The Price of Flame

Final Report
of the
Fire Suppression Interim Committee

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"Smokejumpers Training at Aerial Fire Department"
Lolo National Forest
Cover photo courtesy of the U.S. Forest Service.

Fire Suppression Interim Committee
2007-2008

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Acknowledgments

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The committee also wishes to thank the hundreds of Montanans who responded to our calls for public comment in writing, by directly contacting us, and through attendance at our meetings. These good citizens educated the committee on firefighting operations and efficient use of fire suppression resources; the impacts of fire suppression operations on private land; and the use of private resources for land management and fire suppression. Their commitment of time and effort to offer hundreds of thoughtful recommendations to improve state and federal forest management and fire suppression policies is appreciated.

Finally, the members thank the local, state, and federal agency staff who participated in committee meetings, assisted our staff in organizing meetings, and provided valuable insight into their roles and responsibilities as the committee pursued the duties assigned to it by the legislature.

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Introduction

It's inevitable, unavoidable, fated. Wildfire in Montana could be included with death and taxes as the only sure things in life. It is, as fire historian Stephen J. Pyne writes, "a natural phenomenon [that is] at once as common as sunflowers and as powerful as tornadoes, an ecological element only partly tamed and partly captive and, like a trained grizzly, ever ready to turn feral."[1] Whether ignited by lightning, a campfire left smoldering, or a spark from a vehicle driven in the tall grass, fires will occur and change the landscapes—the physical, social, and political landscapes—left in their wake. By all accounts, the 2007 fire season was one for the books in terms of fire occurrence, fire behavior, and the costs associated with suppression. Ahorn, Black Cat, Jocko Lakes, Fool Creek, Chippy Creek, Meriwether, to name a few—all large project fires that drained resources, prompted evacuations, and forced residents, fire professionals, and elected officials to think about fire in a new way. There will be off years in the state's future when the right combination of moisture and storm frequency, with a little luck thrown in, result in fewer and more manageable fires. But on balance, the signs point to longer fire seasons and extreme events like those for which the years 1910, 1988, 2000, 2004, and 2007 are infamous. Fire year 2007, in all its dry, hot, smoky glory, may just be the shape of things to come.

A wildland fire fighter sprays protective coating over the KOA in Sula during the August 2000 fire season. Montana Department of Natural Resources and Conservation photo.

[1] Stephen J. Pyne, Year of the Fires: the Story of the Great Fires of 1910, (New York: Viking, 2001), 4.

Chapter One
Creation and Structure of the Fire Suppression Committee

It was still dry, hot, and smoky on August 27, 2007, when Governor Brian Schweitzer called the 60th Legislature into special session to "appropriate money and provide spending authority to pay for the actual and anticipated costs of fire suppression, disaster response, and recovery activities for the 2007 and 2008 fire seasons."[2]

When the special session convened on September 5, costs for the 2007 season amounted to $80 million and were climbing. Once cost negotiations among all involved agencies had concluded, the state faced a liability of over $40 million, more than twice the average amount calculated over a 7-year period.

Although the intent of the special session was to appropriate the state's share of costs associated with the year's fire suppression activity and to set aside some money for 2008, as stewards of taxpayer dollars, lawmakers sought not simply to throw money at the problem but to investigate why costs are escalating and what, if anything, might be done to avoid future such hits to the state's budget. The legislature recognized that the state's general fund has not maintained and would not consistently carry the amount of surplus money that would enable expenditures to the degree that the 2007 fire season warranted.

The intent of the special session was to appropriate the state's share of costs associated with the year's fire suppression activity, to set aside some money for 2008, and to investigate why costs are escalating.

House Bill No. 1 (HB 1) (Appendix A) appropriated $39 million from the state general fund to the Department of Natural Resources and Conservation (DNRC) "for wildfire suppression and for wildfire disaster response and recovery activities in Montana", and $3 million from the general fund to the Department of Military Affairs for the same purpose. The bill also created the Fire Suppression Committee and directed it to:

1. investigate firefighting operations in Montana and the management policies affecting the success of those operations;

2. investigate the efficient use of fire suppression resources;

[2] Call to the 60th Legislature for a Special Session; Aug. 27, 2007; Gov. Brian Schweitzer.

3. investigate the impacts of operations on private land and on the effective use of private resources to fight fires; and

4. investigate state and federal forest management policies and how those policies may contribute to an increased number of wildfires, greater safety risk to firefighters, or compromised effectiveness of fire suppression efforts.

HB 1 included a requirement that the committee travel to five specific locations around the state during the course of its study, and FSC added two communities to the list. Between April and August, the committee met and held public hearings in Hamilton, Lewistown, Miles City, Seeley Lake, Thompson Falls, Libby, and Choteau.

Committee's Approach and Structure — Subcommittees, Public Comment, Field Hearings

FSC members quickly realized that they faced a steep learning curve when it came to the myriad aspects of wildfire and wildfire suppression in Montana. In order to be effective and conclude the interim with realistic, viable recommendations, they would have to understand the jurisdictional complexities and the roles and responsibilities of the multiple local, state, and federal agencies that are involved.

FSC field hearing.
Photo by Dawn Field, FSC Staff.

FSC's first two meetings consisted of panel discussions and instruction on the policies of and the relationship, coordination, and communication among the various entities that count land management and wildfire suppression among their duties. Those entities include the U.S. Forest Service (USFS), the Bureau of Land Management (BLM), the U.S. Fish and Wildlife Service (USFWS), the Bureau of Indian Affairs (BIA), the National Park Service (NPS), DNRC, the state Department of Military Affairs (DMA), local fire departments, county commissions, and county law enforcement.

With this background information in hand, the committee formed three subcommittees—Wildland-Urban Interface, Infrastructure, and Contracting—intending that the smaller groups could more deftly focus on specific subjects and ultimately develop recommendations to present to the full committee. The subcommittee recommendations then

would serve as the basis on which public comment would be collected as the committee traveled around the state.

The subcommittees met monthly in Helena during the winter and reached agreement on three sets of recommendations which were approved by the committee as items on which the members wanted to hear public and agency reaction.

> In order to be effective, the committee would have to understand the jurisdictional complexities and the roles and responsibilities of the multiple local, state, and federal agencies that are involved.

Public Comment Blitz

As the subcommittees were beginning their deliberations, FSC launched a campaign to collect as much public input as possible by mail, email, and the committee's website. Notice soliciting comment was sent to all potential interested individuals and organizations and requested that submissions focus on the following:

1. The committee would like specific recommendations on any of the study items listed above as well any other recommendations you may have for fighting fires, suppression of fires or other wildland fire-related issues in Montana.

2. What do you think will happen in this state with regard to firefighting and suppression in the next ten years if no changes in policy, practice, or funding are made?

3. The committee would like to know what can be done by you or others (agencies, local governments, homeowners, private industry) by next spring and early summer to prepare for the fire season.

4. If you provide fire suppression-related contract services during the fire season, please provide us with specific suggestions that may improve the contracting process.

The committee received hundreds of letters, emails, and contributions to a comment form on the website. Staff copied the documents for committee members, scanned all of the documents, and posted them to FSC's website, notifying agency management and staff of the files' location. The input received was summarized, categorized (Appendix B), and also placed on the website. Some of the comments prompted further research and some ideas made their way into the recommendations that the committee considered including in its final report.

Continuation of Work by Committee Members

Although HB 1 required FSC to finalize its recommendations by September 15, 2008, the committee agreed that members may continue to attend relevant meetings, visit fire camps, and gather information as warranted after that date.

Chapter Two
Observations, Predictions, Conclusions

Observations

1. The west is prone to wildland fire and Montana is no exception. As wildland fires increase in severity and size, so does the cost of suppression in terms of real dollars and loss of property and natural resources. The professional forestry community has produced a number of documents detailing the reasons behind the increasing severity and costs of fire. They include:

    a. extended drought in the west;
    b. increased residential development in the wildland-urban interface, which is defined as the "line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels";
    c. an increase in the fuel load in the forest from drought, disease, insect infestation, lack of funding for fuels management, and legal gridlock over management of federal forest land;
    d. an inability—for various reasons—of the U.S. Forest Service to adequately deal with fuel load in the agency's forests resulting from drought, disease, insect infestation, and logging inactivity; and
    e. lack of adequate resources for local, state, and federal agencies.

2. The items listed in #1 may explain why fires are increasing in severity and cost, but on the Montana landscape there are other factors that add to the complexity of fire suppression. These include:

    a. diverging fire suppression policies and strategies—such as wildland fire use and mechanized treatment, assessment of values to protect, and approach to structure protection—among federal, state, and local agencies;
    b. less federal funding for land management activities, due in part to increases in spending on fire suppression;
    c. lack of resources to fully fund DNRC initial attack operations;
    d. increasing gas and diesel fuel costs;
    e. uncertainty over the future of industrial and other private forest lands;
    f. increasing, and often unfunded, use of local government resources;
    g. more large project fires, more extreme fire behavior, and expanding wildland-urban interface;
    h. more competition for national firefighting resources;

i. succession planning for fire management personnel due to difficulty hiring and retaining firefighters who serve long enough to gain the experience needed to perform in leadership roles such as incident commander;
j. widespread effects of poor air quality;
k. inconsistent rehabilitation of burned areas and watersheds;
l. stress on state, federal, and local wildland firefighters, managers, and resources;
m. increased budget pressures on federal agencies to control fire suppression costs, which limits the agencies' ability to manage the forests and reduce the risk to firefighters;
n. heightened public expectations of wildland fire agencies for rapid fire suppression and real time information about fire progress and suppression strategies; and
o. reduced access to forest resources because of closure of existing roads used for fire suppression.

3. After on-the-ground fire suppression work is completed, finances remain to be settled. This process of cost sharing with federal partners and obtaining FEMA reimbursement is often not completed within the fiscal year in which the fire occurs. This leads to concerns in Montana such as:

a. the ability for the state to pay for entire costs of certain fires prior to obtaining payment from federal partners;
b. the ability of DNRC to maintain department operations until a supplemental appropriation can be approved by the legislature;
c. the pressure to settle costs of one fire season as the next season begins; and
d. a limited number of individuals who are dedicated to the business aspects of fire suppression (incident business advisors) and increased pressures on those individuals.

4. When all factors are combined, fire suppression and the business aftermath are becoming increasingly difficult to manage and increasingly difficult for the state to fund. The traditional funding mechanism to pay state costs through a supplemental appropriation to DNRC was not viable for the costs associated with the 2007 fire season, resulting in the need for a special legislative session to appropriate the money. This prompted the question of who should pay the state's share into the future. The options are:

a. landowners in a designated wildland-urban interface;
b. landowners who benefit from direct protection services and county cooperative assistance;

c. all taxpayers through the state general fund;
d. insurance companies and other beneficiaries of fire suppression; or
e. some combination of the above.

5. Wildland fires are a part of life in Montana. Given the identified pressures and financial considerations, and pending any changes in federal fire policy, the outcome of future fire seasons is uncertain. The state must examine proposals to make changes to the status quo to positively impact fire suppression activities in the years to come.

Predictions

The Fire Suppression Committee recognizes that because of climatic conditions, rugged terrain, dense vegetation, concern for firefighter safety, and the nature of fire-dependent ecosystems, some fires cannot be extinguished, no matter what suppression strategy may be employed. However, if nothing changes in the wildland fire arena with respect to funding, priorities, climate trends, demographic trends, and policy, the following may be expected to occur.

1. With limited resources and fuel and climatic conditions, it is likely that communities will burn, firefighters will be seriously injured or killed, and hundreds of members of the public will be seriously injured or killed.

2. Stress associated with longer wildland fire seasons will continue to rise, affecting landowners, firefighters, business owners, and local, state, and federal agency staff, as well as other members of the public.

3. With limited resources to fight fires, the costs of fire suppression and the damage to property and natural resources will continue to grow.

4. Small businesses from the tourism industry to the agricultural industry will continue to be impacted as they are unable to be compensated for business losses due to fires.

5. Increasing spending on fire suppression at the federal, state, and local levels will continue to divert funds away from potential fuels reduction projects.

6. Declining dedication of funds for fuels reduction projects and lack of landowner incentives to treat fuels on private land will ensure continued risk of complex wildland-urban interface fires.

7. Development in the wildland-urban interface will continue to increase without adequate controls on land development.

8. The ineffective management of the accumulation of forest fuels on federal lands—due largely to resources being tied up in litigation—will continue to perpetuate a forest health crisis, putting many communities in imminent danger of catastrophic wildfires.

9. While cooperation among local, state, and federal wildland fire agencies has by most accounts been excellent, greater divergence in fire management policies, strategies, and interpretation of values in need of protection may erode that cooperation and negatively impact suppression efforts in the state.

10. Without a concerted and coordinated effort from insurers to educate policyholders about their wildfire risks and offer incentives for properly mitigating their risks, many homeowners will continue to ignore the advisability of survivable space, placing themselves and firefighters at risk.

11. If market conditions do not improve and other factors do not change, Montana's wood products infrastructure will be defunct within two years and the state will lose the people with the expertise to conduct fuels reduction and hazard mitigation projects.

12. Declining federal assistance will contribute to the need for additional state funding to actively engage in fire suppression.

13. According to a report provided for DNRC and FSC by Headwaters Economics (Appendix C and p. 53), the amount of money needed for fire suppression will continue to grow as additional homes are built in the wildland-urban interface.

Conclusions

The FSC has concluded the following:

1. The forests in Montana are growing more fuel, more trees are dying, and the state is headed toward larger fires. Either we do more logging, more prescribed burns, or other fuel reduction or we have more dangerous fires.

2. Firefighters use all available resources to suppress fires and the only thing that keeps the state budget from going broke is the lack of resource availability.

3. A large number of homeowners do little to protect their homes.

4. The state and local governments cannot conduct evacuations on a scale that would be necessary in the event of a fire year similar to 1910.

5. There will be another fire year similar to 1910 and the state is not prepared for fires of that scale.

6. Even after large burns, the forests still need to be managed (through logging, fuels reduction, prescribed fires, and appropriate wildland fire use fires) long-term to reduce the risk of large and devastating 400-year fires.

7. FSC anticipates a $200 million fire year liability for the state budget sooner or later. Costs incurred by the state may be reduced if there are fast-moving, large fires that simply burn through thousands of acres before resources are available. Other than that limitation, costs will continue to grow.

8. The state fire suppression agency is going to have to grow by 57.5 FTE and $4.7 million in the coming years, as local government and volunteer firefighters dwindle in number due to an aging population and other demographic factors and as federal government involvement in fighting fires declines.

9. A significant amount of money should not be dedicated to hazardous fuels reduction unless private property owners are compelled to manage their property to reduce wildfire risk either through enhanced incentives or required measures.

Chapter Three
Recommendations

Recommendations for Immediate Implementation

The Fire Suppression Committee is convinced of the potential for catastrophic wildfires to occur in Montana in the near future. Its members therefore recommend the following be implemented as soon as possible.

1. The state and local governments in Montana should prioritize fuels reduction in the wildland-urban interface and implement as many projects as possible with current levels of funding. These entities should also be planning to apply for federal grants and to request fuels reduction funding from the 2009 Legislature.

2. The state's federal landowners should spend more to reduce hazardous fuels in the wildland-urban interface.

3. Steps need to be taken to preserve and sustain the state's wood products industry. The industry, the executive branch, legislators, and other interested parties should be discussing strategies to accomplish this. FSC recommends that the 2009 legislative leadership appoint a select committee or a subcommittee of a standing committee to meet during the session and review legislative options.

4. Insurance companies operating in Montana need to explore offering insurance products for grass and other resources that are destroyed by fire and that are necessary for farming, ranching, and other businesses.

5. Additional suggestions made by FSC to the Office of Budget and Program Planning (Appendix D) for use of a portion of the $40 million appropriated during the 2007 special session should be implemented.

6. State and local fire and law enforcement officials should review evacuation capabilities and procedures in the event of a catastrophic fire endangering large communities.

7. Federal, state, and local officials must meet before and after every fire season to discuss fire suppression plans and policies and to review decisions that were made regarding policy, land management, cost sharing, and compensation to private entities and local fire and emergency response agencies.

8. State and federal wildfire suppression agency officials must discuss their respective long-term wildfire policies and continue to identify any differences in policies so the state is prepared to deal with the differences during the wildfire season.

General Recommendations to the Montana Legislature

The Montana Legislature in future sessions needs to take action in these areas:

1. short-term state and local funding of state and local fire agencies;

2. long term funding of state fire agencies;

3. wildland-urban interface conflicts and developments;

4. dealing with federal agencies where their lands meet state and local lands and conflicts when fire management and land management conflict;

5. the responsibility of homeowners and landowners for fire and land management; and

6. the retention of a viable logging and fuel reduction industry.

- All six areas need consideration. The committee strongly believes that simply providing funding will not solve the long term problems of fire costs as well as what has been described above in the conclusions. If the legislature only provides funding and does not deal with the other issues, time, money, and effort will have been wasted on this project.

- The legislature must also assume that the federal agencies can implement very little change in forest management without change at the national and congressional levels.

- If fire and land management agencies, various governmental units, and homeowners and landowners are not making changes, then the legislature will make much less headway in mitigating the predictions made above.

- Finally, the legislature must decide if it wants a committee to follow up on all the recommendations made here. Many do not need bills or laws implemented but there should be some entity to determine whether or not the recommendations are being followed up by other agencies and people. There should be a termination date for the next legislative session at the latest.

Specific Recommendations

The tables on pages 14 through 35 contain recommendations that rely on legislation, funding, budget authority, or production of this report for implementation or they are not appropriate for immediate implementation. Recommendations are divided into subject matter categories.

Some of the requested bills may not be introduced if committee members determine they are unnecessary, if they fail to be assigned a sponsor, or if members believe the problems addressed by the proposed legislation have been resolved.

A. Homeowners

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
1.	Amend the state fire policy statute (76-13-115) to make it clear that homeowners have responsibility for protecting their homes from wildland fires.	X	LC0479		

B. Wildland-Urban Interface: Land Use Planning, Insurance, Building Standards

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
1.	Local agencies and state agencies should study and consider moving toward the Australian concept of evacuations and protection of properties within regions of Montana.				
Staff Comment: In Australia, residents in fire safe homes who do not choose to evacuate early are encouraged to stay and shelter in place as the fire front moves over the home. See Appendix E.					
2.	Create and fund pilot project for fuels reduction on state land in the wildland-urban interface -- use private contractors who then can be shifted to fire suppression when needed.	X	LC0477	X	X
Staff Comment: An appropriation of $3 million in HB 2 would be needed to implement the program.					
3.	Require insurance providers to offer discounts for insureds who maintain their homes and property to certain standards within a designated WUI.	X	LC0476		
Staff Comment: The standards under development in the rulemaking required to be completed by DNRC and DLI under 76-3-104(8) and 50-60-901, respectively, could be the standards for which incentives must be offered under this proposal.					

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
4.	Give the State Auditor the authority to review all property insurance policies to make sure that insurance companies have in place an ongoing education, training, or premium incentives aimed at protection of homeowners' properties from wildland fires. This may include educational material, home inspections, or discounts for proper hazard mitigation and fire protection activities.	X	LC0475		
5.	Require insurance companies to notify their insureds of the best practices developed during DNRC rulemaking pursuant to 76-13-104(8) and encourage their implementation.	X	LC0474		
Staff Comment: Use of best management practices for timber sales and logging are the inspiration for this proposal. Section 76-13-101(2) states: "To achieve the conservation of natural and watershed resources, the legislature encourages the use of best management practices in timber sale planning, associated road construction and reconstruction, timber harvesting, site preparation, and related activities and establishes a process to ensure that information on best management practices is provided to owners and operators engaged in forest practices on private land."					
6.	Send a letter to insurance providers authorized to operate in Montana that FSC encouraging them to educate homeowners who live in the WUI how to properly maintain their property to minimize wildland fire risks.				
7.	Create a Montana Fire Management Easement Program to create an incentive-based voluntary way for landowners who take a series of defined actions to reduce the risk of catastrophic fire and to be compensated for taking those actions. To comply, a landowner must live within a wildland-urban interface area described or identified through a Community Wildfire Protection Plan. To qualify for the program, the landowner must: (a) agree to limit further residential development on the property to a maximum of one additional residence; (b) agree to work with a land trust and a professional forester or designated local fire	X	LC0473	X	X

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
	official to site any new residence based on conservation values and fire protection priorities; (c) participate in a Montana Extension Forestry Forest Stewardship Workshop or work with a professional forester to create a Forest Stewardship Plan for the property; (d) comply with defensible space standards spelled out in the DNRC "Fire Protection Guidelines for Wildland Residential Interface Development"; (e) build any new structures using firewise construction materials as adopted by the Montana Department of Labor and Industry. Structures must comply with Uniform Building Codes and Uniform Fire Codes. The enforcement of these construction/residential measures would be initially addressed by DNRC, the Montana Department of Labor and Industry and local fire officials. Land trusts would be responsible for annual monitoring and enforcement duties. A qualifying landowner would be eligible to receive an income tax credit.				
Staff Comment: There may be a need for FTE at DNRC and DLI to provide the enforcement and inspection. Local fire entities may also need funding to assist with these duties.					
8.	Require the Department of Labor and Industry to develop building standards for houses built within the WUI. DLI would have the inspection authority.	X	LC0472	X	
Staff Comment: (1) The rules being developed under 50-60-901 will provide a list of items for local governments to consider during subdivision review when determining whether wildfire hazards in a proposed subdivision can be overcome by construction techniques.					

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
(2) This proposal would also need to identify which entity would be responsible for delineating the WUI and require that delineation so everyone knows where this law is effective. The committee may want to consider the proposal applying to "high fire hazard areas" rather than the WUI, however, some entity will still need to be responsible for identifying those areas. (3) The committee may want to consider requiring modification and adoption of the International Urban Wildland Interface Code by DLI. This was among the original proposals considered by the WUI subcommittee.					
9.	Require definition of the WUI on a statewide level so that it is clear to all communities what constitutes a threat.	X	LC0480		
10.	Change the state fire policy statute (76-13-115) to make it clear that homeowners have responsibility for their own home protection from wildland fires.	X	LC0479		
11.	Send a letter to the state fire units and local fire units that urges them to make clear to homeowners and landowners what their capabilities are to fight fires and the types of fires they will attempt to suppress.				
12.	Allow local regulation/enforcement of mitigation measures in the WUI. (a) Authorize a local government to regulate and enforce fire mitigation measures such as vegetation management, use of fire resistant building materials. (b) It would be discretionary for local governments. (c) If a local government chooses to implement this authority, it would be required to designate the area where these regulations would be in effect. (d) There would be no protest provision, but an appeals process and possible variance opportunity. (e) Incentives may encourage local governments to "opt in".	X	LC0478		

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
Staff Comment: Standards required could be those implemented in rule under 76-13-104(8) and under 50-60-901 and 50-60-902, pursuant to SB 51(2007).					
13.	Grant funding for local prevention and mitigation programs. Appropriate money to DNRC from the general fund to use for a grant program. Local governments could apply for funding programs to: (a) help planning offices delineate the WUI; (b) target WUI homeowners with mitigation efforts; (c) establish and maintain prevention programs.	X	LC0482	X	X
Staff Comment: The Western Wildlalnd Urban Interface Grant Program, administered by DNRC, uses State Fire Assistance funding provided by the federal government as part of the National Fire Plan to assist people and communities in mitigating wildlfire risk in the WUI. This proposal would use state funds for similar purposes.					
14.	Authorize local governments to form a taxing jurisdiction to pay for fuel reduction projects and tax either through sales or property tax to protect their homes. Authorize local governments to use the revenue from an existing sales tax or any new local option tax for fuel reduction projects around communities.	X	LC0481		
15.	DNRC should provide regular updates of the list of communities at risk for wildfire (available on FSC's website at http://leg.mt.gov/fire) and identification of the top 10 highest-risk communities.				
16.	DNRC should institute a Montana Firewise month in June, during which special programs and educational events directed at property owners in the WUI would occur.				

C. Funding for Fire Protection, Suppression, Fuel Treatment

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
1.	The Appropriations and Finance and Claims committees should review this report, public comments made to FSC about DNRC's fire suppression program, and how the agency has responded to those comments as it reviews DNRC's budget.				
2.	State agencies that own or manage land should develop management plans for properties at risk of wildland fire.			X	
3.	Increase the statutorily-appropriated funding for emergencies and provide that the increase be used only for wildland fire; provide for ongoing fund transfers to the fire suppression account; remove the termination date for the fire suppression account; allow a certain amount in the account to be used for: (a) additional county co-op equipment; (b) fuels mitigation grant programs; (c) rural fire assistance matching grants for counties.	X	LC0503	X	X
4.	Increase the statutorily-appropriated funding for emergencies and provide that the increase be used only for wildland fire; extend the termination date for the fire suppression account and the statutory appropriation of that account.	X	LC0504	X	X
5.	Collection of fire protection funds should be made simpler and the collection problems associated with condominiums should be fixed.	X	LC0483	X	
6.	Remove the requirement in 76-13-207 that the total amount of assessments received by DNRC from landowners not exceed one-third of the amount specified in the appropriation for fire protection costs.	X	LC0502	X	X
<u>Staff Comment:</u> Revenue generated from assessments would continue to rise with increased parceling of forest land.					
7.	Create separate line item in HB 2 for the county co-op program, which should equal one-third of DNRC's fire program.				X

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
Staff Comment: Based on FY 10-11, that would be about $800,000.					
8.	Fund acquisition of 25 more engines each year for the next 2 years of the biennium.			X	X
9.	Allow tribal fire departments to participate in county co-op program.	X	LC0484	X	X
10.	The Legislative Fiscal Analyst assigned to DNRC should provide the Finance Committee with regular updates on cost sharing agreements.				

D. Federal Forest and Wildfire Policy; State/Federal/Local Relations

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
1.	Allow DNRC, under certain circumstances pertaining to public health and safety, to engage in initial attack on all lands, regardless of jurisdiction, if a fire threatens to move onto state or private land.	X	LC0485		
Staff Comment: DNRC does have an agreement with federal agencies that allow for IA under certain circumstances.					
2.	Require DNRC to establish NEPA coordinating agency status [76-13-702(5)].	X	LC0486	X	X
3.	Appropriate $200,000 to DNRC for the agency to establish NEPA cooperating and coordinating agency status.	X	LC0487	X	
4.	Resolution in support of the following NACo draft resolution (which was not adopted by NACo): "Adopted policy: The National Association of Counties calls on Congress to enact legislation granting a Governor authority to declare a crisis when the severity of fire danger from fuels on identified federal lands within that state pose a significant threat to public health and safety, or there would be a probable loss of homes and property if wildfires occur. Upon the declaration of a crisis, responsible federal agencies would fast-track a mitigation plan to reduce forest fuels. The mitigation planning would be excluded under the NEPA appeal process. Any claimant filing a court action against the plan would be required to post a damage bond of ten (10) percent of the value of the property that would be protected under the mitigation plan."	X	LC0488		
5.	Amend provisions of 76-13-701 and 76-13-702(7) to allow the state to intervene on any fuel loading conditions that it considers to be a significant threat to public health and safety.	X	LC0489		

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
6.	Amend the provisions of 77-5-216 to increase the percentage DNRC may exceed sustained yield on trust lands for forest health concerns from 5% to 10%.	X	LC0490		
7.	An appropriate legislative committee should be notified when a transfer of land from a federal agency to the state occurs that will result in more direct protection acreage for DNRC.				
8.	An amount of $200,000 should be set aside as a line item in the Department of Justice's major litigation budget in HB 2 for the state to participate in certain lawsuits brought against federal agencies for forest management.			X	X
Staff Comment: SB 293 (2007), sponsored by Sen. Laible, gave DNRC the authority to intervene in litigation or appeals on federal forest management projects that comply with forest management policy and in which local and state interests are clearly involved. This is codified in section 76-13-702.					
9.	Joint legislative resolution to be forwarded to Montana's congressional delegation that the legislature intends federal fire policy be modified so that: (a) there is safe and aggressive initial attack on all federal lands where there is a potential for the fire to move to state or private land; (b) there be active engagement of the state, local government, and landowners in land and fire management operations; (c) the federal government be responsible for costs and resource losses for large fires for which no direct suppression action was taken or where the federal government shifts control actions onto state or private land; and (d) Forest road closures should be limited if closure restricts access for wildfire suppression.	X	LC0491		
10.	Prior to June 30, 2009, DNRC should develop an internal cost review process to ensure				

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
	adequate review and concurrence on strategy and tactics for wildland fires for which the Wildland Fire Situation Analyses (WFSA) alternatives indicate potential expenditures of over $1 million.				
Staff Comment: According to the USFS website (http://www.fs.fed.us/fire/wfsa/wildland_situation%20analysis.htm), a WFSA "is required when the documentation of suppression decisions needs to occur – because one the following conditions have taken place: *Wildland fire escapes initial actions or is expected to exceed initial action. *A wildland fire being managed for resource benefits exceeds prescription parameters in the fire management plan. *A prescribed fire exceeds its prescription and is declared a wildland fire." "The purpose for completing a WFSA is to convey to an Incident Management Team (IMT) the critical objectives and priorities as defined by an Agency Administrator for a given incident."					
11.	The federal fire agencies and Montana's congressional delegation should review and comment on the information provided to the committee by members of the public and comments made by committee members regarding federal management of wildland fire and federal lands.				
12.	The federal fire agencies should meet with local and state fire agencies and entities of local and state government every spring and fall to discuss fire prevention, protection of homes and private property, land and wildfire management, cost sharing, and compensation to private entities and local fire and emergency response agencies. If federal agencies do not initiate the meetings, the local and state agencies and other entities should do so.				

E. Local Government; Volunteer Firefighters

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
1.	Provide for special license plates and tax credits for volunteer firefighters.	X	LC0492		
Staff Comment: The Montana State Council of Professional Firefighters and the Montana State Fire Chiefs' Association have license plate designs under the Generic Specialty License Plate act.					
2.	Provide tax incentives for volunteer firefighters and their employers	X	LC0493		
3.	Create grant program for volunteer fire departments.	X	LC0494		
4.	Allow leave for state employee volunteer firefighters for incident response.	X	LC0495		
5.	Allow a local government, through enforcement of a community decay ordinance, to engage in fuels treatment on land within the physical boundaries of the local government's jurisdiction but not under the local government's ownership.	X	LC0496		
Staff Comment: (1) A June 11, 1993, letter by Attorney General Joe Mazurek specifically addresses county commission authority to regulate land use upon federal or state lands (Appendix F). (2) Community decay is defined in 7-5-2110 and a local government's authority to control community decay is provided in 7-5-2111.					
6.	Allow volunteer firefighters to participate in county government health insurance pool provided there is no fiscal impact to the county.	X	LC0497		
Staff Comment: A bill draft to implement the above proposal would likely amend section 2-18-701 to include volunteer firefighters in the definition of "employee". The definition applies only to Title 2, chapter 18, part 7 — Group Insurance Generally.					

F. Wood Products Infrastructure[3]

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
1.	Provide for a phased-in biomass tax credit, similar to Oregon's law, ORS Chapter 315.141 (Oregon Department of Revenue summary: Appendix G).	X	LC0498		
Staff Comment: The credit would go to the suppliers of biomass, not the purchasers (mills) of the biomass. The mills would receive the supply.					
2.	Amend 69-3-2003, definitions for the Montana Renewable Power Production and Rural Economic Development Act, to allow for a biomass generation facility with more total calculated nameplate capacity than is currently allowed.	X	LC0499		
Staff Comment: Section 69-3-2003(3) and (12) limit the megawatts in total calculated nameplate capacity and the location of the production facility. A biomass generation facility would use biomass collected from fuels reduction projects.					
3.	Revise license and registration fees for logging trucks so that they are the same as those for trucks used for agricultural purposes (61-10-206).	X	LC0505		
4.	Expand exemption on fuel tax for agricultural use to include logging trucks and other logging equipment.	X	LC0506		
5.	Allow oral (open) bidding on DNRC timber sales.	X	LC0507		
6.	Develop forest management plan for Fish, Wildlife and Parks land that includes mitigating beetle kill, wildland fire risk, and impacts to wildlife habitat.	X	LC0508		
7.	FSC encourages more utilization of non-saw log material—such as pulp logs and other residue—made available through state timber sales.				

[3]Items #3 through #12 in Section F originated in "Montana Wood Products Industry Initiative: Recommendations for Action, September 11, 2008", prepared by the Missoula Area Economic Development Corporation. The Fire Suppression Committee reviewed the document and adopted ten of the 17 Recommendations for Immediate Action.

The FSC has recommended (p. 10) that the 2009 legislative leadership appoint a select committee or a subcommittee of a standing committee to meet during the session and review legislative options for preserving and maintaining the state's ailing wood products industry. If creation of this committee or subcommittee appears likely, items #3 through #12 may not be introduced.

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
8.	Reduce business equipment tax on equipment used to transport, process, and harvest forest products; consider temporary property tax exemption for existing forest products facilities.	X	LC0509		
9.	Index DNRC timber sales to the market.	X	LC0510		
10.	The workers compensation process for the forest products industry should be reviewed to find ways to reduce costs and adopt an apportionment system for workers with prior injuries who file claims and evaluate rates compared to other states.				
11.	State revolving loan fund program to supplements private sources of financing that timber harvesters and wood processors could use to obtain working capital needed to maintain and modernize existing operations.	X	LC0511		
12.	The Forest Service should develop pilot projects for resource recovery that include multi-year timber sales, thinning projects, and removal of dead and dying timber.				

G. Contracting

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
1.	Recommend generally that the private contracting community and state, local, federal, and tribal fire suppression agencies maintain open communications and coordinate activities.				
2.	Recommend generally that the Northern Rockies Coordinating Group work with representatives from the private contracting community to increase the over-all efficiency of the equipment inspection process.				
Staff Comment: The subcommittee heard testimony that the state and federal fire suppression agencies will eliminate unnecessary inspections and that those agencies have pledged to increase the efficiency of the inspection process for future fire seasons.					
3.	Recommend that the Northern Rockies Coordinating Group work with representatives from the private contracting community where possible to conduct joint training sessions.				
4.	Recommend that Department of Labor coordinate with the Northern Rockies Coordinating Group to ensure that private contractors working on the fire lines are complying with the workers' compensation laws. Recommend that the State Fund and private insurance companies work with the fire suppression contracting community to ensure reasonable workers' compensation insurance rates. Recommend that the FSC write a letter to the Department of Labor and Industry and the State Fund requesting those agencies' involvement in solving these workers' compensation issues.				
5.	Recommend FSC support for the current Northern Rockies Coordinating Group dispatch system that utilizes the closest resource concept that involves local governments, state, federal and private contracting resources that is most cost effective and efficient for the taxpayers and local communities.				

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
6.	Recommend that the fire suppression contracting community form at most, one or two associations (including the aviation contractors) to represent private contractors across the state and to provide one voice before the legislature and state and federal fire suppression agencies.				
7.	Recommend that the Montana Legislature and the federal fire suppression agencies increase the number of incident business advisors that are deployed on fires throughout Montana in order to improve the efficiency of deploying private contractors and tracking costs.				
8.	Recommend FSC support for the best value contracting process.				
9.	Recommend that the FSC send a letter to the Legislative Audit Committee requesting a performance audit of the Department of Natural Resources and Conservation's Aviation Program, including an evaluation of the need for additional helicopter managers.				
10.	DNRC should relay to the contracting section of the Northern Rockies Coordinating Group the concerns that contractors have expressed to the FSC.				

H. Miscellaneous Recommendations

	Recommendation	Bill Draft	Bill Draft #	Include in Legislative Budget Analysis	Include in House Bill 2
1.	Extend time limit on an emergency related to wildfire	X	LC0011		
2.	Request that the Montana Department of Transportation mow and maintain highway rights-of-way under its jurisdiction to minimize wildfire starts from vehicles.				
3.	Require training on mechanized fire suppression and fuels reduction equipment at Fire Services Training School (Title 20, chapter 31).	X	LC0501		
4.	Continue Fire Suppression Committee through the 2009-2010 interim, with a general fund appropriation of $50,000, to follow up on recommendations contained in this report.	X	LC0500	X	

I. DNRC Budget Recommendations Provided by the Agency (in order of priority)

Priority # and Title	FTE	Annual Cost	One Time Only (OTO) Cost	Description	Projected Annual Savings or Benefits	Assumptions
1. Extend engine crews to 7-day coverage	7.0	$ 260,000	0	Add or extend seasonal positions on DNRC engines to achieve 7 day full coverage. Operations funds ($50,000) are included for equipment and fuel.	$3.0 M	Prevent two 1000+ acre wildfires per year.
Staff Comment: The committee requested that the above item be approved by the Governor's Office of Budget and Program Planning (OBPP) for implementation during the 2008 fire season (Appendix D). The approval was provided by OBPP and these positions were created as modified for the 2008 fire season. The executive approved this item for submission into the budget process.						
2. Extend aviation crews to 7 day coverage	6.79	$ 469,246	0	Staff all helicopters with manager, crew, and fuel truck driver. Operations and capital of $63,000	$3.0 M	Prevent two 1000+ acre wildfires per year.
Staff Comment: The committee requested that the above item be approved by the Governor's Office of Budget and Program Planning (OBPP) for implementation during the 2008 fire season (Appendix D). The approval was provided by OBPP and these positions were created as modified for the 2008 fire season. The executive approved this item for submission into the budget process.						
3. County Rural Fire Coordinators	2.0	$187,000	0	Add a Rural Fire Specialist at the Northeastern and Southern Land Offices. Includes $50,000 in capital and $20,000 in operations.	Fire safety and improved coordination	
4. Fire Business Specialists	4.0	$300,000	0	Two additional fire business staff for the Fire and Aviation Management Bureau and four half-time positions in field offices. Includes $10k operations each.	$750,000 in prevented expenditures.	Increased fiscal oversight during and after fire season operations, to work as incident business advisors and audit fire bills at fire season end.

Priority # and Title	FTE	Annual Cost	One Time Only (OTO) Cost	Description	Projected Annual Savings or Benefits	Assumptions
Staff Comment: The committee requested that the above item be approved by the Governor's Office of Budget and Program Planning (OBPP) for implementation during the 2008 fire season (Appendix D). The item was not approved by OBPP.						
5. Operations Section Supervisor	1.0	$95,000	0	Operations Section Supervisor to assist Fire and Aviation Management Bureau Chief. Includes $20k capital and $10k operations.	Firefighter safety and coordination of DNRC fire program.	
Staff Comment: The committee requested that the above item be approved by the Governor's Office of Budget and Program Planning (OBPP) for implementation during the 2008 fire season (Appendix D). The item was not approved by OBPP. However, through the re-direction of currently approved FTE, the position was filled in July of this year.						
6. Fire Safety Specialist	1.0	$85,000	0	Safety and investigation specialist for the Fire and Aviation Management Bureau. Includes $20k capital and $10k operation.	Firefighter safety	Increased focus on fire line and aviation safety and investigations.
Staff Comment: The above item was an action item resulting from a 2007 DNRC aviation safety investigation.						
7. Dispatch Center Staff	4.25	$160,000	0	Augment existing and add additional dispatch positions at all land offices.	Firefighter safety and equity with federal agencies	Increased representation in interagency dispatch centers to assure distribution of firefighting resources to state and local government fires.

Priority # and Title	FTE	Annual Cost	One Time Only (OTO) Cost	Description	Projected Annual Savings or Benefits	Assumptions
Staff Comment: The committee requested that the above item be approved by the Governor's Office of Budget and Program Planning (OBPP) for implementation during the 2008 fire season (Appendix D). The item was not approved by OBPP.						
8. County Engines	0	0	$1,000,000	One-time additional development of 20 new county co-op engines to augment the Equipment Development Center's annual development of 15 engines.	$500,000	Prevent one 5,000+ acre fire in eastern Montana each year. Increased safety by removing old equipment from the field.
9. Fuels Mitigation Fund	0	0	$1,000,000	Cost-share assistance to private landowners within the WUI to reduce fuels around home sites consistent with priorities in Community Wildfire Protection Plans. Estimated treatment of 1500 home sites.	$500,000	Prevent one 500 acre fire and one home from loss due to wildfire. Reduced extreme fire behavior, losses and cost from fire on treated private lands.
10. Aircraft Hangars	0	0	$700,000	Construct aircraft hangars in Kalispell and Missoula for DNRC aircraft. (Long Range Planning request)	$700,000	Security from weather and vandalism and adequate maintenance facility in the field.
Staff Comment: The above item is a Long Range Planning request.						

Priority # and Title	FTE	Annual Cost	One Time Only (OTO) Cost	Description	Projected Annual Savings or Benefits	Assumptions
11. Communication System Support	2.0	$280,000	0	Two communication technicians to provide service to the current system. Includes purchase of vehicles, training, and operating costs.	Firefighter safety	Increase management of existing radio network to improve system reliability.
12. Type 3 Incident Management Team Development & Support	0	$300,000	0	Provide support via training, equipment and vehicles.	$500,000	Prevent one Type 2 IMT deployment per year. Improved success in extended attack, reduced costs and losses.
13. Eastside Capital and Mobile Kitchen	0	$115,000	0	Increase in one additional truck purchase per year for eastside land offices and provide support of state mobile kitchens.	$250,000	Prevent one national caterer mobilization per year. Ensure readiness of state mobile kitchens.
14. Federal Excess Property Acquisition Staff	1.0	$135,000	0	One person to screen federal excess property as well as Department of Defense for parts and equipment.	$100,000	Cost savings from five federal excess vehicle vs. purchase of new vehicles. Increase capacity for state and local programs through excess

Priority # and Title	FTE	Annual Cost	One Time Only (OTO) Cost	Description	Projected Annual Savings or Benefits	Assumptions
						equipment procurement.
15. Twenty Person Type 2 Initial Attack Crew	10.0	$680,000	0	Development of a Type 2 team for DNRC use. Includes vehicles, equipment and training costs.	$1.5 M	Prevent one 1500 acre fire by enhanced initial attack effectiveness and saving on contract or severity costs.
16. Additional helicopter and crew	4.0	$112,000	$325,000	Funding to develop a MT 205 helicopter, hire seasonal pilot and support crew.	$750,000	Prevent one 1500 acre fire per year by increased initial attack effectiveness.

J. DNRC Budget Recommendations Provided through Public Comment (not prioritized)

Recommendation # and Title	FTE	Annual Cost	One Time Only (OTO) Cost	Description	Projected Annual Savings or Benefits	Assumptions
1. Continued Support of Volunteer Fire and Rural Fire Assistance Grants	0	0	0	Pass through grants from federal sources.	Increased resources	Provides support for training and equipment to rural fire and volunteer fire departments.
Staff Comment: The above item is currently funded with federal dollars only. Should the legislature wish to expand the program by adding a state appropriation, the fiscal impact would be that amount.						
2. Helicopter for eastern Montana based in Miles City	4.0	$112,200	$325,000	Funding to develop a MT 205 helicopter and hire seasonal pilot and support crew for stationing in Miles City.	$500,000	Prevent one 5000 acre fire by enhanced initial attack effectiveness.
3. Additional staff in Northeastern and Eastern Land Offices	2.0	$210,000	$60,000	Funding to support two additional FTE for increased local support for fire prevention activities and training. OTO funding for vehicles for FTE.	Improved local coordination.	Increased state presence to aid in coordination of local resources with state and federal resources.
4. Eastern Montana Training Coordinator	1.0	$105,000	$30,000	Funding to provide a training coordinator for eastern Montana. OTO funding for vehicle.	Improved local coordination, firefighter safety.	Local training for local fire personnel

Chapter Four
Areas of Study

Controversy surrounds what the human reaction and response to wildland fire should be, but certain facts about the wide-ranging effects of mammoth burns a century ago, the current interaction among governmental land and wildfire management agencies, how fires are paid for, where people choose to live, and the economics of the fire contracting and wood products industries provide the backdrop for the ongoing crossfire.

Although not articulated in HB 1, the legislature's study assignment to the Fire Suppression Committee necessitated familiarization with a universe of the wildfire-related concepts and an understanding of the diverse perspectives that wildfire and its impacts engender.

1910: A Perfect Firestorm

Fire is defined in the Random House Dictionary of the English Language as "a state, process, or instance of combustion in which fuel or other material is ignited and combined with oxygen, giving off light, heat, and flame." Fuel, oxygen, and heat are the three elements necessary for combustion to be initiated and sustained. A fire cannot thrive without all three. And when the three elements conspire to the extreme, a fire doesn't just thrive, it rages.

Forest Fire Crowning. Targhee National Forest. June 1950. USFS Photo.

The hellish summer of 1910 provides a grim reference point by which all wildfire seasons in the American West have since been compared. It was the year of the Great Fires and the Big Blowup. "Great" and "big" are not the most vivid adjectives one can use when describing fires of this intensity, but it may be that no other descriptor could do the events justice. "The big fires of 1910 became Great Fires," writes Stephen J. Pyne, "because they grew out of an extraordinary cultural context. Wind, drought, and woods collided with bureaucracies, railroads, political scandal, pioneering, ideas about nature, and reformist zeal".[4]

[4] Stephen J. Pyne, Year of the Fires: the Story of the Great Fires of 1910, (New York: Viking, 2001), 3.

The Great Fires tore through Idaho and Montana[5] from early July through early September. Blazes caused by settlers, loggers, prospectors, trains, and dry lightning flared across the Northern Rockies, were tamped down, and flared again as the dry heat of July and August persisted. Crews built hundreds of miles of fire line and set hundreds of backfires. Forest Service ranger and grazing specialist A.H. Abbot's field journal entries[6] provide a glimpse into the daily grind of the firefighting effort near St. Regis in the days before the Big Blowup:

> Aug. 3--Worked all day fighting fire at 12 Mile Gulch.
> Aug. 4--Fought fire all day 12 Mile Gulch. Got it under control. Approx 3 mile fire line.
> Aug. 6--Met Guard Spalding fought fire all day. Got meals and stayed at section house in even.
> Aug. 7--Started out to fight fire. Sprained ankle.
> Aug. 8--Went back to Beals.
> Aug. 9--Piled lumber. Started back with a crew to tunnel 8 fire.
> Aug. 10--Went with Crew up to fire. Went back for more men.
> Aug. 11--Went to St. Regis for supplies and another crew. Went out for men and took a record crew to Tunnel 8 Fire.
> Aug. 12--Got out to fire with men. Started building trails, etc.
> Aug. 13--Fought fire.
> Aug. 14--Fought fire.
> Aug. 15--Fought fire.
> Aug. 16--Fought fire.
> Aug. 17--Fought fire.
> Aug. 18--Fought fire and got it under control.
> Aug. 19--Fought fire.

On August 20, violent winds heralding a cold front raked the region. Fuel, oxygen, and heat were in abundance, the backfires set to combat the blazes became monsters themselves, and for two days the Big Blowup blew up. Horrific stories abound about residents of Wallace, Idaho, fleeing in panic as the wind-driven flames roared down the mountainsides into their village; streams turning red and alkaline, too hot to drink; bats emerging in midday confused by the smoky darkness; fire crews

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[5] Numerous fires burned in all of the Western states in 1910, but the largest and most devastating took place in Northern Idaho and Northwestern Montana.

[6] The journal entries appear as quoted in Pyne's book.

consisting of rangers, the military, lumberjacks, miners, hoboes, and drifters seeking shelter in adits, caves, cabins, and cellars, some suffering dreadful, suffocating deaths. Photos depict mountainsides laid waste by fire and wind, described by one witness as "a charred and smoking mass of melancholy wreckage."[7] By the time rain began to fall across the region on September 4, more than 80 firefighters were dead, 2,595,635[8] acres of national forest land had burned, and the smoke plume tinted the sun as far away as Boston.

Nearly a century later, the physical impact of the Great Fires is still visible in the forest. A highway marker atop Lookout Pass describes the 1910 firestorms and explains to vacationing families who stop to admire the view why a close look at the distant hillside reveals a mosaic of vegetation. The Great Fires also spurred an intensive examination of fire and land management policies. History shows that people had long used fire as a means to drive game in a certain direction or clear land for homes or crops or to encourage growth of useful plants. Now to many, fire had become the enemy—a demonic force to be squelched at all costs.

Policies[9] have come and gone and come back again, and there are many shades of gray in the ashes, but the basic opposing perspectives of fire as beneficial versus fire as the enemy remain and form the basis of the debates that, in the face of increasingly extreme and costly wildfire seasons, have blown into the legislative arena.

Federal, State, Local Agency Relations

- **Appropriate Management Response**

During the wildland fires of 2007, the term "Appropriate Management Response" (AMR) became the center of a new debate. While the term itself has been around for quite some time, its use came to the forefront when the USFS chose to engage in less than full

[7] Firefighter Joe Halm, as quoted by Sherry Devlin in "Mountains of Fire", a story in a series on the 1910 fires published in 2000 by the *Missoulian*: http://www.missoulian.com/specials/1910/index.html.

[8] This figure does not include the private land, tribal land, national park land, or other public land. Pyne estimates a true count of the acres burned would double that number.

[9] One federal policy referred to at FSC's meetings that has gone by the wayside as suppression strategies have changed is the 10 a.m. Policy, adopted in 1935. The policy reflected a burgeoning federal emphasis on fire control regardless of the circumstances. The 10 a.m. Policy provided that all fires were to be controlled by 10 a.m. after first reported. "Failing [an aggressive initial attack] effort," the policy reads, "the attack each succeeding day will be planned and executed with the aim, without reservation, of obtaining control before ten o'clock the next morning." In 1971, the meaning of the 10 a.m. Policy was changed to require that all fires be extinguished before they reached 10 acres. Perhaps realizing that the change negated the policy's original intent, the Forest Service dumped the 10 a.m. Policy for good in 1978.

suppression action on the Ahorn and Meriwether fires, both of which had ignited in wilderness areas.

In a July 2007 document prepared by the USFS entitled "Appropriate Management Response Summary for the Northern Rockies", AMR is defined as "any specific action taken in response to a wildland fire suitable to meet protection OR fire use objectives described in the fire management plan."[10] The document states:

> All unplanned wildland fire ignitions require an Appropriate Management Response (AMR). The AMR, which can range from aggressively suppressing a wildland fire to managing an incident as a wildland fire event, is guided by the strategies and objectives outlined in the unit Land and Resource Management Plan reflecting land and resource values, management goals and objectives. The unit Fire Management Plan (FMP) outlines fire management activities and procedures to accomplish those objectives. The objective of a wildland fire use project is to obtain resource benefits, whereas a wildfire is to be extinguished at the most efficient cost.
>
> The Appropriate Management Response is based on an evaluation of risks to firefighter and public safety, land and resource and fire management objectives, resource availability, the circumstances under which the fire occurs, including weather and fuel conditions, protection priorities, values to be protected, and cost effectiveness.

The document stresses that this is not a new concept, is not a "let burn" policy, and is not strictly driven by costs.

The actions associated with implementing AMR created some confusion on the front lines of the firefighting effort. As part of the agency's review of the 2007 fire season, DNRC documented the problems fire managers and firefighters encountered with AMR. The agency presented the report in draft format to the Infrastructure subcommittee in January and in final format to the FSC in February (Appendix H). The committee in turn asked the USFS to respond to the document, which the USFS did in July 2008 (Appendix I).

The DNRC's AMR document and the USFS's response demonstrate the agencies' divergent approaches to wildland fire and forest management. As directed by statute, the DNRC is a full suppression agency that does not use willdand fire as a forest management tool. The USFS has an array of options under AMR, from full suppression to wildland fire use to accomplish forest management objectives. The committee learned through agency and public testimony that the public is often unable to determine which agency has lead on a

[10] Document found at: http://www.fs.fed.us/r1/fire/nrcg/BulletinBoard/AMRsummary.pdf

particular fire and why certain decisions are being made. The committee requested that both agencies improve their communication with the public before, during, and after each fire season.

As directed by statute, the DNRC is a full suppression agency that does not use willdand fire as a forest management tool.

Local fire agencies also weighed in on AMR and what implementation means to their operations. A position paper presented to the FSC by the Montana State Fire Chiefs' Association and the Montana County Firewardens Association states that "local fire agencies have concerns that [AMR] is a let it burn policy that directly impacts the communities and towns in Montana."[11] The paper maintains that the AMR message is inconsistent in the following ways:

- Safety is our first concern but it will force local and state fire agencies to operate independently.
- Doing a better job of managing fires but let more and larger fires burn.
- Providing point and perimeter protection for communities while removing the funding and suppression tools to do so.
- Holding homeowners accountable for the costs of fires that start on overgrown federal forests, but do no management on those forests.[12]

The paper concludes that AMR "has little to do with the safety of firefighters. It is a mechanism for federal land and financial management and a means for those agencies to transfer the costs of their fires to state and local agencies."[13]

- **Structure Protection**

The ability for wildland fire agencies to fight fire in the wildland urban interface (WUI) has become more difficult as people continue to subdivide land to build more homes in the WUI. The committee grappled with the question that hounds fire managers during the wildland fire season: Which agency is responsible for structure protection during a wildland fire incident?

In an attempt to clarify the responsibilities of structure protection, the agency membership of the Northern Rockies Coordinating Group (NRCG) published "Community and Structure Fire Protection" in April of 2008 (Appendix J). In this document, the agencies clearly express that

[11]"Wildland Firefighting and Structure Protection in Montana--Position Paper"; Montana State Fire Chiefs' Association and Montana County Firewardens Association, 2008.

[12]Id.

[13]Id.

their primary intent is to keep the firefighters and the public safe. Once safety is ensured, the agencies will "aggressively work towards keeping the wildland fire away from structures and communities" but "[p]rotecting structures from fire will not be possible in every situation." Structure protection measures must be cost-effective and, the document provides, "[s]tate and federal agencies will limit the use of tactics such as gelling, wrapping, extensive hazardous fuels modification, and utilization of Type 1 and 2 structure engines."

The ability for wildland fire agencies to fight fire in the wildland urban interface (WUI) has become more difficult as people continue to subdivide land to build more homes in the WUI.

While the agencies pledge to engage in structure protection as risks and circumstances allow, they also maintain that "[w]ildland fire agencies have no capability or responsibility to do structure fire suppression."

The DNRC provided guidelines to its own line officers to further clarify the agency's structure protection responsibilities for the 2008 fire season (Appendix K). FSC reviewed the guidelines and discussed them with DNRC staff at its meeting in Miles City on May 30.

Through the Fire Chiefs' and Firewardens Associations, local fire agencies criticized the NRCG policy as being "just plain wrong" and contrary to DNRC's statutory mission to provide fire protection. Local agencies predicted that implementation would drive a wedge between the state and local fire entities that were supposed to be cooperating to protect Montana citizens and property.

- **Agency Coordination**

The Infrastructure subcommittee studied the coordination required to successfully operate a fire suppression program in Montana. This activity led to the discussion of coordination of forest management issues among interested local stakeholders and agencies. Discussion of both items follows.

Fire Suppression:

The number of entities involved in fire suppression requires intensive coordination year-round. The six-party agreement outlines the ability of the DNRC, USFS, Bureau of Land Management, National Park Service, Bureau of Indian Affairs and the U.S. Fish and Wildlife Service to share resources, including personnel, equipment, supplies, services, and funds. The agreement is implemented under the auspices of the NRCG. The six party agreement is a 20+ page document and is available at http://www.fs.fed.us/r1/fire/nrcg/Op_plans/05_MT_Coop_Agreement.pdf

The NRCG is the interagency focal point for coordinating the mobilization of resources for wildland fire, wildland fire use, prescribed fire and other all-hazard incidents throughout the

Northern Rockies and, when necessary, for assignment elsewhere in the United States. Located in Missoula, Northern Rockies Coordination Center also provides "intelligence and predictive services"-related products to support wildland fire managers and firefighters in the Northern Rockies in the decision making process.[14] Agencies participating in the six-party agreement provide financial support to the NRCG.

Local fire forces are made available to the federal agencies through DNRC. Cooperative fire agreements are negotiated with the state to provide for continuity and ensure proper assignment of responsibility in accordance with Montana state law. This prevents the local fire forces from having to negotiate agreements with all federal entities.

Forest Management:
The Infrastructure subcommittee also explored coordination of forest management activities.

Two projects were showcased to the subcommittee. The Montana Forest Restoration Committee is a diverse collaborative working group that has established principles for forest restoration activities that provide for early constructive engagement of wide community interests to facilitate on-the-ground work in a timely manner. The committee is undertaking pilot efforts to test the principles its members have agreed upon. Membership and additional information can be found at: http://www.montanarestoration.org/home.

The second effort examined was the Beaverhead-Deerlodge Partnership. This partnership formed to address the perceived shortcomings of the Beaverhead-Deerlodge Forest Management Plan. Partnership members—including the National Wildlife Federation, Montana Trout Unlimited, Pyramid Mountain Lumber, Smurfit-Stone, Montana Wilderness Association, RY Timber, Sun Mountain Lumber, and Roseburg Forest Products—worked with recreation interest groups to create a strategy for forest management. This strategy transformed into a draft congressional proposal, The Beaverhead-Deerlodge Conservation, Restoration and Stewardship Act (BDCRSA). The draft legislation seeks to designate and implement a stewardship plan that would be funded with stewardship dollars that remain within the designated forest. A copy of the BDCRSA is located in the appendix of this report (Appendix L).

A common theme in collaboration discussions was the inability of landowners to assure that neighboring landowners, be they private or public, would manage land in an appropriate fashion. Without such contiguous management, the efforts of some will be negated by the lack of efforts of others.

[14] http://gacc.nifc.gov/nrcc/index.htm

FSC's final recommendations indicate the committee's support for the concept of the state and local governments becoming more involved in federal forest management planning.

Representative Vincent outlined his view of the challenges of coordinating among all of the interested parties in written remarks to the committee regarding forest management collaboration in Lincoln County (Appendix M).

The collaboration process and what is considered to be appropriate management, however, are subjects that are as hotly contested as any that surround wildland fire and its impacts. Rep. Vincent's comments were quickly countered in an email to the committee (Appendix N) and in testimony provided at the FSC's meeting in Hamilton by the WildWest Institute, an organization that has participated in forest management groups and that is intensely involved in forest management projects in Montana.

FSC's final recommendations indicate the committee's support for the concept of the state and local governments becoming more involved in federal forest management planning.

Funding Wildland Fire Suppression

The Infrastructure subcommittee studied the business side of fire suppression through review of appropriation history, average costs, and the cost settlement process. Part of this process included the review of the DNRC Forestry Division's budget to gain an understanding of the funding methodology and costs of being prepared for wildland fire.

- **How it's Done**

The DNRC provides wildland fire suppression services for the 5.6 million acres of land under the agency's direct protection. Other entities such as local government, the USFS, and the Bureau of Indian Affairs also provide direct protection services for unincorporated or tribal lands.

To leverage resources, the entities work together to suppress fires. Initial attack services are provided by the direct protection agency. However, if initial attack efforts

Firefighters train on digging a fire line at the Central Montana Wild Land Engine Academy. DNRC Photo.

do not suppress the fire in 24 hours, the fire moves to extended attack status and an incident management team is assigned to the event. Incident Management teams are composed of fire professionals from various state and federal agencies. The incident commander has the responsibility to implement the plan of action. The plan could be direct suppression or wildland fire use, whereby fire is used to manage the landscape. The plan also includes everything from personal services to fire equipment needs to catering.

When fire season is over, the DNRC has the responsibility of processing fire bills. The agency must determine what costs are billable to the federal or local partners, what costs could be covered under a Federal Emergency Management Act (FEMA) declaration, and the amount of the remaining balance. The remaining balance is ultimately the cost to the state. Prior to the September 2007 special session, the legislature had not provided up-front appropriation authority for the state share of suppression costs. Instead, DNRC was required to utilize general fund appropriations provided for another reason, such as water resources work, to enable the department to fund as much of the cost as possible until such time the legislature convened to provide supplemental appropriation authority. When DNRC must use appropriations for other purposes, the department is placed in the position to slow the work towards the agency's mission due to the temporary need to divert appropriation authority to cover the cost of fire.

The September 2007 special session provided the appropriation of funds for the 2007 fire season as the agency did not have enough appropriation authority within its total budget to cover fire costs until the legislature convened in regular session on January 5, 2009. The special session resulted in $42 million in appropriation authority for FY 2008 and the establishment of a fire suppression fund for FY 2009 costs via a general fund transfer of $40 million.

Prior to the September 2007 special session, the legislature had not provided up-front appropriation authority for the state share of suppression costs. Instead, DNRC was required to utilize general fund appropriations provided for another reason.

- **Cost of Fire**

The Legislative Fiscal Division calculates the average by utilizing the previous seven years of data, removing the high and low seasons, and dividing by five. Because of the severity of the last two seasons, including FY 2008, a moderate season was rolled off the seven year stretch and the severe season of FY 2004 was rolled into the average. This season represents the seven year high in all total costs and the state share. The Figure below demonstrates the calculation.

Average Cost of Fire Suppression				
Fiscal Year	**Total Cost**	**Reimbursements**	**Net Cost to State**	
2003	6,710,688	4,684,927	2,025,761	30%
2004	79,579,965	44,582,841	34,997,124	44%
2005	3,969,096	989,945	2,979,151	75%
2006	8,302,312	3,240,042	5,062,270	61%
2007	61,000,318	21,290,928	39,709,390	65%
2008	81,544,805	31,544,805	50,000,000	61%
2009	8,474,127	2,489,460	5,984,667	71%
7 year average	34,443,883	15,190,498	19,253,385	56%
5 year adjusted average	$ 32,813,482	$ 12,650,032	$ 17,746,520	54%

- **Reimbursements from Other Parties**

Cost share agreements document the financial responsibility for incident costs. The agreements are traditionally prepared for multi-jurisdictional incidents where the decision has been made to share resources. The DNRC line officer is responsible for the cost share process including negotiation and oversight on behalf of the state. Cost share agreements can be adjusted as incidents grow or include additional jurisdictions. DNRC's Fire and Aviation Bureau managers review cost share agreements prior to signature if time allows. This was the case for FY 2008 fires, except for Jocko Lakes, Brush Creek, Black Cat and Chippy Creek which due to size and complexity were sent to a cost negotiation team consisting of representatives from DNRC, USFS, and the Bureau of Indian Affairs.

Previously, cost sharing had been based on the number of acres burned in within an agency's direct protection area. However, due to changing wildland fire tactics and the availability of additional data, the 2007 cost negotiation team had available to it five other options for cost settlement:

- you order you pay;
- cost apportionment;
- miles of control line;
- percent of perimeter miles; and
- equal share.

The options are described in the document "Fire Suppression - Cost Settlement Options" (Appendix O).

- **State Share of Fire Costs**

As noted above, the state share has historically been paid from a general fund supplemental appropriation made to DNRC after a fire season has concluded. Over time, numerous attempts by legislators to change the timing or source of funding have failed. HB 3, enacted during the September 2007 special session, created and funded a fire suppression account and placed on it a termination date of June 2009.

HB 3, enacted during the September 2007 special session, created and funded a fire suppression account and placed on it a termination date of June 2009.

The termination provision and dissatisfaction among some members of the committee with the way wildfire suppression has historically been funded prompted the subcommittee to discuss a number of different options. If a certain amount of money was set aside before the wildfire season and no other source of funds was authorized, some members argued, the amount of taxpayer money used would be limited to that amount and everyone would know before fire season how much was available to spend. An after-the-fact appropriation of whatever amount the season ends up costing is viewed by some as a blank check with no limitations. Of course, simply capping the spending would present a number of challenges to the state fire agency, not the least of which is: What happens in an extreme season when the fires last longer than the money? Do DNRC firefighters simply hang up their pulaskis, go home, and hope it rains?

Specific funding options FSC explored include::

- biennial, restricted one-time-only appropriation of $10 million in HB 2;
- removing the sunset on the fire suppression fund and creating an ongoing funding mechanism; or
- establishing ongoing funding from sources that benefit from fire suppression activities.

- **The Cost of Being Prepared**

To fulfill its statutory direct protection obligation[15], DNRC's Forestry Division is funded with a combination of general fund and fire protection fees. In addition, the department receives federal resources for specific activities such as support for rural and volunteer fire departments as well as fuel reduction. A summary of ten years of appropriation authority is included in the appendix (Appendix P).

[15]There is often confusion between funding for fire suppression and for fire protection. To clarify, fire protection involves preparation, staffing, and resources. Those items appear in DNRC's budget and fire protection fees provide some of the funding. Fire suppression costs are the costs negotiated after a fire is extinguished and are funded by the state general fund.

The subcommittee reviewed the current staffing and resource patterns of the division as well as future needs of the division given the increasing number of homes being built in the wildland urban interface and the struggles of rural and volunteer fire departments. At the request of FSC's chair, DNRC gave the subcommittee a critical needs list including staffing, equipment, and financial resources that will be necessary to maintain services and enhance firefighter safety in the face of longer, hotter wildfire seasons. The subcommittee and later the full FSC voted to endorse this list. The list is contained in Section I of the recommendations, beginning on page 30. FSC's fiscal staff prepared an analysis of the list (Appendix Q). The analysis discusses the need for, scope of, and potential funding problems associated with the recommendations.

- **Who Pays What**

The DNRC receives general fund and forest protection fees to fund fire protection activities. Section 76-13-213 limits the collection of the fee to one-third of the total appropriation for fire protection. The maximum allowed by statute (Section 76-13-201) is $45.00 per landowner in a protection district and an additional $0.25 per acre for every acre in excess of 20 acres. Section 76-13-213 provides that 60 percent of the total fee be collected from small forested land owners, or those owning less than twenty acres. The current rate of $41.65 and $0.22 per acre over 20 acres raises approximately $3.2 million.

The subcommittee reviewed the status of the fee and the limitations of the cap currently contained in statute. The potential alternatives to the fee are contained in Section C of the recommendations (Funding for Fire Protection) in this report. A discussion of the fees, entitled "Fire Protection Fee", is provided in the appendix (Appendix R).

Local Government and East Meets West

- **County Cooperative Program/Engine Replacement**

The Infrastructure subcommittee reviewed the county co-op program to understand the relationship between DNRC and local fire agencies. DNRC's Equipment Development Center builds Type 6 fire engines for distribution to the counties. These engines are loaned to the counties, maintained by the counties, and inspected by DNRC land office mechanics. These engines are used in both initial and extended attack activities. Other equipment developed for the county fire departments are pumps, water tenders, Types 5,4, and 3 fire trucks, and trailers set up for communications and generators.

Both the Infrastructure subcommittee and the FSC heard public comment on the benefits of this program and many requests to increase the number of engines produced annually to reduce the number of aging and at times, unreliable fire equipment currently in use. Members saw for themselves the differences in aged versus newer equipment at the May 16 meeting in Lewistown, where Fergus County and DNRC displayed a 40-year old truck still being used, a brand new truck, and everything in between.

At the August 20th meeting in Choteau, the committee directed staff to write a memo to Budget Director David Ewer requesting that $1.25 million from the fire suppression fund be utilized to build an additional 20 Type 6 fire engines (Appendix S). On September 4th, the committee was notified of Director Ewer's decision to allow DNRC to purchase 25 vehicle chassis for redevelopment into Type 6 engines for distribution to the counties (Appendix T).

- **Volunteer Firefighters**

While money and equipment go a long way toward helping local fire agencies maintain and enhance their initial attack capabilities, a deficit that remains and threatens to worsen is the number of firefighters willing and able to serve. Representatives of local fire agencies attended all of the FSC's meetings around the state, but participated in particularly high numbers at the Lewistown and Miles City meetings. Local firefighters told committee members that an aging population, the length of time it takes to become a skilled firefighter, and a reluctance on the part of some employers to allow employees time off to respond to wildfire incidents are all contributing to the staffing shortfall. In response, the committee agreed to back measures to provide incentives for volunteer firefighters and their employers.

- **Regional Differences**

Thanks in part to the committee's visits to Lewistown and Miles City, members learned of the striking differences between eastern and western Montana in land ownership and management, wildfire behavior, and resources that are of value to the public. In Miles City, a local firefighter told the committee about a grass fire he had responded to that was threatening a home. The homeowner told the firefighters that he didn't care about the house; it was insured. He pleaded with firefighters to save his grass, the grazing value of which was much more important. Appendix U, provided to the committee in Miles City by DNRC's Eastern Land Office area manager, highlights the regional differences from the agency's perspective.

Wildland-Urban Interface (WUI)

- **Definitions and Use of the Term**

There is general acceptance of the definition of the WUI found in the National Wildfire Coordinating Group's 2005 Glossary of Wildland Fire Terminology:

> The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

The 2007 Legislature recognized the need to provide a statutory definition of the WUI as it required DNRC to adopt rules specific to development in these areas and enacted a state fire policy. The definition contained in 76-13-102(16) reads exactly as the above definition. The term as defined for Title 76, chapter 13, parts 1 and 2 of the MCA is used in the following sections.

- **76-13-104. Functions of the department [of Natural Resources and Conservation] -- rulemaking.**
  (8) By October 1, 2008, the department shall adopt rules addressing development within the **wildland-urban interface**, including but not limited to:
  (a) best practices for development within the **wildland-urban interface**; and
  (b) criteria for providing grant and loan assistance to local government entities to encourage adoption of best practices for development within the **wildland-urban interface**.

- **76-13-115. State fire policy.**
  The legislature finds and declares that...
  (8) development of fire protection guidelines for the **wildland-urban interface** is critical to improving public safety and for reducing risk and loss.

Three sections outside of Title 76, chapter 13, parts 1 and 2 also reference the WUI.

- **76-1-601. Growth policy -- contents.**
  (3) a growth policy must include...
  (j) an evaluation of the potential for fire and wildland fire in the jurisdictional area, including whether or not there is a need to:
  (i) delineate the **wildland-urban interface**; and
  (ii) adopt regulations requiring:
  (A) defensible space around structures;
  (B) adequate ingress and egress to and from structures and developments to facilitate fire suppression activities; and
  (C) adequate water supply for fire protection.

- **76-13-702. Duties -- authority.**
  To implement the [sustainable management of public forests] policy of 76-13-702, the department of natural resources and conservation:
  (3) shall promote forest management activities within and adjacent to the **wildland-urban interface** and promote the implementation of community wildfire protection plans;

- **77-5-215. Definitions.**
  (4) "Forest health concerns" means issues that can be addressed through management or harvest of merchantable or nonmerchantable trees and includes:...
  (b) **wildland-urban interface** areas where timber harvest or forest management is necessary to prevent catastrophic or other damage to forested lands, livestock, buildings, or other infrastructure;

Prior to the 2007 legislative session, the term "wildland-urban interface" did not appear in the Montana Code Annotated.

The term assumes a more specific meaning as defined in the 2003 Healthy Forests Restoration Act. Congress intended the Act in part to reduce wildfire risk to communities by allowing prioritization of federal funds to fuels reduction near communities. Under the Act, if a community chooses to adopt a Community Wildfire Protection Plan (CWPP), the community may, through an established process, designate the WUI to suit its own needs. If CWPP is not adopted, the WUI is determined as provided in the following definition.

> (16) WILDLAND-URBAN INTERFACE. -- The term "wildland-urban interface" means--
>
> (A) an area within or adjacent to an at-risk community that is identified in recommendations to the Secretary in a community wildfire protection plan; or
>
> (B) in the case of any area for which a community wildfire protection plan is not in effect--
>
> (i) an area extending ½-mile from the boundary of an at-risk community;
>
> (ii) an area within 1½ miles of the boundary of an at-risk community, including any land that--
>
> (I) has a sustained steep slope that creates the potential for wildfire behavior endangering the at-risk community;
>
> (II) has a geographic feature that aids in creating an effective fire break, such as a road or ridge top; or
>
> (III) is in condition class 3[16], as documented by the Secretary in the project-specific environmental analysis; and
>
> (iii) an area that is adjacent to an evacuation route for an at-risk community that the Secretary determines, in cooperation with the at-risk community, requires hazardous fuel reduction to provide safer evacuation from the at-risk community.

Neither the state nor the federal use of the term is for the purpose of imposing regulation on property owners who live within the WUI. The WUI subcommittee and FSC considered various proposals to:

[16] Condition class 3 is described in the USDA Forest Service's Rocky Mountain Research Station April 2002 report: *Development of Coarse-Scale Spatial Data for Wildland Fire and Fuel Management as:* "Fire regimes have been significantly altered from their historical range. The risk of losing key ecosystem components is high. Fire frequencies have departed from historical frequencies by multiple return intervals. This results in dramatic changes to one or more of the following: fire size, intensity, severity, and landscape patterns. Vegetation attributes have been significantly altered from their historical range.

- require certain vegetation management and building standards for residents of a defined WUI;
- give local governments specific authority to regulate development and require certain standards within a designated WUI;
- require insurance companies to offer premium incentives for property owners within a designated WUI;
- require insurance companies to educate property owners within a designated WUI about best practices for building on and maintaining property that reduce the risk of fire.

FSC also considered proposals for providing incentives to property owners who maintain their structures and property in a manner that reduces the risk of wildfire.

Implementation of either kind of law (regulatory or incentive-based) would have to include as a key component identification of the WUI beyond the definition provided in 76-13-102(16), which does not include discussion of relative wildfire risks associated with different landscapes and vegetation types. Whatever entity becomes ultimately responsible for delineation of the WUI, that process must occur—and the entity must consider as a factor the potential for wildlfire in these areas—so that every property owner knows whether his or her property lies within or outside of the area to which the regulation or incentive applies.

Much of the WUI debate has centered around whether use of fire-safe building materials, managing vegetation, and providing adequate access and water should be voluntary on the part of the property owners and communities or whether a state or local government should require and enforce certain standards for people who live in certain areas.

Through development of CWPPs, which are community-driven, many counties have defined where the WUI is within their jurisdictional boundaries. Again, however, those communities were contemplating prioritization of federal fuels reduction funds, not potential regulation, when identifying the WUI.

Much of the WUI debate has centered around whether use of fire-safe building materials, managing vegetation, and providing adequate access and water should be voluntary on the part of the property owners and communities or whether a state or local government should require and enforce certain standards for people who live in certain areas.

- **The WUI and Local Governments**

Opinions also diverge on whether or not local governments already have all of the statutory authority and non-statutory tools they need to mitigate wildfire hazards in the WUI. A staff

paper presented to the WUI subcommittee in January 2008 focuses on this debate (Appendix V). And even with no government mandates, motivated communities can affect changes that will make a difference to property owners and forest health and promote a relatively safe coexistence with the random whims of nature.

- **One Community's Approach**

In the summer of 1984, Helena-area residents watched the eerie orange glow produced by the flames of the North Hills fire night after night. The silver lining of that orange glow for people living in Lewis and Clark, Broadwater, and Jefferson Counties was that the fire prompted a group of concerned citizens to form the Tri-County Fire Working Group (Tri-County). Membership in Tri-County includes citizens, representatives of local, state, and federal government agencies, contractors, and fire departments. At one of FSC's first meetings, Tri-County demonstrated the wildfire hazard mapping project the group has undertaken for interface areas in the three counties.

Originally a fire prevention education organization, Tri-County has evolved into a valuable hazard identification and risk mitigation entity that many landowners in the WUI have come to rely upon for advice and on-the-ground mitigation assistance. The Regional Community Wildfire Protection Plan (CWPP) developed by Tri-County states that the group "found that with the money available for hazard mitigation in general, and with the generous match provided by numerous members and landowners it was able to step out of the role of talking about fire prevention and mitigation to a very proactive position of wildland fuel hazard reduction projects."

For the CWPP, Tri-County defined the WUI as "the area within four miles from communities that possess a population density exceeding 250 people per square mile." A fuel hazard layer and a fire ignition layer—based on analysis of twenty years of natural and human caused fire starts— placed over the WUI layer ultimately results in a fire risk map for the area that ranks parcels on a risk scale of one to 12. The CWPP also explores various methods of fire hazard reduction and treatment options. This kind of information helps property owners help themselves and their neighbors and encourages the kind of personal responsibility that FSC members heard repeatedly exists only intermittently in areas of the state certain to be affected by wildfire.

- **Other States**

As was evident during the fall of 2007 and summer of 2008 when dozens of wildfires burned through California, prompting evacuations, destroying homes, and costing taxpayers billions of dollars in suppression efforts and lost property, Montana's not alone in struggling with how to handle development in areas prone to wildfire. Western states have implemented a variety of means to deal with the WUI, as represented in a March 2006 staff report to the

Environmental Quality Council and a November 2007 memo produced by the Legislative Audit Division. (Appendix W)

Wildland-Urban Interface Cost Study

It has long been assumed and anecdotally supported by fire suppression agencies that fire suppression in wildland areas costs less than suppression where homes and other structures are involved. Certainly the tactics are different. As the WUI subcommittee delved deeper into how fire suppression costs might be controlled and debated whether regulating development in the WUI was a reasonable proposal, members wanted more data on which to base their decisions.

In January, Headwaters Economics (HE), a nonprofit research group headquartered in Bozeman, presented its findings to the WUI subcommittee on its study of the potential for future development on fire prone lands in the west. Key findings of that study, as provided to the subcommittee and as they appear on HE's website,[17] are:

- Only 14% of forested western private land adjacent to public land is currently developed for residential use. Based on current growth trends, there is tremendous potential for future development on the remaining 86%.
- Given the skyrocketing cost of fighting wildfires in recent years (on average $1.3 billion each year between 2000-2005), this potential development would create an unmanageable financial burden for taxpayers.
- If homes were built in 50% of the forested areas where private land borders public land, annual firefighting costs could range from $2.3 billion to $4.3 billion per year. By way of comparison, the U.S. Forest Service's annual budget is approximately $4.5 billion.
- One in five homes in the wildland urban interface is a second home or cabin, compared to one in twenty-five homes on other western private lands.
- Residential lots built near wildlands take up more than six times the space of homes built in other places. On average, 3.2 acres per person are consumed for housing in the wildland urban interface, compared to 0.5 acres on other western private lands.

After hearing this report, the WUI subcommittee recommended and FSC agreed to authorize the use of a portion of the committee's budget for DNRC to contract with HE to take a detailed look at whether and how much residential development adds to the cost of wildfire suppression.

[17] www.headwaterseconomics.com

HE's presented its findings to FSC at its August meeting in Choteau. As reported and as the information appears on HE's website and in Appendix C, the key findings are:

- Firefighting costs are highly correlated with the number of homes threatened by a fire.
- The pattern of development (dense vs. spread out) is an important contributing factor.
- When large forest fires burn near homes, costs related to housing usually exceed $1 million per fire.
- As few as 150 additional homes threatened by fire can result in a $13 million increase in suppression costs in a single year.
- For all agencies involved in fire suppression in Montana, the estimated annual costs related to home protection for 2006 and 2007 were approximately $55 million and $36 million, respectively.
- If current development trends continue, fires seasons similar to 2006 and 2007 could cost $15 to $23 million more by 2025, bringing total fire suppression costs associated with homes to between $51 and $79 million dollars. Adjusted for inflation, future costs could be as high as $124 million in 2025.
- A conservative estimate is that 25% of all costs of protecting homes from wildfires within Montana are paid for by the state. Therefore, Montana's costs for home protection in 2006 and 2007 are estimated to have been $13.9 million and $9.2 million, respectively.
- By 2025, Montana's future costs, adjusted for inflation, could be as high as $31 million.

The findings and report methodology were disputed by the Montana Forest Owners Association (MFOA) in testimony before FSC at its final meeting on September 12. MFOA's policy position can be found in the exhibits of that meeting or on the organization's website.[18] HE has responded to MFOA's assertions in what is likely to be an ongoing discussion, particularly if legislation to regulate development in the WUI moves forward.

Wood Products Infrastructure

The wood products industry is in steady decline, with mill closings and layoffs occurring on a regular basis. Panelists and citizens providing testimony at all of FSC's meetings in western Montana told the members that loss of the state's wood products infrastructure would be devastating not only to the state's overall economic health and the economic health of thousands of families, but also to efforts to mitigate wildfire hazards. Much of FSC's meeting in Libby focused on the wood products industry, its history in the area, its precipitous decline, and the reasons for that decline. Those who spoke to the committee in Hamilton and Libby

[18] www.forestsmontana.com

made passionate arguments from all sides of the debate (conservation, industry, and governmental agency) about who—or what—is to blame for the state of the industry.

The Montana Wood Products Industry Initiative sums it up this way:

> Montana's forest products industry is facing an unprecedented situation involving downturns in the construction and housing components of the national economy, record high energy prices, limited timber inventory on private lands, and reduced availability of timber from National Forests

Through its recommendations (see Section F of the recommendations), many of which originated in the Montana Wood Products Industry Initiative, FSC recognizes that whatever factors played a role in the downturn, measures must be taken to preserve the industry's infrastructure.

Contracting

- **Overview of Contracting Subcommittee Activities**

As a result of a number of panel discussions among the various firefighting agencies, extensive public comment, and extensive comments from private firefighting contractors, the FSC appointed a standing Contracting subcommittee to analyze the role of private firefighting contractors in fire suppression across the state. The members of the subcommittee included Representative Jim Keane and Senator Ken Hansen, although a number of FSC members attended subcommittee meetings.

The subcommittee met two times during the interim. Members of the subcommittee also attended numerous fire suppression contracting training programs, fires suppression contracting meetings, and tours. Subcommittee members were also actively involved with various state and federal agencies, resolving coordination issues among those agencies related to fire suppression contracting. The subcommittee members were so proactive in attempting to resolve various contracting problems, that one could easily characterize the subcommittee members as the "Legislative Fire Suppression Contracting Problem Suppressors", when it came to engaging the respective parties one on one and resolving private fire suppression contracting and agency coordination issues.

The subcommittee's first meeting consisted of an informational overview on the fire suppression contracting process and extensive public comment from private contractors and other members of the public. The directed purpose of this first meeting, outside of educational orientation, was to solicit specific suggestions and solutions from the firefighting agencies, the contracting community and the public.

The subcommittee's second and final meeting included a presentation on aviation contracting, an update on the private contractor inspection process, an overview of workers' compensation issues, and the adoption of subcommittee recommendations.

Declining federal land management agency resources over the years have resulted in the increased use of private fire suppression contracting services.

- **Private Fire Suppression Contracting in Montana**

Dramatic changes over time have occurred in terms of how, and to what extent, local, state, federal, and tribal agencies use contracted fire suppression services. In 1984, the governmental fire suppression resources applied to fires accounted for 75% the total resources and private contractors made up the remaining 25%.[19] In 2004, the resource split was 50% government resources and 50% private contracting resources.[20] In 2007, private contracting resource made up 60% and government resources accounted for 40%.[21] Declining federal land management agency resources over the years have resulted in the increased use of private fire suppression contracting services. This trend is likely to continue in the future.

In the Northern Rockies Coordinating Region during 2007, there were 1,191 dispatches for contracted services, total days out amounted to 16,246 days, length of contractors incident assignments averaged about 14 days, and the average total number of contractor days that a contractor was out in the field for the season was 40 days.[22] The total cost for private fire suppression contracting services for water handling activities that occurred primarily in Montana in 2007 amounted to $28.5 million.[23] This excludes a number of other private contracting fire suppression services such as aviation fire suppression services.

Starting in 2006, as a result of federal and state audits, congressional and state legislative oversight, and declining state and federal resources, the Northern Rockies regional fire suppression agencies moved away from the historic standard fixed rate for service contracts to a competitive bidding process known as best value contracting.[24] In the Northern Rockies

[19]Tim Murphy, NRCG Contractor Coordinator

[20]Id.

[21]Id.

[22]Northern Rockies Wildfire Contractors Association, Position Pater, March 4, 2008. See http://leg.mt.gov/css/Committees/Interim/2007_2008/fire_suppression/meeting_documents/March4materials.asp

[23]Id.

[24]For a good overall review of best value contracting facts and statistics, see NRCG Montana Legislature Fire Committee PowerPoint presentation at http://leg.mt.gov/css/Committees/Interim/2007_2008/fire_suppression/meeting_documents/March4materials.asp

region, best value is defined as a procurement and contracting process which allows awarding contracts based on cost effectiveness and impartial consideration of various factors such as pricing, experience, training, and past performance of personnel and capabilities and condition of equipment, thereby providing the greatest overall benefit in response to the requirements.[25] Best value contracting also influences the priority for dispatching contracting resources in many cases.

In 2007, the best value contracting competitive bidding for engines, water tenders, and heavy equipment in the Northern Rockies saved state and federal agencies $1,031,176.[26]

As might be expected, when there is a transition from one contracting process to another, a number of glitches arise. The subcommittee heard hours of testimony regarding best value contracting.[27]

- **Subcommittee Identified Contracting Issues**

Extensive public comment and subcommittee deliberations led the subcommittee to formally conclude that there were specific contracting matters in need of attention, including:

- coordination and communication among and between the private contracting community and local, state, federal, and tribal fire suppression agencies;
- overall efficiency of the contractor equipment inspection process;
- coordination of training programs between governmental entities and private contractors;
- private contractor workers' compensation insurance rates and compliance;
- dispatching of closest private contracting resources;
- organization of the private contracting community;
- business management resources allocated to incidents;
- best value contracting; and

[25]Northern Rockies Strategic Action Committee for Private Fire Suppression Resources, 2/23/05.

[26]Tim Murphy compilation, see footnote #13.

[27]See the minutes from the March 4, 2008 and March 27, 2008 Contracting Subcommittee meetings.

- review of the DNRC Aviation Program.[28]

The subcommittee ended up making formal recommendations to the full FSC at the March 28, 2008 FSC meeting (see subcommittee recommendations on page 27 of this report). Those recommendations were approved by the FSC to be put out for public comment and finally approved by the FSC at its September 11, 2008, meeting.

In addition to the items discussed above, individual subcommittee members identified the need to utilize mechanized fuel reduction private contracting services on both state and federal lands within the state in a proactive manner.

- **Subcommittee Member Actions During the Interim**

The marching orders from Chairman Cobb to FSC members at the beginning of the interim was: if the committee members could act as a facilitators to resolve fire suppression problems during the interim, then those committee members should be as proactive as possible. In addition to the full FSC membership, the Contracting subcommittee members took this message to heart and spent a lot of time during the interim in the field; in agency offices; at private contractor training programs and association meetings; and in maintenance shops, engine shops, and aviation hangers talking to people about resolving fire suppression contracting issues that the subcommittee had identified.

During the interim, subcommittee members:

- specifically requested that state and federal fire suppression agency staff sit down with private contractors and coordinate activities and maintain open lines of communication;

- met with Department of Labor (DOL) staff to ensure that DOL would be out in the field coordinating with fire suppression agencies to ensure that all private fire suppression contractors were in compliance with the workers' compensation laws;

- met with the Director of the State Fund to ensure that representatives from the State Fund attend private contractor association meeting to discuss ways to keep workers' compensation rates low and to coordinate database information regarding insured contractors with the DOL;

[28]See the minutes from the March 27, 2008 Contracting subcommittee meeting.

- met with the Northern Rockies Coordinating Group contracting coordinator to discuss improving the best value contracting process generally and as it relates to dispatching closest private contracting resources;

- attended a mechanized fire suppression training and encourage the Forest Service and the DNRC to utilize mechanized fire suppression and fuel reduction private contracting resources;

- met with Legislative Audit staff to discuss the feasibility of requesting a performance audit on the DNRC aviation program; and

- attended private contractor association meetings to discuss legislative activities and issues.

- **Conclusion**

The importance of private contracting for fire suppression services cannot be overstated. Reliance on private contracting services will continue to increase in the foreseeable future. Ultimately, the goal is to ensure that the contracting process and dispatch systems operate in a safe, competent, productive, and cost-effective manner for the citizens of Montana.

Biomass

Wood Methanol Production - Submitted by Sen. Rick Laible

This report is a follow up summary of the presentation we had at the Hamilton Fire Suppression Meeting in April by Dr. Kristiina Vogt from the University of Washington. The first half of the summary came from Dr. Vogt, and the second half is about Montana, and our opportunities for biofuels.

There are several global issues that, at first glance seem unrelated. These issues include: higher incidences of catastrophic forest fires, global climate change, the need for increased energy sources, the global peaking of oil and gas supplies, the need to develop substitutes for fossil fuel energies, developing sustainable rural economies, decreasing poverty, and the loss of productive lands. In the past, each of these issues was treated as a separate problem in which solutions were derived by focusing on only one individual problem at a time. Today these global issues are being formally linked because the combustion of fossil fuels to produce energy, the main ingredient fueling industrialization, is now causally linked to climate change and emission of greenhouse gases. Fossil fuel combustion is a major contributor to CO2 emissions and these levels are increasing as more countries become industrialized. It is therefore logical to develop strategies that shift our reliance from fossil fuels to alternative energy resources that are carbon neutral and can help reduce our total emissions of CO2. Mitigating climate change is driving the development of technologies to convert renewable resources in biofuels that can be substituted for fossil fuels.

Even though renewable resources are used to produce biofuels, some of these biofuels may not be climate friendly or carbon neutral when fossil fuels are consumed in their production. For example, if fossil fuels are used to increase the growth rates of crops or used to transport them to the markets, these biofuels may mitigate less CO2 emissions, but in actuality are not carbon neutral. Residual wood biomass has the lowest net CO2 equivalent emissions compared to most food crops used to produce biofuels (ethanol from corn, wheat, sugar beets, etc.). Some of the concerns with food crop biofuels is that the production of ethanol uses almost as much energy as it generates. In addition the use of food based biofuel production also has lead to significant worldwide food price increases.

The energy crisis is also raising concerns about the environmental and social impacts of our dependence on energy derived from fossil fuels. Even if new energy supplies are developed, those energy supplies will have to be accepted by the stakeholder groups and satisfy their criteria for both sustainable management and environmental friendliness. The social, economic or environmental impacts of producing the different biofuels will ultimately determine which biofuel will become a possible fuel substitute.

In another example demonstrating the need for biofuels to be environmentally friendly, the European Union recently decided that it will not import palm oil from Malaysia and Indonesia for biodiesel production because of the deforestation concerns. This loss of forest is detrimental to the survival of the local people that are dependent on those forest for their primary source of energy (i.e., fuelwood). This forest loss is also occurring at a time when fuelwood supplies are inadequate to meet the energy needs in many developing countries.

The future acceptance of biofuel production from biomass hinges on whether it can provide significant environmental and societal benefits. Since systematic assessments of the environmental benefits of using biomass to produce biofuels are sparse, especially from forests, the goal is to assess the amounts of methanol production possible from agriculture and forest materials/products.

Converting available biomass from municipal, agricultural and forest wastes to bio-methanol can result in significant environmental and economic benefits. Keeping these benefits in mind, one plausible scenario is the potential to produce energy by using bio-methanol in five of the western United States. In this scenario, the bio-methanol produced is from different biomass sources and used as a substitute for fossil fuels in energy production. In the U.S. West, forest materials are the dominate biomass waste source and could, with the addition of other biomass waste replace an amount equivalent to almost all of the fuels required by motor vehicles in these states.

As members of the Fire Suppression Committee our goals were to find solutions to the costs of fire suppression within our state, but as is typical when you embark upon one journey, there will be many stops along the way.

Our committee was formed, not because of the health risks of smoke within our valleys, or to the risk to our communities, but to the cost of fighting these fires. If the Federal government paid for all of our Fire Suppression costs and fire suppression costs didn't impact the state in excess of $ 40.0 million a year, we would not have had a special session.

Almost all of the information above, regarding biofuels, we already know. In short, bio-fuels from food sources, cellulous fibers, or municipal landfills will decrease our demand for fossil fuels, so what in fact does this have to do with fire suppression. We reduce our dependency on fossil fuels by converting biofuels (corn, wheat, et. al) to ethanol, but first of all it doesn't work unless we subsidize the process. Secondly, it takes almost as much energy to grow the crops, and then process into fuel as the ethanol created, not to mention the amount of water required in the process.

Our National Forests in the western states are dangerously over fueled and under the current guidelines and funding the agency is unable to manage our forests. It's not that the Forest Service doesn't want to manage the forests, they just don't have the resources and this is where methanol production from our over fueled forests comes into play. Thinning our forests to healthy coverage of trees will reduce the risk of future fires, provide cellulous fiber for the creation of methanol and reduce the carbon emissions as a result.

The technology for biomass utilization to methanol as proven, would allow for the processing of methanol (165 gallons per 1 dry ton of fiber) and doesn't require the construction of large refining facilities. Small mobile units can process the fibrous materials in the forest complex, and distribute the finished fuel locally.

If this technology is proven, economically feasible then why isn't it being done? First of all the methanol producers don't have a lobbyist group to access subsidies like the farmers, oil producers and I doubt there will be a section in the "farm bill" for methanol producers. Secondly, funding will be required to put the first mobile processing units into production and of course a distribution system will need to be interfaced. The last hurdle, the Forest Service will have to manage the National Forests to provide access to the dangerous fuel loads within our forests.

So consider this scenario. The Forest Service, or DNRC does a timber sale, sells the merchantable timber, sells the small diameter ladder fuels, and converts the slash piles into methanol. Results, money in the general fund, jobs in our community, forests in a healthy condition, fire risks have been reduced, less carbon emissions, and we have lessened our dependence on foreign oil.

In 2007, China became the world's largest methanol producer and consumer, so this can be done, we just need the will to do it. Or will it take $ 7.00 gallon fuel before we act.

In addition to the methanol potential discussed by Sen. Laible above, FSC members examined other aspects of biomass created as a result of forest management projects. These included the Fuels for Schools program, proposal of a biomass tax credit, and the role biomass might play in helping retain the state's wood products infrastructure as the bottom falls out of the industry.

Conclusion

As the 2008 wildland fire season progressed, some joked that if Montanans want to avoid catastrophic wildfires in the future, they should encourage the legislature to appoint a committee to study the subject every summer—it worked in 2008. As the subcommittees finished their work in the spring, most members were prepared to accept DNRC's invitation to visit fire camps as the season heated up and see for themselves the complex business operations that spring up when wildfires blow up. Some members did visit a handful of fires, but the massive, weeks-long events that cost millions and prompted the committee's creation never did materialize. Through their observations, dire predictions, and recommendations, however, the members of FSC have articulated their conviction that more extreme and dangerous wildfire incidents lie in the state's future. Montana's citizens, fire professionals, and elected officials can't make it snow, nor can they slow the wind on a hot July day or arrest the pine beetle epidemic. But the members of FSC trust that the information and recommendations contained here will be seriously considered by all to whom they are directed. The things all Montanans value, for various reasons—trees, grass, water, wildlife, human life, may depend on it.

Appendix A
House Bill No. 1

2007 Montana Legislature

About Bill -- Links

HOUSE BILL NO. 1

INTRODUCED BY CALLAHAN
BY REQUEST OF THE GOVERNOR

AN ACT PROVIDING RECOVERY FUNDS FOR THE STATUTORY APPROPRIATION FOR EMERGENCIES AND DISASTERS; PROVIDING FOR A STUDY OF STATE FIRE SUPPRESSION METHODS AND COSTS; REQUIRING A REPORT ON IMPLEMENTING AUDIT RECOMMENDATIONS; PROVIDING APPROPRIATIONS FOR FIRE SUPPRESSION AND FOR DISASTER RESPONSE AND RECOVERY ACTIVITIES; PROVIDING AN APPROPRIATION FOR THE FIRE SUPPRESSION STUDY; AND PROVIDING AN IMMEDIATE EFFECTIVE DATE.

AN ACT PROVIDING RECOVERY FUNDS FOR THE STATUTORY APPROPRIATION FOR EMERGENCIES AND DISASTERS; PROVIDING FOR A STUDY OF STATE FIRE SUPPRESSION METHODS AND COSTS; REQUIRING A REPORT ON IMPLEMENTING AUDIT RECOMMENDATIONS; PROVIDING APPROPRIATIONS FOR FIRE SUPPRESSION AND FOR DISASTER RESPONSE AND RECOVERY ACTIVITIES; PROVIDING AN APPROPRIATION FOR THE FIRE SUPPRESSION STUDY; AND PROVIDING AN IMMEDIATE EFFECTIVE DATE.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Fire suppression committee -- study. (1) There is a fire suppression committee established to conduct a comprehensive fire suppression study.

(2) The committee consists of six senators appointed by the committee on committees and six representatives appointed by the speaker of the house. Three senators and three representatives must be members of the majority party, and three senators and three representatives must be members of the minority party.

(3) The legislative services division shall provide staff assistance to the committee, and the committee may receive staff assistance from the legislative fiscal division and the legislative audit division. The committee shall conduct meetings in Miles City, Libby, Thompson Falls, Lewistown, and Hamilton.

(4) The study must include:

(a) an investigation of firefighting operations in Montana, including operations on tribal land and private land, by the state and federal governments and the management policies affecting the success of those operations;

(b) an investigation of the efficient use of fire suppression resources, including equipment and firefighters;

(c) an investigation of impacts of operations on private land and on the effective use of private resources to fight fires; and

(d) an investigation of state and federal forest management policies and how those policies may contribute to an increased number of wildfires, greater safety risk to firefighters, or compromised effectiveness of fire suppression efforts.

(5) The fire suppression committee shall complete the study by September 15, 2008, and report to the 61st legislature on its findings and recommendations, including any recommendations for legislation.

Section 2. Report on implementing audit recommendations. The department of natural resources and conservation shall prepare a report to the governor and the 61st legislature on its progress in implementing the 27 recommendations of the legislative audit division contained in the December 2004 performance audit entitled "Wildland Fire Administration".

Section 3. Appropriations. (1) There is appropriated $39 million from the state general fund to the department of natural resources and conservation for wildfire suppression and for wildfire disaster response and recovery activities in Montana.

(2) There is appropriated $3 million from the general fund to the department of military affairs for fiscal year 2008 for wildfire suppression and for wildfire disaster response and recovery activities in Montana.

(3) Of the $42 million appropriated to the departments of natural resources and conservation and military affairs for fiscal year 2008, up to $16 million is intended to be treated as the recovery of money previously expended under 10-3-312 in fiscal year 2008.

(4) The amounts appropriated in [this act] may not be used to purchase or lease capital assets on a long-term basis.

Section 4. Appropriation. There is appropriated from the state general fund to the legislative services division $200,000 for the purpose of conducting the study provided for in [section 1].

Section 5. Effective date. [This act] is effective on passage and approval.

- END -

Appendix B
Summary of Public Comment Received

SUMMARY OF PUBLIC COMMENT RECEIVED
by the
Fire Suppression Interim Committee
January-February, 2008

*** Please note: The comments below are intended to summarize and categorize the large amount of written public comment the Fire Suppression Committee received during its public comment solicitation in January. They are not intended to be all-inclusive, nor are they intended to be entirely verbatim; in some cases, edits were made in the interest of brevity or for the purposes of clarification.*

HOMEOWNER RESPONSIBILITY

- The homeowner must prepare for fire each year. The homeowner must take the responsibility to prepare for fire.
- The local volunteer fire departments, communities, state and federal agencies and local governments must educate and remind homeowners each year to prepare for fires. It should become instinctive to all homeowners to prepare for fires.
- Homeowners need to know what their chances of fire protection are from local, state and federal agencies. Homeowners should realize that under large fires, local resources will be overwhelmed and that from federal agencies with limited funds and resources, the chances of protection in large fires is slim at best.
- We expect insurance companies, locals and state and federal beginning immediately in April to notify the public about their responsibility to their own homes as well as the chances of success on fighting fires around their homes regardless of whether the homes are prepared for fires.
- Fire proofing homes is far easier than fire proofing the forest. Mandatory metal roofs, removal of fuels near homes and perhaps surgical thinning immediately adjacent to homes are the best way to deal with wildfire.
- The legislature should pass a law mandating basic requirements of homes for fire protection.
- Local governments should require certain fireproofing of all new homes and restrictions of fire proofing within all new subdivisions.
- Local governments must educate forest users and rural property owners on how to address slash and debris removal and encourage the public to participate.
- It is not the job of firefighters to reduce fuels around structures that are in the path of a wildfire. Taxpayers should not pay for preparing someone's property for an oncoming wildfire.
- The legislature or local counties should designate wildland hazard areas throughout our counties. We can create special taxing areas, special impact fees or other fees for those who insist on building in hazardous urban wildland interface areas. We can urge planning boards to look seriously at proposed subdivisions and educate private homebuilders who insist on building in fire risk areas.
- The homeowner who builds in the interface or near forests should not have to pay any increased taxes, fees or impact fees unless it is clear that the fees and taxes can be shown will be used to protect that person's home. If it is not, then why pay for a tax increase when it is clear that the home will not be protected. It must be clear that any fee or tax will be used and how used to protect a home.

- There is the argument that if you move to the woods the local communities and government say you moved up there it's your problem. But if you are also paying taxes for fire protection then you should expect something in return.

- All agencies, local communities, fire fighting groups, dept of state lands, etc. should remind people to prepare for fire season each spring and during the summer and also remind them in the fall. "Pray for rain, but prepare for fire" should be the motto. Who to contact, how to prepare for fires, what to expect in fire season from small to large fires and the chance of being helped during fire seasons to your home and property.

- Developments and homes should return some form of money each year in taxes and fees for fire protection.

- Many pay taxes to the county for county fire protection not DNRC but some have never seen a county fire engine respond to our area. Some locals just are not capable of fighting fires for homes or even fires on land.

- Encroachment of homes in fire prone areas is an increasing problem and is costing the average taxpayer too much. These homes should be taxed according to danger levels of location. If it taxes them out of having a home there so be it. Not fair to normal taxpayer to protect home.

- With a good deal of the state's growth occurring in the wildland-urban interface, polices that restrict, or at least require some level of minimum standard for, development in wildfire hazard areas have the potential too minimize the increasing wildfire vulnerabilities in the state.

- Homeowners must be aware and plan and provide for the importance of an access road that allows both access to the site for fire and emergency vehicles and that will provide an escape route for in habitants. Many homes and subdivisions in the WUI are being located in very hazardous locations. Locations such as in draws or steep slopes where the risk to the homeowner and firefighter is extreme. A possible solution would be to just not allow development in these areas.

- Landowners who have reduced their fire hazard should be exempt from expenses and liabilities occurred from fire suppression. Consider enactment of the Oregon Forestland-Urban Interface Fire Protection Act or something similar.

- City dwellers of incorporated cities should not have to pay for fire fighting services outside of city limits. We are subsidizing those outside of city limits with our own tax dollars.

- We still have an extremely hazardous condition with existing homes that are not "firewise", plus the many more that are being constructed in the WUI. Recommend an increase in funding for educational efforts and grants that create defensible space. Encourage insurance companies to carefully consider existing fire conditions before insuring. A harder line position would be to deny insurance through state law for those properties that are a fire risk to themselves and their neighbors.

- Building codes vary for residences outside of municipalities. Many materials are recognized as being fire resistant while others are not. Recommend building codes that promote fire resistant materials. Either the State sets them or the locals set them but they need to be done.

- The definition of WUI means much to many people. The wildland urban interface consists of high density housing, low density housing and dispersed housing that is adjacent to fuel conditions that can burn with high intensity during wildfire season. Low density and dispersed density housing applies to many family forestland owners which across the nation is defined as ownership of at least 10 forested acres and the possession of a written and certified forest management plan. We need a good definition of what it means.

- There needs to a list each year for each home whether it is safe or not to help with fire protection.

- The current trend is to blame the skyrocketing cost of fire suppression on residential construction in the wildland urban interface. We are confusing cause and effect when we look at suppression costs in that way. Without a doubt, large sums of money are spent on protecting life and property in the WUI. But the primary risk from those catastrophic wildfires lies outside of the WUI on our public lands. The deplorable condition of our public land resources and the astronomical fire danger that exists there is the real problem. Landowners in the WUI have a definite responsibility to treat their property to minimize wildfire risk and maximize survivability of their property in the event of a fire. If homes were not in the WUI, private timberlands and ranch lands would be. Those lands also have significant a value that deserves protection every bit as much as a residence. No matter what, there will always be an interface between public and private lands. While the mangers of our public lands may be willing to allow our public resource to be destroyed and wasted, no private landowner would be or can be so negligent. We need to re focus our efforts on minimizing the risk of catastrophic wildfires starting on public lands and then burning into the interface with private lands whether there are homes there or not.

- Wrapping expensive houses is a terrible PR job. Homeowners should be responsible for their own home protection.

- Those who elected to have a house in the forest/rural or forest/urban interface should pay special government taxes that are reserved for fire fighting activities.

- Central questions for government on structures
  - How much does the public pay to protect private structures in the public firefighting efforts?
  - Issue- are we paying for them to protect against the public land fires?
  - How do demands for funds, human resources, equipment, and firefighter training differ for structure protection?
  - What are the current trends in costs for structure protection?
  - What are the projected changes in the number of structures vulnerable to wildland fire?
  - Who should be responsible fore defending structures?
  - Who should pay the costs of structure protection?
  - Does use of the state's general fund to pay structure protection costs reflect tax accountability in the state budget?
  - What policies and tax structures have other states and public entities developed to address structure protection and accountability in budget and taxation?

- Humans have caused many fires to ignite near the wildland urban interface. Those people must be punished if caught. Also people need to be made aware of the statistics of man caused fires and they are just as dangerous and need to be prepared for.

- Have a qualified fire inspector tour your home and follow their recommendations. Attend fire training and support your fire departments, be aware of your county government polices and concentrate on what role your disaster and emergency services is playing in this and if your county DES officer is qualified to make the required decisions.

- Currently I am double taxed for fire suppression. We have the state fire protection, based on acreage and at the same time a mill levy on entire property evaluation goes to the local fire department.

- If the state simply does more rules, regulations, etc. on wildland interface with the feds doing less, there are not the resources at state disposal to do more. If the state spends more, the problem still is dealing with a landowner that we have little or no control over how they fight fires.

- Pass legislation that requires all people who reside within or bordering forest or rangelands that are fire prone to form and/or to belong to rural fire districts. Rural fire districts must be granted the authority and responsibility to require residents or other property owners within the district to (1) adhere to county building codes and maintenance requirements that are designed to reduce the risk from forest fire generated burning embers. (2) Through fire assessments on their property, fire district residents must pay the full cost of fire prevention, pre-suppression (engines, fire crews, etc) and fie suppression.

- The alternative to the suggestion above is if we pay the taxes will you defend our homes.

- Subdivisions are being approved without adequate consideration for wildfire risk including water supply and ingress and egress. Require Firewise assessment of the proposed subdivision at the time of the application and make the recommendation from the assessment a requirement for approval. Lincoln County currently doing this.

- Need to have fixed the fire protection fee since condos should probably be paying more and to fix an easier way to have the existing fee allocated without having the DNRC staff redo the land descriptions from Dept. of Revenue records to allocate the fee.

OTHER LANDOWNERS

- The private landowner needs to be informed at the early stages of the fire as to what is expected of them as to paying for any of the resources used by the fire agencies, particular private resources. If the private landowner is expected to pay for any of the resources, they should be involved in the management of the fire.

- Saving grass can be done, but it takes fire engines to do it. Most crews are focused on controlling the perimeter, and don't commit resources to mopping up fire within the interior. This usually results in bitter complaints from the owners of the grass. The legislature can help in establishing some expectations for teams to manage big fires on private lands and can provide the liaisons to talk with ranchers about what can be realistically accomplished.

- Ranchers and farmers must be informed by both local, state and feds every year what the capacity of fighting fires are and what is expected if a major or minor fire occurs. Landowners need to understand years ahead of what can or cannot be done in fires. There are too many mixed messages by fire management on what can be done on fires. Landowners may have understandings of what fire fighting is and can be done. Landowners also need to be educated as to what can be done to protect their resources.

- Landowners need to take care of their own forested lands. Work with timber companies, land trusts, etc. If the feds are being asked to take care of their lands, privates should do the same.
- There needs a decision from federal agencies if landowner's grass and cows have any value to be protected.

- As a REIT [real estate investment trust], Plum Creek pays no corporate income taxes to our state. As these lands become developed, our WUI problems increase dramatically. The problem of more fires in these WUI owned by Plum Creek will be exacerbate greatly as Plum Creek continues to sell timberlands for real estate. It just does not make sense to me that Plum Creek makes money selling the land to developers, developers make money creating subdivisions, and the taxpayers are left holding the bag when a fire threatens the newly formed development.

- The local and state governments should restrict development in the Plum Creek Lands to place subdivisions in defensible positions, to have taxes and fees from the subdivisions and Plum Creek to pay for fire protection even on a limited basis.

- The federal government should buy most of the Plum Creek lands and keep development out.

- Plum Creek's comments:
  - We would support some type of equitable tax surcharge or user fee linked to structures located in the WUI. The revenue would help fund the added costs of fire suppression associated with existing dwellings threatened by wildfire.

  - We would like FSC to explore a Firewise certification program for new developments in the WUI. Perhaps a set of standards could be developed related to desired construction materials, subdivision design, covenants, and vegetation treatments to provide mitigated development in the WUI. Particular developments or properties adhering to the standards or guidelines could be Firewise Certified by DNRC or another agency charged with wildfire suppression duties.

  - We support the concept of active fire management on private, state, and federal lands to reduce fuel loading in the forests. Fire suppression efforts on managed forests may be more "manageable", less destructive and prone less to rapid expansion than forests with high fuel loading.

- The committee should set up a working group or subcommittee to work with Plum Creek and other local governments and agencies to come up with specific recommendations concerning Plum Creek's comments.

- Plum Creek sells the land, the developer builds the houses, the buyers move in and the public a la the Forest Service bails them out. That has to change. We cannot afford to keep writing the blank check.

FEDERAL POLICIES AND FIRE FIGHTING

- The Forest Service can't and won't fight fires to protect property that is not either a home or a structure.

- If a fire is attacked in the first 10-20 hours, the success rate in containing the fire is around 97%. The crews are that are used to do this are termed "I-A initial attack crews" and they are extremely efficient and well trained. Aerial fire suppression is also a very effective tool at this time. Unfortunately only 1 ½% of the aircraft that are thought to be available at any one time is operational.

  There are various reasons and opinions why the fires are uncontrollable from this point on. One prevalent opinion is that fires have in the past, until twenty five years ago been put out early, thus increasing the amount of fuel left in the forest. This was the thinking that led to the let it burn policy that has been in effect since then. This has proven to be not quite valid assumption as some of the Montana and Idaho fires, during the past two years, have been over areas that were burned in the previous 20 years. The reality is that the extended drought and heat of the last few years has dried out the re growth brush and grass that has grown back after the initial fires. This has become a dangerous source of potential fuel in itself in these dry years.

  The above items notwithstanding, there are several more reasons that fires are not being controlled after the initial attack phase. The next type of classification for fire control and suppression is called "the extended attack phase". Over the past twenty years or so, in an effort to control costs, the Forest Service has steadily reduced the numbers of in house full time fire fighters and supervisors. They now rely on outside fire crews and fire trucks, both structural and wild fire types. Supervisors are recruited from among former Forest Service employees with previous fire fighting experience. Crews that are hired to fight fires do have to be certified by the Forest Service. That is where a problem arises; some of the crews are well qualified and well supervised, while others are not. There are some independent crews are in large part more of a danger to themselves and those around them, than they are useful in the actual control of wild fires. The structural crews would appear to be somewhat more competent; it was indicated by people with extensive fire management experience, that they would be comfortable with at the most 65% of the trucks and their crews that are supplied to them. It is also interesting to note, that by far, the largest amount of funds expended on fire suppression in the wild fire arena are spent on these extended attack resources. There is also a big

shortage of qualified supervisor personnel available. Many fire trucks are hardly ever utilized but they are apparently there just in case.

The shortage of experienced supervisors is due to several factors. The first is that at the time that the Forest Service reduced the number of full time fire fighters a like reduction in supervisors was made. For many years these people were then available for hire as private contractors during the fire season. However, as will all people these people grew older and no longer wanted to do this type of work. Another factor that comes into play is the liability factor. If something goes wrong in a fire operation, the blame can be shifted onto the supervisors and away from the Forest Service. Contract employees do not have the immunity from prosecution enjoyed by government agencies; supervisors have been held liable for both loss of life and loss of property and thus many qualified peopled do not want to assume the risk. The Forest Service has also responded to these situations in their own way. People were lost fighting fires in areas where there was fuel for the fire so crews were no longer used to build fire lines in areas where there is fire fuel except for back burning. Wild fires lay quite dormant during the night and early mornings due to lower temperatures and higher humidity and this is the ideal time to try to control them. However, there have been people killed and injured fighting fires at night so this is not now an allowable option.

- If fires are not controlled at the very beginning, then they are impossible to manage due to the present fuel conditions in our wildlands and the worker safety restrictions now in place.

- The money spent on the extended attack plan to protect private property other than structures is a complete waste.

- The bulk of the resources available on a particular fire are used to protect structures and homes or cabins. No attempts are made to contain the fire to Forest Service lands. Indeed private property is sacrificed to control the fire and free up resources for structure protection. There is no insurance to protect grass, trees, or wildlife habitat, fences and water tanks.

- Fire retardant drops while spectacular are almost useless and are nothing more than public relation displays unless used in the initial attack phase. The funds and resources spent during this phase would be better spent on such endeavors as thinning, fuel control projects, and compensation to adjacent landowners for damage due to unchecked fires.

- Landowners who border public lands can be held responsible for fire fighting costs arising from fires that are allowed to spread onto publicly owned lands from private holdings. There is no reverse liability here. The Forest Service is not liable for damage caused to private property from fires originating on public ground, whether or not any measures to control the fire were used.

- Another point to be made is that the level of priority that wildfires have varies from national forest to national forest. It would seem that the farther one is removed from southern California, the lower the priority that is given to fire prevention and control.

- The people of Montana are not getting much bang for their buck when an interagency fire agreement with the federal government is signed.

- What needs to be done now is fuels reduction projects, road improvements, restructure policy to stop wasted fire resources. Appoint affable personnel who want to be there and teach them to leave the attitude at home. Offer incentives to landowners to be firewise- i.e. fuels reductions, construction to prevent fire spread, develop water sources, irrigation systems surround buildings, etc.

- Federal agencies need to recognize the importance of coordinated pre planning. This has a high priority especially in counties like Beaverhead.

- Include local volunteer fire chiefs and assistant chiefs on type 1 and type II management teams.

- To ensure involvement by local rural fire departments, improve and increase training workshops for those individuals.

- On type 1 and type II fires, rely more heavily on local fire departments. Currently the emphasis is on using contract crews.

- Closure implementation should occur earlier than it does now. Areas known to contain elevated levels of fuels should be closed before they are on fire.

- Individuals who permit camping or other activities to cause fires should be held responsible and subjected to large fines. The present policy is supposed to do this but seems to be poorly enforced.

- Initial attack is essential to successful fire suppression. Cooperation between agencies, private contractors and local fire departments must focus on successful initial attack. Preparedness and severity funding to have initial attack resources available and ready is the best money spent in a fire season. This includes having cooperative agreements and communication with private contractors who have equipment suitable for fire fighting and are working in fire prone areas that could be quickly mobilized for initial attack if a fire were to start.

- Effective and efficient use of heavy equipment is vital to successful and quick suppression of wildfires, especially in the fuel conditions and fire behaviors we have been seeing recently. Safety constraints on hand crews coupled with the severity of the fire activity limit their effectiveness in containment activities.

- Develop training and certification programs for private contractors to not only serve as equipment operators, but also to be line officers for fire suppression activities. Unfortunately, both state and federal agencies are quickly losing institutional knowledge in on the ground fire suppression tactics. Furthermore the trend is to put the least experienced fire fighters in these on the ground positions where the decisions are made that dictate success or failure in suppression. Dozer bosses are a good example. Why not create opportunities to train and certify private foresters, logging contractors and others who work with equipment and forestland on a year-round basis to perform these leadership and supervisory jobs as well?

- We need to develop private contractor heavy equipment suppression squads that have not only the equipment and operators but also the leadership, supervisor and support roles such as dozer bosses, support crews such as lowboys and fuel service as well as qualified line officers to cooperate with the fire operations specialist. Rather than requesting individual pieces of equipment like we do now, you could request a mechanical fire line squad that would have a feller buncher, skidder, dozer, lowboys, dozer bosses and other supervisory personnel all as one unit. These units could train together and be deployed together as a unit. This will greatly increase the efficiency and effectiveness of heavy equipment on fires.

- We need to keep the fire fighting professionals who are familiar with Montana fuel types, topography, fire behavior, suppression tactics and other local issues in Montana. Almost all of our successful suppression of large fires comes when the out of state teams consult with and cooperate with the local knowledge and resources. I understand the need to cooperate with other states and agencies on "fire teams" and fully believe that many aspects of the fire team can be mobile across the country. However, like the heavy equipment suppression squad idea, we need to consider splitting how our "fire teams" are organized. On the ground suppression operations need to be led by local resources. Operations chiefs, division supervisors, equipment supervisors, fire behavior specialists, etc. need to be separated from the "overhead" such as logistics, mapping, safety, etc. Formation of floating "overhead teams" that couple up with local "suppression teams" on large fires may improve the success of large fire suppression activities.

- We need to continue to provide both technical and financial assistance to private landowners to assist them to treat fuels around their property and homes. The goal would be a structure that could survive a wildfire without significant human intervention. At the same time, landowners need to understand and accept the risk of losing their home and property if they do not take personal responsibility for its protection. Building cooperatives with existing outreach organizations such as the Montana Tree Farm System, Montana Forest Stewardship Program, DNRC Forestry, and local fire departments would be the most efficient manner to distribute technical and financial aid.

- The issue of fire suppression is almost too large to get one's hands around. As the old saying goes, an ounce of prevention is worth a pound of cure. The state DNRC for its aggressive initial attack, early detection and overall cooperative outlook to fire suppression is good. I think if we could get similar attitudes in all agencies with fire suppression responsibility and remove what could be viewed as incentives to have large project type fires, we can go a long way towards reducing the negative impact of this fire dependent ecosystem.

- The federal fire agencies need measurable performance measures as to fire fighting policy, fire fighting, etc. that the public can follow not only as to the fire fighting over a season but each major fire also.

- Future agreements similar to the Beaverhead-Deerlodge conservation restoration and stewardship act should take into consideration major fires as well as protection of watersheds during droughts as well as restoration after fires.

- Cost sharing agreements must be reviewed by the legislature as AMR takes effect to decide how costs should be borne between the state and federal fire agencies.

FEDERAL AGENCIES

- Federal management to fighting large fires or even initial attack on fires is sending mixed signals to everyone including themselves. This is dangerous to firefighters and home and landowners. The federal management needs to be clear of their capacity to fight fires and how they fight fires to the public and other firefighters including their own. The longer the federal government management sends these mixed signals the greater the chance for firefighters dying and large number of homes burning including towns and communities.

- There is little way in how federal agencies define what values are important to protect or have even asked the public what are important values to protect especially on private and public lands once the fires have left the federal lands.

- Federal firefighting management needs to have surveys or reviews by the public where fires occur to get feedback on how the public perceives the fires were fought. There is little or no request for feedback from the areas where fires were fought except from fellow firefighters.

STATE ISSUES WITH THE FEDS

- In 2007 federal agencies began widespread implementation of appropriate management Response (AMR) for all unplanned wildfire ignitions. The DNRC has several concerns as also shared by local government partners that can be categorized into the following areas of emphasis:
  - AMR in current fire climate, drought, fuel lading, fire behavior. Should any agency be contemplating something other than full suppression given these outlooks? Valid reasons for modified suppression are negated by the potential for fires to spread beyond their intended ecological boundaries in many cases.

- AMR implications for fires in or threatening the WUI and federal divesting of interface suppression responsibilities. The Montana DNRC functions as much like a fire department as a wildland fire agency, and that mission includes protection of private property and critical infrastructure threatened by wildfires. Conversely, the federal agencies are wildland agencies, and there is constant discussion about the appropriateness of federal agencies fighting fires in the interface. However, it is important to note that there is significant federal acreage defined as WUI by communities and counties across the state. Therefore, discussion about federal divestiture of structure protection and or interface suppression must include a plan to mitigate the fuel hazard and fire risk on federal holdings within the interface. Only then will it be reasonable to ask state and local government to assume more of the interface fire suppression role.

- Adequate explanation of AMR and collaborative decision making between land managers, IMTs, local responders, elected officials, and the public. There remains much confusion among nearly every audience with regard to defining AMR and its implementation. Though not new, the approach to AMR, is different from the way state and local governments have historically approached wildland fire suppression. In the absence of full suppression, the public perception is that the government is unwilling to take the necessary steps to protect their homes and property.

- Economic and public health impacts from large, long duration fires. The most frequent complaint received from the public during the 2007 fire season was about smoke. While little can be done about it, the fact remains that large, long duration fires damage the state's air quality and pose a significant health risk to the elderly and those with respiratory illnesses. Long duration fires also impact local economies negatively because people with health problems that are aggravated by smoke will not visit areas near large fires. There were frequently inquiries about air quality from non-residents who were planning trips to Montana, and the majority of them changed their plans out of concerns related to air quality.

- Communication of intent by federal agencies during development of any and all AMR strategies. While federal agencies to a commendable job of explaining the resource benefits of modified suppression, they do not clearly communicate their intent regarding protection of private property. Many view 'point protection' as a contingency plan for saving homes from a fire that should have been aggressively fought when it was still many miles away. A near constant criticism of federal agencies is that they are not aggressive enough on initial attack and that many large firs could have been suppressed when they were smaller.

- Conflicting fire management mandates among federal, state and local agencies. The Montana DNRC is a fire suppression organization with a full suppression mandate. While there are circumstances when another strategy is appropriate, the basis for those decisions is the statement that full suppression is always the first consideration. AMR seems to be the opposite: it appears that full suppression is treated as a last resort to be undertaken only if less aggressive, cheaper options fail. The clash of these two ideologies creates tension among federal, state and local partners.

- Impacts of long duration fires on state and local resources. The DNRC and its local partners are organized for aggressive initial attack. We believe that the safest, least expensive fire is the one that's prevented or the one that's aggressively suppressed as the smallest size possible. Once a fire escapes initial attack, management decisions are made for extended attack, which include releasing IA resources as soon as possible. The main reasons for that is to keep them ready to respond effectively to new fire starts. Long duration fires tie up local resources as well as DNRC staff to the extent that the IA mission is compromised. Even a supporting role on an incident- as an agency representative, local government contact, or liaison-requires significant time and commitment of resources. Over time this depletes firefighting resources and lessens our ability to respond to new fires.

- Compensation for losses resulting from point protection WFU, or other less than full suppression actions. While it is difficult to quantify in some instances, there is a financial impact to communities and private landowners resulting from AMR policies. Even without losses of structures; there are losses such as grazing

lands, tourism, recreation, and other infrastructure i.e. fences, that must be considered. Should the federal government pay for 100% of the economic recovery as a result of fires they do not actively suppress?

- With continued pressures to lower fie suppression costs and address safety concerns, it is reasonable to expect AMR policies to be in place for the foreseeable future. There are, however, recommendations for mitigating some of the problems with AMR implementation. Specifically:
  - Federal agencies need to better explain the concept of AMR to the public, other wildland fire agencies, elected officials, and other stakeholders. The time to do this is before the incident; clear communication of the policy prior to the process of implementing it is key to gaining understanding.
  - Agencies must involve all potential jurisdictions for any incident. Each must have the opportunity to voice their concerns/opposition throughout the AMR decision-making process.
  - Policies regarding fire in the wildland urban interface cannot be developed without a comprehensive effort to reduce the fuel hazards. Agencies must further clarify structure protection guidelines for fire in the interface. State, local and private entities must also recognize and take responsibility for their roles in WUI issues.
  - Agencies must be transparent in communicating their intent regarding all wildfire incidents. If, from the start, there is no intention of suppressing a fire, all cooperators, stakeholders, and the public need to know.
  - If an agency representative, local fire chief, or other cooperator disagrees with the AMR strategy and subsequent wildland fire situation analysis (WFSA), they must inform the host agency in writing.
  - If a suppression strategy includes purposely utilizing private lands for fuel breaks or as tactical opportunities, private landowner must be well informed and as appropriate, be compensated for losses.
- The state needs to have initial mutual attack on all fires regardless of federal or state lands (The issue with Tribal lands has to be negotiated with tribes.) unless federal agencies have said early on to not fight the fire. Early on means weeks ahead.
- A lesson learned in our multi-jurisdictional partnerships in managing the 2007 Chippy Creek, Blackcat, and Jocko Lakes fires is that the USFS, Confederated Salish and Kootenai Tribes, and the state of Montana are not on the same page in regards to AMR, long-term fallback protection strategies, and other alternative large fire suppression decision making and implementation that is impacting the public and communities.
- Each year before fire season, the state and local government and firefighting agencies both state and local must know ahead of time which federal areas will be suppressed rapidly as the state does and how they will be suppressed.
- If the federal government has decided to pay less for fire costs off federal lands, then the state needs to put out the fires on federal lands that may cause a cost increase on state and private lands.
- If the federal agencies are worried about the long fire seasons, then they need to have more initial attack as the state does to put out fires. Both presidents Carter and Reagan suggested a single federal Department of Natural Resources to improve conservation in the United States that would also result in truly substantial savings in administrative and overhead costs- funding that could be applied to on the ground conservation to include fire- and more effective and efficient conservation. For example, why in Montana, should major federal administrative offices be in Billings (BLM), Missoula (FS) and Helena (FWS) when one could be

adequate (let alone combining offices in Butte, Dillon, Billings and elsewhere). Imagine what a single Federal Natural Resource administrative office housed with MFWP or DNR (and in other cities) would bring to effective and efficient resource management and conservation. Not needed is yet another request for increases in state and federal funding, communication and collaboration, and public involvement- ideas with little record of success.

- The federal fire agencies should explain why they would not use heavy equipment on their own lands but will on private and state without the landowner's permission.

- Federal fire agencies should be responsible for all costs, including home protection by the state and local agencies, when fires escape their lands and they have not done initial attack similar as the state or local agencies have initial attack.

- There were many comments on how the federal fire agencies can communicate with state, local, and private better as well as issues on how fires are fought. The agencies say they are listening, then why are these issues being brought to the committee if the feds said they were listening?

- Fire should be dealt with differently in drought years than normal years. In drought years, a more aggressive approach should be used.

- Federal agencies may not burn or back burn private land without permission of the landowner or the state if the fire starts on federal lands.

- Under no circumstance should the state take over fire fighting for Big Sky from the federal government.

- With the concern of global warming, the federal government must take into consideration letting fires burn to release large amounts of CO2 in the air. There must be limits to the number of fires of major significance that can burn due to global warming.

- If major fires are allowed to burn, air pollution must be monitored and the federal government must reimburse local agencies and the public for health care risks associated with the pollution.

- Before there are permanent road closures by the feds, state and local governments, there must be a determination whether the roads are needed for fire suppression activities.

- The management of forestlands is broken when it comes to fire suppression. There are too many conflicting rules, regulations and values. It is confusing to the public and expectations are misplaced and confusing by the feds and the public toward fire fighting. Until the feds say clearly what they will or will not do regarding fire fighting and fires when fires get out of their lands, it is stressful and harmful to the public who live near the forests and public lands.

- The people who use the forest or live next to it are upset with the lawsuits from environmentalists, etc. to stop logging, etc. These people need to sue also. Right now the federal land managers are stopped from doing a lot of things so encroach on the landowners next to the forests or stop other multiple use. Those who are losing need to protest also the closure of roads for fire protection, closure of etc to protect fires. Sue to stop letting it burn unless other values are taken into consideration.

- Watersheds: We need a revised policy, which includes immediate suppression of fires in watershed drainage in drought years. The federal lands must take into account the value of watersheds outside of their lands in determining letting fires burn

- Stop the environmentalists. Open the woods back up for supervised logging like in the 1970-80s. We didn't have this problem then. It doesn't take a rocket scientist to see why we are in this situation. Market our

natural resource. Yes we do need it to be monitored, but what is more expensive? Monitoring or fighting fires? If those who sue lose a lawsuit, they should have to pay for the federal governments costs for the lawsuit.

- Groups that want to stop the environmentalists need to use the same tactics those groups have- they should sue to stop road closures, etc. due to affects of fires on other lands, wildlands, wildlife etc. Right now the groups that oppose the above, have to react all the time to lawsuits. They need to be proactive and sue also. They are not going to get the Forest Service to change if they react all the time and are not proactive. If the forest service comes to a standstill then maybe things can finally get done on saving the forests.

- Local groups and governments should be talking to the federal agencies every year and at meetings about how changes should be made in fire policy. There is not the interaction that is necessary for local people to put their input into the fires.

- There seems to be no importance placed on recreational opportunities in wilderness when it comes to fires. The federal government must reexamine the values they consider when allowing fires to burn and place somewhere in their decision making whether recreational opportunities have a value or not.

- Outfitters who use the forests need to be allowed back into burned areas and areas of trails as soon as possible after a fire pass through. Some forests say no outfitters may use the trails, etc. until all can use the trails. Outfitters are paying the Forest Service for the use of the land, but they are told to wait until non-payers can go at the same time. This is not fair.

- The Forest Service should reimburse outfitters for any costs from fees paid to Forest Service and the outfitter cannot use the lands because of fires.

- The Forest Service should consider subsidizing loss of business insurance for outfitters due to fires.

- If we continue the way we are, with current polices and never ending environmental law suits, I predict one third or more of our forested lands will be destroyed by fires over the next decade or so. We need to think outside the box in getting everyone to the table community-by-community to plan; pass litigation legislation that mandates payments of costs and penalties for frivolous suits that stop management plans, and harness the energy of wood products harvesters and responsible citizens to help with thinning and gather wood so our forests more closely resemble those of Germany and Switzerland. As fuel prices increase, there are many who would gladly help cut and who would burn the medium slash in homes and businesses.

- In recent years too many fires, because of federal policies, including let burn policies and locked gates restricting access when fires were small, have been allowed to grow until virtually uncontrollable. The state of Montana needs to re examine any existing memorandums of understanding with the federal agencies to ascertain that policy differences will no longer contribute to excessive suppression costs. There must be an assumption that liability must be assessed when bad policy decisions of agency personnel allow fires to grow to catastrophic size, increase the costs of suppression and endanger the public.

- The budgets of the Forest Service are in decline in terms of real dollars available for management. Until their budgets can stabilize and not be used to fight fires each year, the Forest Service and other federal agencies are unable to manage the forests as they plan.

- The federal agencies should not have any more involvement with suppression of fires involving fighting structures.

- It is okay to burn up grass and private timber and small businesses since they are not considered values by the feds. What a terrible neighbor. If a private landowner starts a fire and it goes onto federal land that pays for the costs.

- Federal policy makers must re examine their own definitions of "Wildland fire use"and the new term "fire uses fire" to determine their worth in the overall scheme of things. It is time for them to not only count the cost, but also face related liability when use of fire as a toll results in out of control fires spreading to other jurisdictions.

- Our firefighters should be held blameless or be given immunity to prosecution in any takings assessed by federal agencies relative to alleged infractions of federal law or administrative rules. This means when a decision is pending, human safety and property protection must be placed ahead of alleged endangered species considerations. Inasmuch as DNRC has set in motion a plan on state lands to protect itself from "unintended takings", I can think of no more fitting application for claiming that immunity.

- If we have a current drought, why is the federal government allowing watersheds to burn up?

- The first objective of the Forest Service is forest health not all the other stuff.

- If fires are natural then why do the federal agencies spend so much time "directing" the fire?

- Permittees that have lost use of the land on federal lands should be reimbursed for the fees paid for that lease for the time of loss of that lease.

- The federal fire agencies should consider loss of business insurance for those who use the forestlands as permittees but cannot use it due to fire.

- There is not always a consistent policy between and within agencies in regard to fire suppression. One agency may attempt to save all homes in danger of a wildfire regardless of a lack of an effort by homeowners to fire wise the property. Other agencies may not. Recommend agreeing to a consistent policy recognizing the available resources and time constraints may vary by fire.

- Large, long term stewardship contracts like currently in place on the Apache-Sitgreves NF in Arizona are not being encouraged in Montana primarily because of the lack of leadership and the bonding requirements required by the Federal Acquisitions Act. Recommend that land mangers to take more risk and implement long term stewardship contracts when economics allows. Also encourage federal legislation that reduces or eliminates the cancellation bond currently required for these contracts.

FEDERAL, STATE AND LOCAL COMMUNICATION

- Federal and state fire management plans need a complete annual review to ensure everyone is on the same page. Do not have to agree but talking about fire control during the fire season is too late.

- The federal and state officials should have local meetings at least twice a year, which are widely advertised.

- State and federal agencies need to do a survey or what the public thinks in the area after a fire has been fought. The agencies review how they fought the fires afterwards, but they do not get public and local review. This should not be done in a public hearing but a good survey that people can fill out in the local area.

- More interagency dialogue, collaborative policy making, and increased agency administrator and public education are needed in defining agency fire suppression missions and in structuring future long-duration fire suppression strategies.

ROADS

- Roads are being currently seasonally closed on federal lands and are often impassible to firefighters because of the lack of maintenance. If a road is going to remain on the transportation system it should be made accessible to firefighters.

- Roads are being obliterated and closed on federal lands making fire suppression more difficult and expensive. Consider fire access and response time when making the decision to close or obliterate a road.

- There should be maps of logging roads and other roads now in place that should be used as a grid for preventing forest fires and managing the forest. Certain roads should be for multiple uses by the public and a yearly fee should be paid for management uses.

TRIBAL

- The BIA under a 638 program once funded fire protection program for Northern Cheyenne. Not now. These cuts affect fighting fires as well as other programs such as Hazmat incidents, car extrication, structure fire protection and a variety of other services to help keep our community safe. Currently our Tribe itself owns no fire fighting apparatus. Our trucks are the property of the BIA. We have a good core of volunteers and we keep up on our training. Without any equipment or funding it makes life pretty tough. We have tried to request equipment but the counties seem to have their needs also which overshadow ours.

- As far as wildfires are concerned we are served by the Northern Cheyenne Forestry which is a BIA run department. They do a pretty good job but they rely on us for structure protection and occasionally water support. They are paid from 8-5 and sometimes during slow times in the season they are not readily available after hours. During these times we are available and are often called upon.

- We often respond to county fires off the reservation, and provide mutual aid to these counties without receiving any compensation.

- Basically we need equipment and funding to keep our efforts alive. I feel as a volunteer fire department we are at a disadvantage being on the reservation as we receive no funding from the counties or state and our federal funding have now been cut off.

- The state should form its own rapid response team and work with the tribes to have crews work directly with the state on a contract basis each summer.

- The state of Montana should receive 10 million each year from the federal government to fight fires as they leave the forest or are adjacent and within the forest that are fought by the state themselves. The state could contract with various contractors including tribal fire crews to fight the fires. This provides Montanans to fight the fires when we need to fight them.

- The state needs clearly negotiated understanding on mutual aid between tribal governments and the state on suppression of fires on either border of their lands.

- Tribal fire departments should also be entitled to state fire engines or have a separate program for them in order to receive state fire engines as the local county governments and local fire departments do now.

- The Confederated Salish and Kootenai Tribes believe that initial and extende dattack operations are still very efficient and safe as demonstrated by historical fire statistics and specific fire suppression actions associated with the 2007 fire season. Large fire organizations are also very safe, but are less efficient in suppression operations due to sheer number and size of wildland fires due to the existing climate of extended droughts, historically low summer fuel moisture, and record-breaking weather conditions.

Maintaining initial and extended attack successes are dependent on high levels of interagency cooperation and out abilities to supplement critically short fire suppression resources with fire severity funding.

We need to maintain our high levels of interagency cooperation into the future, and improve in a sharing of ground and aviation resources on a local, zone, and regional basis to address expected shortages of resources during an escalating period of hotter summers and increased fire occurrence.

We would recommend that all wildland fire suppression agencies (Federal, State, Tribal) ensure and protect supplemental fire severity funding processes for the hiring of emergency manpower, equipment, and aircraft. The State looks to Tribes for hand crews and heavy equipment resources, the Tribes look to the state for aircraft support. A pre-planned sharing of critical fire suppression resources is very important to interagency initial response, mutual aid successes.

LOCAL GOVERNMENTS

- Pass legislation to allow local fire agencies to declare imminent threats to their areas of responsibility on fires located in the federal forest or on state lands. Upon an agency declaring imminent threat make the legislation require DNRC and USFS to form a unified command with the local agency to establish common objectives.

- Counties must have full authority and responsibility to:
  - regulate how growth within the county occurs;
  - require county wide comprehensive land use planning and zoning;
  - regulate road location, design, and construction standards for subdivisions and or residences that insure safe ingress and egress for engines, water tenders, large trucks and fire crew transport equipment.

- If the feds have said they will no longer do structure protection and the state does not have the resources, why bother with the zoning, etc. since the state more than the feds are going to protect most of the structures.

- Restructure polices and SOPs – standard operating procedures of paid and volunteer fire departments. Make sure grant money is being spent appropriately, train departments to respond more efficiently, develop water sources, upgrade mapping, enforce a proper road construction and access policy, encourage training and awareness so county departments do not accept assignments that are beyond their scope of experience.

- Fire restrictions and closures vs. private property rights must be addressed, particularly agriculture harvest operations. Jurisdiction and enforcement are often unclear.

- Teams dedicated solely to population protection functions do not exist. Resources assigned to those duties must be reassigned from core functions by the home department or departments providing mutual aid.

- Local government reimbursement for population protection functions is divided between fire suppression and disaster funding (state and federal). Guidelines and procedures need to be more clearly defined.

- There should be community wildfire protection plans in every county.

- Federal AFC program specifically discriminates against small rural volunteer fire companies in the evaluation and award of federal grant funds.

- The federal FEPP program, which is specifically designed to support rural fire organizations, does not support these local organizations in Montana because of the vehicle classification issue with the working

capital fund of the USDA. DNRC is hoping by the end of February that they will be able to screen dept of defense bases as a higher level for useable equipment.

- The Montana DNRC county co-op program has been providing and replacing wildland engines to mainly eastern Montana since 1967, The West Kootenai area, along with most of Western Montana, does not meet the primary requirements.

- Local agencies need to be clear to the public and homeowners the capability for what can be done in fires both large and small and with the limited resources that they have.

- Local and state agencies need to request public review and comments on how fires were fought.

STATE FIRE FIREFIGHTING

- Need to be clear to be public on what fires you fight and how. Need to be clear to the public and homeowners on the capability of what can be done in fires or not with the resources the state has.

- There is a need for funding still need incident business advisors at all major fires to save the state money.

- Need title to our helicopters.

RURAL AND LOCAL FIRE DEPARTMENTS

- Rural fire departments are having a difficult time recruiting and retraining volunteer fire fighters.

- Have an inadequate budget for maintenance effectiveness.

- Mandated training and contracting requirements have resulted in inflexibility at all levels of fire suppression.

- Rural fire departments need to be able to address the needs of growth though impact and mitigation fees.

- There is a serious problem with demographics, in the future with there will be fewer firefighters being able to fight fires.

- Evolve local fire departments having the greatest potential for fire prevention, structure and woodland fire suppression capability and need into quasi-volunteer professional entities. Streamline by giving fire departments immediate access and oversight to one state firefighting board of directors composed of firefighting chiefs, officers and heads of departments. This would essentially be NRCG with full and primary participation by representative fire department chiefs with a goal and responsibility to develop, train, fund, and support local resources.

- There is a good opportunity to offer vocational and or for-credit fire fighting courses through local community colleges. State subsided and coordinated by the state fire board of directors above, fire academies could be established and organized with rural communities at local community college campuses across the state. Statewide oversight can assure national qualification standards are met. Local community colleges can be organized as part of the fire academy to keep records of training and assist firefighters to progress though a career ladder.

- State should subsidize local fire department funding above and beyond that which is assessed for structure fire protection by local communities. Pay firefighters and apparatus a decent hourly wage at federal rates whenever assigned on a wildland fire or structure fire within a wildland fire incident. Streamline the payment process making pay for people and equipment much easier, fairer, and more direct than now exists.

- Protect primary jobs when local firefighters are called on wildland fire incidents. This would extend the same protection to firefighters as given to Montana State National Guard personnel.

- DNRC relies heavily on the volunteer fire departments to support them once a fire has transitioned past initial attack status. In fact Montana law requires the state to relieve those volunteer resources so they can get rested and return to initial attack status. Too often the volunteer departments are required to stay on the incident until it is over sometimes extra pay for wages and operating expenses are promised and then not paid when the fire is over. This has left a lot of bad feelings towards the DNRC.
  (Editor's note: Staff is unaware os a statute as the one described above.)

INCIDENT MANAGEMENT TEAMS / FIRE TRAINING

- There is a lack of obtainable training. Most fire fighters have little time to go to the fire training college. So we spend time training trainers.

- Incident management teams are losing personnel and qualified individuals are hesitant to joint teams because of the risk of personal litigation.

- Incident management teams are often from other parts of the country and lack the local color needed to make them more effective.

- Incident management teams may not be available in critical areas. Recommend pre position teams into critical areas.

VOLUNTEER FIRE FIGHTING

- Volunteer crews may need more training.

- We have some crews that have few resources while others have a lot more plus volunteers that are trained. Perhaps we should spend more money at the state level, instead of the state giving money to the locals and help the state have good professional crews.

- Local volunteer fire trucks get to a fire. When state or BLM trucks get there it takes them a long time before they actually get water on the fire. I understand safety, but speed up the paperwork or do it when the fire is under control.

- In eastern Montana there needs to be better coordination with the local ranchers. Their grass pasture and livelihood are at risk; therefore, they need to be involved in tactics and the planning.

RESOURCE DISPATCH AND COORDINATION

- There currently exists no statewide standardized means of facilitating the ordering, dispatching and tracking of local government agencies resources. While there are pockets of cooperative mutual aid dispatching, no uniformly effective and standard procedure assures timely notification and response of local agency units on a regional, intrastate or interstate basis. In time of critical need, bureaucratic red tape, archaic pre-response regulations and local preferences delay and inhibit initial attack or compromise support of state and federal units.

- In reviewing the orderly dispatching, assembly and response of local agency resources in other areas throughout the western states, several highly proven models are in affect and have proven extremely beneficial in terms of both timely response as well as effective management of interagency resources.

- A system established and disciplined in conjunction with regional or zone dispatch/communication centers with immediate access to pre-determined agency resources; categorized in conjunction with the ICS kind and type identification system, would assure dramatic improvement in response, coordination and utilization of resources.

- Enhancing our expectation to comply with the tenets and principles of the NIMS should be a mandate. For too long our state has been without advocacy to accelerate participation in the Interstate Mutual aid system and the Intrastate Mutual Aid System. Both of which would generate expansion and benefit of improved operational readiness and deployment.

- The existing conflicting layers of often contradictory and arbitrary selection of local government units causes confusion, distrust and undermines interoperability, the essence of the NIMS.

TRAINING AND CERTIFICATION

- While universal acceptance and support has been established for standardized training and qualification (NWCG and NFPA) of personnel, a lack of accountability stemming from administrators without real credibility is a source of valid apprehension on the part of line supervisors. Again, other states have implemented the state initiated and maintained Peer Review Group method of credentialing eligible personnel.

- The consensus of a state group representing agencies likely to utilize local personnel is positioned to verify eligibility or recommend steps necessary for credentialing.

PRIVATE CONTRACTORS

- Type I and type II fires need to rely more heavily on local fire departments. Currently the emphasis is on using contract crews. Contract crews are less motivated to extinguish fires simply because the longer the fire burns the more they get paid.

- Respecting the private enterprise system, private contractors do not need subsidizing, but do need to have training opportunities available. Local community college fire academies can be geared to private needs to develop progressive training in all phases of fire incident organization. Databases can be maintained with local fire departments to keep track of training taken and trainees.
- There needs to be a more streamlined and liberal process to hire private contractors that have proven utility and effectiveness. Competition is good and necessary-and standards need to be met- but hiring a contractor based on local value should be easier than it is.

- Contract food services need a good hard look. The caterers are following strict contracts to provide every firefighter a set number of calories per meal. That works for the line firefighters but there are 100 to 200 people in support positions that are being overfed every day. There needs to be a distinction between the quantities of food served to a line firefighter, and the quantity served to a support firefighter. Agencies need to check the waste on food not eaten.

- More effort should be made to allow local volunteer firefighters to do what they are trained to do, put fires out. Contracted crews get paid for the time they are there on a fire, not for putting the fire out, therefore they have little interest in saving a ranchers grassland, the longer the fire burns the more they get paid.

- Contracts would work better if they were seasonal in length and paid out over a season where there is a fire or not. That would allow fires to be put out without the worry of allowing the fire to burn longer and people get paid more.

- The current requirements for contracting are unrealistic and centered at discouraging the private industry participation. Be advised that agency and volunteer departments are not required to meet the same standards, but they continue to work fires each year. Example:

  > The Department of Transportation (DOT) requires that all commercial haulers that transport freight for profit over the public road system be registered. A commercial driver's license is required for all vehicles with a gross vehicle weight over 26,000 pounds. Endorsements are also required for air brakes, hazmat, doubles and triples, passenger bus, etc.
  >
  > Under the current best value process each vehicle is required to register as a commercial hauler with the DOT when in fact the DOT does not require their registration whatsoever.
  >
  > *(Editor's note: The DOT was contacted regarding this comment; any commercial hauler that utilizes public roadways needs to register.)*

- Weight restrictions for engines are an issue. The old standard for the engines has changed to make the use of all currently approved engines illegal, even though they meet weight restrictions to legally haul according to the DOT. Example:

  > The minimum allowable gallons that a type 6 wildland engines was changed from 150 gallons to 250 gallons then the hose reel was made mandatory and it had to have a one-inch hard rubber hose on it. This made the use of a one ton four wheel drive no longer possible, and unless you were able to completely build a new engine using a larger truck you could not pass the pre-season inspection even though your engine had been working fine before. Volunteer departments could still work their engines according to the old standard. Cost for a new engine varies from $80,000 up.

- Private contract services are not always used. Many contractors have built engines, trained their staff, and purchased all protective clothing, fire fittings, fire hose, and fire equipment to comply with the agency requirement. They have purchased the required contract insurance and workman's compensation insurance. They have gone thru the rigid fire equipment inspection so they could be placed on the agency's list of resources. All this money is required to be spent up front along with an obligation by the contractor to be available 24/7 throughout fire season. Then a fire broke out within their district and they never were called. Resources just like theirs were brought in from other towns, districts, even from out of state. If they called their dispatch to find out what was going on they were often treated rudely or told that when they were needed they would be called. Many times it helped to be friends with the dispatcher or their supervisor, but if anyone said anything or made public inquires they were committing professional suicide and never dispatched again.

- All resources are not treated the same. When signed up on a fire, each resource is categorized as agency, volunteer, or private. When each supervisor looks at that resource they know whom they work for and treat them accordingly not equally. A good summary is the best and most productive workers aren't always the last to go as production and hard work is not the priority on many incidents. Safety is discussed but not practiced and some resources are not treated the same or required to do the same tasks as others.

- Other states have the same requirements but they work all their contractors on wildfire suppression and prescribed burns. This allows the contractors to make enough money to survive and guarantees that they will be there year after year. It is important for a fire commander to know a resources are capable of doing and working on prescribe fire is one sure way to find out. Prescribed fire gets everyone used to working together and provides a cost efficient method of fire prevention for the district.

- Montana DNRC makes the contractors compete with their own tax dollars when they hire a volunteer fire department before a private contractor. These volunteer companies are leaving their districts and working fires out-of -state without their district even knowing what they are doing. This leaves the district they

represent short-handed and often the best apparatus is taken so they can't offer the protection that the taxpayer thinks they are getting. There have been cases where catastrophic events have occurred and most of the fire departments resources were out of the district on another fire as a contract engine.

- The contracting section in the Lolo forest needs to be more user-friendly.

- The state should revise the contracts made with the seasonal workers. A private contractor pays a set amount per 24 hours, during which an employee can be called at any time to work and is generally expected to work up to 16 hours of that time. Absolutely no alcohol consumption is allowed during those 24 hours (times number of days); and during the times when fire activity does not call upon their services, they are often times offered the opportunity to participate in some other work such as thinning job. This means more bang for the buck. Currently those who are employed by the state, specifically for severity, unless actively on a fire, produce little to nothing during the time they are drawing wages from the state. People should not drink before any work the next day.

- Should the state hire more seasonal workers instead of hiring private contractors for severity? But one can figure out the costs easily. Right now we pay a lot when we could contract for the season at a lower rate.

- For too long now, the expectation of entitlement has influenced resource selection. The annual statistics of firefighter injuries and fatalities tend to support this connection.

- The Emergency Equipment Rental Agreement (EERA) resources will always be an alternative available to fire suppression administrators. This provides them with a source for fire suppression resources upon exhaustion of those available by contract. The concern is two fold.
    1. The continued use of EERA resources on fires while contract resources are being sent away. This is a direct violation of the agencies obligation for the employment of contract engines. This may be because once an EERA resource is on an incident; fire personnel have no way to easily and definitively identify a resource as EERA. These resources need to be readily recognizable to incident personnel so they can be managed in accordance with their agreements. Recommend that there be a prominent entry in a piece of EERA equipment's resource.

    2. Plans and finance personnel need to be trained to spot this entry upon the equipment's check in at an incident and made aware of the limitations this type contract places on its employment. Further, the equipment should be identified in t-cards and documentation so plans and resource management personnel would be aware that they should be among the first units to be de-mobbed.

- It is unfair to those who equip and maintain engines in accordance with Chapter 20 and Region One contract specifications as well as to the fire management personnel on an incident to allow EERA equipment on the line that does not met the same standards for complements and conditions as do contract engines.

- Equipment complements and standards on an incident should apply to all. The crews of EERA engines and tenders should have to meet the same standards for training, condition and equipment as required of the contracted engines crew persons, including the crew complement. The 2007 season type six EERA engines only required a crew of two people while the contract engines required a crew of three people. If so, this allowed the agencies to violate their own standards.

- Private contractor (Best Value and EERA) firefighting resources are important to our fire suppression successes in Montana. We believe that all wildland fire suppression agencies try to use these resources on a fair and equitable basis. Dispatching and resource hiring and assignment difficulties arise during very

chaotic times during multiple large fire situations. Successful assignment and use of private contractors depends on effective pre-planning and implementation by dispatch and incident support organizations.

Use of private firefighting equipment continues to be a very complex situation. The Confederated Salish and Kootenai Tribes believe there are many things that can be done to improve contractor use and services. The local contractors can help improve the situation by meeting pre-season paperwork and equipment inspection deadlines and by improving their track record on annual firefighter training and incident qualification and certification processes.

The Tribes would recommend continued interagency support of local and zone equipment boards and committee activities, the fire suppression equipment best value system, and other fire business and equipment procurement activities. All dispatch organizations need to adhere to strict resource list rotations, contractor services information support, and equipment inspection timelines to fulfill local extended attack and large fire resources ordering and assignment processes.

FIRE FIGHTING TECHNIQUES

- Stop this "back fire" control stuff. Let the local fire people fight them.
- Some of the problem for firefighters is locked gates and sometimes waiting hours for someone to arrive with a key.
- Eliminate the use of type 6 engines on major fires. These are initial attack resources. If you need personnel, hire individuals; or if you need engines, hire type 3 or better, not type 6 pick up pumpers with 150-200 gallons of water.
- Use aircraft more efficiently. Use fixed wing aircraft on initial attack; and don't be unwilling to divert loaded aircraft that are in the air and working another fire to an incident that is just starting. Use rotary aircraft where they do the most good in support of ground attack activities.
- Provide support (aircraft, bulldozers, hand crews) to local fire agencies upon request on any fire in the interface without having to wait until an officer of DNRC or the USFC arrives on the scene.
- Not clear why some private lands are burned and others are not. The policy needs to be explained by fire agencies.
- Open closed gates temporarily in appropriate places, in a safe season in previously burned areas so firewood gathers can supply their needs creating a low fuel fire land where fire might be stopped.
- Allow people to volunteer to help.
- Station groups of tribal fire fighters in rural communities with only volunteer fire departments during high fire danger to provide extra resources.
- Stop making fire lines behind the fire. Three days after the fire had burned across our land they wanted to run a cat through our place and make a fire line. Everything was burned and black and the fire was headed the other direction, it could not come back because all the fuels were already burned.
- Stop making back burns. When things are very dry we need less fire not more.
- When back burns are made there must be all the necessary resources available and if they are not then it should not be done. If the resources are not available and a back burn is allowed then that agency is responsible for the costs of the fire incurred by landowners affected- grass, hay, fences, if it gets away.

- Pay fire fighters a bonus if the fire is put out in the first 24 hours.

- Include local volunteer fire chiefs or assisted fire chiefs on type I and type II teams.

- Bring back private firefighters to work each district under a severity contract. This is a proven method, which saves the district money and allows quick first response to a wildfire. A severity contract permits a contractor to provide fire protection to a specific district. This type of protection is defined as initial attack, which puts resources on an incident before it can get very large. The amount of resources required and their cost are incidental compared to their effectiveness and benefit to a district should a large fire occur.

- Severity contracts provide trained personnel who size up the incident and contain the wildfire or notify the district that resources are needed. Then they direct additional resources to the location, identify water sources, hazards, secure area where the fire started, assist with operations, etc.

- Very often severity engines and crews are all each district requires and by patrolling 7 days each week they prevent large wildfires human or natural caused. They are also more dedicated than volunteer departments as this is not a sideline or a volunteer effort it is what they do for a living. The district is only required to pay for them as long as they are needed and they work well with the local people. This eliminates the need for a year around fire crew, new apparatus and support equipment each year, affiliated waste etc. that is what is happening now.

- Form type 2, type 3 and type 4 teams made up specifically of contract firefighters. They are better trained and ready to go. By organizing these teams you eliminate the liability of unprepared personnel and un-experienced firefighters.

- Montana does little prescribed fire as part of their fuels reduction. There is a great need for this.

- The current program provides a very negligible reclamation effort. Weeds are rarely addressed, re seeding is only done by air which is expensive and the results are questionable. The reclaiming of fire lines, repair of roads, fence reconstruction, and silt and erosion control are rarely finished and in some cases not done at all. Minimal effort is given to see that the work was even done. The obvious conclusion from a landowner standpoint concerning impact to their property is that extensive damage was caused and nothing was done to make it right.

- Eliminate the overt abuse of air support by division assignments that use tenders, engines, hand crews and good old hard work. We used to put out a lot of fire when there were no helicopters available by using hose lines, engines and water tenders.

- Water sources are not developed to provide fill sites for initial attack equipment. Mapping is done poorly or not at all so responding resources are going in blind with no information unless they collect it themselves.

- Policy requires that any resources that are on the incident engaged in actual fire suppression be stopped and removed even if there are no resources available to take over. When resources finally do arrive they typically arrive on the incident by late morning when fire activity is just picking up making their efforts fruitless. Too much emphasis is placed on air support while ground resources are assigned to secondary objectives.

FIRE SUPPRESSION AND FIRE FIGHTING

- If a fire is not immediately suppressed as under state guidelines then the agency is responsible for the costs of the fire on private and state lands.

- We need to relax some of the rules. Firefighter safety is of major importance and a great concern but, anyone who has ever fought a rangeland fire knows that more progress can be made in the night when winds die down and humidity rises. Having to work in daylight hours only makes it harder to control fires.

- We need to have more local involvement in decisions made by management teams. We as stewards of this land know the terrain, know the area, where roads are, so we are capable of making some decisions without someone from another state telling us where and what to do. No one knows a ranch better than the rancher.

- Capacity issues in assisting with suppression and/or increased demands for the response operation. Montana needs to have a tactical team in place including a local official in each county to respond within minutes to hours not days to a fire. This plan must include helicopters or retardant planes than can respond to a crisis immediately.

- Does Montana have a tactical team now? First responders in the areas are generally tactical response teams from different federal agencies. This results in a horrid bottleneck of bureaucratic politics that strangles their ability to deal with immediate threats.

- The Forest Service and state need to take into account water and watershed protection during fire season.

- The state must take a more active role during the fire season to protect values outside of the federal lands and push the feds to do more to contain the fires within their boundaries.

- We need fire management procedures that fit across a large area but in many cases the procedure needs to be at a watershed level. Let be prepared now, not after the fire has started.

- Let's bring in the scientists that look at long and short-term fire control. Not all agencies or private sectors either but a variety to consider views.

- The Confederated Salish and Kootenai Tribes believe that over the next ten years, Montana wildland fire agencies will experience decreased fire suppression capabilities and effectiveness, with greater safety risks to firefighters if no changes in policy, practices, or funding are made. State and Tribal agencies are trust asset protection organizations. Both agencies must evaluate our agency missions as full suppression organizations. Can we afford to suppress all wildland fires (at high costs) in the face of changing climates, increased long-duration fire events and with increasing hazard exposure to our firefighters?

  Montana will experience increased impacts to Tribal trust, private, and community lands and properties over the next ten-year period. The Tribes believe that governments should support preparedness, hazard fuel reduction, fire severity, and fire prevention information/education budgets to keep pace with expected increases in initial/extended attack and long-duration fire workloads.

INITIAL ATTACK

- Waiting for the fires to get to edge of public lands to fight is too late. Need healthy buffers that federal, state and local landowners are free upon, if possible.

- Pre-position resources in known tinder areas (forest crown), lighting arrestors and treetop hot strike dispatchers, coupled with fire line extinguishers broadcasting chemical suppressants. All placed by helicopter, to perform as a high firewall or 'break' when the wildfire domes or spreads thru the remote, often isolated wilderness forest canopy.

AFTER THE FIRE

- After each major fire, there should be input by the local entities and private landowners as to reforestation and grass reseeding.

- It should be clear each fire season by the federal agencies and the state what landowners and others have for resources if they are burned out. It is after or during a fire that these things come up. There should be regular information each year by many entities on what to do after a fire has passed and there is damage.

- Review the history of logging sales including salvage sales following fire or disease.

- Big fires are not good since they sterilize the soil. Grass and reforestation are necessary.

TOURISM

- Encourage all governmental agencies to include tourism organizations when developing their fire communication plans. Frequently the losses to business are due to an inaccurate public perception of the threats of wildfires. Media tends to over exaggerate and sensationalize fires, which leads to visitors canceling trips, and leads to losses to tourism businesses. Working together we can help to manage the publicity implications by creating unified, consistent, accurate messages giving our residents, our visitors, and the media the information they need while mitigating negative impacts to tourism.

- Allow a single declaration of a "state of emergency" that would be statewide and season long. Each time a declaration is used it creates negative attention to our state and limiting these declarations would be very beneficial for tourism.

- Large fires have had equally negative effects on small communities that depend on tourism, hunting etc.

- These fires affect outfitting and hunting and Fish, Wildlife and Parks needs to discuss with Forest Service and other agencies way to promote these activities even though there are fires every year.

- It is ironic that the Forest Service and other federal agencies say that fires are normal. If they are normal then allow people to live with fires instead of simply shutting down the state and major areas of the state during fires. It is a matter of risk taking and those who are willing to live with fires and willing to live in this state should be able to not be scared by every fire of shut out of other activities during fire season as long as they follow procedures and guidelines on protecting themselves and others.

THINNING

- Most of the acreage burned in any one year occurs in a relatively few large blazes. In other words if you were to put out all of the other fires, these few fires would account for the bulk of all acreage burned. This is important because of the next point.

  Big blazes are driven primarily by climatic conditions- when there is extended drought, low humidity, and high winds, you get big fires. The 1910 burn that scorched 3.5 million acres of northern Idaho and western Montana is a good example. More than half of the acreage that burned occurred on two days, August 21 and what has been known ever since as Black Friday, August 22. That day the winds were roaring across north Idaho and into Montana. This leads to the next point.

  When conditions are ripe for a big blaze, and assuming you have an ignition source (lightning or human), you can't stop the fires. You just have to get out of the way or are out of the way (i.e. do not build your house in the woods.)

As consequence of above points, thinning proposal as "fuel reduction" have little impact on fire spread. Thinning does work to reduce fire intensity (how hot it burns), but little to stop the spread of large blazes. This is because high winds blow burning embers as much as a mile or more ahead of any fire front starting new blazes. Unless you were to thin all the forests in the West (an impossible task to say the least), you are going to have little effect on fire spread on a landscape scale- though there may be some benefit to surgical thinning in very specific and concentrated areas- more on that below.

- There is no predicting where a fire will start and burn. So many things affect fire spread including the wind direction, topography, past fire and insect history which shares present stand age and species composition. The idea that you can think forests across the landscape in hope that the areas selected will be the same ones that will likely burn is optimistic at best.

Thinning is not a one-time treatment, when you thin a forest you release a lot of other trees from competition, which rapidly grow till fill holes in the canopy and under story. Unless you are prepared to go back time and time again and re-thin the forest over and over again, you lose much of the fuel reduction value. Long before any federal and state agencies could finish with their first generation of thinning, they would need to go back and repeat the thinning process again on the earlier thinning projects. Are there realistically the funds to pay for all this thinning- only if you accept the commercial logging of big trees to pay for it all- and that results in unacceptable impacts to the forest. Logging big trees to pay for the cutting of small trees is really a "Vietnam strategy" of destroying the forest to save the forest.

Thinning is not a proven strategy. Most of the evidence to support thinning is anecdotal- as many places where advocates claim thinning stopped or slowed a fires, there are other examples where fires burned right through thinned stands. Did the winds slow, for instance, just when it approached a thinned parcel and/or was the topography such that it led to a reduction flames- that had nothing to do with thinning? These kinds of questions are difficult to answer and control, thus proponents of thinning can always claim that thinning was the reason a particular fire slowed down, but often as not thinning has no observable effect on fire spread under severe fire conditions. For instance, much of the forest that was charred in the big Derby fire in Montana was stands of savanna like ponderosa pine. A similar effect was noted in Oregon's Biscuit fire where naturally thin (due to special soil that restricts plant growth), Jeffery pine stands were scorched. In both of these bases, high winds drove flames across the landscape.

Remember even if thinning appears to work under normal fire conditions, it appears to be less effective under severe fire weather. And it's very difficult to replicate these conditions in an experiment. No scientist can thin a forest, then create a super drought, low humidly and winds in excess of fifty miles an hour and have it burn both the thinned and adjacent un-manipulated forest stand at the same time.

Thinning, as a fire hazard reduction strategy, could work under less than severe fire conditions, but fail miserably under the high fire severity climatic conditions.

There is even some evidence that suggests that thinning can actually increase the fire severity and intensity because thinning opens up the forests to more wind and permits greater drying of ground vegetation and the fuels that sustains fire spread.

- Logging is not a benign activity, nor is it the same selective factor as natural events like fire and beetles. Logging introduces human intrusions into the forest ecosystem. This can disturb sensitive wildlife like wolverine and grizzly bear. Logging can be a vector for the spread of weeds and disease into the forest. Logging almost certainly creates more sedimentation in streams. Logging removes woody debris (dead wood), which has many ecological functions including providing homes for many invertebrates. Logging removes snags, and the potential for future snags, snags are important for many wildlife species, particularly cavity dwellers. Logging can alter nutrient cycles. Logging roads, even closed and reclaimed roads, often become new OHV (off highway vehicle) routes. Furthermore logging tends to select against early succession species that are favored by fire and beetles, and also skews age classes.

- Where thinning may be appropriate is for community protection, i.e. if you thin say within a half mile or less of community or whatever, and you can get a big fire fighting force in the area, thinning can sometimes help to slow a fire enough that fire fighters can put it out. However you have to have a lot of fire fighters on the scene for this to be effective- and the only time you can cost effectively justify this kind of force is to protect structures. For instance in 1988 in Yellowstone, there were a massive effort to protect Old Faithful Inn, this worked because you could get hundreds of firefighters in one spot, but you're not going to get that kind of force to focus on a big fire front that may be miles wide.

- Finally nearly all efforts to reduce big blazes and restore health forests assume that health forest is ones with few dead trees and without large fires. This may itself be a flawed assumption. Many ecologists would argue that a healthy forest has a good share of dead trees and at some times in the natural course of events, to have a great many dead trees. The same can be said for large fires- large stand replacement blazes may be ecologically important.

- The bottom line is that we should seriously question whether we need any manipulation of our forests. I believe the forests are effectively capable of taking care of themselves. After all they have been operating without our aid for a lot longer than we have even assisted. They are used to drought, fires, beetles, and even changing climate. In the face of global climate change, protecting large tracts of un-manipulated landscapes may be the real salvation of our forests.

- Early detection and aggressive initial attack can be the most important steps to reduce costs and degradation of our air and water.

- Thinning may be appropriate for community protection, i.e. if you thin say within a half mile or less of a community or whatever, and you can get a big fire fighting force in the area, thinning can sometimes help to slow a fire enough that fire fighters can put it out. However, you have to have a lot of fire fighters on the scene for this to be effective- and the only time you can cost effectively justify this kind of force is to protect structures.

- There are those that claim that because major wildfires have burned though industrial timberlands, there is obviously no reduction in fire risk due to harvesting by the timber companies. Use some industrial timberlands that were thinned have burned, but the acreage of such burns is afar less than other types of forestlands that were not previously thinned.

- Need a report each year of acres of natural timberland burned, acres of pre-thinned timberland burned, acres of pre-harvested timberland and acres of grassland.

- The term wildfire and wildfire hazard are part of a very broad spectrum of situations that should not be applied equally. The most hazardous fuel conditions consists of large amounts of fine fuels such as cured tall grasses, brush and fine woody debris. Wildfire statistics show that range and brushfires have caused the most damage and injury to human health not forest fires. Grass and brush fires can burn with high intensity and travel at great speeds, making fire suppression very difficult and dangerous. Forest fires can burn with great intensity in dense forests and/or with high surface fuel loading conditions, but do not typically travel with great speed.

- Most forest fires are contained in areas where fuel treatments have occurred that prevent active crown fires and thinned trees suppress understory fuels such as grasses and a combination of moderate forest thinning, followed by controlled burning, can lead to less catastrophic fires. This two-step process, thin and burn can help reduce anticipated future catastrophic wildfires with their consummate massive emissions of greenhouse gases and ecosystem devastation.

- The policy by the feds does not allow the timely removal of dead timber and vegetation- fuel reduction projects. There are little or no efforts made to provide even the smallest degree of preparation in fire prone

areas such as firebreaks and clearings in high fire urban areas. Roads are not maintained or bridges constructed to allow access of fire apparatus and resources.

- We still have too many man caused fires started from slash burning. Grants should be made available to subsidize low cost removal of pulp and biomass.

- At the present time, my ability to hand pile and burn debris is restricted. I cannot burn during the months of December, Jan and Feb. This is an arbitrary impediment that has to do with air quality but ignores the fact that on well ventilated days it could be done. The regulation restricts us entirely during the three months of the year when fire danger is lowers and burning would be safe.

- The wide spread loss of lodge pole pine coupled with high-energy prices should allow us to capitalize on the potential of wood to reduce fuel bills. At the present time we permit curing without requiring piling and burning of the residue. In addition county road crews on occasion clear adjacent to road right of ways and simply leave the debris. Consequently we have a dangerous accumulation of debris along roadsides that present the potential for careless ignition in areas laden with fuel.

- We need stewardship training for those we permit, and would now encourage, utilizing firewood and perhaps engaging in fuel reduction. We also need to create an equivalent of the Civil Conservation Corps to address fuel reduction along travel routes, wood cutting areas and the rural urban interface. Such a program could be funded from the coal trust fund created under the coal severance tax.

LOGGING

- Big wildfires can be prevented by more logging trees.

- Any logging or large-scale logging should include re planting new little trees.

- Stop fires before they get too big and out of control by checkerboard logging.

- You can let the fire burn the tress or cut it.

- The forest between Boulder and Butte is dead. Why isn't the Forest Service doing anything to remedy the situation? They should at least tell people what to expect sooner or later.

- Burning of slash has caused many large run away fires. It is unnecessary to burn slash anymore. Technology is available in this country to harvest slash from logging and thinning and use it to create energy.

- Log in a checkerboard fashion such as every other section. Cut 80% of the tress in some areas and leave the other 20%.

- Allow modern style logging into our threaten forestland within three months after a fire.

- Reducing fuel is an absolute effective tool to reduce fire intensity. One of the most effective tools to reduce fire severity on public and private lands will be to increase the acreage of fuel reduction; timber harvest operations. Big fires lose intensity when they spread into harvested areas. Our operation chiefs are always looking for road access and for areas that have the fuel loads reduced. Fire behavior changes significantly when the main fire reaches an area that had been harvested or had some sort of fuel reduction treatment.

- We are running out of loggers and soon there will not be any. Then options are gone forever for thinning.

- Diseased and dying forests need to be harvested and treated as long as it is economically feasible.

- Our forests and rangelands need to be managed for the long run- 100 plus years not for the next ten years.

REDUCTION OF FIRE SUPPRESSION COSTS

- Invest in fire prevention/education, early detection, and rapid suppression.

- The earlier you can implement mitigation, the fewer resources you will need to expend for fire suppression. Fuel reduction; fire breaks on both public and private land are very important. Opportunities for prevention include closer mowing along the highway right of way and a dozer line. This concept could be implemented stateside by the Montana Department of Transportation high-risk locations for low cost, highly effective prevention.

- Another prevention opportunity becomes obvious where subdivisions interface national Forest Service land. Viewed from above, there are clearly identified vegetation corridors of contiguous dense trees that would be an indefensible corridor for fire transmission. Again adequate preemptive fire breaks on both private and public land would provide protection for private property and would save substantial suppression costs.

- Stillwater County had a horrible fire season in 2006 and then one significantly better in 2007. The difference between the two was clearly the very quick deployment of aircraft dropped water and retardant resources to the initial stages of the 2007 fires.

- Wildfires in mountainous terrain are nearly impossible to control with trucks and men on the ground. We have learned that once a fire gets to a size over 100 acres, we are dependent on the weather for significant control. Most importantly we have learned that if fires are attacked right away with air operations equipment, we save property, lives and money. Please put up more resources into firefighting airplanes, helicopters and the related support services needed to allow them to be deployed at the earliest evidence of a fire start, especially in areas of denser populations.

- The federal and tribal agencies need to allow the state to have the state provide initial attack with air resources when they spot a fire unless the feds have said no in an area weeks before.

- The modern practice of not fighting a fire at sundown has to cease. Nighttime, even though more dangerous, is a very good time to fight a forest fire.

- The state of Montana should cap spending on fire suppression. The total should be $40 million per biennium. DNRC may use the money for fire suppression besides their regular costs appropriated by the legislature. Money left over stays in the fund.

- There needs to be time studies regarding to how many are fighting the fires and when versus waiting for a fire. We are spending way too much waiting for a fire and fighting a fire for various reasons.

- There is no reason that the cost of the fires the last several years could not have been cut down by at least 50%. But until it is clear what the Forest Service and federal government are fighting fires for and with, the costs will continue to be enormous.

- At the end of each fire season, fire managers should go back and review how the fires could have been reduced in cost from what was spent.

- Until the feds figure out what they are fighting, the cost will continue to escalate. The fires will just get bigger with fewer results in protecting homes and landowners and the public.

- Letting a fire burn, and it gets out of control, the state is busy trying to protect homes, while the feds say they do not do structure protection is plain wrong. Meriwether and other fires should not have occurred.

The state and local agencies should be reimbursed from the feds for fighting those fires not the other way around.

- Without business people on the ground of fires, the state will lose hundreds of thousands of dollars every year.

- As more timberlands become real estate, our wildland urban interface is increasing dramatically. As development increases, so does the wildland urban interface; this will cause the cost of firefighting to rise dramatically in future years as the values at risk continue to grow.

- Fire prevention and education programs need to be funded across the state of Montana through the Forest Service, BLM, DNRC and tribal jurisdictions. Several national forests and DNRC offices across the state do not have dedicated prevention technicians.

- Bring fire prevention to the forefront of the wildland fire discussions.

- Currently Montana seeks reimbursement for costs associated with suppressing a fire from those individuals found accountable for igniting the fire. This money goes into the states general fund. Instead create a funding mechanism whereby this money would go to fire prevention and mitigation efforts.

- As fire danger rises, planning levels increase to bring on more fire suppression resources. Prevention resources should also ramp up as fire danger increases.

- As it looks like the state will pay a large part of fire costs, the state needs the authority to simply go in and put out a fire or suppress it early on federal lands. We cannot afford to wait until the fire comes out. We may need to suppress it for watershed values that are not considered now by the federal government. Also when we have these large drought seasons and longer fire seasons, the state needs to put out the fires early on if the federal government will not.

- It would be simpler for the state to have grass insurance that is subsidized by the feds to pay for the cost to landowners for their grass. Right now it is terrifying to watch the grass burn caused by fires from federal lands that are not being put out.

- The state of Montana must know what the cost of federal fires which start in the wilderness or non-federal property and wreak destruction in their paths when burning their way on to private or state owned property.

- Cost reduction is a buzzword with the incident management teams. But they don't practice what they preach. There is considerable waste. There are resources and people that are not fully utilized. On state fires, use a comptroller that oversee and approve expenditures on a daily basis. Include periodic reviews by qualified overhead to question the incident management team about the necessity of people and equipment.

- Montana does try and reclaim burned wood unlike the federal government.

- The Montana Legislature must realize we spend too much on fire suppression each year. It is off budget but we still spend it. We must recognize the cost and find other ways to pay for it. One way is to cap the amount and put part toward fuel reduction every year. We need to work for a state fire team to put out fires. The feds must kick in so much money each year for fuel reduction and engine replacements to local governments.

- Here is a list of ways to save money in suppressing fires:
  - Fully fund the state fire resources; 24/7 coverage for state helicopters and engines.
  - Have incident business advisors on each fire to save money.
  - Enter into agreements with feds to put out fires the state believes will get away.

- Federal government to buy hay for ranchers who had their grass destroyed.
- Pay for a percentage of trees lost.
- Pay for 70% of a fence.
- Have the feds pay the state $10 million each year for fuel reduction.
- Be upfront as to what can or cannot be protected.
- Give more resources to local governments and entities to fight the fires.
- Have the state have their own fire management and fire teams to put out larger fires all under state control, the feds to provide $10 million each year for this.

- It would be cheaper to prepare for fire fighting than wait for fires. But it is easier to pay for emergency funding both at the state and federal level but far too costly. Fuel reduction around homes and communities, added staff and equipment would save money. Yet there is concern of too much government so we wait and spend too much government money when the crisis erupts. Where it is cheaper to have government help we need to look at that instead of both parties and all governors waiting for a crisis to spend money we should not be spending at that rate.

- Cost share agreements must be reviewed during each legislative session. The legislature may wish to pass laws to govern cost share agreements.

STATE FUNDING

- If the federal agencies will do little more than what they do now in fighting fires, then the state must either put more resources into fighting fires when they come off the federal lands including more control of how fires are fought outside federal boundaries.

- The state must decide should they act on federal lands to protect private and state lands during extreme drought times or when they feel that the cost of fighting the fires outside of federal lands on their own clearly will cost far more than simply putting and suppressing the fire.

- The state will sooner or later have to consider having their own response team to do the job that the feds will or have become unable to do now.

- State and federal management policies contribute to the increased number of wildfires. Fuel reduction programs are not being done in a timely manner if at all so it is easier to wait for a wildfire than to monitor the land with fire resources. The environmental studies and court restrictions are too much trouble to deal with on a low budget besides the state always comes up with the money for fire even if you go over budget. They'll just hold a special session and throw more money at it until it goes away or it snows. No responsible party is ever held accountable. Tax the environmental groups that sue to stop logging to help pay for some of the costs.

- State and federal agencies will continue to increase their fire departments and millions of acres of grass and trees will be burned when the weather permits. Funding will never be a problem because it is typical of all governments to throw unlimited money at a crisis to make it go away then make the taxpayer recoup the loss.

- Best value may be good for getting the right contractors for the right price but it does not take into account if the state or federal government had simply hired them as state employees in the first place for year round or seasonal work on fires. In many cases it is cheaper to have seasonal or full time employees and equipment than to contract out for a few weeks at a time.

LAWSUITS

- Lawsuits stop projects to remove trees. Look at the list of proposed projects minus the amount in lawsuits or appeals.
- Those who start illegal fires should be sued.
- The state of Montana should be suing the feds to stop road closures, pollution from fires, carbon dioxide releases from fires, etc.
- It is not right that a handful of lay people to be able to file some type of legal action and ask a judge to overrule these professionals.
- The national appeals process needs to be repealed and revised so only local stakeholder input is recognized.

PHILOSOPHY OF FIRES

- When we went to the holistic science of conservation biology, it centers on the assumption that nature knows best.
- The manner used today to detect fires is only contributing to more and larger fires. This happened much less frequently in the days of the fire lookouts.

POLLUTION

- Include carbon emissions as a part of the environmental analysis of forest management planning. Industrialized fuel reductions will probably do more harm than good and should be avoided. Non-motorized recreation should be encouraged and given priority in planning. There are several state programs that use off road gas tax monies to accommodate motorized recreation. These programs and funds should be redirected into planning and implementing recreational activities that leave a minimum carbon footprint.
- Local groups and state groups should sue the state and feds to stop large fire let it burn due to the increased carbon dioxide in the air. The federal government must comply with restricting the amounts of carbon dioxide in the air. Other groups fight and sue the federal government to stop logging and thinning as well as other activities, why do not other groups sue to stop the federal government from pollution as well as dumping large amounts of carbon dioxide in the air. There needs to be a lawsuit or suits by groups or the state to stop let it burn policies.
- If the fed government does not suppress the fires then they need to pay pollution fines as well as costs for smoke related sickness.
- There needs to be a study on sickness for air pollution during fire seasons. The feds must pay for those costs related to sickness including those who have no insurance.
- The Forest Service does not consider air pollution and its effects when allowing fires to burn.
- The Forest Service does not consider the injury to people, wild animals, etc when deciding to allow fires to burn.
- The Forest Service has decided that allowing large fires to burn for the good of the forests is more important than the damage it does to people breathing the polluted air.

- Continued use of fire and tolerance of "let burn" polices in light of the recent race to control carbon emissions, certainly raises the question of double standards being observed in setting state fire policy. Information provided from a California pollution study reported amazing statistics relative to catastrophic fire emissions. Information collected from a model developed by the California Air Resource Board Dept. to estimate emissions from forest fires indicated burning one acre of coniferous forest emits on average nine tons of carbon dioxide, 0.6 tons of hydrocarbon particulates, 0.25 tons of nitrous oxide. It was calculated that it would take 1040 new cars driving 1250 miles to equal a one-acre fire. In 2003 about 500,000 acres burned in Flathead County. From that model we can only guess at the volume of contaminants which were, and still are being released.

- Prescribed burns may only be allowed by the local county boards.

- Air quality restrictions need to be relaxed to provide for more burning of range and forestlands. This is particularly true east of the continental divide where there is increasing forest encroachment on grasslands.

- It is ironic that private individuals can not burn fires during certain periods of the year or even on certain days but the feds can let fires burn or start them during those same times.

MEDICAL

- Type I and type II teams provide emergency medical coverage for their personnel differently. This ranges from having a full paramedic transport ambulance assigned to the base camp or spike camp to having some EMT's with no ambulance. For example the Southwest teams always insist on having paramedics and an ambulance contracted and assigned to the team. The Northern Rocky teams seem to be comfortable with EMTs or some paramedics, but none want to have an ambulance contracted. They seem to be content on dialing 911. Having advance life support medical transport coverage should be one of the highest priorities when it comes to the type of work our firefighters have to perform. Our statistics tell us that most of the firefighters who die in the line of duty die from heart related events.

- Every organization in the country accepts a licensed medical doctor's certificate of health, but the agency requires the "backpack test".

- A fireman should be able to pass a doctor's health examination to certify that they are physically fit to work fires. The agency should accept this examination and stop killing firemen.

AVIATION

- Put more resources in airplanes, helicopters and the related support services needed to allow them to be deployed at the earliest evidence of a fires start, especially in areas of denser populations.

- The state must contract ahead for air support for a fire season so they are not looking for assistance during fire season. In the long run it will be cheaper to contract for a part of a fire season, regardless of the number of fires.

- We need the title to our state helicopters as soon as possible.

PUBLIC AWARENESS

- Need to continually make the public aware of cost of fires, fire suppression, and breakdown of costs. It may slow down this percentage of preventable fires if the investigating team would update the public on reasons for fire, costs of fire suppression, and what fines and or criminal action was taken against the persons responsible for the fires.

- The public, landowners, homeowners must be so educated on their responsibilities to their homes, fires and property that it is ingrained in them what and how to protect their property, expectations of what firefighters will do to protect their homes on small and major fires, what to do in emergencies when fires comes. Too often the public meetings are more song and dance.

- The state/feds/local officials need to understand that the public wants to be heard at public meetings. Too often it is top down. It should be what do people really need to know instead of dog and pony shows.

WOOD FIBER FOR RENEWABLE RESOURCES

- There is the need to use the small timbers for wood fiber for energy.

- Encourage use of timbers for energy and biomass.

LEGISLATIVE AUDITS

- The legislative audit recommendations for promoting proper forest practices and prioritizing forest fuels reduction projects must be implemented. The question for the department is: Were the recommendations all implemented? The college of forest resources website gives facts and figures which prove that utilization of the excess fuel waste is a far most cost effective way to go in the long term than what have been acceptable practices.

- The wildland fire administration audit from 2004; were all the recommendations implemented?

STATE FIRE POLICY

- The state should explain if they follow the state fire policy provided by the legislature or where the gaps are for following the policy. (76-13-104, MCA)

Appendix C
Headwaters Economics Report

Montana Wildfire Cost Study
Technical Report

8-8-2008

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Executive Summary

Montana's "big sky" appeal, wealth of recreational opportunities, and growing economy have contributed to rapid population growth in the last few decades, particularly in the western portion of the state. Many of the new homes have been built in rural areas, outside existing cities and towns. Living in Montana's forests, however, is not a risk free nor a low-cost proposition. Most years, federal, state, tribal and county governments spend millions of dollars suppressing the state's inevitable wildfires to protect Montanan's homes in the woods.

To better understand the current and future implications for Montana's taxpayers, Headwaters Economics analyzed daily fire suppression costs across 18 large fires that burned in Montana during 2006 and 2007, systematically distilling out the portion of total fire suppression costs directly associated with housing – that is: the dramatically higher costs required to fight fires in the "Wildland Urban Interface."

Montana State University collaborated in the statistical analysis, identifying the fire characteristics that were most responsible for daily firefighting costs, including the size of the fire, the nature of the terrain the fire burned through, whether roads and other infrastructure aided or complicated suppression, and the extent of housing threatened by the fire. MSU helped determine the relative contribution of each characteristic to the total costs. Headwaters Economics then incorporated these main drivers of firefighting cost into a growth model that projects new development expected in Montana by 2025 based on the state's recent rate of growth and pattern of development. With these tools, it was possible to understand the increases in firefighting costs that Montana will likely see unless development changes significantly from its current pattern. Key findings of our research include:

- Firefighting costs are highly correlated with the number of homes threatened by a fire.
- The pattern of development (dense vs. spread out) is an important contributing factor.
- When large forest fires burn near homes, costs related to housing usually exceed $1 million per fire.
- As few as 150 additional homes threatened by fire can result in a $13 million increase in suppression costs in a single year.
- For all agencies involved in fire suppression in Montana, the estimated annual costs related to home protection for 2006 and 2007 were approximately $55 million and $36 million, respectively.
- If current development trends continue, fires seasons similar to 2006 and 2007 could cost $15 to $23 million more by 2025, bringing total fire suppression costs associated with homes to between $51 and $79 million dollars. Adjusted for inflation, future costs could be as high as $124 million in 2025.
- A conservative estimate is that 25% of all costs of protecting homes from wildfires within Montana are paid for by the state. Therefore, Montana's costs for home protection in 2006 and 2007 are estimated to have been $13.9 million and $9.2 million, respectively. By 2025, Montana's future costs, adjusted for inflation, could be as high as $31 million.

Decisions about how and where to fight fires, and where homes will be built in the future will have a major effect on the state's firefighting costs. Our research reported here was funded by the Montana State Legislature Fire Suppression Interim Committee.

Montana Wildfire Cost Study
Technical Report

8-8-2008

The objective of Headwaters Economics' analysis is to identify whether homes surrounding wildfires are related to changes in fire suppression costs, and if so, to what degree. We used a statistical approach to compare the daily fire suppression costs across 18 large fires in Montana, some of which burned in remote areas where few or no homes were threatened, and some of which burned through developed areas. This sample of fires allowed for a comparison between fires that threatened homes, and those that did not. We also investigated the importance of housing relative to the other factors that may affect suppression costs, including weather, vegetation, terrain, and other human factors including road access and threatened infrastructure.

This document explains the statistical methodology and provides some basic interpretations of the results. Section 1 describes the data, and a candidate set of models to account for non-independence of daily observations. Section 2 describes how we chose the best model among this candidate set. Section 3 uses model selection to arrive at a best set of predictors of average daily wildfire cost. Section 4 describes the results of a cross validation exercise on the best model from Section 3. Section 5 incorporates weighting of the residuals. Section 6 gives some basic interpretations of the coefficient estimates in the best model. Finally, in Section 7 we extrapolate from these results to answer two questions:

(1) How much is protecting homes from wildfires currently costing Montana?

(2) How will future home construction impact fire suppression costs?

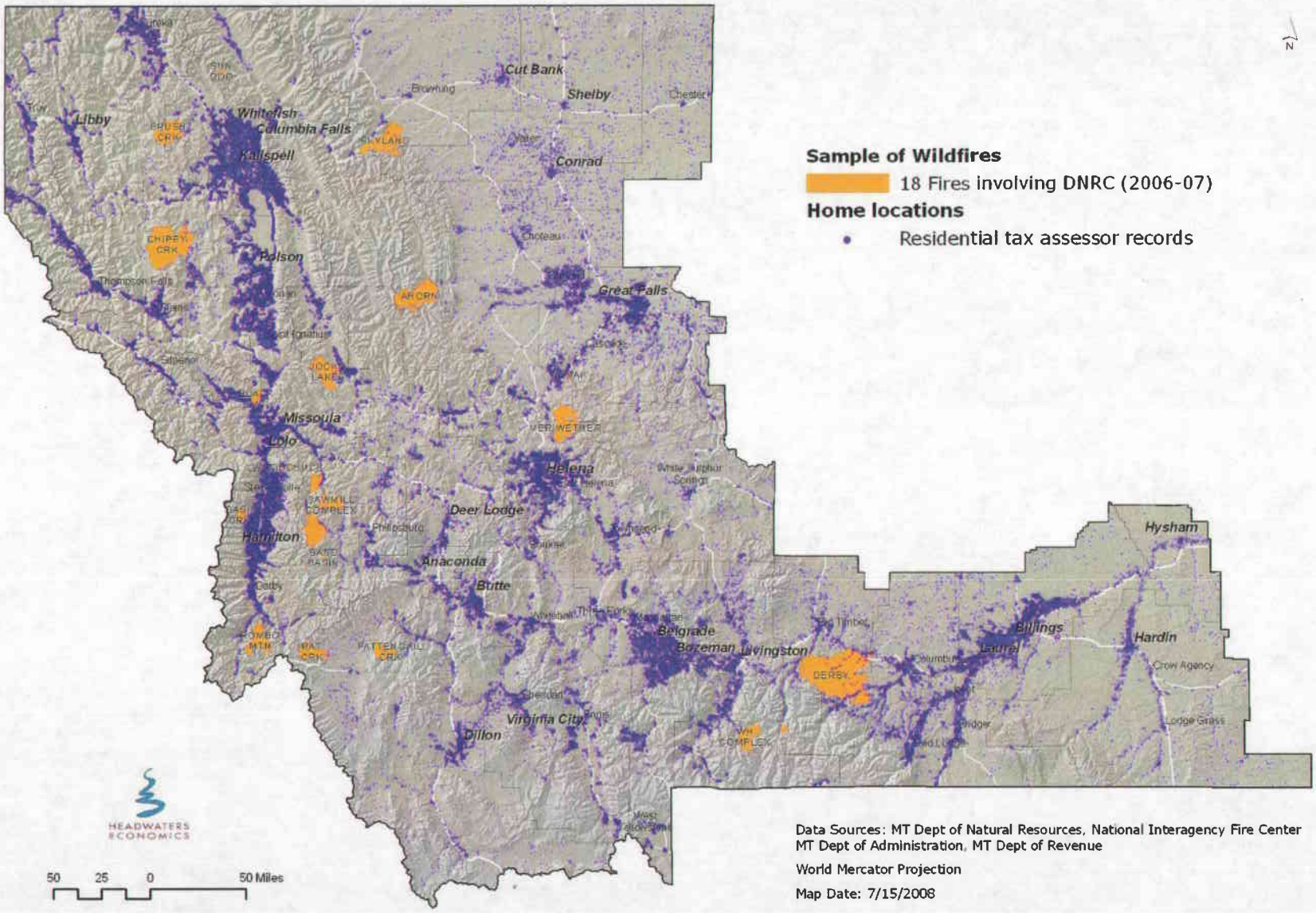
1 Data and Candidate Models

The wildfire data consist of 294 days of information on total suppression costs and wildfire characteristics, including size, surrounding development, weather, terrain, and surrounding infrastructure, which were collected for 18 wildfires in western Montana (Map 1). Much of data describing the wildfire costs and characteristics were pulled from a large body of documents, including ISUITE and 209 forms, recorded by federal and state agencies. The 18 fires were selected because they met several criteria, including:

(1) The state of Montana provided firefighting resources for the fire.

(2) The fire burned in either 2006 or 2007, which guaranteed the availability of daily cost data.

(3) The fire was large enough to guarantee the availability of daily Geographic Information System (GIS) data describing the fire (location, area, perimeter, etc.). These data are not consistently available for wildfire smaller than one square mile.



Map 1. Locations of the 18 fires included in this study are shown relative to housing in western Montana.

The 18 fires studied were Ahorn, Black Cat, Brush Creek, Chippy Creek, Jocko Lakes, Meriwether, Novak, Pattengail, Rat Creek, Rombo Mountain, Sawmill Complex, Skyland, and W H Complex from 2007, and Derby, Gash Creek, Sand Basin, Sun Dog, and Woodchuck from 2006. Data that were collected for each of these fires are listed, alongside their data sources and abbreviations that are used throughout this document, in Table 1.

Table 1: Data collected for each day of firefighting for each of the 18 wildfires studied.

Data	Abbreviation	Source
Total Daily Cost	Cost	ISUITE Forms
Size of Fire	Acres	GIS Perimeter Files
Rate of Spread	AcresGrowth	GIS Perimeter Files
Percent Contained	Pct	209 Forms
Wind Speed	Wind	209 Forms
Temp. taken by Fire Crews	Temp	209 Forms
Temp. Weather Station at 5 pm	Temp1700	Nearest Weather Station
Temp. Weather Station 24hr Low	TempL	Nearest Weather Station
Temp. Weather Station 24hr High	TempH	Nearest Weather Station
Relative Humidity	Humidity	209 Forms
Fire Growth Potential	GrPot	209 Forms
Terrain Difficulty	TerrDiff	209 Forms
Mean Vegetation Height	VegH	LANDFIRE
Mean Fire Severity Rating	Sev	LANDFIRE
Points of Road Access	AccPts	MT Dept. of Admin.
Length (mi) of Intersecting Roads	RdLen	MT Dept. of Admin.
Major Infrastructure Threatened	InfThreat	Global Energy/Penwell/MT Dept. of Admin.
Homes within 1 mi. of wildfire	Homes1	Tax Assessor Records
Homes within 2 mi. of wildfire	Homes2	Tax Assessor Records
Homes within 3 mi. of wildfire	Homes3	Tax Assessor Records
Homes within 4 mi. of wildfire	Homes4	Tax Assessor Records
Homes within 5 mi. of wildfire	Homes5	Tax Assessor Records
Homes within 6 mi. of wildfire	Homes6	Tax Assessor Records
Homes within 7 mi. of wildfire	Homes7	Tax Assessor Records
Homes within 8 mi. of wildfire	Homes8	Tax Assessor Records
Developed acres within 1 mi.	Acres1	Tax Assessor Records
Developed acres within 2 mi.	Acres2	Tax Assessor Records
Developed acres within 3 mi.	Acres3	Tax Assessor Records
Developed acres within 4 mi.	Acres4	Tax Assessor Records
Developed acres within 5 mi.	Acres5	Tax Assessor Records
Developed acres within 6 mi.	Acres6	Tax Assessor Records
Developed acres within 7 mi.	Acres7	Tax Assessor Records
Developed acres within 8 mi.	Acres8	Tax Assessor Records
Homes at Risk	HomesAtRisk	209 Forms
Evacutation in Progress (Y/N)	Evac	209 Forms

Within each wildfire, there were cases when data were missing for particular dates. Usually this was due to a lack of GIS perimeter data on individual dates when weather did not permit flying or the capture of satellite imagery for digitizing fire perimeters. This type of data is known as a time series with missing/unequally spaced observations, which was important in choosing the correct statistical method of analyzing the data. The response variable for the statistical analysis was the average daily wildfire cost since the last date with available data.

Depending on the nature of the correlation in the data, we considered four possible models to address the obvious non-independence in the daily observations within fire:

(1) A linear model that does not attempt to model correlation. This is no attempt to address the non-independence – a baseline case.

(2) A mixed model with random intercepts to account for the possibility that two observations within each fire share information not explained by the explanatory variables.

(3) A linear model that fits the residual autocorrelation with a continuous autoregressive (CAR) model.[1] This accounts for the possibility that observations close in time within each fire share information not explained by differences in the explanatory variables.

(4) A linear mixed model that allows for random intercepts and fits the residual autocorrelation with a CAR model.

Formally, this set of models can be expressed as:

$$
\begin{aligned}
(1)\quad & y_{ij} = X_{ij}\beta + \varepsilon_{ij} \\
(2)\quad & y_{ij} = X_{ij}\beta + b_i + \varepsilon_{ij} \\
(3)\quad & y_{ij} = X_{ij}\beta + \nu_{ij} \\
(4)\quad & y_{ij} = X_{ij}\beta + b_i + \nu_{ij}
\end{aligned}
$$

where $i = 1,2,\ldots,18$ indicates the wildfire on which the observation was made, $j = 1,2,\ldots,n_i$ indicates the day of the fire on which the observation was made, $\mathbf{X}_{ij}$ is a $1 \times p$ vector of observations on explanatory variables, β is a $p \times 1$ vector of regression coefficients, $b_i \sim N\left(0,\sigma_b^2\right)$ is a random intercept for the i^{th} wildfire (shows up in models (2) and (4)), $\varepsilon_{ij} \sim N\left(0,\sigma^2 I\right)$ is an *iid* normal error term (shows up in models (1) and (2)), and $\nu_{ij} \sim N\left(0,\sigma^2 \Omega\right)$ is a more general error term where Ω is a block

[1] Continuous Autoregressive (CAR) models are an extension of autoregressive (AR) models for residual autocorrelation. CAR models are valid for unequally spaced time series, which is the type of data we have within each fire. Pinheiro and Bates's *Mixed-effects Models in S* (2000) describes the use of CAR models in the mixed model framework. Another good discussion of AR (and the more general ARMA) models is presented in Chapter 3 of Shumway and Stoffer's *Time Series Analysis and Its Applications with R Examples* (2006).

diagonal matrix with each block accounting for temporal correlation within each fire (shows up in models (3) and (4)).[2]

2 Comparison of AIC for Potential Models of Residual Autocorrelation[3]

In this section, we compare AIC from fits of the previous section's candidate set of models. We fit models (1) through (4) in `R Version 2.7.0`, using the `gls` and `lme` functions in R's `nlme` library. Table 1 presents AIC values for models (1) through (4), where a different of 2 units between models is considered large (Burnham and Anderson, 2002).

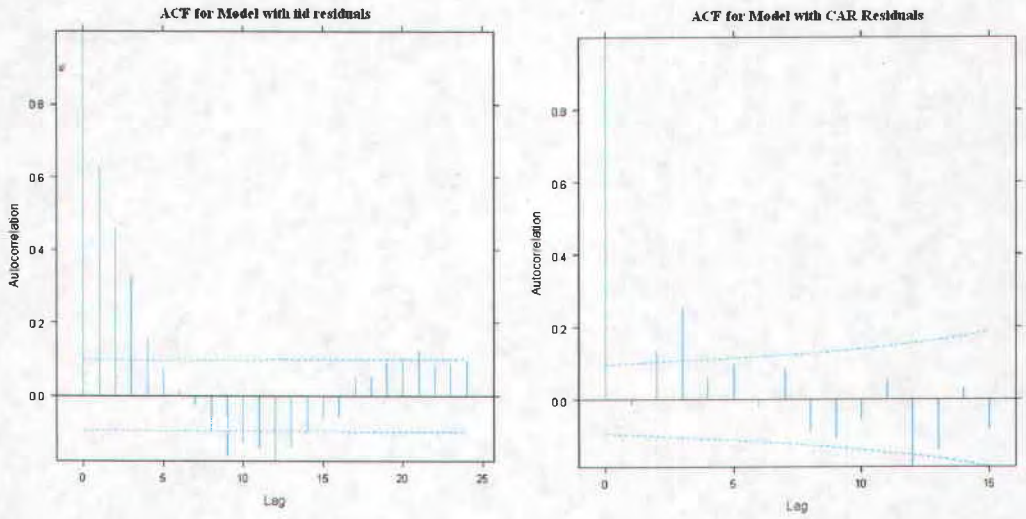
Table 2: AIC comparison of Competing models for Residual Autocorrelation.

Model	*AIC*
(1) iid errors	7747
(2) random intercepts	7721
(3) CAR residuals	7542
(4) random intercepts and CAR residuals	7544

Note: Each model was fit with the entire set of predictors in the dataset.

Clearly, the model that does not account for any non-independence in the residuals performs poorly. Models (2) through (4) are substantially better. The model that accounts for a CAR process in the residuals within each fire outperforms a pure random intercepts mixed model by nearly 200 AIC units. It also appears that random intercepts do not improve on the model that already accounts for the CAR process in the residuals. Therefore, we use the CAR model that does not have random intercepts.

Figure 1: ACF Plots



[2] After the model selection for the fixed effects, we will also consider weighting of the residuals to account for possible heteroskedasticity.

[3] A good discussion of the use of AIC and alternative model selection criteria is presented on pages 356 and 357 of Ramsey and Schafer's *The Statistical Sleuth: A Course in Methods of Data Analysis* (2002).

Additionally, as Figure 1 demonstrates, the autocorrelation function (ACF) for the CAR model looks much better than the ACF for model 1 in that there is no apparent pattern in the residuals. It appears that the CAR model does an adequate job of accounting for non-independent observations.

3 Selection of Model with the Best Set of Explanatory Variables

Because there are many combinations of the explanatory variables that could be considered, we use a stepwise procedure for selecting the best set of explanatory variables. At each step in the model selection process, the computer fits all models with one fewer predictor than the current model and all models that have one more predictor than the current model (within the set of variables considered). We take the model with lowest AIC, and then repeat the process in the next step. The model selection terminates when the lowest AIC model is the current model. The `stepAIC` command in R's `MASS` library automatically goes through this stepwise procedure for selecting the best model.

To allow for ease of interpretation, we only allow one housing/ development variable enter the model for any given stepwise selection. There are 17 separate housing / development variables in the data set (eight GIS housing, eight GIS developed acres, and one self reported houses at risk variable). Therefore, we ran the stepwise process 17 separate times to select the best model.

In model selection, housing variables were always included in the best model. Excluding the Acres1 model, the models with developed acres did not perform as well. Nearly all of the selected models also had `Acres`, `AcresGrowth`, `AccPts`, and `TerrDiff` as the other predictors in these models. This suggests that these variables are important to include in the final model. Of these selected models, the model that included `Homes6` had the lowest AIC.

Table 3: AIC values for the Selected Models when only one development variable is allowed

Development Variable	*AIC*
Homes1	7521.55
Homes2	7521.05
Homes3	7522.31
Homes4	7521.38
Homes5	7521.54
Homes6	7520.34
Homes7	7520.84
Homes8	7520.7
Acres1	7521.38
*Acres2**	7524.92
*Acres3**	7524.92
*Acres4**	7524.92
*Acres5**	7524.92
*Acres6**	7524.92
*Acres7**	7524.92
Acres8	7524.71
HomesAtRisk	7521.14

* indicates that the selected model does not include the development variable.

4 Cross Validation on the Best Model

One way to assess the predictive accuracy of a model is to drop some observations from the dataset, fit the model using the remaining observations, and use the new fitted model to predict the deleted observations. This is a process known as cross validation (Stone, 1974). After computing the predicted values and prediction errors for each observation in this manner, we can compute the mean squared error in these predictions (called the mean squared error of prediction, MSEP) to obtain an estimate of the prediction error. Taking the square root of MSEP gives us an estimate of the standard deviation of the predictions from the model.

Ordinarily, researchers cross validate by dropping one observation from the dataset at a time. In our case, where we are modeling the dependence of observations as a time series within each fire, dropping one observation at a time does not preserve the same basic model structure, and therefore does not make sense. We can get around this problem by dropping all observations from a fire at the same time, fitting the model on the other 17 fires, and then computing the predicted values and prediction errors for the deleted observations in the same fire.

We applied the *leave one fire out cross validation* process described in the previous paragraph to the `Homes6` model from the previous section to obtain an estimate for the standard deviation of predictions from the model. Using this process, we estimated the standard deviation of predictions from the `Homes6` model to be $205,107.20, or a little more than half of the mean average daily cost.

The *leave one fire out cross validation* also allows us to assess how the model performed on different fires, allowing us to learn more about the scope of inference that we can draw our model. We computed three measures of prediction variability for each fire: (A) the proportion of the prediction sum of squares attributed to each fire, (B) the square root of MSEP for each fire, and (C) the square root of MSEP divided by the mean average daily cost for that particular fire (a measure similar to the coefficient of variation).

Fires that showed up as contributing a great proportion to the prediction sum of squares were typically large fires with a large mean average daily cost like Jocko Lakes or Skyland. Fires that showed up as having a large sqrt(MSEP) were typically larger fires than those that did not have a large estimate for the prediction standard deviation. Lastly, most of the fires on measure (C) had a smaller standard deviation of prediction estimate than its mean average daily cost – the sole exception being Pattengail whose standard deviation estimate was 2.68 times the mean average daily cost.

5 Introducing Weighting of the Residuals

The fact that bigger fires have bigger prediction variability suggests that weighting the residuals may improve on the final model. Table 4 presents AIC values for each of the selected models with and without weighting the residuals. For every model, weighting improves the fit. The `Acres1` model has the lowest AIC after weighting. Among the housing variables, `Homes1` has the lowest AIC when the residuals are weighted.

The fact that the `Acres1` model improves so much more dramatically than the other models under a weighted regression scheme suggests that the unweighted fit of `Acres1` model (which was the best model selected among unweighted models) may have been affected by some extreme observations. For this reason, we interpret the coefficient estimates from weighted versions of `Homes6` and `Homes1`, as well as the `Acres1` model. Looking at the interpretations on the coefficient estimates from several competing models can give us a more complete picture of the underlying process.

Table 4: AIC Values for selected models without weighting, and allowing for weights as a power of the mean.		
	AIC Without weights	*AIC With weights*
Homes1	7521.55	7510.433
Homes2	7521.05	7511.357
Homes3	7522.31	7513.334
Homes4	7521.38	7514.053
Homes5	7521.54	7514.363
Homes6	7520.34	7513.865
Homes7	7520.84	7514.505
Homes8	7520.7	7514.666
Acres1	7521.38	7490.087
Acres8	7524.71	7514.754
HomesAtRisk	7521.14	7510.09

6 Basic Interpretations of Coefficient Estimates

Table 5 presents the estimates of the effect of a standard deviation increase `Homes1`, `Homes6`, and `Acres1` in comparison to a standard deviation change in the other predictors in the model. This gives us a comparable scale on which to compare the effects of development variables to the other predictors in the model. The development variables appear to have quite large effects compared to the other variables in the model. Regardless of the model, a standard deviation increase in the amount of development is associated with at least $50,000 of additional cost per day of firefighting, compared with comparable effects ranging from $80,000 to $115,000 for the other variables.

Table 5: The effect of a standard deviation increase in each quantitative predictor			
	`Homes1` model	`Homes6` model	`Acres1` model
Homes1	$59,505	-	-
Homes6	-	$51,643	-
Acres1	-	-	$153,579
Acres	$96,925	$114,666	-
Acres Growth / Day	-$7,511	-$8,294	-$3192
# of Access Points	$88,574	$81,719	$100,414
The entries in the table are based on coefficient estimates from a weighted gls fit accounting for CAR(1) errors. The standard deviation increase is computed using the daily cost measurements.			

Table 6 presents the coefficient estimates (p-values in parentheses) for the predictors in each of the best models we selected in the previous section. Any measure of development pressure in these selected models has a positive relationship with daily wildfire firefighting cost. For example, an additional home within one mile of the fire perimeter is associated with $344.90 more in average daily wildfire fighting cost. To put this in perspective, if one house is within a mile of the fire perimeter for the entire duration of the firefighting effort (on average approximately 38 days), this would be associated with an additional $13,106 in wildfire firefighting cost. However, more commonly homes are only within a mile of the fire for a portion of the time the fire is burning. We found that, on average, when fires burn near homes, homes are within a mile of the fire perimeter for 23 days. Therefore, after accounting for differences in fire size, terrain, and road access, each additional home within one mile of a wildfire is associated with a $7,933 increase in suppression costs and each additional home within six miles of a wildfire is associated with a $1,240 increase in suppression costs (Figure 2). Put differently, 125 homes within one mile of a wildfire are associated with a $1 million increase in fire suppression costs.

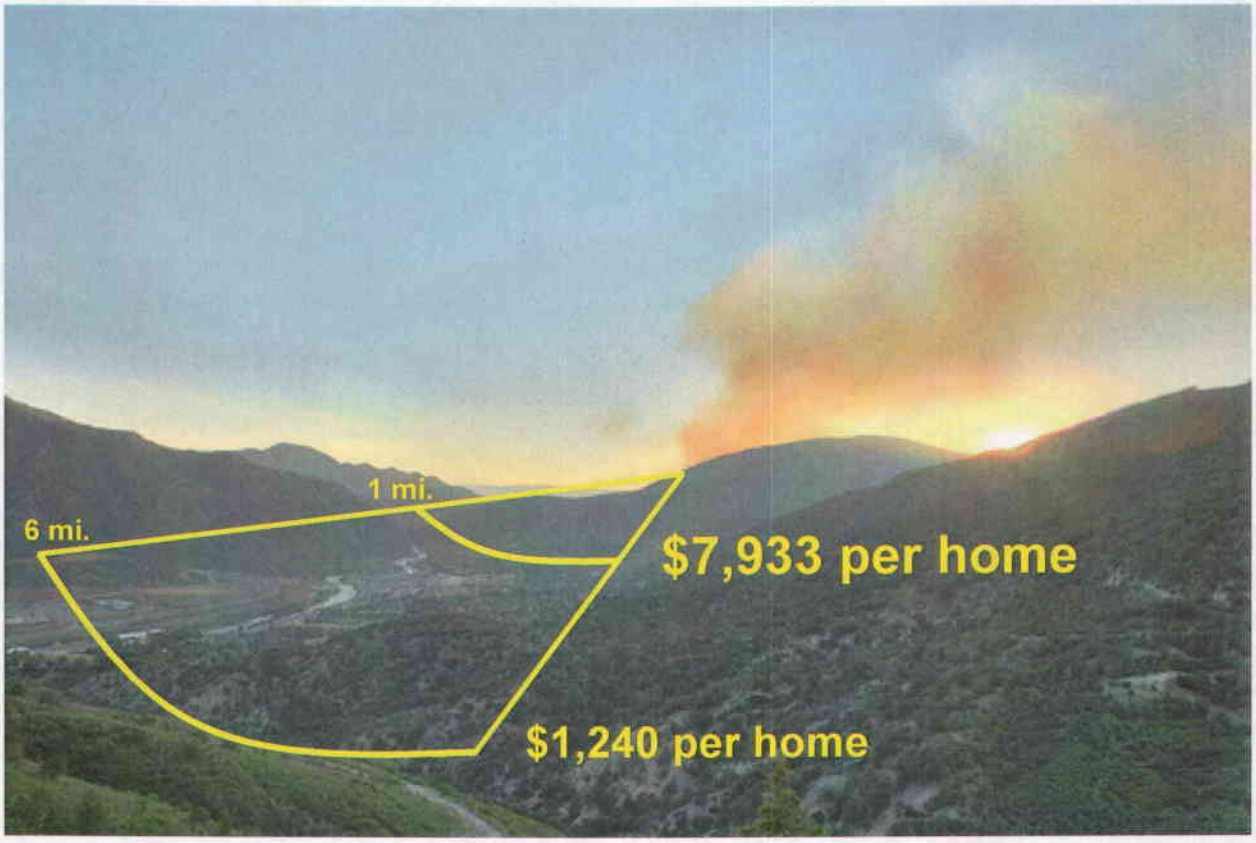


Figure 2. After accounting for differences in fire size, terrain, and road access, each additional home within one mile of a wildfire is associated with a $7,933 increase in suppression costs and each additional home within six miles is associated with a $1,240 increase.

Table 6: Coefficient estimates and significance levels for models predicting the average daily wildfire firefighting cost.

	Homes1 model	Homes6 model	Acres1 model
Homes1	344.90 (0.0223)	-	-
Homes6	-	53.92 (0.0150)	-
Acres1	-	-	28.88 (0.0000)
Acres	2.24 (0.0012)	2.65 (0.0006)	-
Acres Growth / Day	-2.40 (0.0312)	-2.65 (0.0183)	-1.02 (0.2696)
High Terrain Difficulty	636.91 (0.9764)	2744.57 (0.9011)	-13527.90 (0.4702)
Med. Terrain Difficulty	125567.49 (0.0225)	138867.36 (0.0095)	100232.98 (0.0910)
# of Access Points	3375.97 (0.0001)	3114.71 (0.0003)	3827.26 (0.0000)

The entries in the table are coefficient estimates from a weighted gls fit accounting for CAR(1) errors. P-values in parentheses.

Interestingly, the most accurate predictions of daily suppression costs were yielded by incorporating information about the area of residential lots rather than the counts of homes within 1 mi. of wildfires. We found that after accounting for differences in terrain difficulty, fire size, and road access, each additional acre of residential property within 1 mile of a wildfire is associated with a $664 increase in wildfire costs. The average lot size of homes that were threatened by the 18 fires in our sample was 12 acres, and if you multiply the cost per acre ($664) by 12 acres, you get roughly $8000 (the cost per home). One possible reason that the Acres1 model outperformed the Homes1 model is that the Homes1

model is missing information about the spatial distribution of those homes. In other words, the pattern of development (dense vs. spread out) appears to be related to fire suppression costs.

7 Past and Future Expenditures on Home Protection

7.1 How much is protecting homes from wildfires currently costing Montana?

Within our sample of 18 fires, we found that the portion of the fire suppression costs related to housing varied from 0 to 60% depending on how much development there was around the fire. For all of large forest fires that occurred in more densely developed areas, the costs related to housing exceeded $1 million (Figure 3).

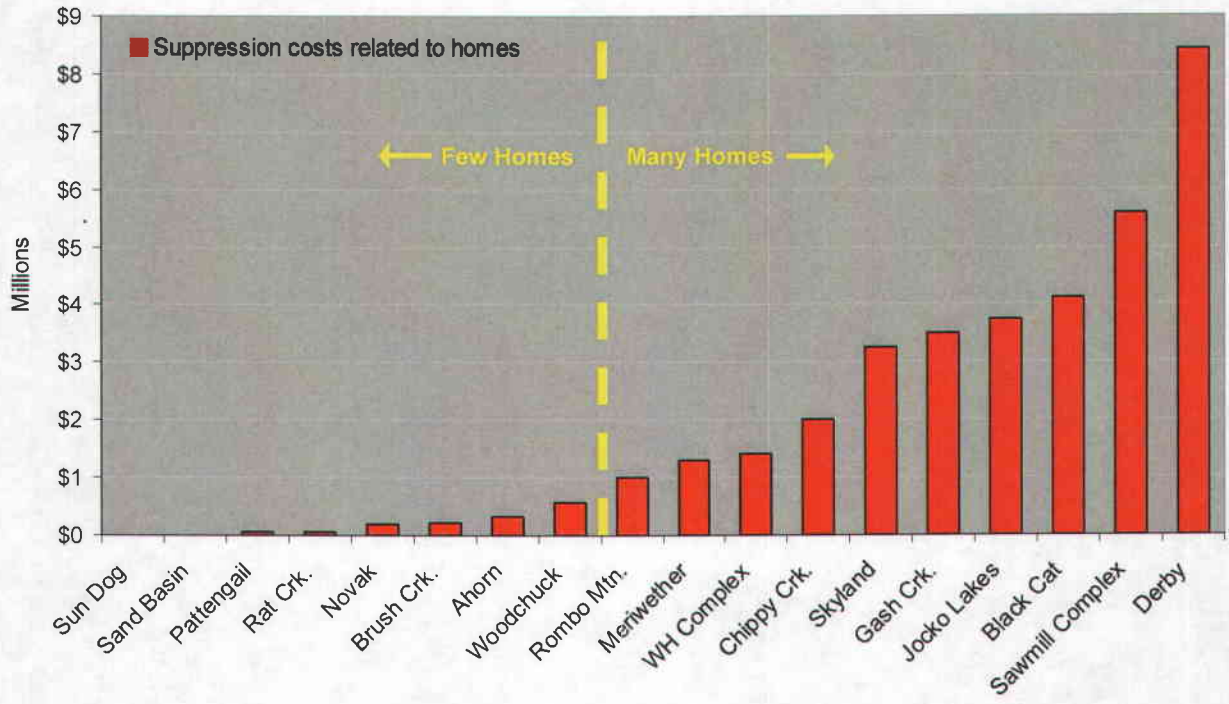
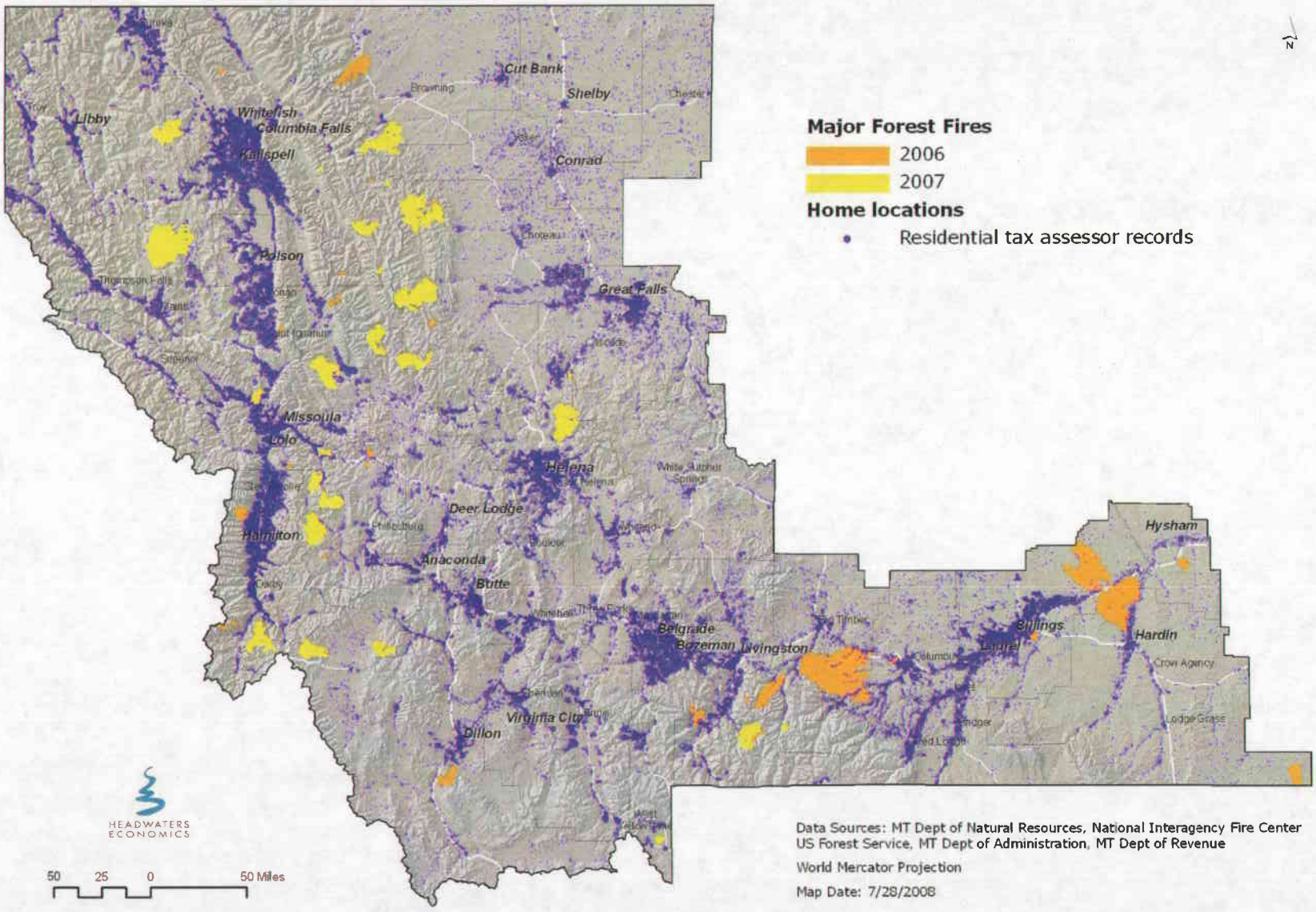


Figure 3. For the fires on the right side of this figure, suppression costs related to housing totaled $35 million (30% of the total firefighting costs). Fires on the left side were remote or small.

Based on the statistical findings, we extrapolated beyond our sample of 18 fires to estimate the costs associated with homes for 2006 and 2007. Because our sample of 18 fires did not include grassland fires or fires smaller than 360 acres, we estimated costs only for large fires that burned predominantly in forest and shrubland. As a result, our estimates are conservative.

For 2006 and 2007, we summed the acres of residential lots within one mile of large forest fires that occurred in each year. In 2006, 83,727 acres of residential land were within one mile of large forest fires (Map 2). Since each additional acre of residential land is associated with a $664 increase in fire suppression costs, the portion of the firefighting costs related to protecting homes in 2006 was estimated to be $55.6 million. In 2007, 54,632 acres of residential land were within a mile of large forest fires. Therefore, we estimate that last year approximately $36.6 million firefighting dollars were related to home protection.



Map 2. Locations of all large forest fires that occurred in 2006 and 2007 are shown relative to housing in western Montana.

The years 2006 and 2007 are very interesting to compare since, in total, more acres burned in Montana in 2007, yet the cost related to protecting homes near the 2007 fires was less (Table 7). The reason for this has to do with the development pattern in the areas surrounding the fires. In 2006, forest fires burned in areas with more housing. In 2007, although there were more forest fires, many of those fires burned in remote areas. Since the locations of wildfires and the conditions that influence how easily they can be put out are largely outside of the state's control, the suppression costs associated with home protection will vary from year to year. For example, although years with many large fires tend to result in high costs related to home protection, the highest expenditures on home protection in the past decade occurred in 2000. This was the year in which the most residential land was threatened, but not the biggest fire year in terms of total acres burned (Figure 4).

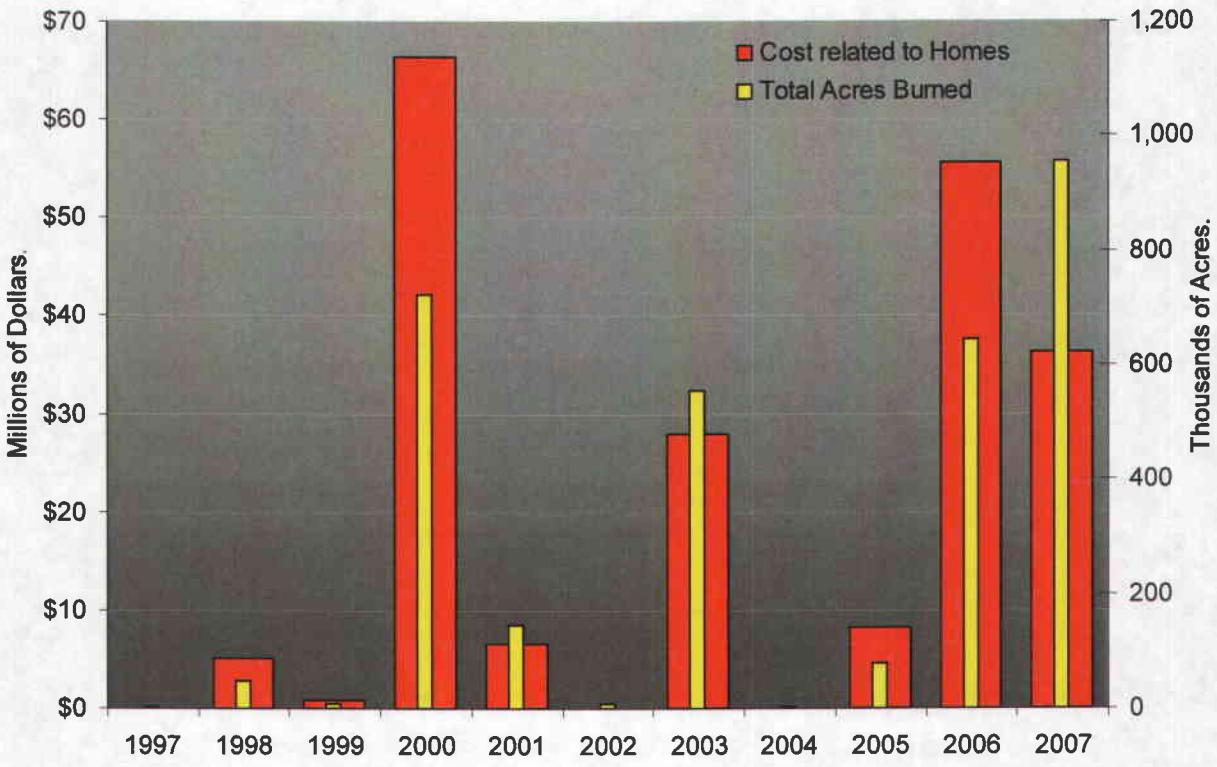


Figure 4. Four of the past ten years (2000, 2003, 2006 and 2007) stand out as having exceptionally high costs related to home protection.

The estimated $92.2 million spent on fire suppression costs related to housing in the past two years were not borne entirely by the state of Montana. Although we do not have sufficient data to estimate the portion paid by Montana, we do know that in our sample of 18 fires that involved the Montana Department of Natural Resources, the state of Montana paid approximately 20 percent of the total fire suppression costs (personal communication, Matt Hedrick, MT DNRC, July 31, 2008). Most of the remainder was paid by federal agencies and FEMA. However, when substantial numbers of homes are at risk, we found that Montana pays a higher percent of the total firefighting costs. In the twelve fires within our sample where more than 1,000 acres of residential land were within one mile of the fire, the state of Montana paid approximately 25 percent of total fire suppression costs. Therefore, we can estimate that Montana paid $13.9 million in 2006 and $9.1 million in 2007 on home protection. However, this is likely a conservative estimate because most homes in the interface occur where DNRC and local governments are responsible for providing wildfire protection. Montana may pay 25% of the

total firefighting costs, but a larger share of the cost related to home protection. What's more, as the development in fire prone areas continues, it's likely that state and local will pay an increasing share of the costs related to home protection (personal communication, Bob Harrington, MT DNRC, August 6, 2008).

7.2 How will future home construction impact fire suppression costs?

Next, we asked "What if a similar fire season to 2006 or 2007 occurred in the future when more homes are present?" To answer this question, we overlaid maps of all the large (greater than 360 acres) forest fires that occurred in 2006 and 2007 on top of Headwaters Economics' 2025 development forecast, which is based on a continuation of recent growth rates and trends observed in western Montana (Gude et al. 2007) (Map 3).

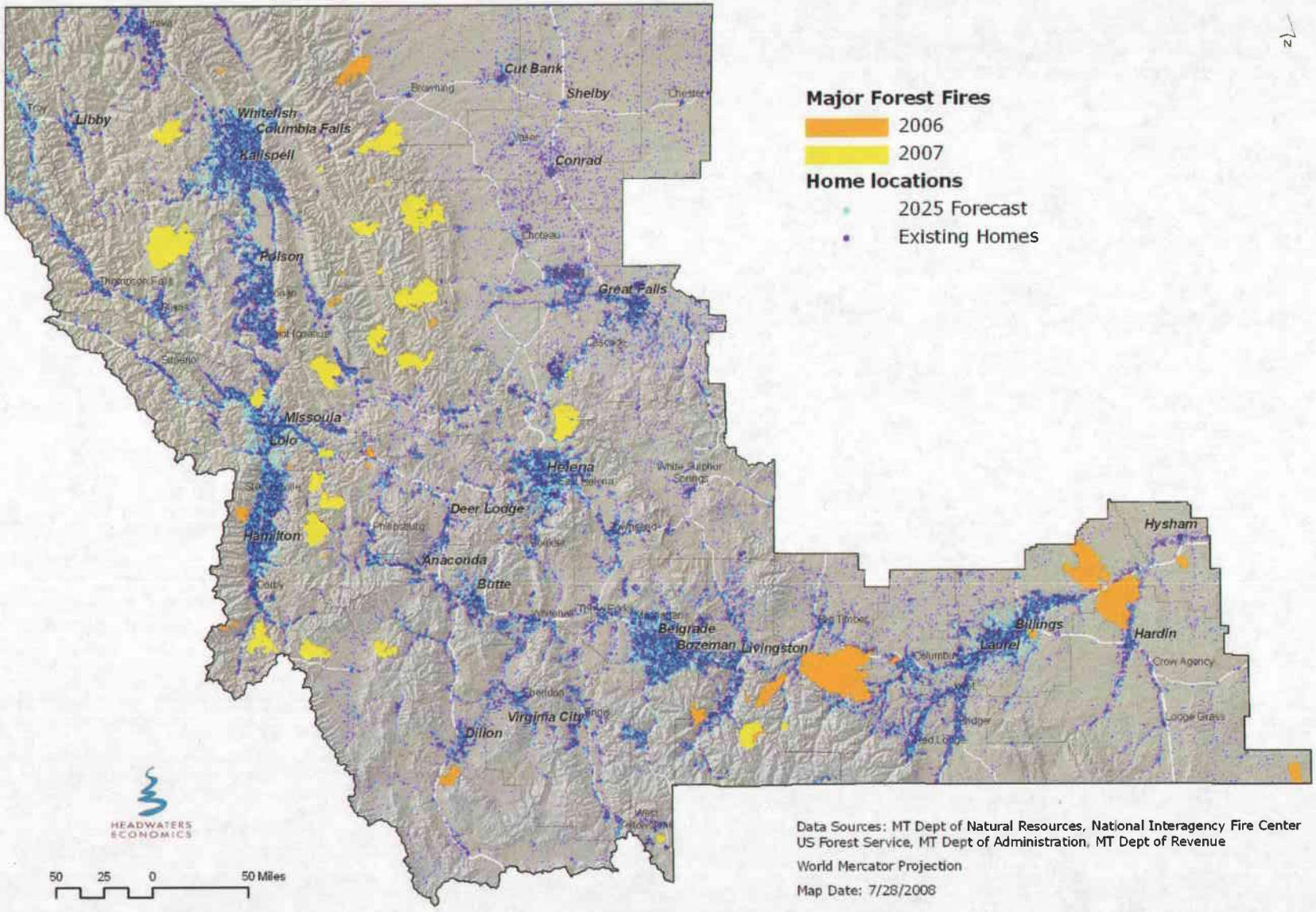
We found that the 2025 development forecast results in an additional 35 thousand acres of residential land occurring within one mile of the 2006 fires. Had these additional homes been present in 2006, firefighting costs related to home protection would have been roughly $23 million higher, totaling $78.9 million (Table 7). In 2025 dollars, this figure adjusted for inflation using the Congressional Budget Office's inflation projections is $124.0 million. We also found that the 2025 development forecast results in an additional 22 thousand acres of residential land occurring within one mile of the 2007 fires. Had the forecasted homes been present in 2007, firefighting costs related to home protection would have been roughly $14 million higher, totaling nearly $51 million (Table 7), which is $80.2 million after adjusting for inflation.

Table 7. Estimates of fire suppression costs related to housing are compared between historical fire seasons and those fire seasons overlayed with a development forecast for 2025.

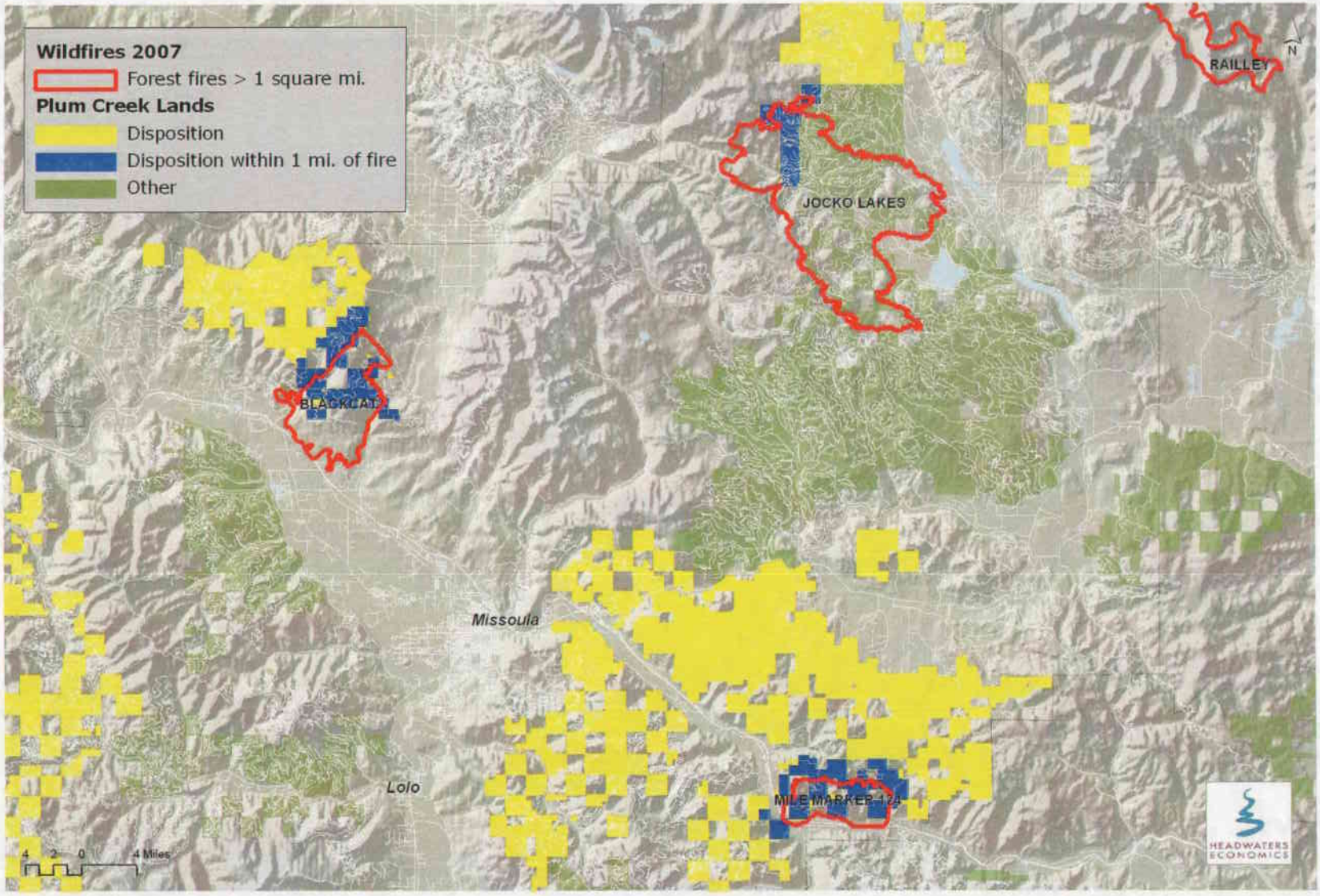
	2006	2006 Fire Season with 2025 Homes	2007	2007 Fire Season with 2025 Homes
Total Size of Fires (acres)	645,640	645,640	956,151	956,151
Development within 1 mile (acres)	~~83,727~~	118,734	~~54,632~~	76,847
Homes within 1 mile	~~5,148 (16 ac lots)~~	6,056 (20 ac lots)	~~3,536 (15 ac lots)~~	4,137(19 ac lots)
Costs related to Homes	~~$55.6 million~~	$78.9 million	~~$36.6 million~~	$51.0 million

7.3 How will the Montana Legacy Project impact fire suppression costs?

Due to the potential for the proposed Montana Legacy Project to significantly alter future development in Western Montana, we investigated the project's potential to impact fire suppression costs. Following a similar method to the one described above, we overlaid maps of all the large forest fires that occurred in 2006 and 2007 on top of the Plum Creek land proposed for purchase. In 2007, 20.5 thousand acres of these lands were within 1 mile of three large forest fires that occurred in 2007 (Jocko Lakes, Black Cat, and Mile Marker 124) (Map 4). Given the proximity of these Plum Creek parcels to Missoula, the high level of road access, and the ability of Plum Creek to opt out of zoning, it seems reasonable that these lands could be subdivided and developed if the Montana Legacy Project fails. Had these parcels been subdivided into 160 acre lots, as few as 150 homes distributed across these lands could have added $13 million in costs to 2007's fire suppression bill.



Map 3. Locations of all large forest fires that occurred in 2006 and 2007 are shown relative to existing and forecasted housing in western Montana.



Map 4. The large forest fires that burned in 2007 around Missoula are shown in relation to Plum Creek lands.

Summary

- Firefighting costs are highly correlated with the number of homes threatened by a fire.
- The pattern of development (dense vs. spread out) is an important contributing factor.
- When large forest fires burn near homes, costs related to housing usually exceed $1 million per fire.
- As few as 150 additional homes threatened by fire can result in a $13 million increase in suppression costs in a single year.
- For all agencies involved in fire suppression in Montana, the estimated annual costs related to home protection for 2006 and 2007 were approximately $55 million and $36 million, respectively.
- If current development trends continue, fires seasons similar to 2006 and 2007 could cost $15 to $23 million more by 2025, bringing total fire suppression costs associated with homes to between $51 and $79 million dollars. Adjusted for inflation, future costs could be as high as $124 million in 2025.
- A conservative estimate is that 25% of all costs of protecting homes from wildfires within Montana are paid for by the state. Therefore, Montana's costs for home protection in 2006 and 2007 are estimated to have been $13.9 million and $9.2 million, respectively. By 2025, Montana's future costs, adjusted for inflation, could be as high as $31 million.

Acknowledgments

Funding for this research was made possible by the Montana Legislative Fire Suppression Interim Committee. We are also indebted to staff at the Montana Department of Natural Resources, including Lowell Whitney, Matt Hedrick, Ted Mead, and Bob Harrington. The statistical analyses were conducted by Tony Cookson and Dr. Mark Greenwood of the Department of Mathematical Sciences at Montana State University. Finally, we express gratitude to wildland firefighters. We owe them a debt far beyond the cost in dollars.

Literature Cited

Burnham, K. P., and D. R. Anderson. 2002. Model selection and multimodel inference: a practical information-theoretic approach. 2nd Edition. New York: Springer-Verlag.

Gude, P.H., A.J. Hansen, and D.A. Jones. 2007. Biodiversity Consequences of Alternative Future Land Use Scenarios in Greater Yellowstone. Ecological Applications 17(4):1004-1018.

Pinheiro, J.C. and D.M. Bates. 2000. "Mixed-effects Models in S and S-PLUS." New York: Springer.

Ramsey, F.L. and D.W. Schafer. 2002. "The Statistical Sleuth: A Course in Methods of Data Analysis". Second Edition. Belmont, CA: Duxbury Press.

Shumway, R.H. and D.S. Stoffer. 2006. "Time Series Analysis and Its Applications: with R Examples". Second Edition. New York: Springer.

Stone, M. 1974. Cross-Validatory Choice and Assessment of Statistical Predictions. Journal of the Royal Statistical Society B36(2): 111-147.

Appendix D
Letter to OBPP

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(406) 444-3064
FAX (406) 444-3036

Fire Suppression Interim Committee

60th Montana Legislature

TO: David Ewer, Director
Office of Budget and Program Planning

FROM: Senator John Cobb, Chair

RE: FY 2009 Fire Season Recommendations

DATE: February 29, 2008

The Fire Suppression Interim Committee (FSIC) recognizes that the decisions regarding the implementation of resources for the upcoming fire season are that of the administration. The FSIC would like to offer to the administration options to increase resources for the upcoming fire season. This letter details those recommendations and the potential cost savings.

The Fire Suppression Interim Committee (FSIC) met via conference call on Friday, February 22 to discuss the availability of funding sources to increase the seasonal workforce within the Forestry Division of the Department of Natural Resources and Conservation (DNRC). By a unanimous vote, the committee agreed to recommend to the administration specific initiatives for the FY 2009 fire season to be funded with the fire suppression fund, which includes $40 million available for fire suppression costs after July 1, 2008. Discussions with legal staff led to the conclusion that this fund could be utilized to provide additional resources for the FY 2009 fire season, if those resources would have been part of the normal suppression bill. The cost of adding emergency fire personnel has historically been a part of the fire suppression bill.

DNRC provided the FSIC with a prioritized list of potential resource needs for the upcoming 2011 biennium. After close review of the list, the committee selected specific items designed to provide additional seasonal resources to DNRC to increase efficiency in initial and extended attack as well as increased fiscal oversight. The initiatives could also provide an opportunity to determine their effectiveness prior to adding such resources to DNRC's base budget.

The items endorsed are as follows:

Extend Engine Crews to 7 days/wk
Increase seasonal positions on DNRC engines to provide 7 days/wk coverage. This initiative would require approximately 7.0 seasonal FTE and $260,000. These resources could potentially prevent two 1000+ acre wildfires for an annual savings of $3.0 million.

Extend Aviation Coverage to 7 days/wk

Increase seasonal positions in the Aviation Program to provide 7 days/wk coverage. This increase would staff each helicopter with a manager, crew, and fuel truck driver. This initiative would require approximately 6.79 seasonal FTE and $469,846. These resources could potentially prevent two 1000+ acre wildfires for an annual savings of $3.0 million.

Fire Business Specialists

Increase the presence of fire business specialists in the field offices and within the Central Services Division. These individuals would also serve as incident business advisors on DNRC managed fires. This initiative would increase the fiscal oversight during and after fire season for a potential costs savings of approximately $750,000 per year. This initiative would require approximately 4.0 seasonal FTE and $300,000.

Dispatch Center Staff

Augment existing and add additional dispatch positions at all land offices for increased representation in interagency dispatch centers, yielding better distribution of firefighting resources on state and local government fires. This initiative would require approximately 4.25 seasonal FTE and $95,000.

Operations Section Supervisor

Increase the efficiency in fire management fire operations across the state and consistently represent DNRC within the Northern Rockies Coordinating Group by adding 1.0 modified FTE as a section supervisor within the Fire and Aviation Management Bureau. This addition would require approximately $95,000.

The committee would appreciate a response from the administration regarding the implementation of the above mentioned initiatives prior to the next scheduled meeting on March 27, 2008. This information can be provided to our staff, Barb Smith of the Legislative Fiscal Division. If you require additional information I can be reached at 562-3670 or you can reach Barb at 444-5347.

C Members of the Fire Suppression Interim Committee
Taryn Purdy, LFD
Barbara Smith, LFD
Leanne Heisel, LSD
Todd Everts, LEPO
Hal Harper, Governor's Office
Mary Sexton, Director, DNRC
Bob Harrington, Administrator, Forestry Division, DNRC
Amy Sassano, OBPP
Christine Hultin-Brus, OBPP

Appendix E

No Place Like Home?

THE BACK PAGE

NO PLACE LIKE HOME?

The Australian Stay or Go Model as an Alternative to Evacuation in Wildfire

By Leanne Heisel
Legislative Research Analyst

SOUND FAMILIAR?

It's hot. It's windy. It hasn't rained in months. A power line goes down, someone lights a cigarette and tosses the match out a car window, or drives away from a campfire with the embers still smoldering, and that's all it takes. Fueled by wind and crunchy-dry vegetation, the fire is unstoppable and consumes everything in its path, including lives, homes, and agricultural land. All anyone can do is get out of the way and hope the weather smiles upon the toasted landscape.
But this is not October in Malibu or August in Augusta. It's February in Cockatoo.

Australians call February 16, 1983 Ash Wednesday--the day that over 100 fires began their rampage through Victoria and South Australia. Over 1.5 million acres were burned, 75 people were dead, and over 2,500 homes were destroyed.

Legislative researchers often inventory other state laws in a particular policy area in hopes that someone somewhere else with the same problem has found a solution that could be the inspiration for a Montana-style approach. While tempting, it is usually folly to focus much energy beyond the borders of the United States when casting about for policy ideas in other jurisdictions. Differences among nations in constitutions, laws, politics, and social behavior can make meaningful comparative study difficult. But wildfire doesn't respect the constitution. It doesn't care which side of the road you drive on or which way the water swirls when the toilet flushes. Countries with similar combinations of climate (dry), vegetation (dry), and human development (sprawling) have common experiences with the effects of wildfire. Some interesting distinctions appear, however, in how people on the other side of the world react to wildfire and attempt to mitigate its damage. Can the land that brought us Foster's Lager and Keith Urban also show us a different way of responding when wildfire threatens homes and property?

FROM THE ASHES

Once the smoke from the Ash Wednesday fires had cleared, the Australian government undertook a series of studies that focused on why houses burned, why each fatality occurred, and how life and property may be better protected during these events. The result has been an approach called "Stay and Defend or Leave Early" or "Stay or Go" in which, under certain circumstances, the homeowner stays on his or her property and protects it, rather than evacuating at the first sign of trouble.

Alan Rhodes with the Country Fire Authority Australia writes that Stay or Go "advocates that people living in fire prone areas should decide how they will respond to wildfire."[1] A fundamental component of Stay or Go is education, so that a homeowner recognizes the risks, accepts responsibility, understands the options, and effectively plans and implements those options. Others tend to highlight the "Stay" in this approach.

"The Australian experience has been that mass evacuations of communities should not be undertaken", writes Keith Harrap, acting executive director of operations support for the New South Wales Rural Fire Service, "People who stay behind reduce the loss of both life and property."[2] The idea is that if a home is properly built and the homeowner is prepared and trained, the homeowner may not only have an improved chance of survival, but can be a key resource in the firefighting effort. Harrap cites research completed by the Commonwealth Scientific and Industrial Research Organization as evidence that "a properly prepared house is in fact a safe haven rather than a risk in times of major wildland fires." He adds that "when a major wildland fire touches on the urban interface, exposing hundreds of homes to a simultaneous threat, there never will be sufficient firefighting resources available to cope with the situation. . . . It's far more efficient to have the added resource of the homeowners who, given the proper information and advice, can undertake the vitally important role of extinguishing the embers that potentially threaten the integrity of any structure."

According to Harrap, while Australian fire officials "don't as a rule support evacuations from properly prepared residences," they do recognize that in some cases evacuation--early evacuation--is the only safe option. Harrap concludes that by "fire services taking a leading role in the education of their communities with regard to wildland-urban interface fire protection and relevant government authorities supporting the effort with appropriate legislation and codes, there will be an inevitable reduction in number of lives lost and properties destroyed."

AXE, BUCKET, SHOVEL, . . . AND WET BLANKET

Of course, no responsible government or firefighting service would even consider recommending this type of approach in the absence of a protocol and of resources made available to homeowners. Local governments, local fire service entities, and community members have formed organizations that produce guidelines for protecting property and checklists so that property owners can gage their level of preparedness.

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[1] "The Australian Stay or Go Approach: Factors Influencing Householder Decisions", Alan Rhodes, Country Fire Authority (CFA) Australia/RMIT University, Melbourne.

[2] "Shelter Shock", *Wildfire* Magazine. Web URL: http://wildfiremag.com/pub-ed/shelter_shock/

The Fire and Emergency Services Authority of Western Australia has published a pamphlet called *Should I Stay or Should I Go? A guide to help you take action this bushfire season*. It contains a discussion of the characteristics of bushfires, list of supplies needed, the events likely to occur as the fire approaches and passes through the property, and a preparedness checklist with questions like "Do you understand the nature of bushfires and the level of risk to you and your family?" "Are you committed to undertake and maintain the required level of preparation before the bushfire season?" "Do you believe your house will offer your family adequate protection from a bushfire after all preparation activities have been completed?" Those who do not wish to stay are encouraged to leave early.

Another pamphlet published by the same organization includes a specific action plan with each task that must be accomplished--inside the house and outside--before the fire front approaches, as the fire front approaches and during the fire, and after the fire front has passed. Before the fire front arrives, a homeowner should, among other tasks:

- Fill basins, sinks, bath, troughs and buckets with water and locate maps and other equipment.
- Soak towels and rugs in water and lay along the inside of external doorways.
- Soak blankets and keep them handy for protection against radiant heat.
- Place a ladder and torch [flashlight] close to the manhole [access to attic] and regularly check the ceiling space for embers.
- If possible, block downpipes and fill gutters with water.
- Regularly patrol for spot fires around your home and put them out.

During the fire, homeowners are to move inside, frequently check the roof cavity and interior of the house for spot fires, drink plenty of water, and tune in to the radio for fire information. Once the front has passed, the primary activity is patrolling for and extinguishing spot fires.

All the wet towels in the Southern Hemisphere won't help, though, if a home is not built or retrofitted to certain standards and if property around a home is not properly maintained. Some local governments do require certain building standards in extreme bushfire-prone areas. These include masonry construction for external walls, an independent water supply, internal hose fitting, and spark-proof chimneys. However, building codes and where building is allowed to occur in the face of predicted higher intensity fire seasons is a source of debate in the halls of Australia's state governments, just as it is in the United States.

STAY OR GO, AMERICAN-STYLE

Extensive public education, decades of research, and local motivation drive Australia's Stay or Go approach. Sarah McCaffrey of the U.S. Forest Service's Northern Research Station has explored whether such a program could work in the United States. McCaffrey traveled to Australia to learn firsthand about Stay or Go.

A number of institutional and social factors play into an examination of whether Stay or Go would work in the United States, according to McCaffrey's research. Those include the organization and responsibilities of fire management agencies; housing, construction, and development patterns; and human behavior and education.

In the United States, the wildland fire management agencies are land management agencies that are increasingly forced to engage in structure protection because of the increasing number of structures in the path of wildfire. Australia's state-level land management agencies are responsible for wildfire management in their jurisdictional areas, but the responsibility for protection of structures falls to another state agency with more of an emergency management focus.

Differences in building construction standards are also noteworthy. In Australia, writes McCaffrey, "metal roofs have long been a standard and preferred construction practice; whereas metal roofs are not as prevalent is the U.S. where, until recently, wood shingle roofs[3] have been popular in many fire prone areas."[4] McCaffrey concludes that:

> In terms of human behavior, having individuals stay and protect their property requires clear understanding of fire dynamics and the significant physical and psychological resources that are required of individuals who stay. Australia has developed and laid the groundwork for its approach over more than two decades. Their outreach work is quite clear about two key items -- that most houses are lost through ember attack and that radiant hear is the primary cause of death from wildfire. This knowledge is integral to understanding their concept that 'People protect houses and houses protect people.'

McCaffrey says that because of these fundamental differences, a Stay or Go model is likely not appropriate for universal adoption in the United States. She concedes, however, that some aspects may lend themselves well to certain locations. Residents of a few communities near Rancho Sante Fe, California, would agree.

A DIFFERENT KIND OF CALIFORNIA ADVENTURE

Watching the news footage from Southern California last October, it was easy to imagine that the apocalypse was nigh. The relentless Santa Ana winds and dry countryside fed a multitude of huge blazes that forced mass evacuations

[3] The Helena City Commission recently amended its zoning regulations to require the use of fire-resistant roofing materials on new construction and on replacement of more than 50% of a roof within the city's wildland-urban interface zone, which the commission defined as the entire city.

[4] "Applying Australia's Stay or Go Approach in the U.S. Would it work?", Sarah McCaffrey, USDA Forest Service Northern Research Station.

and consumed over a thousand homes-- that's not news to anyone who wasn't living under a rock last fall. What may be news, though, is that a handful of communities in San Diego County known as Shelter in Place[5] communities lost none of the 2,460 homes located within their boundaries to the Witch Creek fire, one of the area's most devastating.

The Rancho Santa Fe Fire Protection District (RSFFPD) identifies five communities as Shelter in Place communities and the district enforces the stringent building and landscape standards that are imposed there. Residents must adhere to a district-approved vegetation management plan and homes must have the following design features:

- fire-resistive materials used in construction;
- boxed eaves;
- residential fire sprinklers;
- a well-maintained, fire-resistive landscape with a minimum 100-foot defensible space surrounding all structures;
- a "Class-A", non-combustible roof;
- dual pane or tempered glass windows; and
- chimneys with spark arresters containing a minimum 1/2" screening.

The communities themselves must have:

- adequate roadway and driveway widths, designed to accommodate two way traffic and large firefighting apparatus;
- adequate water supply and water flow for firefighting efforts; and
- vegetation modification zones.

"Why not evacuate?", the fire district's Shelter in Place brochure asks, and then answers: "Most wildfire-related deaths occur during evacuation efforts." Heavy smoke, flying embers, panicked drivers, and the sheer volume of cars and horse trailers on the road are named as the factors that contribute to the high number of injuries and deaths during evacuations.

Not Convinced

Given the outcome of the Witch Creek fire's run through these communities, the residents and some planners in the area consider the district's Shelter in Place program an unmitigated success. The program has its detractors, though, who caution that Shelter in Place may be misunderstood and that a homeowner whose home is not built to the standards as those in the RSFFPD and who has not prepared the property, yet chooses to stay in defiance of evacuation orders risks his or her life as well as the lives of firefighters.

In an extreme event, is evacuation still considered in a Shelter in Place community? RSFFPS's brochure would suggest that it is not, or that residents need not comply, which is one reason some fire professionals question the approach. A December 2, 2007, article in the San Diego Union-Tribune[6] quotes Dave Bacon, a retired national forest fire chief and head of a private fire protection company as stating that Shelter in Place "doesn't mean you always stay at home. It means you can stay at home because you have done advance preparation. You need to know when to evacuate and when evacuation is too late." RSFFPD's brochure stresses that by residing in one of the five Shelter in Place communities, a homeowner "will *not* need to evacuate during a wildfire", yet the Union-Tribune story profiles Emil Costa, a resident of one of the Rancho Santa Fe Shelter in Place communities who stayed home in defiance of evacuation orders. If your fire district says you don't have to evacuate but another entity has issued evacuation orders, who do you listen to?

Other critics believe a Shelter in Place approach allows development in areas that are so prone to fire that they simply should not be developed, period. Identifying areas where the fire danger is extreme and prohibiting building in those areas is one option available to policymakers, but it is generally an unpalatable one to many, especially in places where private property rights are held sacred.

BATTLING MARSUPIALS

In a November 5, 2007, commentary published in the Washington Post National Weekly Edition Steve Pyne, a professor at Arizona State University and author of numerous texts on wildfire and its history, writes that, in contrast to Australia's Stay or Go model:

> . . . the American resort to ever-vaster mandatory mass evacuations looks both pathetic and paranoid. Apparently we can defend our houses with an M16 and a bazooka if we choose, but not with a garden hose and a rake. There can never be enough firefighters to shield all structures during a conflagration. They shouldn't have to. Let homeowners take responsibility, not only for preparing their property but for protecting it. Knowing that you might be called on to defend against the next outbreak of a Santa Ana fire avalanche ought to concentrate the mind wonderfully.

Stay or Go, Shelter in Place, whatever it's called, the concept of staying home and toughing it out as a wildfire bears down is a scary one and foreign to most Americans. It's a little disconcerting to think about making sure you have wet

[5] In her paper, McCaffrey notes that the terms Stay or Go and Shelter in Place (SIP) are often used interchangeably, but that there is a distinct difference. "SIP is generally described as a fairly passive process where any individuals who stay would simply passively shelter in fire resistant structures. When the passivity of the SIP approach was described to Australians, it was greeted with horror as something that would endanger lives." " The Australian process is an active one," she continues, "--if the homeowners aren't well prepared and actively protecting their home before, during (from within the house), and after the fire front passes through, they shouldn't stay." SIP literature produced by Rancho Santa Fe Fire Protection District, however, indicates that its style of SIP is not entirely passive and mirrors much of the information provided by Australian fire service agencies.

[6] "'Shelter in Place' kept flames at bay; Strategy pays off but has its critics"; Lori Weisberg and Emmet Pierce, San Diego Union-Tribune; Dec. 2, 2007.

blankets on hand to protect you from the intense radiant heat as a roaring fire front passes over your home. But, under certain circumstances, it appears to work, and decades of research in Australia has convinced the denizens of the bush that it is a viable option. However communities and governments across America's fire-prone landscapes choose to act in the face of what most agree will be intensifying wildfire seasons in the years to come, the notion that people who live where fire has always burned and will continue to burn should assume some level of responsibility cannot be ignored. To do so may prove to be as foolish as trying to box a wallaby.

Appendix F
Letter From AG Joe Mazurek

ATTORNEY GENERAL
STATE OF MONTANA

Joseph P. Mazurek
Attorney General

Department of Justice
215 North Sanders
PO Box 201401
Helena, MT 59620-1401

June 11, 1993

Mr. Mike McGrath
Lewis and Clark County Attorney
County Courthouse
228 Broadway
Helena, MT 59623

Mr. Keith D. Haker
Custer County Attorney
1010 Main Street
Miles City, MT 59301

Dear Mr. McGrath and Mr. Haker:

You have requested my opinion concerning questions I have consolidated as follows:

> Does a board of county commissioners have the authority to: (1) regulate land uses upon federal or state lands; and (2) prevent the acquisition of land by the federal or state government?

These questions have arisen in the context of proposals submitted for the adoption of a package of county land use ordinances. The exact proposed ordinances vary, but a general movement exists to promote the adoption of county ordinances that establish, inter alia:

1. that federal agencies must notify the county a set number of days prior to issuing land management decisions;

2. limitations upon the federal government's ability to designate additional wilderness areas and wild and scenic rivers;

3. that the amount of federal or state land within the county may not be increased;

4. that all federal natural resource decisions shall be dictated by principles protecting private property rights, protecting local custom and culture, and opening new economic opportunities through reliance on free-markets; and

5. a county threatened and endangered species committee for overseeing protection and recovery of all state and federal listed species.

In sum, these and other proposed county ordinances seek to restrict the traditional public land regulatory authority of federal and state governments. You inquire as to the validity of the proposed ordinances. I will begin my analysis with the federal aspect of the questions presented, including the history of the federal public lands.

Historically, at the inception of our Union, the public domain included a substantial area with seemingly inexhaustible natural resources. As a result, the federal government undertook a policy of disposal and made these public lands readily available to private citizens, states, counties, cities and companies for purposes such as homesteading, town sites, educational purposes and railroad construction. Bennett, Public Land Policy: Reconciliation of Public Use and Private Development, 11 Rocky Mtn. Min. L. Inst. 311, 314-15 (1966); see also Nat'l Wildlife Fed'n v. Burford, 835 F.2d 305, 307-09 (D.C. Cir. 1987) (reviewing the government's past management of the federal public lands). Near the end of the 19th century, however, the federal government began changing its prior policy of disposal to one of retention and management. Bennett, supra, at 318-22. Beginning in 1872, when Congress set aside Yellowstone National Park, a variety of federal laws allowing presidential withdrawals and congressional reservations were enacted. See, e.g., Act of March 1, 1872, ch. 24, 17 Stat. 32 (codified at 16 U.S.C. § 21 (1988)); Forest Reserve Act, ch. 561, 26 Stat. 1103 (1891) (codified as amended at 16 U.S.C. §§ 471(a)-533p (1988)); Pickett Act, ch. 421, 36 Stat. 847 (1910) (codified as amended at 43 U.S.C. §§ 141-158 (1988)); Antiquities Act, ch. 3060, 34 Stat. 225 (1906) (codified as amended at 16 U.S.C. § 431 (1988)). More recently, Congress has enacted the Federal Land and Policy Management Act of 1976 [FLPMA], 90 Stat. 2743 (codified as amended at 43 U.S.C. §§ 1701-1784 (1988)), and the Forest and Rangeland Renewable Resource Planning Act of 1974 [RPA], 90 Stat. 2949 (codified as amended at 16 U.S.C. §§ 1600-1687 (1988)). FLPMA currently controls the classification and withdrawals of federal public lands, and both FLPMA and RPA, along with the corresponding regulations, establish management plans for these lands in coordination with other applicable federal legislation. See, e.g., 43 U.S.C. § 1712; 43 C.F.R. § 1610.1 to -.8; 16 U.S.C. § 1604; 36 C.F.R. §§ 219.1 to -.29.

Congressional control over these federal public lands is grounded in Article IV of the Constitution, also known as the Property Clause. This Article provides that

> Congress shall have power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States; and nothing in the constitution shall be so construed as to prejudice any claims of the United States, or of any particular state.

The United States Supreme Court has repeatedly held that Congress's power over these lands is without limitations. Kleppe v. New Mexico, 426 U.S. 529, 539 (1976); United States v. San Francisco, 310 U.S. 16, 29-30 (1940). While a state may enact laws that apply to Article IV federal public lands, the Supremacy Clause, U.S. Const., art. VI, cl. 2, requires that federal legislation overrides any conflicting state laws that are applicable to these lands. Kleppe, 426 U.S. at 543. Further, unless clear congressional authority specifies otherwise, the Supremacy

Clause provides the federal government immunity from local ordinances which attempt to compel the federal government to comply with local requirements which may be consistent with the federal statutes. See, e.g., Hancock v. Train, 426 U.S. 167 (1976); United States v. State of Montana, 699 F. Supp. 835 (D. Mont. 1988).

As stated above, the management of these federal public lands is dictated by federal legislation, such as FLPMA and RPA, and corresponding federal regulations. Nonetheless, advocates of the county ordinances in question have suggested that when a county enacts such ordinances, federal officials are required to follow their dictates. FLPMA and RPA and the corresponding regulations do require federal officials to allow federal, state and local governments and the public an "opportunity to comment upon and participate in the formulation of plans and programs relating to the management of the public lands." 43 U.S.C. § 1712(f); see also 43 C.F.R. § 1610.4 ("At the outset of the planning process, the public, other Federal agencies, State and local governments and Indian tribes shall be given an opportunity to suggest concerns, needs, and resource use, development and protection opportunities for consideration in the preparation of the resource management plan"); 16 U.S.C. § 1604 ("[t]he Secretary of Agriculture shall develop, maintain, and, as appropriate, revise land and resource management plans for units of the National Forest System, coordinated with the land and resource management planning processes of State and local governments and other Federal agencies"); 36 C.F.R. § 219.7(a) ("The responsible line officer shall coordinate regional and forest planning with the equivalent and related planning efforts of other Federal agencies, State and local governments, and Indian tribes"). However, these coordination provisions do not require federal officials to follow local government plans or ordinances. While a county may enact local land use plans or ordinances that affect federal public lands, these plans and ordinances may not conflict with a federal land use plan or federal law.

In summary, Congress's power over Article IV federal public lands is paramount. "A different rule would place the public domain of the United States completely at the mercy of state legislation." Kleppe, 426 U.S. at 543. State legislation cannot prevail on federal public lands when it conflicts with federal legislation, and likewise a county ordinance or land use plan applicable to federal public lands will not be allowed to stand when it conflicts with federal law. Whether a specific ordinance will have legal effect will require an analysis of the particular ordinance with the foregoing principles in mind.

Similarly, a county government does not have the authority to prevent the federal government from acquiring lands within a county. The federal government may purchase land from a state, with the state's consent, under the authority of Article I of the United States Constitution. Lands purchased under the authority of Article I, known as federal enclaves, are either governed exclusively by the federal government or by a combination of both the federal and state governments. Silas Mason Trading Co. v. Tax Comm'n, 302 U.S. 186, 203-09 (1937); James v. Dravo Contracting Co., 302 U.S. 134, 143 (1937). The federal government may also use its inherent sovereign powers to acquire land by eminent domain. U.S. Const., Amend. V; Fort Leavenworth R. Co. v. Lowe, 114 U.S. 525 (1885); Kohl v. United States, 91 U.S. 367, 374 (1876); see also 43 U.S.C. § 1715. Finally, Congress has provided that under certain circumstances the federal government may engage in land exchanges with private property owners or a state. 43 U.S.C. § 1716. In any of the methods outlined above, a

county does not have the authority to prevent the federal government from acquiring or exchanging these lands. Any proposed county ordinance that prohibits or limits such action by the federal government is in direct conflict with the United States Constitution and federal legislation.

I will now address the state aspects of the questions presented. The State's authority to manage and regulate land uses on state lands is grounded in the Montana Constitution and implemented by state statutes. The Montana Constitution, art. X, § 4, provides that the board of land commissioners has the authority "to direct, control, lease, exchange and sell school lands and lands which have been or may be granted for the support and benefit of the various state educational institutions." Article X, section 11 of the Montana Constitution provides that "[a]ll lands of the state ... shall be public lands of the state. They shall be held in trust for the people ...." Mont. Code Ann. § 77-1-202 implements these provisions by providing, in pertinent part, that the board of land commissioners "shall exercise general authority, direction, and control over the care, management, and disposition of state lands." This provision applies mainly to state trust lands. The Legislature has also given other agencies authority to manage non-trust lands. For example, the Department of Fish, Wildlife, and Parks has authority to manage state parks, recreation areas, monuments, historic sites, and game management areas. MCA §§ 23-1-102, 87-1-209. These provisions make clear that it is the State, not county governments, that has the authority to manage state lands.

A county board of commissioners does not have the authority to prevent the State from acquiring lands within a county. As sovereigns, state governments may exercise their police powers to secure and promote public welfare. Cunningham v. Northwestern Improvement Co., 44 Mont. 180, 206-07, 119 P. 554, 560 (1911). A state government may use its power of eminent domain to acquire property for the public welfare if the state pays the owner just compensation for the condemned property. Mont. Const., art. II, § 29; see also generally MCA §§ 70-30-101 to -322. The State, via the board of land commissioners, may also exchange state lands under its control or enter into agreements to purchase lands. See, e.g., Mont. Const., art. X, § 4 ("The [board of land commissioners] has the authority to direct, control, lease, exchange, and sell school lands"); MCA §§ 77-1-202, -214, -301; Mont. Const. art. IX, § 4 ("The legislature shall provide for the ... acquisition ... of scenic, historic, archaeologic, scientific, cultural, and recreational areas ... for their use and enjoyment by the people"); MCA § 87-1-209 (addresses acquisition and sale of lands or waters). A board of county commissioners therefore does not have the authority to prevent the State from acquiring land within a county's border when the State chooses to acquire such land by lawful authority.

In conformity with the internal guidelines of this office, I have chosen to issue the foregoing as an informal unpublished letter of advice rather than as a formal published opinion. Informal letters of advice are used in response to opinion requests when, as in this case, the issues presented are straightforward and can be resolved by reference to readily available authority. Moreover, a formal opinion is generally not appropriate with respect to questions surrounding the constitutionality of proposed legislation.

I believe that the answers to your questions are clear from the cases and constitutional provisions cited above. Counties lack the power to enact land management ordinances for federal and state lands which conflict with federal and state law. My discretionary decision to

issue this advice in a letter rather than a formal opinion does not indicate any uncertainty about the legal advice set forth above.

Sincerely,

JOSEPH P. MAZUREK
Attorney General

jpm/ces/dlh

Appendix G
Oregon Biomass Survey

Biomass Producer or Collector Tax Credits

The 2007 Oregon Legislature passed House Bill 2210 which provides- Oregon businesses with tax credits to support the production, collection and use of biomass and biofuels to improve Oregon's environment, economy and energy resource diversity. The Oregon Department of Energy published the advisory, linked below in the right column, with details of the biomass producer and collector income tax credits. These credits may be claimed for activities conducted during 2007. This is a taxpayer administered income tax credit. The text of the statute is the most specific authority for properly claiming the credit.

BACKGROUND AND SUMMARY:

The 74th Oregon Legislature passed House Bill 2210 during the 2007 regular session. Producers or collectors of Oregon sourced biomass or energy crops, used for energy production in Oregon, are eligible for tax credit incentives based upon the volume of production or collection. Producers of neat ethanol or pure bio-oils, from Oregon feedstock, are also eligible for tax credits.

Biomass Producer and Collector Income Tax Credit Advisory (Effective December 1, 2007)

Tax Credit Transfer Form For Biomass Producer or Collector Income Tax Credit

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New Text of House Bill 2210 Enrolled

WHAT ARE THE CREDITS FOR?

The credits provided for under House Bill 2210 are:

- oil seed crops, $0.05 per pound, and
- grain crops, including but not limited to wheat, barley and triticale, $0.90 per bushel
- grains do not include corn, and wheat is eligible only after 1 January 2009, and
- virgin oil or alcohol from Oregon-based feedstock, $0.10 per gallon, and
- used cooking oil or waste grease, $0.10 per gallon, and
- wastewater biosolids, $10.00 per wet ton, and
- and woody biomass collected from nursery, orchard, agricultural, forest or rangeland property in Oregon, including but not limited to prunings, thinning, plantation rotations, log landing or slash resulting from harvest or forest health stewardship, $10.00 per green ton, and
- grass, wheat, straw or other vegetative biomass from agricultural crops, $10.00 per green ton, and
- yard debris and municipally generated food waste, $5.00 per wet ton, and
- animal manure or rendering offal, $5.00 per wet ton.

WHO CAN GET A TAX CREDIT?

An Agricultural producer or a biomass collector that is operates as a trade or business that pay taxes for a business site in Oregon are eligible for the tax credit.

The business, its partners or its shareholders may use the credit.The applicant must be the producer or collector of the biomass in Oregon that is delivered to a bioenergy facility in Oregon for use as a energy fuel. An Agricultural producer means a person that produces biomass that is used in Oregon as biofuel or to produce biofuel. A biomass collector means a person that collects biomass to be used in Oregon as biofuel or to produce biofuel.

The producer or collector also can be an Oregon non-profit organization, tribe or public entity that partners with an Oregon business or resident who has an Oregon tax liability. This can be done using the transfer form to allocate the credit to another party that pays Oregon income tax.

HOW DO I CLAIM THE TAX CREDIT?
The biomass producers and collectors tax credit is a taxpayer administered incentive.
The following is considered appropriate documentation necessary to meet statutory standards for transacting a biomass for use as energy or biofuel, and subsequently claiming a tax credit. The biomass production or collection credit is claimed on one's tax form for the year the biomass was sold. Appropriate documentation and record keeping is required.
Records are required to be held for five years following the claim (not collection). Eligible biomass is required to be produced and collected in Oregon for use as a biofuel produced in Oregon. A receipt for delivery or sale of the qualifying biomass would document the necessary information if it contained:

- the name address and of the producer or collector of the biomass, and
- location of production and collection of the biomass (street or road address, or forest unit, and county) and
- the type of biomass (grain, seed oil, manure...), and
- the amount of biomass in the appropriate quantity (tons, pounds, bushels, gallons ...), and
- receiver of the biomass, and
- location of the biofuel energy use of the biomass, and
- a signed declaration that the receiver will put the feedstock to biofuel or energy use in Oregon.

Records justifying the claim of a tax credit are required to be recorded and documented by the taxpayer claiming the credit. Records of these attributes of the taxpayer, source, biomass feedstock collection, type, use, or transfer of credit are required to be retained for five years.

FOR MORE DETAILED INFORMATION
Please read the advisory linked in the right-hand column.

For more information or interpretation of the information contained on this web page or in the attached advisory contact
The Corporate Tax Division of the Oregon Department of Revenue at 800-356-4222, or Mark Kendall at the Oregon Department of Energy, 800-221-8035.

Appendix H
DNRC AMR Report

APPROPRIATE MANAGEMENT RESPONSE (AMR) POLICIES: A STATE PERSPECTIVE

Management considerations for large, long duration wildland fire incidents in Montana

Introduction

Appropriate Management Response is defined as, "any specific action suitable to meet fire management unit (FMU) objectives. Typically, the AMR ranges across a spectrum of tactical operations (from monitoring to intensive management actions). The AMR is developed by using fire management unit strategies and objectives identified in the fire management plan. *(source: Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 2003 and referenced in the 2007 Interagency Standards for Fire And Fire Aviation Operations)*

The concept of AMR is based on an evaluation of risks to firefighter and public safety, land and resource and fire management objectives, resource availability, the circumstances under which the fire occurs, including weather and fuel conditions, protection priorities, values to be protected, and cost effectiveness. *(NRCG AMR Summary, 2007).*

Appropriate Management Response is not entirely new. Fire managers have always sought to develop strategies that are safe, operationally effective and cost effective. The contrast between federal and non-federal approaches to fire suppression appears dramatic because of the rapidly changing conditions and concerns regarding cost and safety. As a result, federal and state tactics each tend toward opposite ends of the AMR continuum between wildland fire use and full suppression.

The intent of this paper is not to criticize federal fire agencies for the emergence of AMR policies. Rather, it is to communicate some of the challenges of implementing AMR (resulting in less-than-full suppression) for state and local government and offer solutions for moving forward. Certainly, there will continue to be diverging opinions about AMR, but clear communication about the impacts, needs, and intentions of each stakeholder will go a long way toward resolving some of the issues and ultimately, improving implementation of AMR policies.

In 2007, there was a noticeable shift in federal agency interpretation and implementation of AMR. This was driven by a number of factors, among them: continued rising suppression costs, limited resource availability, and extreme conditions that threatened firefighter safety. During the summer of 2007, it was often determined that the appropriate management response for fires which escaped initial attack would be something less than full suppression. This decision, while not without merit, is at times contrary to the mission of state and local fire organizations who are directed under Montana Law to suppress fires to minimize damage to resources and loss of property.

While direct suppression is included in AMR, those activities are focused on perimeter control and point protection for property and high value areas. The Montana DNRC is a full suppression organization, striving to completely suppress all fires at 10 acres or less. The same is true for the vast

network of local partners, fire departments, fire districts and fee service areas. This difference in management approach to wildland firefighting has caused confusion and frustration among federal, state, and local fire agencies, as well as a backlash from private citizens whose homes and property have been threatened or destroyed by wildfires that, in their estimation, were not actively nor aggressively suppressed.

The purpose of this document is to outline key differences between direct suppression agencies such as the Montana DNRC and federal agency interpretation and implementation of AMR, as well as the ramifications to communities, private landowners, and the public stemming from large, long duration fires like the Ahorn, Meriwether, Rombo Mountain, and Sawmill Complex fires of 2007.

Desired outcomes from the dialogue surrounding AMR will be identification of issues and outlining of possible solutions, along with clarification of policies and protocols for resolving conflicts between federal, state and local fire agencies.

The Challenges

The concerns shared by DNRC and local government partners can be categorized into the following areas of emphasis:

- ***AMR in current fire climate (i.e. drought, fuel loading, fire behavior).***
- ***AMR implications for fires in or threatening the WUI, and federal discussions of interface suppression responsibilities.***
- ***Adequate explanation of AMR and collaborative decision-making between land managers, IMTs, local responders, elected officials, and the public.***
- ***Environmental and public health impacts from large, long-duration fires.***
- ***Communication of intent by federal agencies during development of any/all AMR strategies.***
- ***Conflicting fire management mandates among federal, state and local agencies.***
- ***Impacts of long-duration fires on state and local resources.***
- ***Compensation for losses/costs resulting from point protection, WFU, or other less-than-full-suppression actions.***
- ***State/County fiscal impacts for cost-sharing and/or overall suppression expense from a fire which is not immediately suppressed due to AMR interpretation and/or implementation.***

AMR in the current fire climate:

Already this decade, the State of Montana has seen 4-5 of the worst fire seasons on record. Indices for fire danger, ignition potential, and large fire growth have consistently risen to previously unknown highs, and Montana's deepening drought continues to be a harbinger for more of the

same. Given these conditions, all agencies must critically analyze suppression tactics and consider the potential for fires to spread beyond their intended geographic boundaries.

AMR implications for fires in or threatening the WUI, and federal discussions of interface suppression responsibilities.

The Montana DNRC functions as much like a fire department as a wildland fire agency, and that mission includes protection of private property and critical infrastructure threatened by wildfires. Conversely, the federal agencies are wildland agencies, and there is constant discussion about the appropriateness of federal agencies fighting fires in the interface. In Montana, some of both federal and non-federal lands under federal protection are listed as interface. It is important to note that there is significant federal acreage defined as WUI by communities and counties across the state. Therefore, discussions about changes to structure protection and/or interface suppression activities must include a plan to mitigate the fuel hazard and fire risk on federal holdings within the interface.

Other entities such as local government, state government and the insurance industry must also acknowledge responsibility for hazards in the WUI. Only then can all interests develop comprehensive strategies for dealing with the Wildland Urban Interface.

Adequate explanation of AMR and collaborative decision-making between land managers, IMTs, local responders, elected officials, and the public.

There remains much confusion among many audiences with regard to defining AMR and its implementation. Though not new, the approach to AMR is different from the way state and local governments have historically approached wildland fire suppression. In the absence of full suppression, the public perception is that the government is not taking the necessary steps to protect their homes and property. Internet postings on the Montana Governor's website accuse government entities of deliberately letting fires burn or waiting until they become very large before taking action.

Economic and public health impacts from large, long-duration fires.

The most frequent complaint received from the public during the 2007 fire season was about smoke. While little can be done about it, the fact remains that large, long-duration fires damage the state's air quality and pose a significant health risk to the elderly and those with respiratory illnesses. Long-duration fires also impact local economies negatively because people with health problems that are aggravated by smoke will not visit areas near large fires. There were frequent inquiries about air quality from non-residents who were planning trips to Montana. Education efforts during the fire season are essential in addressing tourism and health related issues.

Communication of intent by federal agencies during development of any/all AMR strategies.

While federal agencies do a commendable job of explaining the resource benefits of

modified suppression, they do not clearly communicate their intent regarding responsibility for protection of private property. Many view 'point protection' as a contingency plan for saving homes from a fire that could have been aggressively fought when it was still many miles away. A criticism of federal agencies is that they are not aggressive enough on initial attack.

Conflicting fire management mandates among federal, state and local agencies.

The Montana DNRC is a fire suppression organization. As such, there are expectations that each fire will be suppressed as quickly as possible to protect natural resources and property. While there are circumstances when another strategy is appropriate, the basis for those decisions is the belief that full suppression is always the first consideration. AMR seems to be the opposite: it appears that full suppression is treated as an option to be undertaken only if less aggressive, cheaper options fail. The clash of these two ideologies creates tension among federal, state and local partners.

Impacts of long-duration fires on state and local resources.

The DNRC and its local partners are organized for aggressive initial attack. We contend that the safest, least expensive fire is the one that's prevented or the one that's aggressively suppressed at the smallest size possible. Once a fire escapes initial attack, management decisions are made for extended attack that include releasing IA resources as soon as possible. The main reason for that is to keep them ready to respond effectively to new fire starts.

Long duration fires tie up local resources as well as DNRC staff to the extent that the IA mission can be compromised. Even a supporting role on an incident – as an agency representative, local government contact, or liaison – requires significant time and commitment of resources. Over time this depletes firefighting resources and lessens our ability to respond to new fires.

Compensation for losses resulting from point protection, WFU, or other less-than-full-suppression actions.

While it is difficult to quantify in some instances, there may be a financial impact to communities and private landowners resulting from AMR policies. Even without loss of structures, there are losses such as grazing lands, tourism, recreation, and other infrastructure (i.e. fences) that must be considered. How can the federal government fund economic recovery as a result of fires they don't actively suppress?

State fiscal impacts for cost-sharing and/or overall suppression expense from a fire with less-than-full suppression.

There are a number of different methodologies used to determine and negotiate cost-share agreements for fires across multiple ownerships and jurisdictions. The ones based on total burned acres have the potential to be impacted by AMR. It can be argued that, for example, federal lands where DNRC has fire suppression responsibility have the potential for cost savings because of DNRC'S aggressive full suppression mandate.

Conversely, the state may inherit a costly fire that becomes a large, long duration incident due, in part, to AMR-related decision-making. Continued discussion on appropriate cost-share strategies is essential.

Common Ground

There continues to be universal agreement among all agencies of the importance of initial attack. While the tactical strategies may vary, all agencies agree that unplanned fire ignitions outside of a wilderness or pre-identified wildland fire use (WFU) area are to be suppressed through aggressive initial attack to the greatest extent possible.

There is also continued agreement regarding containment of large fires where appropriate. These commonalities provide a solid framework for important future dialogue regarding areas of greater disagreement: namely implementation of AMR and some facets of large incident management.

Recommendations

We are fighting wildland fires under significantly different circumstances in the last decade. AMR is the product of the changed environment. With continued pressures to lower fire suppression costs and address safety concerns, it is reasonable to expect AMR policies to be in place for the foreseeable future. There are, however, recommendations for mitigating some of the problems with AMR implementation. Specifically:

- ✓ All agencies need to better explain the concept of AMR to the public, other wildland fire agencies, elected officials, and other stakeholders. The time to do this is before the incident; clear communication of the policy prior to the process of implementing it is key to gaining understanding.

- ✓ Agencies must involve all potential jurisdictions for any incident. Each must have the opportunity to voice their concerns, opposition, and/or support throughout the AMR decision-making process. ***It is critical that the agencies debunk the popular criticism that AMR is analogous to "let burn", "wildfire use", or "prescribed natural fire."***

- ✓ Policies regarding fire in the wildland urban interface cannot be developed without a comprehensive effort to reduce the fuel hazards and manage growth. Agencies must further clarify structure protection guidelines for fire in the interface. State, local, and private entities must also recognize and take responsibility for their roled in WUI issues.

- ✓ Agencies must be transparent in communicating their intent regarding all wildfire incidents. If, from the start, there is no intention of suppressing a fire, all cooperators, stakeholders, and the public need to know.

- ✓ Agencies must develop protocols to resolve disagreement over implementation of AMR and management of large fires.

- ✓ If a suppression strategy includes purposely utilizing state and/or

private lands for fuel breaks or as tactical opportunities, private landowner must be well-informed and, as appropriate, be compensated for losses.

- ✓ Further discussions are needed to address cost-share agreements for large fires where suppression strategies cross jurisdictional boundaries. Specifically, when those strategies include allowing a fire to cross onto state protection as a prerequisite to specific operational activities.

Conclusion

There are several valid reasons for developing AMR policy, among them: firefighter and public safety, resource benefit, cost, and efficiency. But, when AMR implementation contributes to a large, long duration fire, there are ramifications for neighboring ownerships and jurisdictions, air quality, cost, structure protection, and the capability of affected agencies to continue to meet IA missions or other management objectives.

Whenever a new methodology is put into practice, it is reasonable to expect some initial confusion, disagreement and conflict. The implementation of AMR will continue to be an evolving process, made better each time through clear communication, collaboration, public education, and post-incident evaluation. However, an immediate critical need is for better public education regarding AMR and also a process for receiving and responding to feedback from state and private entities that are impacted by AMR implementation.

The effectiveness of wildland fire suppression across all ownerships is under threat from a number of areas: climate change, forest health, fire behavior, expanding wildland urban interface, and the demand for cost reductions. Appropriate Management Response attempts to create a decision space where wildland fires can be managed in the face of these threats.

As we move forward, we must consider the concerns mentioned in this paper, as well as others which will surely emerge. For all agencies, broad support for fire suppression depends on clear communication of AMR strategies was well as continued cooperative efforts to address the other challenges presented by wildland fire.

Prepared by the Montana Department of Natural Resources and Conservation
February, 2008.

Appendix I
USFS Response to AMR Report

Forest Service Response to AMR White Paper

We appreciate the committee's invitation to comment on the "State & Local Government Concerns with Federal Implementation of the Appropriate Management Response (AMR) Policy" paper and the opportunity to offer the Forest Service's perspective. We believe continuing the dialogue with our cooperators is extremely valuable and we offer the following comments for your consideration.

Introduction

The fire environment has clearly exceeded all state, local, federal and private capabilities. Climate change has extended fire seasons in the Northern Rockies, and we will continue to have large fires that burn all summer, regardless of how much money we spend and how many resources we commit to these fires, for the foreseeable future. Something to consider is that there are more wildland fire fighting resources in Southern California than anywhere in the world, and the fires that occurred there last fall were not controlled until the winds quit blowing. To think we can put all fires out in fire dependent ecosystems is not realistic and the Forest Service believes this approach is inherently flawed. The numerous long duration fires that were managed by the DNRC as well as federal agencies in 2007 are manifistations of the extended drought, extreme weather conditions, and fuel conditions in which they burned.

Fires should be viewed like earthquakes and floods. They will always occur, and there is nothing we can do about either one other than not building in flood plains and by constructing homes that will survive earthquakes. Likewise, we need to build our houses and communities to survive wildland fires when they occur. No private, local, state, or federal government can prevent all wildland fires from occurring. The Director of DNRC has testified before the FSC that there are extreme fire situations where there is nothing to be done but to get out of the way. At times, large fires will dictate the terms to us, not the other way around. To tell the people we work for otherwise, builds expectations we cannot meet and tends to generate a false and dangerous sense of security.

Our Challenges

We can continue to have a successful aggressive initial attack program to delay fires from occurring, but they will occur.

We can continue to treat fuels to minimize effects to private property owners when wildland fires occur, but there will be effects.

We can continue to provide State Fire Assistance programs to increase local government capability and programs to treat private lands with fuel treatment programs, but fires will occur and people will be affected.

Our collective perceptions, policies and programs must be changed to consider learning how to live with fire, versus maintaining the futile attempt to have absolute control of fire. When considering how federal fire policy affects states, local government and the public, cooperators' fire policies should also be reviewed as to how they affect federal fire management.

Concerns with State Fire Policy

State fire policy does not recognize there are resource benefits from wildland fire--research has clearly proven otherwise.

Full suppression (we assume this is full perimeter control) is the only tactic utilized to minimize damage to resources and loss of property. The use of this tactic on all large state fires requires large-scale commitment of federal resources. It should be noted that how we manage one long duration fire significantly affects our options for how we manage the next long duration fire. If the Forest Service had utilized full perimeter control strategies on Ahorn, Meriwether, Rombo Mountain, and Sawmill complex, the resources available for Black Cat, Chippy Creek, and Jocko Lakes (all State fires) would have been greatly reduced. Initial attack and extended attack success rates for all agencies would have been reduced and impacts to the public and government agencies would have been significantly greater. The federally-managed fires that used varying tactics were controlled on similar dates as the state-managed fires that were using full perimeter control.

Protection of resource values on National Forest System lands received minimal consideration due to efforts related to structure protection and supporting full perimeter control tactics on State Land.

Other Issues Surfaced in the AMR Paper

Long duration fires: During fire season 2007 the Forest Service made decisions to manage the Ahorn, Meriwether, Rombo Mountain fires and the Sawmill Complex using less than full perimeter control tactics. For the Chippy Creek, Black Cat, and the Jocko Lakes fires, the state elected to use a full perimeter control strategy. The duration of all of these fires was nearly the same, in spite of the selected strategy.

Impacts of long duration fires to communities, cooperators, and tourism: The paper discusses concerns related to smoke impacts to health and tourism. While we recognize that these are serious concerns, the point of the preceding paragraph is that the other cooperators, particularly in western Montana, end up managing long-term events despite utilizing more aggressive and expensive tactics. Given these facts and outcomes, we don't see managing long duration fires and associated impacts as an exclusive challenge just for the Federal agencies.

Fire managers consider smoke impacts on human health and welfare when making wildfire management decisions. As fire managers develop their strategies for fighting a wildfire, they consider fire behavior and weather forecasts, topography and proximity to communities – all factors that can affect smoke and its impact on public health and safety. We also work closely with entities such as TravelMontana to provide information on wildfires during the tourist season.

We understand that the series of severe fire seasons in recent years have put a tremendous strain on local firefighting resources and law enforcement. We support them financially to the degree that we are legally authorized to do so. And we work hard to reduce the burden to our cooperators through strong communication and by involving them in decisions when long duration fires have the potential to burn onto their jurisdictions.

Initial Attack: We agree that the safest, least expensive fire is the one that's prevented or the one that's aggressively suppressed while still small in size, and in fact we enjoy a 97 to 98% success rate with initial attack. For the 2 to 3% of fires that do escape, an additional benefit of a flexible approach to their management is that fewer resources are committed when not attempting full perimeter control. Rather than causing depletion of initial attack capabilities as suggested by DNRC, selective deployment of resources on large fires means additional resources will be available for initial attack or for assignment to other fires with higher values at risk.

Wildland Urban Interface/Structure Protection: There is a suggestion in the paper that the Forest Service is seeking to divest itself of fire protection within the WUI. We remain committed to our responsibility to protect these lands. Fire cost considerations are secondary to safety and protection of values at risk.

The FS is a strong advocate for the reduction of hazardous fuels in the WUI and in the establishment of survivable space for home owners. We believe zoning and building codes specific to the WUI could lead to sustainable communities that have the potential to survive a wildfire without the intervention of a fire agency.

The Forest Service has supported and provided funding for projects developed through collaboration with home owner associations, counties, rural fire departments and other entities to reduce hazardous fuels in high priority areas. We have been an active partner in the CWPP process across the state of Montana for the past several years. The agency uses these plans to develop fuels reduction projects on federal lands to reduce the threat to communities.

Protection of structures and communities is a shared partnership between the homeowners and landowners and their fire agencies. Continued public education is needed about living in fire adapted ecosystems and how communities and citizens can

create survivable space by clearing flammable fuels and vegetation away from their homes and businesses.

A significant amount of federal resources and money are spent on trying to keep wildland fires from approaching the Wildland Urban Interface and away from structures. Our 2001 policy states, " Federal agencies MAY assist with exterior structural protection activities under formal Fire Protection Agreements that specify the mutual responsibilites of the partners, including funding." Protection of private property is not our only mission but it is where we spend a majority of money and resources. The committee has been provided the 2008 NRCG position paper on structure protection. We support that position without reservation.

Wildland Fire Use: While aggressive initial attack is the cheapest and safest approach in the short term, the Forest Service does not believe that this is always necessarily the best option in every event with regard to the long term. Given that we live in a fire-dependent ecosystem, allowing some fires to burn naturally can generate a number of positive outcomes. While we have met with considerable success in suppressing fires over the past decades, this success has created a less diverse landscape dominated by dense stands of older trees and heavy fuel loads. We see fire across the intermountain west as inevitable. The longer we succeed in postponing fires, the ultimate outcome will be more extensive fires with unnaturally high intensities that do pose numerous negative effects to resources because they burn precisely when weather and fuel conditions are most extreme. A wildland fire use program not only accomplishes resource objectives, but also reduces the risk to communities.

Cost Share Agreements and Damage Compensation tied to AMR: Per the Montana State Cooperative Agreement, any wildland fire use fire burning out of prescription is considered a wildfire and is the financial responsibility of the jurisdictional agency (land management). This occurred on the Fool Creek fire last year. Once declared a wildfire, the Forest Service absorbed all costs.

The Northern Rockies Coordinating Group has developed an interagency cost share template and cost share methodologies to be used on fires this season. The methodologies were developed by state, federal, and local fire agencies and were based on methods used on Meriweather, Brush Creek, Chippy, Ahorn, and Sawmill Complex. We do not have any legislated authority to pay for economic losses. Any landowner can file a claim for fire suppression damage caused by the tactical efforts used on a fire.

The perception seems to exist that Forest Service-managed fires burn onto other jurisdictions quite commonly. Our records indicate that over the last 10 years there have been about the same number of state fires (33) move to other jurisdictions as Forest Service fires (31). Protocols for cost share need to remain on parity.

Recommendations

In some instances, state fire policies utilize a significant amount of Forest Service and other firefighting resources with a low probability of success. This has become more common in a fire environment that has exceeded our operational capability. While we recognize that DNRC operates under a different mandate and in general is responsible for fire protection on lands that hold higher values at risk, we still believe Montana DNRC fire managers should give more consideration to utilizing the full spectrum of appropriate responses rather than being committed to full perimeter control in every event. We believe the payoff would be a reduction in risk exposure for fire personnel and a reduction in state fire expenditures. In 2007 the largest fire in the state of Montana was Chippy Creek and the most expensive fire in the state was Jocko Lakes, which were both under state management. Minimizing acres burned in every event is not a low-cost approach.

More common usage of alternate tactics would also enhance our collective ability to maintain strong initial attack capability.

The Forest Service allocates significant resources for structure protection, fighting fire in the WUI, and supporting full perimeter control on state-managed fires. DNRC needs to recognize this.

All agencies and local governments need to work harder to jointly develop a comprehensive and effective information program to promote the concepts of survivable structures and communities and learning how to live with fire. It is essential that we communicate to the citizens of Montana what they can realistically expect from us.

Instead of looking to compensate private landowners for loss (after the fact) there should be a proactive effort of tax incentives to make structures and communities survivable when wildland fire occurs.

Conclusion

The strength of Fire Management in the Northern Rockies is the interagency planning and implementation of how to manage fire. DNRC has a very professional fire organization that is very effective and has excellent leadership. We are confident in our ability to continue to work very effectively with the state of Montana in managing wildfire. We agree with nearly all of DNRC's recommendations and have suggested some additional ones for your consideration.

Appendix J

Community and Structure Fire Protection

NORTHERN ROCKIES COORDINATING GROUP

COMMUNITY AND STRUCTURE FIRE PROTECTION
Guidelines for the Northern Rockies
2008

Background
Protection of structures and communities is a shared partnership between the home and landowners and their fire agencies. Structure and community protection is high risk and a large cost center for all fire agencies. Clarification on what, how and where we will accomplish our structure protection roles and responsibilities must be identified. There needs to be common expectations among all agencies and the public on how structure protection will be handled within the Northern Rockies.

With the increased growth in the wildland urban interface fire agencies do not have the capability to protect all structures. The goal is to support the creation of firewise communities and structures that can survive the effects of a wildland fire without intervention.

All fire agencies have primary responsibility for fire suppression within their respective protection areas. A strong initial attack commensurate with risk with suppression as the primary objective will occur on all wildfires. Fire agencies have a responsibility to attempt to prevent a wildland fire from spreading into areas where there are structures, and to assist local fire agencies in protecting communities and structures from the advancing wildland fire.

Leaders Intent
Our first and foremost intent is to keep our firefighters and the public safe. Secondly, once that safety can be ensured, then we will agressively work towards keeping the wildland fire away from structures and communities. Our strategies and tactics will be based on that intent. Protecting structures from fire will not be possible in every situation. Risk to firefighters, fire behavior and availability of resources will dictate the strategies that will be used.

When there is a need to engage in structure protection, we will ensure that we are taking safe, appropriate, and reasonable tactical actions for which we are trained and equipped. Those actions will be cost effective. State and federal agencies will limit the use of tactics such as gelling, wrapping, extensive hazardous fuels modification, and utilization of Type 1 and 2 structure engines.

Unified Efforts
Fire agencies may have a shared responsibility for wildland fire and structure protection within the scope of their state laws, agreements and annual operating plans. Agency Administrators will discuss with their partners roles and responsibilities, what capabilities each party has, how the parties will interface with each other, and how responsibilities for costs will be addressed. Agency Administrators will provide leaders intent for structure fire protection. Incident management organizations will engage local government agencies (fire departments, law enforcement, disaster services, etc.) in the planning of strategies and tactics for community and structure protection.

There are areas in the Northern Rockies where there is no local fire agency. Through established agreements and authorities, the wildland fire protection agencies may have the responsibility to protect structures from wildland fire. Landowners have the responsibility to determine whether there is a local fire agency that provides structure fire protection.

It is important for NRCG members to:

- **Partner** with communities, home and landowners to identify what actions can be taken to mitigate potential wildland urban interface losses, and identify financial and technical assistance opportunities.
- **Identify** how the parties will work together when the wildland fire impacts another's protection or jurisdictional responsibility.
- **Establish** agreements and/or local operating plans to identify roles and responsiblities prior to the wildland fire.

Capabilities
Wildland fire agencies have no capability or responsibility to do structure fire suppression.

Some local fire agencies may have limited capability within their own areas of jurisdiction to respond to a wildland fire. It is important to understand what capability they do have and if they have options to reach out to others, such as mutual aid, to enhance that capability.

Definitions
The following are defined:

Wildland Fire Protection: Protecting natural resources and municipal watersheds from damage from any fire that occurs in the wildland. State, tribal and federal forestry or land management and some local government agencies normally provide wildland fire protection.

Structure Protection: Protecting a structure from the threat of damage from an advancing wildland fire. This involves the use of standard wildland protection tactics, control methods, and equipment, including fire control lines and the extinguishments of spot fires near or on the structure. The protection can be provided by both the rural and/or local government fire department and wildland fire protection agencies.

Structure Fire Suppression: Interior or exterior actions taken to suppress and extinguish a burning structure or improvement associated with standard fire protection equipment and training. This is the responsibility of local government entities; however there are areas where there is no structural fire agency in place.

This supercedes any prior Community and Structure Fire Protection guidelines developed by NRCG.

Appendix K

Fire Structure Protection Guidelines

Montana DNRC 2008
Fire Structure Protection Guidelines

Montana DNRC has been involved with, and supports the position taken in the 2008 NRCG paper regarding community and structure protection. However, given the challenges of broad consensus and short timeframes, we feel the need to provide more specific guidance for DNRC Line Officers for the 2008 fire season.

- DNRC fire operations are not changing significantly from past practice. We are mandated to protect values at risk, including structures, from wildfire, and we will continue to do so. We will continue to utilize available resources to take safe and appropriate actions to keep the wildland fire from igniting structures and other infrastructure.

- Although the focus of the discussions to date have been regarding structure protection, it should be realized that other values at risk, such as communication sites, transportation corridors, and key infrastructure (bridges, water supply systems, etc.) also will be threatened by wildfire and necessitate suppression tactical decisions.

- Tactical actions such as gelling, wrapping, extensive fuel modifications (i.e logging) or use of type 1 & 2 structure engines have not traditionally been included as actions which the DNRC has taken.

- Line Officers should plan to directly authorize, and document justifications these types of extraordinary measures are used on DNRC fires. DNRC Line Officers should include specific instructions within their delegation of authority and during their in-briefing of Incident Management Teams regarding structure protection.

- Other cooperating agencies, especially local government, may take additional actions which are outside of DNRC policy. In those instances, the agency making the decision to implement the tactic will be responsible for the cost of those actions.

TM
5/28/08

Appendix L

Beaverhead-Deer Lodge Conservation Partnership

Revised Draft – October 9, 2007

The companies and organizations making up the Beaverhead-Deerlodge Partnership released an initial Partnership Strategy in April, 2006. The Strategy was prepared in response to revisions to the Forest Plan proposed by the Beaverhead-Deerlodge National Forest. Because some elements of the Strategy require Congressional authorization, the Partnership prepared an initial draft of legislation in January of 2007. Since releasing the January draft, the Partnership has received many comments. Based on these comments, the Partners issued a revised legislative draft on April 24, 2007 and are now issuing a second revised draft. This revised draft, dated October 9, 2007, reflects changes in wilderness boundaries that are the result meetings between Partnership members and other interested groups including snowmobile associations, backcountry horsemen, motorized recreation interests and backcountry cyclists. This draft also provides more specificity on where and how stewardship contracting, timber harvest and restoration work will take place on the Beaverhead-Deerlodge National Forest. The Partnership welcomes comments and inputs on this draft legislative proposal.

BEAVERHEAD-DEERLODGE CONSERVATION, RESTORATION AND STEWARDSHIP ACT OF 2007

A BILL

To sustain the economic development and recreational use of National Forest System lands and other public lands in southwestern Montana, to reduce gridlock and promote local cooperation and collaboration in forest management, to produce forest diversity and wood fiber to accomplish measurable habitat restoration using stewardship contracting while generating a more predictable flow of wood products for local communities, to improve fish and wildlife populations and better protect key habitats, to better prevent and manage wild land fire and better protect adjoining private land and property and, to add certain National Forest System lands and Bureau of Land Management lands in to the National Wilderness Preservation System and manage other lands to preserve existing primitive and semi-primitive recreation, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE AND TABLE OF CONTENTS.

(a) Short Title- This Act may be cited as the Beaverhead-Deerlodge Conservation, Restoration and Stewardship Act of 2007.

(b) Table of Contents- The table of contents for this Act is as follows:

1. Secretary— the term "Secretary" means the Secretary of Agriculture.

2. Beaverhead-Deerlodge National Forest—the term "Beaverhead-Deerlodge National Forest"

means the area covered by the Beaverhead and the Deerlodge National Forests which are combined into a single administrative unit and administered by the USDA-Forest Service.

3. Forest Plan— The term "Forest Plan" means a land and resource management prepared under Section 6 of the Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1604).

4. Stewardship Area – The term "Stewardship Area" means the six areas designated in Section 101 and depicted on the map entitled _____, dated _____, in which the Secretary shall implement one or more landscape scale restoration projects as directed in Section 102.

5. Landscape Scale Restoration Project – The term "Landscape Scale Restoration Project" means an area of between _____ and 50,000 acres within a Stewardship Area where vegetation management through commercial timber harvest, prescribed burning and other silvicultural techniques shall occur, with the majority of vegetative management designed to mimic mixed severity and stand replacement fires, and vegetation management goals to include reducing the risk and severity of fire and insect infestations, restoring impaired watersheds, enhancing fish and wildlife habitat, and maintaining the current infrastructure of wood products manufacturing facilities that provide economic stability to local communities

6. Stewardship Contract – The term "Stewardship Contract" means a contract authorized under Sec. 332 of PL 107-63, 16 U.S.C. 2104 Note (Revised February 28, 2003 to reflect Sec. 323 of H.J. Res. 2 as enrolled), for vegetation treatment including mechanical treatment using commercial timber harvest of vegetation to reduce fire and insect risk, restore impaired watersheds, enhance fish and wildlife habitat or reduce road densities. A stewardship contract includes the ability to (1) offset the value of goods such as timber for services; (2) retain and reinvest the receipts in the same or another landscape scale restoration project within a Stewardship Area; (3) designate timber for cutting by description or prescription; (4) enter into a multi-year contract for services exceeding five years but not more than ten years duration.

7. Eligible Land – The term "Eligible Land" means lands within the Stewardship Area generally forested where landscape scale restoration projects shall be implemented as depicted on the map referenced in Section 101(b).

8. Reclaimed – The term "Reclaimed" means a road that is revegetated and restored to its original contour where appropriate.

TITLE I

SECTION 101. DESIGNATION OF STEWARDSHIP AREAS

(a) Designation - Those National Forest lands in the Beaverhead-Deerlodge National Forest, as generally depicted on the maps dated _____, 2007, are hereby designated as a Stewardship Area to reduce fire and insect risk, restore impaired watersheds, enhance fish and wildlife habitat, and reduce road densities:

(1) Big Hole Stewardship Area –comprising approximately 550,000 acres generally depicted on a map entitled "Big Hole Stewardship Area." Within the Big Hole Stewardship Area, there are approximately 212,500 acres of eligible land that shall be managed under landscape scale restoration projects.

(2) Clark Fork Stewardship Area - comprising approximately 356,500 acres generally depicted on a map entitled "Clark Fork Stewardship Area." Within the Clark Fork Stewardship Area, there are approximately 110,500 acres of eligible land that shall be

managed under landscape scale restoration projects.

(3) Highlands Stewardship Area - comprising approximately 514,500 acres generally depicted on a map entitled "Highlands Stewardship Area." Within the Highlands Stewardship Area, there are approximately 183,000 acres of eligible land that shall be managed under landscape scale restoration projects.

(4) Pioneer Stewardship Area - comprising approximately 462,000 acres generally depicted on a map entitled "Pioneer Stewardship Area." Within the Pioneer Stewardship Area, there are approximately 87,500 acres of eligible land that shall be managed under landscape scale restoration projects.

(5) Upper Rock Creek Stewardship Area - comprising approximately 206,500 acres generally depicted on a map entitled "Upper Rock Creek Stewardship Area." Within the Upper Rock Creek Stewardship Area, there are approximately 79,000 acres of eligible land that shall be managed under landscape scale restoration projects.

(6) Tobacco Roots Stewardship Area - comprising approximately 182,500 acres generally depicted on a map entitled "Tobacco Roots Stewardship Area." Within the Tobacco Root Stewardship Area Stewardship Area, there are approximately 26,000 acres of eligible land that shall be managed under landscape scale restoration projects.

(b) Map – A map entitled the "Beaverhead-Deerlodge Stewardship Area Map" establishing the Stewardship Areas and Eligible Lands in which the landscape scale restoration projects of this Act shall be implemented is on file with the Committees on Agriculture and Energy and Natural Resources of the Senate; the Committees on Agriculture and Resources in the House of Representatives; the office of the Secretary, the office of the Chief of the Forest Service; and the appropriate administrative unit offices of the Forest Service.

SECTION 102. IMPLEMENTATION OF STEWARDSHIP AND RESTORATION ON THE BEAVERHEAD-DEERLODGE NATIONAL FOREST

(a) Development of Landscape Scale Restoration Projects. Not later than one year after the effective date of this Act, and annually thereafter, the Secretary shall sign a record of decision and begin implementation of at least one landscape-scale restoration project annually on those eligible lands within the Stewardship Areas identified in Section 101 of this Act. Each landscape scale restoration project will include a mix of vegetative treatments and restoration and will be designed and planned at a landscape scale of between _____ and 50,000 acres. In determining priority for such projects the Secretary should consider eligible lands where:

(1) road densities exceed 1.5 miles per square mile; or

(2) habitat connectivity is compromised due to past timber harvest patterns; or

(3) forests are at high risk from insect epidemics or high severity wildfires; or

(4) opportunities exist to reduce fire risk in an identified wildland-urban interface.

(b) Landscape scale restoration projects under this section shall be planned and implemented using Stewardship Contracts. This does not preclude the Secretary from using other available authorities for other projects in the Stewardship Areas not conducted pursuant to this Act.

(c) Requirements for landscape restoration projects. The landscape scale restoration projects shall meet the following timber harvest and restoration requirements:

(1) Permanent roads, defined as roads where the road prism remains permanently in place following construction, shall be managed so the density of roads/motorized trails on the landscape does not exceed 1.5 miles per square mile. The road density standard shall be met at the completion of a landscape scale restoration project and measured at the project scale (miles of permanent roads in the forested portions of the Stewardship Area).

(2) All new access roads shall be temporary. Where temporary roads are employed, road prism and landings will be re-contoured and crossing features (culverts, bridges, etc.) removed promptly following vegetation treatment. Vegetative treatments shall be scheduled so that any temporary roads will be re-contoured and seeded promptly following use but not to exceed five years after construction. Relocated permanent roads, designed to resolve existing resource problems, do not constitute new permanent road construction. These new permanent roads must access the same destinations as the old permanent roads which shall be re-contoured, seeded and abandoned.

(3) Existing roads that are not needed or cannot be maintained under current road maintenance budgets shall be reclaimed.

(4) Vegetation shall be managed through timber harvest, prescribed burning as a secondary option and other silvicultural techniques with the majority of vegetative management designed to mimic mixed severity, natural fires.

(5) Existing culverts shall be replaced and resized if needed to restore fish habitat or to repair a source of sediment that exceeds natural sediment loads.

(6) Wildlife habitat shall be restored and maintained through mechanical treatment and through the use of prescribed burning that mimics natural fire that is allowed to burn beyond harvest units. Nothing in this Act shall preclude short term habitat modification to facilitate long term maintenance and restoration.

(7) The Inland Native Fish Strategy (INFISH) standards for Riparian habitat conservation and riparian management shall apply.

(8) Vegetation management shall include commercial timber harvest designed to reduce the long term risk and severity of fire and insect infestations, to maintain and restore healthy sustainable forests, to produce revenue to reinvest in fish and wildlife habitat maintenance and restoration, and to maintain current infrastructure of wood products manufacturing facilities that provide economic stability to local communities.

(d) Timing of Implementation –

(1) Within the Stewardship Areas identified in Section 101, the Secretary shall mechanically treat timber that yields value for meeting the restoration goals of this Act, on a minimum of (i) 14,000 acres of eligible land within two years after the date of enactment; (ii) 35,000 acres of eligible land within five years after the date of enactment; and (iii) 70,000 acres of eligible land within ten years after the date of enactment.

(2) Upon completion of the environmental analysis in paragraph (e) and the signing of a record of decision that complies with the requirements in paragraph (c), the Secretary shall implement the projects required by this section.

(e) NEPA Documentation –

(1) The Forest Service shall prepare one environmental impact statement pursuant to the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), for each landscape scale restoration project that shall be implemented in Section 102.

(2) Additional environmental analysis under the National Environmental Policy Act is not required to implement an approved landscape restoration project.

SECTION 103. FUNDING SOURCES AND AUTHORIZATION OF APPROPRIATIONS

(a) Stewardship Contract Authority.—In accordance with funds administered under Sec. 332 of PL 107-63, 16 U.S.C. 2104 Note (Revised February 28, 2003 to reflect Sec. 323 of H.J. Res. 2 as enrolled), the Beaverhead-Deerlodge National Forest shall implement projects covered by Section 102 (a) using Stewardship Contracts. Stewardship contracting authority shall be available for use on the Beaverhead-Deerlodge National Forest for the duration of this Act.
(b) Cost-Effective Implementation.— Consistent with Section 104(a), the Secretary shall plan and implement projects using the most cost-effective means available.

(1) Reprogramming.—Subject to the relevant reprogramming guidelines of the House and Senate Committees on Appropriations, funds specifically provided to the Forest Service by the Secretary to implement resource management activities according to this Act may be made available.

(2) Unobligated Balances.—Subject to normal reprogramming guidelines, the forest supervisor of the Beaverhead-Deerlodge National Forest may allocate and use all accounts that contain year-end excess funds and all available excess funds for the administration and management of the Beaverhead-Deerlodge National Forest to plan and implement projects to meet the goals and objectives of the Proposal.

(3) The Secretary may retain any receipts from implementation of the landscape restoration projects under Title I for the planning and implementation of additional landscape scale restoration projects.

(c) Pursuant to the procedures and criteria established by the Secure Rural Schools and Community Self-determination Act (P.L. 106-393), the Secretary shall establish a Resource Advisory Committee (RAC) for the Beaverhead-Deerlodge National Forest. The Secretary may use an existing RAC if it is determined to be capable of carrying out the requirements of this subparagraph; and, includes both conservation and industry representatives from the Partnership. The RAC shall establish project specific advisory committees, comprised of industry, recreation, conservation, and livestock interests, to aid in the location, design, and implementation of the landscape projects required by Section 102. The RAC shall advise the administrative units of the Beaverhead-Deerlodge on the use and disbursement of excess receipts which result from the completion of the landscape scale restoration projects in this Act.

(d) Overhead.—The Secretary shall ensure that of amounts available to carry out this section not more than XX percent is used or allocated for general administration, planning, or other overhead; and at least XX percent is used to implement projects required by this section.

(e) Authorization of Appropriations.--There are authorized to be appropriated additional sums as may be necessary to fulfill the obligations of this Act.

(f) The Secretary shall retain receipts and fees derived from commercial and recreational activity

on the Beaverhead-Deerlodge National Forest for use on that forest for the purpose of implementing this Title, and for other purposes.

SECTION 104. MONITORING AND REPORTING

(a) The Secretary shall prepare a report to Congress at five year intervals on the implementation of large landscape projects on the Beaverhead-National Forest. The report will:

(1) assess the effectiveness of stewardship contracting in meeting vegetative management goals and funding restoration goals;

(2) provide information on the number of landscape projects designed and implemented, the cost of such projects, including the costs of planning and environmental analysis; and the number of acres treated and restoration projects accomplished;

(3) evaluate whether the use of stewardship contracting, the participation of the RAC and project specific advisory committees and other public involvement tools have reduced the number of administrative appeals and legal challenges or otherwise impacted the outcome of appeals and litigation;

(4) make recommendations on legislative or administrative actions that might better achieve the goals and purposes of the Beaverhead-Deerlodge Conservation, Restoration and Stewardship Act.

(5) Identify additional resources and authorities needed if any, to fully implement the Act.

SECTION 105. TERM OF AUTHORIZATION

(a) The Secretary shall plan and implement landscape scale restoration projects under this Title until:

(1) the date, no earlier than 10 years after the date of enactment of this Act, on which the Secretary completes a significant amendment or revision of the land and resource management plans for the Beaverhead-Deerlodge National Forest in accordance with 16 U.S.C. 1604(f)(4); or

(2) fifteen years after the date of enactment of this Act; and

(3) Provided that a minimum of 70,000 acres have been treated pursuant to Section 102(d) of this Title and that all contracts begun under authority of this Title, may be completed under this Title.

SECTION 106. RELATIONSHIP TO OTHER LAWS

Except as provided for in this Act, the Secretary shall manage the Beaverhead-Deerlodge National Forest in accordance with all existing laws and regulations.

TITLE II

SECTION 201. DESIGNATION OF WILDERNESS AREAS

(a) DESIGNATION – In furtherance of the purposes of the Wilderness Act of 1964, the following lands in the State of Montana are designated as wilderness and, therefore, as components of the National Wilderness Preservation System:

(1) ANACONDA-PINTLAR WILDERNESS ADDITIONS- Certain land in the Beaverhead-Deerlodge National Forest, comprising approximately 65,400 acres, as generally depicted on the map entitled "Anaconda-Pintlar Proposed Wilderness Additions, Beaverhead-Deerlodge National Forest (Ross Fork, Rock Creek, East Pintlar, North Big Hole)" dated March 1, 2007, is incorporated in and shall considered to be a part of the "Anaconda-Pintlar Wilderness," as designated by section _____ of the Wilderness Act of 1964 (16 U.S.C. _____);

(2) LEE METCALF WILDERNESS ADDITIONS- Certain land in the Beaverhead-Deerlodge National Forest, comprising approximately 17,800 acres, as generally depicted on the map entitled "Lee Metcalf Proposed Wilderness Additions, Beaverhead-Deerlodge National Forest" dated March 1, 2007, is incorporated in and shall considered to be a part of the "Lee Metcalf Wilderness," as designated by section _____ of the _____ Wilderness Act (16 U.S.C. _____);

(3) EAST PIONEERS WILDERNESS- Certain land in the Beaverhead-Deerlodge National Forest comprising approximately 87,500 acres, as generally depicted on the map entitled "East Pioneers Proposed Wilderness" and dated March 1, 2007, which shall be known as the "East Pioneers Wilderness".

(4) ELECTRIC PEAK WILDERNESS- Certain land in the Beaverhead-Deerlodge National Forest comprising approximately 9,400 acres, as generally depicted on the map entitled "Electric Peak Proposed Wilderness" and dated March 1, 2007, which shall be known as the "Electric Peak Wilderness".

(5) LIMA PEAKS WILDERNESS- Certain land in the Beaverhead-Deerlodge National Forest, comprising approximately 35,100 acres, as generally depicted on the map entitled "Lima Peaks Proposed Wilderness" and dated March 1, 2007, which shall be known as the "Lima Peaks Wilderness".

(6) HIGHLANDS WILDERNESS- Certain land administered by the Beaverhead-Deerlodge National Forest, comprising approximately 20,400 acres, as generally depicted on the map entitled "Highlands Proposed Wilderness" and dated March 1, 2007, which shall be known as the "Highlands Wilderness".

(7) ITALIAN PEAKS WILDERNESS- Certain land administered by the Beaverhead-Deerlodge National Forest, comprising approximately 29,522 acres, as generally depicted on the map entitled "Italian Peaks Proposed Wilderness" and dated March 1, 2007, which shall be known as the "Italian Peaks Wilderness".

(8) LOST CABIN WILDERNESS- Certain land administered by the Beaverhead-Deerlodge National Forest, comprising approximately 5,220 acres, as generally depicted on the map entitled "Lost Cabin Proposed Wilderness" and dated March 1, 2007, which shall be known as the "Lost Cabin Wilderness".

(9) MOUNT JEFFERSON WILDERNESS- Certain land administered by the Beaverhead-Deerlodge National Forest, comprising approximately 4,500 acres, as generally depicted on the map entitled "Mount Jefferson Proposed Wilderness" and dated March 1, 2007, which shall be known as the "Mount Jefferson Wilderness".

(10) QUIGG PEAK WILDERNESS- Certain land administered by the Beaverhead-Deerlodge National Forest, comprising approximately 8,200 acres, as generally depicted on the

map entitled "Quigg Peak Proposed Wilderness" and dated March 1, 2007, which shall be known as the "Quigg Peak Wilderness".

(11) SAPPHIRES WILDERNESS- Certain land administered by the Beaverhead-Deerlodge National Forest, comprising approximately 43,500 acres, as generally depicted on the map entitled "Sapphires Proposed Wilderness" and dated March 1, 2007, which shall be known as the "Sapphires Wilderness".

(12) SNOWCREST WILDERNESS- Certain land administered by the Beaverhead-Deerlodge National Forest, comprising approximately 92,000 acres, as generally depicted on the map entitled "Snowcrest Proposed Wilderness" and dated March 1, 2007, which shall be known as the "Snowcrest Wilderness".

(13) STONY MOUNTAIN WILDERNESS- Certain land administered by the Beaverhead-Deerlodge National Forest, comprising approximately 15,500 acres, as generally depicted on the map entitled "Stony Mountain Proposed Wilderness" and dated March 1, 2007, which shall be known as the "Stony Mountain Wilderness".

(14) WEST BIG HOLE WILDERNESS- Certain land administered by the Beaverhead-Deerlodge National Forest, comprising approximately 92,800 acres, as generally depicted on the map entitled "West Big Hole Proposed Wilderness" and dated March 1, 2007, which shall be known as the "West Big Hole Wilderness".

(15) DOLUS LAKES WILDERNESS- Certain land administered by the Beaverhead-Deerlodge National Forest, comprising approximately 8,300 acres, as generally depicted on the map entitled "Dolus Lakes Proposed Wilderness" and dated March 1, 2007, which shall be known as the "Dolus Lakes Wilderness".

(16) WEST PIONEERS WILDERNESS- Certain land administered by the Beaverhead-Deerlodge National Forest, comprising approximately 34,400 acres, as generally depicted on the map entitled "West Pioneers Proposed Wilderness" and dated March 1, 2007, which shall be known as the "West Pioneers Wilderness".

SECTION 202. ADMINISTRATION OF WILDERNESS AREAS

(a) Management- Subject to valid existing rights, each area designated as wilderness by section 3 shall be administered by the Secretary in accordance with the Wilderness Act (16 U.S.C. 1131 et seq.), except that--

(1) any reference in that Act to the effective date shall be considered to be a reference to the date of enactment of this Act; and

(2) any reference in that Act to the Secretary of Agriculture shall be considered to be a reference to the Secretary that has jurisdiction over the wilderness.

(b) Map and Description-

(1) IN GENERAL- As soon as practicable after the date of enactment of this Act, the Secretary shall file a map and a legal description of each wilderness area designated by section 3 with--

(A) the Committee on Resources of the House of Representatives; and
(B) the Committee on Energy and Natural Resources of the Senate.

(2) FORCE OF LAW- A map and legal description filed under paragraph (1) shall have the same force and effect as if included in this Act, except that the Secretary may correct errors in the map and legal description.

(3) PUBLIC AVAILABILITY- Each map and legal description filed under paragraph (1) shall be filed and made available for public inspection in the appropriate office of the Secretary.

(c) Incorporation of Acquired Land and Interests- Any land within the boundary of a wilderness area designated by this Act that is acquired by the Federal Government shall--

(1) become part of the wilderness area in which the land is located; and

(2) be managed in accordance with this Act, the Wilderness Act (16 U.S.C. 1131 et seq.), and any other applicable law.

(d) Withdrawal- Subject to valid rights in existence on the date of enactment of this Act, the Federal land designated as wilderness by this Act is withdrawn from all forms of--

(1) entry, appropriation, or disposal under the public land laws;

(2) location, entry, and patent under the mining laws; and

(3) disposition under all laws pertaining to mineral and geothermal leasing or mineral materials.

(e) Fire, Insect, and Disease Management Activities-

(1) IN GENERAL- The Secretary may take such measures in the wilderness areas designated by this Act as are necessary for the control and prevention of fire, insects, and diseases, in accordance with--

(A) section 4(d)(1) of the Wilderness Act (16 U.S.C. 1133(d)(1)); and
(B) House Report No. 98-40 of the 98th Congress.

(2) REVIEW- Not later than 1 year after the date of enactment of this Act, the Secretary shall review existing policies applicable to the wilderness areas designated by this Act to ensure that authorized approval procedures for any fire management measures allow a timely and efficient response to fire emergencies in the wilderness areas.

(f) Access to Private Property- The Secretary shall provide any owner of private property within the boundary of a wilderness area designated by this Act adequate access to such property to ensure the reasonable use and enjoyment of the property by the owner.

(g) Snow Sensors and Stream Gauges- If the Secretary determines that hydrologic, meteorological, or climatological instrumentation is appropriate to further the scientific, educational, and conservation purposes of the wilderness areas designated by this Act, nothing in this Act prevents the installation and maintenance of the instrumentation within the wilderness areas.

(h) Military Activities- Nothing in this Act precludes low-level overflights of military aircraft, the designation of new units of special airspace, or the use or establishment of military flight training routes over wilderness areas designated by this Act.

(i) Livestock- Grazing of livestock and the maintenance of existing facilities related to grazing in wilderness areas designated by this Act, where established before the date of enactment of this Act, shall be permitted to continue in accordance with—

(1) section 4(d)(4) of the Wilderness Act (16 U.S.C. 1133(d)(4)); and

(2) the guidelines set forth in Appendix A of the report of the Committee on Interior and Insular Affairs of the House of Representatives accompanying H.R. 2570 of the 101st Congress (H. Rept. 101-405).

(j) Fish and Wildlife Management-

(1) IN GENERAL- In furtherance of the purposes of the Wilderness Act (16 U.S.C. 1131 et seq.), the Secretary may carry out management activities to maintain or restore fish and wildlife populations and fish and wildlife habitats in wilderness areas designated by this Act if such activities are—

(A) consistent with applicable wilderness management plans; and
(B) carried out in accordance with applicable guidelines and policies.

(2) STATE JURISDICTION- Nothing in this Act affects the jurisdiction of the State of Montana with respect to fish and wildlife on the public land located in the State.

(k) Adjacent Management-

(1) IN GENERAL- Nothing in section 3 creates protective perimeters or buffer zones around any wilderness area designated by section 3.

(2) NONWILDERNESS ACTIVITIES- The fact that nonwilderness activities or uses can be seen or heard from areas within a wilderness area designated by section 3 shall not preclude the conduct of those activities or uses outside the boundary of the wilderness area.

TITLE III

SECTION 301. DESIGNATION OF LOST CREEK PROTECTION AREA

(a) ESTABLISHMENT.—There is hereby established in the Beaverhead-Deerlodge National Forest, Montana, the Lost Creek Protection Area (hereinafter in this Act referred to as the `protection area').

(1) The protection area shall consist of certain lands in the Beaverhead-Deerlodge National Forest, Montana, which comprise approximately 11,600 acres, as generally depicted on the map entitled `Lost Creek Protection Area', dated March 1, 2007.

(b) ADMINISTRATION- The Secretary shall administer the protection area in accordance with this section and the laws and regulations generally applicable to the National Forest System.

(c) WITHDRAWAL- Subject to valid existing rights, all lands within the protection area are hereby withdrawn from all forms of entry, appropriation, or disposal under the public land laws, from location, entry, and patent under the mining laws, and from disposition under the mineral and geothermal leasing laws, including all amendments thereto.

(d) DEVELOPMENT- No developed campgrounds shall be constructed within the protection

area. After the date of enactment of this Act, no new roads or trails may be constructed within the protection area.

(e) TIMBER HARVESTING- No timber harvesting shall be allowed within the protection area except to the extent that would be permitted in wilderness under section 4(d)(1) of the Wilderness Act for necessary control of fire, insects, and diseases, and for public safety.

(f) MOTORIZED TRAVEL- Motorized travel shall be permitted within the protection area only on those designated trails and routes existing as of March 1, 2007, and only during periods of adequate snow cover. At all other times, mechanized, non-motorized travel shall be permitted within the protection area.

(g) MANAGEMENT PLAN- During the first revision of the Land and Resource Management Plan for the Beaverhead-Deerlodge National Forest following enactment of this Act, the Forest Service shall develop a management plan for the protection area, after providing for public comment.

Appendix M
Rep. Vincent Letter

Collaboration and Coordination; Will it result in management? Will it Help?

Lincoln County Experience:

With collaboration efforts being the buzz in many communities throughout the state right now, I felt that discussing Lincoln County's current and past exercises on collaboration would prove valuable to this committee.

In order to have perspective on what needs happen to move forward, we need to acknowledge what has already been tried, as well as why it has failed to produce measurable results.

One point that is important to make is that collaboration is not a new concept, particularly to the citizens of Lincoln County.

The impetus of the collaboration efforts in Lincoln County are however the same as many of the new efforts throughout the state.

Trying to bring stakeholders to the table to arrive at a desired future outcome that is palatable and manageable for all interests on our public lands.

While the theory of finding common ground to work together on seems very reasonable and pragmatic in nature, it is a slow and frustrating process of building bridges of trust, with scud missiles flying in from the fringes constantly testing their strength.

In fact, the residents of Lincoln County have been living in the wake of the many failed attempts of bridge building for over two decades now.

And there have been many attempts, we've had:

Kootenai Forest Sustainability Task Force (started in 1987)

Timber Chamber Summit

Cabinet/Yaak Community Involvement Team for Grizzly Recovery

Thompson Chain of Lakes Citizens Involvement Committee

Libby Sustainability Committee

Kootenai Forest Roundtable

Kootenai Forest Congress

Community Sustainability Committee for the Stimson Mill

While the many diverse interests working together had thousands of hours trying to come up with common ground solutions to our dire situation, the end results have been what all participating were trying to stop. We have yet to find a way to keep external elements from dictating the outcome.

The loss of the infrastructure needed to manage our forest, as well as the economic and cultural well being of the proud heritage that managed it.

I could speak at length to the many effects this has had to the social, economic, and environmental health of our region.

Instead I will speak to what we have learned in our failed attempts at collaboration, and why we are still working towards successful ones.

To fully understand the external elements that ultimately dictate the management of our public lands, we must look to the NEPA process and its evolution.

NEPA was passed in 1969 and signed into law in 1970.

NEPA was spawned out of a very much needed environmental movement. People affected by Federal decision making had no venue to get involved, and NEPA provided this venue.

Communities relocated for the creation of dams and reservoirs had no voice. Nor the land owner who was to be the new neighbor to the government munitions dump.

We had fish swimming upside down in Lake Erie, and rivers burning their bridges down in Pennsylvania.

If you read the congressional dialogue during the bills passage, a great deal of it spoke to the need for the local indigenous population in the areas affected by agencies decisions to have a voice in the process to allow them recourse.

To this end NEPA has been a very successful tool, but unfortunately as with all good intended policy, there are always ways to abuse it creating many unintended consequences.

Coupled with NEPA in 1980 was the Equal Access to Justice Clause that allows for anyone in America to object to any agency's procedural guidelines in court. If the presiding judge interprets that the objection raised a "reasonable concern", the attorney fees are awarded to the litigator. This again is a well intended constitutional right enabling those without the resources the ability to stand up.

The consequence to this well intended clause has left a few entities that want to obstruct any management on our public lands the means by which to create a procedural gridlock. This is because all objections to any agency action must be answered. Appellants have learned that the more objections to be answered, the more likely a court to rule all have not been adequately addressed. With the high abundance of endangered species in areas like the KNF for instance, appellants have a plethora of objections to list, and regardless of the substantive merit, all must be responded to before action can be taken.

This has resulted in timber sales being tied up in court for 5-7 yrs.

With the USFS has the majority of its resources bogged down in court, they have been crippled in their ability to address forest health concerns. Things like addressing the Douglas fir beetle epidemic becomes an unmanageable task. Doug fir is only merchantable for two to three years after it has been hit, the reality of the time line for treatment results in no treatment at all. What we are left with are groves of un merchantable timber.

The consequence of this reality has left many areas like the KNF in a very dangerous fuel load situation.

The KNF his comprised of 2.4 million acres.

Of the 2.4 approximately 1.6 is considered suitable timberlands.

Based upon 1987 forest plan revision process:

Annual growth = 442 million board feet
Annual mortality = 346.5 million board feet (numbers skewed with mountain pine beetle epidemic)

Annual Harvest (from Cut and Sold Reports)
2006 = 26.2 MMBF
2005 = 44.6 MMBF
2004 = 48.2 MMBF
2003 = 45.5 MMBF
2002 = 82.5 MMBF

The many collaborative efforts in Lincoln County have been spawned from this unacceptable situation. Many diverse interests from all sides of the public lands debate have recognized the unintended consequences and continue to come to the table with renewed hope that this time, we may find a way.

More than once we have thought we were close.

While the Comm Sustainability Committee for the Stimson Mill was lobbying in DC to find some a legislative solution in the form of a litigation shield to save what was left of the Stimson Mill in Libby, we witnessed it actually happen.

There was a collaborative group in South Dakota made up of timber, recreation, mining, wilderness, conservation, and elected officials attempting to hammer out an agreement to save their local mills while addressing as many of the stakeholders interests as they could. This collaborative effort took three yrs to come to an agreement. After all had agreed to work with the Black Hill National forest to deliver this resolution, they received a phone call from the Center for Biological Diversity pledging to appeal the timber management portions agreed upon. Realizing that the external elements would negate all of their hard work, they ran to their Senator, Tom Daschle. After reviewing their collaborative work and agreeing that something had to be done to protect the progress made, Sen Daschle slipped an amendment (literally at midnight) into a defense bill that created a litigation shield for the forest. We

then ran to Sen Baucus, and Sen Burns to see if we could do this on the Kootenai. Interestingly enough, they hadn't known that they had voted for it, but after verifying with staff that they had, said that it wasn't politically feasible to do so. The group in the Black Hills had more diverse makeup of stakeholders we needed to replicate if we wanted to even attempt it. Sen Baucus also predicted that the manner in which Sen Daschle pushed this through may have serious repercussions. Many believe that it played a large part of his loss in the next election.

Running home with invigorated hope that we could replicate this in Lincoln County, we came up with the diversity in stakeholders, but could not come up with the political horse power to achieve what the Black Hills did, nor the 60 million board feet a yr to keep the doors open on the last remnants of our mill.

So what have we learned in our failures?

We've learned that the only way we will ever be able to manage the catastrophic fuel loads on the Kootenai is to provide an atmosphere of certainty for investments to rebuild the infrastructure needed for management.

We've learned that to create this atmosphere we will have to provide a sustainable timber flow off of the Kootenai.

We've learned that with the FS committing resources to the 90 million board feet currently in litigation on the Kootenai, they have limited ability to put resources to the ground to accomplish this.

We've learned that you can bring as many local stakeholders to the table as you can muster, but it pales in comparison to the 300 million stakeholders NEPA allows. The elements outside of the watersheds impacted have learned that the true management of our public lands does not reside with the Federal Agencies; it resides within the judicial system.

With all that we have endured through the failed attempts, those truly dedicated to finding common ground continue to drag themselves to the table because of what we know to be true.

We know that unless we can find a way to address our forest health situation, we are headed for a train wreck.

We know that the Kootenai National Forest is stacking over 300 million board feet of fuel annually.

We know that a large part of the mortality rate is contributed to a very large monoculture of timber that was created in the wake of the largest recorded wildfire in America's history.

We know that we are reaping the benefits of removing a natural fuel reduction tool, and not implementing another one.

We know that reintroducing fire as a tool into areas with 500-600 tons of fuel per acre is not an option. It will not create desirable outcomes for air quality, water quality, wildlife habitat, or timber restoration, not to mention the loss of a valuable renewable resource or public safety.

We know that as long as environmental studies professors in Wesleyan College in Connecticut have the ability to require their students to appeal timber sales on the Kootenai as part of their course curriculum, we cannot hope for common sense to dictate our reality.

We know that congressional legislation can help us with this situation. But we also know that the only way we can get our local communities to support the wilderness component necessary for this to materialize, we must guarantee the same permanence to multiple uses as the permanence of wilderness designations.

We know that we have skyrocketing drug, alcohol, and domestic violence rates in our county.

We know this is directly connected to the highest unemployment rate in the state.

We know this because we know that Lincoln County's social, economic, and environmental health is all inter connected.

The fact that they are all interconnected is why we continue to press on. The only thing worse than fighting in futile attempts for solutions, is to not fight for them at all.

In our struggles of collaboration we have realized a great many positive truths. Most of the diverse interests have more in common than actually sets them apart. We find ourselves struggling with the margins, on both sides of most issues before us. Though there has yet to be much produced from the collaborative efforts, there is promise in the relationships that have been forged trying to find the common ground.

This is why we still have hope.

Lincoln County has a couple worthwhile collaborative efforts in the mix at this time, and one on the horizon.

We have the Kootenai Stakeholders, which is made up of many citizens of all walks of life. The group has a MOU with the KNF and is almost two yrs old at this point. The main focus has been on the WUI areas in the Kootenai, but unfortunately progress has been very slow, and will probably get slower before it gets better. Many of the WUI project hinge on the FS ability to use Categorical Exclusions to expedite the process. Thanks to a ninth circuit court of appeals decision, we have lost the ability to use CE's for our projects. But we continue to come to the table.

We have another group called the Three Rivers Challenge on the Kootenai. This group is very similar to the folks in South Dakota, and has the same goal in sight. It has been working very hard to create a piece of legislation that would create recreation areas, timber management, and wilderness permanence in the Three River District. This group still needs a great deal of outreach to the locals in our county, more diversity, and it needs to refine the conditional language needed for their support. The people of Lincoln County have given all that there is to give in this management gridlock, asking them to support more wilderness can only be done with a guarantee that they will get some of what they have lost back first.

The difficulty facing them right now is the same that a few legislative attempts in MT are struggling with. Conditional language will not be accepted in the House Natural Resources committee at this time. Chairman Rahall's staff has been very clear as to the fate of any conditional language accompanying a wilderness bill. Our biggest fear in pursuing a legislative solution at this time is that we will be left with the permanence of wilderness, but only the promise of jobs. Lincoln County has a long history of broken promises to point to; the road map to our broken economy and current forest health has been drawn with them. We must have the same certainty of permanence for jobs and sustainable management as a permanent wilderness designation gets. If we cannot provide this certainty, we are unable to move forward with the support of the locals impacted by the legislation.

On the horizon in Lincoln County is another Collaborative effort. This effort is called coordination. With Lincoln County being in the beginning stages of this collaborative process, I will await for our June meeting in Libby to go into depth about what coordination is.

What I can tell you is that it is a very exciting opportunity that has been exercised by a handful of counties across the nation.

With the many unintended consequences of NEPA, I suppose it is only fitting that it is the NEPA procedures that have made the coordination process work.

The collaborative efforts in Wash and OR using coordination status have been able to appropriately empower the local indigenous stakeholders with the ability to have a say in the Federal policies that have a negative impact to their customs and cultures.

What they have found is a way to step in front of those that refuse to collaborate before they have all of the hoops available to jump through. Not that their collaborative efforts haven't been tried in court. They have, and they have won.

Do I think that the collaboration/coordination will result in management? Absolutely. And I am not alone.

I want to leave you with something that I feel is important and relevant to our discussions of collaboration. The Earth Summit in Rio entitled "Providing for Humans today, without compromising our Tomorrows" arrived at a very interesting conclusion about sustainability. "Sustainability will be defined and defended at the local level by the indigenous stakeholders that are impacted by the decisions made to provide it."

In our striving to find solutions to management and sustainability, we must acknowledge the importance of empowering the local stakeholders that will share in the burdens and benefits of collaboration.

Appendix N
WildWest Institute E-mail

Heisel, Leanne

From: Matthew Koehler [koehler@wildrockies.org]
Sent: Wednesday, February 20, 2008 11:49 AM
To: Heisel, Leanne
Subject: Comments for Fire Suppression Committee RE: Collaboration

February 20, 2008

Fire Suppression Committee
c/o Leanne Heisel
Legislative Services Division
P.O. Box 201706;
Helena, Montana 59620-1706.
lheisel@mt.gov

TRANSMITTED VIA EMAIL. PLEASE ACKNOWLEDGE RECEIPT
Dear Fire Suppression Committee,

I read with interest Rep. Vincent's comments to the Infrastructure Subcommittee during the February 15th, 2008 meeting (See: http://leg.mt.gov/content/committees/interim/2007_2008/fire_suppression/meeting_documents/20comments.pdf).

My organization, the WildWest Institute, was one of the founding members of the Kootenai Forest Stakeholders Coalition (KFSC), so I was especially interested in what Rep. Vincent had to say about this collaborative group specifically, but also what he had to say about the concept of collaboration and cooperation in general.

In addition to our work with the KFSC, the WildWest Institute is an active participant in a number of collaborative groups around the state and region. Our goal is to help craft positive solutions that promote sustainability in our communities through jobs restoring naturally functioning ecosystems and protecting communities from wildfire. For example, we helped form FireSafe Montana and we helped develop the 13 Restoration Principles of the Montana Forest Restoration Working Group. We serve on the Lolo and Bitterroot National Forests restoration committees that are working to implement the 13 Principles and we also serve on collaborative groups in Sanders and Mineral County, as well as in Lemhi County, Idaho.

Unfortunately, without providing names, Rep. Vincent states "We have yet to find a way to keep external elements from dictating the outcome" and "a few entities that want to obstruct any management on our public lands [have] the means by which to create a procedural gridlock."

I believe it's clear that Rep. Vincent is talking in large part about our organization, which is rather strange given the facts of our committed involvement in so many significant collaborative groups in the state and region.

For example, one thing that Rep. Vincent failed to point out in his comments is that to date, the KFSC has endorsed five fuel-reduction projects and helped negotiated a sixth on the Kootenai

National Forest. The work covers some 7,000 acres in the Wildland-Urban Interface and these projects will produce over 16 mmbf of wood products. It's also worth mentioning that the KFSC - including environmental groups such as the WildWest Institute and The Lands Council - voted with a "Consensus without Reservation" recommendation on every endorsement. That certainly says something and I'm honestly surprised why this information would not have been presented to the Infrastructure Subcommittee during Rep. Vincent's comments on collaboration and cooperation.

It should also be pointed out that the KFSC has been used as a model to establish the similar stakeholder group in Mineral and Sanders County that I referenced earlier. Things aren't going to change overnight, but the accomplishments of the KFSC group within the first year of existence speak for themselves, especially given the diverse make-up of the group.

I'd also like to take this opportunity to provide the Fire Suppression Committee with some more detailed information about current WildWest Institute lawsuits of Forest Service projects in Montana. The purpose of any lawsuit we have filed is to get the Forest Service to follow the law and their own forest plans and to get the agency to protect fish and wildlife species, soils, old-growth and improve their overall management, not to stop all logging or "obstruct any management on our public lands" as Rep. Vincent alleges.

Take our recent Kootenai lawsuit, which Rep. Vincent references, for example. True, our lawsuit names nine separate timber sales on the Kootenai National Forest, however WildWest chose not to seek injunctive relief stopping any of these sales while the litigation proceeds. To our knowledge, all these timber sales are either logged, being logged or could be logged. In truth, we named these timber sales in the Kootenai lawsuit to forcefully raise issues and concerns over the cumulative impacts of implementing the old forest plan, so that the Forest Service would not be able to ignore those issues and concerns in the new revised forest plan.

What follows is a list of current WildWest Institute lawsuits of timber sales on National Forests in Montana with an update on the status. As you can clearly see, there is currently only one court-order injunction of a timber sale on National Forest land in Montana as a result of a WildWest Institute lawsuit.

1. Clancy-Unionville timber sale, Helena NF: (Volume: 2.3 million board feet).

Status: On appeal to the 9th. No Injunction in place and no injunction ever sought by WildWest.

2. Middle East Fork timber sale, Bitterroot NF: (Volume: 11.02 million board feet).
Status: On appeal to the 9th. No Injunction in place. Logging is on-going and nearly completed on one part of the project. Logging contract has been awarded on another part of the project, but the logging contractor is waiting for lumber markets to improve before logging. To see photos of the logging done as part of this "healthy forest" project, go here: http://wildwestinstitute.org/pdf/MEF_Logging.pdf.

3. Basin Creek timber sale, Beaverhead/Deerlodge NF: (Volume: 14 million board feet).

Status: On appeal to the 9th. No Injunction in place. Logging and roadbuilding is on-going.

4. Keystone Quartz, Beaverhead/Deerlodge NF: (Volume: 600,000 board feet).

Status: Injunction in place pending further Forest Service studies regarding impacts on flamulated owl. It's our understanding that this is only timber sale in Montana currently under a court-ordered injunction.

5. Kootenai NF (multiple timber sales all under the same lawsuit): Bristow Area Project, Fortine Project, West Troy Project, Pipestone Project , Lower Big Creek Project, South McSwede Project, Alder Creek Project, Cow Creek Project, and the McSutten Project. (Volume: approximately 80 million board feet).

Status: On appeal to the 9th. No Injunction sought by WildWest. and no injunction in place. To be perfectly clear, WildWest has not asked the court to stop the logging on these sales while the litigation moves forward. It's our understanding that logging is on-going on many of these timber sales.

6. Camp Salvage CE, Lolo NF: (Volume: N/A. But under 1 million board feet)
Status: Logging already completed. On appeal to the 9th. No Injunction in place. Note: This lawsuit names approximately 20 CE's on the Lolo to give the court an idea of how wide-spread the use of CE's on the Lolo NF is, but WildWest never asked for injunction for any of these other CE's.

It's also worth noting that many of the legal challenges currently taking place on public lands are the direct result of the Bush Administration breaking the law or illegally bending or re-writing rules to change long-standing Forest Service policy in favor of increased logging, oil and gas development, etc. If you're looking for someone to blame for lawsuits against these illegal policies or projects, blame former timber industry Mark Rey (who currently runs the Forest Service) and the Bush Administration who broke the law, not environmental groups, for holding them accountable.

Hopefully we get to a point soon where appeals and lawsuits greatly diminish because the Forest Service follows the law and implements projects that protect and restore fish and wildlife species, refrain from cutting down old-growth and unlogged, native forests and begin to restore the vast ecological damage caused by the Forest Service and logging industry's wholly unsustainable practices of the recent past.

That's why the WildWest Institute is deeply involved in numerous efforts around the state and region to try and reach some common ground and move forward with diverse interests to craft positive, sustainable solutions that create jobs in the woods restoring watersheds and forests while also protecting our communities from wildfire through careful and strategic fuel reduction projects. If you have any questions, feel free to contact the WildWest Institute at 406.542.7343. Thank you.

Sincerely,

Matthew Koehler
Executive Director
WildWest Institute
http://www.wildwestinstitute.org/

Appendix O
Cost Settlement Options

FIRE SUPPRESSION - COST SETTLEMENT OPTIONS

Cost share agreements document the financial responsibility for incident costs. It is traditionally prepared for multi-jurisdictional incidents where the decision has been made to share resources. The DNRC line officer is responsible for the cost share process including negotiation and oversight on behalf of the state. Cost-share agreements can be adjusted as incidents grow or include additional jurisdictions. Cost share agreements are reviewed by managerial staff of the Fire and Aviation Bureau prior to signature if time allows. This was the case for FY2008 fires, except for Jocko Lakes, Brush Creek, Black Cat and Chippy Creek which have been sent to a cost negotiation team consisting of representatives from DNRC, US Forest Service and the Bureau of Indian Affairs.

Types of Costs:

Direct Costs: Direct and indirect costs of personnel assigned to the incident, equipment costs (contract and non-contract) and air costs, including retardant.
On-incident support costs: items such as catering, mobile commissary unit, shower unit, cache supplies and materials.
Off-incident support costs: expanded dispatch, area command, buying teams, etc.

TYPES OF COST SHARE AGREEMENTS

Traditional			Under consideration for cost settlement negotiations		
You Order You Pay	**Acres Burned**	**Cost Apportionment**	**Miles of Control Line**	**% of Perimeter Miles**	**Equal Share**
Each agency is fiscally responsible for the resources they order, regardless of where they are used on the incident. A unified ordering point is required. On-incident support costs are shared based on a percentage of agency requested resources and off-incident costs are paid for by the ordering unit	Costs are shared based on the acreage percentage of the fire within an agency's protection area.	Share final cost based on the usage of resources for operational periods. Costs are assigned out on a daily basis. Support costs are in proportion to direct costs.	Costs to be shared based on miles of control line built within each agency's protection area. This method is being proposed as it would assume an average level of effort put forth for each mile of line within direct protection areas.	Costs to be shared based on each agency's percentage of the total fire perimeter miles. This could reflect suppression efforts by direct protection area, but may not be representative of acres burned.	Split equally among agencies reflecting the concept that the agencies were working together under a single set of objectives to manage the entire incident.

Appendix P
Suppression Funding History

DNRC -Suppression Funding History

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008
General Fund									42,000,000
Appropriated	4,291,239	27,265,986	6,167,493	2,497,863	1,273,787	726,213	5,062,270	25,000,000	
Supplemental		5,100,000	6,700,000				688,022	13,000,000	*6,856,285*
Gov. ER Fund									
State Special Revenue*	0	0	0	0	0	0	63,060	0	0
Federal									
Partners	914,375	0	3,549,700	3,644,358	11,898,018	985,315	2,488,960	8,311,320	30,498,955
FEMA	0	23,500,000	0	0	36,058,972	0	0	14,979,608	26,797,846
Job Growth and Tax Relief					31,925,625	2,252,938			
Total	$ 5,205,614	$ 55,865,986	$16,417,193	$6,142,221	$ 81,156,402	$ 3,964,466	$ 8,302,312	$61,290,928	$106,153,086

* Fire Costs paid by DEQ and Trust Lands

Line items

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
General Fund	277,119	269,879	381,621	319,621			200,000	-	1,272,203	303,380
State Special										
Fire Protection	6,667	6,667	151,148	110,348	66,000	66,000		-	8,259	19,867
Nursery Fees*	10,000	10,000								
Timber Slash Fees									436	1050
Forest Improvement										
Natural Resources Ops										
Federal	389,000	428,000	628,000	628,000	134,000	134,000	-	-	-	0
	$ 682,786	$ 714,546	$ 1,160,769	$ 1,057,969	$ 200,000	$ 200,000	$200,000	$ -	$1,280,898	$324,297
	Comm. Equip Nursery Protective Gear Forest Mont.	Nursery Protective Gear Forest Mont.	Software Slash Program Defensible Sp Landowner Asst. Forest Mon.	Slash Program Defensible Sp Landowner Asst. Forest Mon.	Pay Except.	Pay Except.	Copter		Equipment HB 13 Disc. Biomass	HB 13 Disc Biomass

* in FY 06 the nursery program was transferred to a proprietary fund

DNRC - Forestry Base Appropriations History

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
General Fund	$ 5,371,586	$ 5,573,031	$ 6,109,837	$ 6,046,205	$ 6,224,033	$ 6,366,636	$ 7,915,261	$ 8,198,998	$ 8,855,263	$ 9,109,491
State Special										
Fire Protection	2,095,075	2,154,600	2,147,645	2,209,590	2,434,004	2,486,964.00	2,614,847	2,616,783	3,199,801	3,295,870
Nursery Fees*	277,476	281,766	395,421	403,475	390,585	403095	0	0	0	0
Timber Slash Fees	176,161	172,564	176,136	185,246	109,057	111573	142,360	147,772	136,097	140,891
Forest Improvement	46,070	45,248	49,892	51,409	49,341	49341	40,309	40,346	40,109	40,109
Natural Resources Ops									100,000	100,000
	2,594,782	2,654,178	2,769,094	2,849,720	2,982,987	3,050,973.00	2,797,516	2,804,901	3,476,007	3,576,870
Federal+										
Forest Res. - Fire	463,684	803,840	500,306	511,396	778,062	788,559	1,558,203	1,603,233	1,455,935	1,286,503
Forest Res. - PFA	406,139	487,084	437,909	462,755	539,907	548,801	0	0	0	0
	869,823	1,290,924	938,215	974,151	1,317,969	1,337,360	1,558,203	1,603,233	1,455,935	1,286,503
Total Funds	$ 8,836,191	$ 9,518,133	$ 9,817,146	$ 9,870,076	$ 10,524,989	$10,754,969	$ 12,270,980	$12,607,132	$13,787,205	$13,972,864

* in FY 06 the nursery program was transferred to a proprietary fund
+ changes to federal grant management occurred in FY 06

DNRC - Appropriations History

Base	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009#
General Fund										
Base	$ 5,371,586	$ 5,573,031	$ 6,109,837	$ 6,046,205	$ 6,224,033	$ 6,366,636	$ 7,915,261	$ 8,198,998	$ 8,855,263	$ 9,109,491
OTO	277,119	269,879	381,621	319,621			200,000	-	1,272,203	303,380
Suppression	4,291,239	32,365,986	12,867,493	2,497,863	1,273,787	726,213	5,750,292	38,000,000	48,856,285	0
GF Subtotal	9,939,944	38,208,896	19,358,951	8,863,689	7,497,820	7,092,849	13,865,553	46,198,998	58,983,751	9,412,871
State Special*										
Base	2,594,782	2,654,176	2,769,094	2,849,720	2,982,987	3,050,973	2,797,516	2,804,901	3,476,007	3,576,870
OTO	16,667	16,667	151,148	100,348	66,000	66,000	0	0	8,695	20,917
Suppression	0	0	0	0	0	0	63,060	0	0	0
SSR Subtotal	2,611,449	2,670,845	2,920,242	2,950,068	3,048,987	3,116,973	2,797,516	2,804,901	3,484,702	3,597,787
Federal+										
Base	869,823	1,290,924	938,215	974,151	1,317,969	1,337,360	1,558,203	1,603,233	1,455,935	1,286,503
OTO	389,000	428,000	628,000	628,000	134,000	134,000	-	-	-	0
Suppression	914,375	23,500,000	3,549,700	3,644,358	79,882,615	3,238,253	2,552,020	23,290,928	57,296,801	0
FED Subtotal	2,173,198	25,218,924	5,115,915	5,246,509	81,334,584	4,709,613	4,110,223	24,894,161	58,752,736	1,286,503
TOTAL APPROPRIATIONS	$ 14,724,591	$ 66,098,665	$ 27,395,108	$ 17,060,266	$ 91,881,391	$ 14,919,435	$ 20,773,292	$ 73,898,060	$ 121,221,189	$ 14,297,161

* in FY 06 the nursery program was transferred to a proprietary fund
+ changes to federal grant management occurred in FY 06
# FY 2009 is not complete

Appendix Q
Critical Resource Needs Analysis

Introduction

The purpose of this document is to provide an analysis of the document en titled "DNRC Fire Program Critical Resource Needs – January 2008" to assist the Fire Suppression Interim Committee (FSIC) with their deliberations regarding potential budget items for the Forestry Division of the Department of Natural Resources and Conservation (DNRC).

The traditional budget analysis format was utilized to provide a view of the critical resource needs identified by DNRC as if it was the actual executive request. Each itemized resource is listed in decision package format and is followed by a brief justification. These items are followed by commentary by the Legislative Fiscal Division analyst in the form of issues and comments.

In order to adapt this format, two assumptions were made. First, costs provided on the DNRC spreadsheet were for one year only (it was doubled to obtain a biennial amount). Second, all packages were funded based on current state policy of one-third forest protection fees (state special revenue) and two-thirds general fund.

Program Description

The Forestry Division is responsible for planning and implementing forestry programs statewide. Forestry responsibilities include protecting natural resources from wildfire, regulating forest practices, and providing a variety of services to private forest landowners. Specific programs include:

- Fire and Aviation Management - Protecting 50 million acres of state and private forest and watershed lands from wildfire through a combination of direct protection and county support.
- Forest Practice Regulation - Enforcing Montana's streamside management zone regulations and monitoring the voluntary best management practices program on all forests in Montana.
- Administering Montana Fire Hazard Reduction Law - Ensuring that the fire hazard created by logging and other forest management operations on private forest lands is adequately reduced, or that additional fire protection is provided until the hazard is reduced.
- Providing Forestry Services - Providing technical forestry assistance to private landowners, businesses, and communities.
- Tree and Shrub Nursery - Growing and selling seedlings for conservation and reforestation plantings on state and private lands in Montana.

Program Performance

A critical goal of this program is to achieve an initial attack rate of 95 percent, meaning that the staff and resources of the division are utilized to keep 95% of direct protection area fires to ten acres or less. The actual initial attack rates are as follows:

- 2005 - 97.3 percent: 218 of 224 fires
- 2006 - 94.6 percent: 368 of 389 fires
- 2007 - 93.8 percent: 411 of 438 fires

The initial attack rate has fallen off in the past two years, which were more severe than the average year. The reasons for the variance from the goal may include:

Fire Location – more difficult terrain
Lack of Resources – unable to obtain and utilize resources in a timely manner

Several of the prioritized needs have the goal of increasing initial attack capacity.

The department also tracks on the amount and scope of forestry assistance provided to landowners, businesses and communities. Data is available on the amount of assistance provided in terms of contacts, streamside violations, or hazard reduction agreements.

LFD ISSUE

Performance Measurement

The department publishes output data in relation to forestry goals and objectives. The information does not illustrate what benefit is provided to whom with the utilized resources. If output data is to be tracked, then it should at least be compared to a baseline. The committee may wish to address the need for increased performance measurement.

Critical Needs - Highlights

Forestry Division Major Highlights of Critical Resource Needs
♦ Priority 1 list contains 26.04 FTE and $5.0 million in funding over the biennium, of which $2.0 million is for one-time only issues, such as ▪ The development of an additional 20 county co-op engines ▪ Cost share assistance for private land owners to reduce fuel loads ♦ Priority 2 list contains an additional 15.0 FTE and $1.9 million in funding over the biennium of which $325,000 is one-time only for helicopter and fuel truck development. ♦ The total of both lists: ▪ 41.04 FTE ▪ $9.3 million of which $3.0 million is one-time only
Major LFD Issues
♦ Justifications provided are mainly based on potential savings from an average fire season. ♦ Performance measurement needs to be integrated into program expansion to assure progress is being made. ♦ An increase in fire protection fees may be need to occur.

Funding

Currently, the department is required to collect up to one-third of the state's fire protection appropriation from private landowners through a forest protection fee. The other two-thirds are funded with general fund. The department is required to levy the fee so that collections equal the amount appropriated by the legislature. This policy was applied to all items listed in the critical resource need document.

Priority 1

The "Priority One" table shows the 10 critical resource needs ranked by the department. For the purpose of this analysis, the assumption was made that these requests would be funded under the current 1/3 fire protection fee and the 2/3 general fund formula. Base year numbers were provided by DNRC and were doubled to show the potential biennial impact. As these numbers are estimates, they will vary from what is presented to the executive for potential inclusion in the executive budget during the upcoming executive planning process (EPP).

Table 1

	FY 2010				FY 2011			
	FTE	GF	Protection Fee	Total	FTE	GF	Protection Fee	Total
P1 - 1	*Extend Engine Crews to 7 days/week*							
	7.0	$173,334	$86,666	$260,000	7.0	$173,334	$86,666	$260,000
P1 - 2	*Extend Aviation Coverage to 7 days/week*							
	6.79	313,231	156,615	469,846	6.79	313,213	156,615	469,846
P1 - 3	*County Rural Fire Coordinators*							
	2.0	124,667	62,333	187,000	2.0	124,667	62,333	187,000
P1 - 4	*Fire Business Specialists*							
	4.0	200,000	100,000	300,000	4.0	200,000	100,000	300,000
P1 - 5	*Operations Section Supervisor*							
	1.0	63,334	31,666	95,000	1.0	63,334	31,666	95,000
P1 - 6	*Fire Safety Specialist*							
	1.0	56,667	28,333	85,000	1.0	56,667	28,333	85,000
P1 - 7	*Dispatch Center Staff*							
	4.25	.106,667	53,333	160,000	4.25	106,667	53,333	160,000
P1 - 8	*County Engines - OTO*							
	0	333,334	166,666	500,000	0.0	333,334	166,666	500,000
P1 - 9	*Fuels Mitigation Fund - OTO*							
	0	333,334	166,666	500,000	0.0	333,334	166,666	500,000
P1 - 10	*Aviation Hangars - (Capital Appropriation)*							
	0	466,667	233,333	700,000	0.0	0	0	0
Tota Priority One								
	26.04	$2,171,235	$1,085,611	$3,256,846	26.04	$1,704,550	$852,278	$2,556,846

P1 -1 Extend Engine Crews to 7 days/wk

Add or extend season positions on DNRC engines to provide 7 days/wk coverage. FTE allocation is 1.6 FTE to the central land office, and 2.7 FTE to both the northwest and southwest land offices. Operations funding of $50,000 per year is included for equipment needs and increased fuel.

Justification Provided: This package has the potential to prevent two 1000+ acre wildfires/year .through increased initial attack success. This package may also reduce severity costs. Current staffing for engine initial attack has been static for the past 20 years. The potential biennial savings is $6.0 million.

LFD COMMENT The justification is based on the prevention of wildfires. If the potential avoided costs of $6.0 million over the biennium were realized, the return on investment for this package is 1053 percent. As this is a direct increase to the initial attack program, the outcome of the investment could be measured by adjusting the initial attack goal to 97% of fires held to ten acres or less.

P1 – 2 Extend Aviation Coverage to 7 days/wk

Staff helicopters with a manager, crew and fuel truck driver. Package includes three seasonal pilots, three seasonal managers and two 2 person crews, three seasonal fuel truck drivers, and a full time aviation specialist. This amount also includes $63,000 per year of minor capital and operations funding.

Justification Provided: This package has the potential to prevent two 1000+ acre wildfires/year. Full deployment of DNRC helicopters will decrease suppression costs. An aviation specialist will increase coordination and safety of the entire aviation program. The potential biennial savings is $6.0 million.

LFD COMMENT The justification is based on the prevention of wildfires. If the potential avoided costs of $6.0 million over the biennium were realized, the return on investment for this package is 538 percent. The outcome of this investment could also be tracked by adjusting the initial attack goal to 97% of fires held to ten acres or less.

P1 – 3 County Rural Fire Coordinators

Add rural fire specialist at the Northeastern and Southern Land Offices where only one fire staff position currently exists. This request includes $50,000 in minor capital and $20,000 in operations on a yearly basis.

Justification Provided: Currently at the Northeastern and Southern Land Offices, there is not sufficient state oversight if there is more than one county assistance fire.

LFD ISSUE Performance Measurement - The duties of a rural fire coordinator include oversight of county assistance fires, as well as training of local government entities. The "value" of this position is improved firefighter safety and local coordination. The committee may need to quantify and measure how this value will provide to the overall fire program. Is it:

- Through increased presence in rural areas to improve coordination?
- Reduced accidents on county assist incidents?
- Increased training opportunities?
- More on-the-ground management of fuel reduction programs?

P1 – 4 Fire Business Specialists

Provider two additional fire business staff within the Fire and Aviation Management Bureau and four half time positions in field offices. This package includes $10,000 in operations funding for each FTE, each year of the biennium.

Justification Provided: This proposal could increase fiscal oversight during and after fire season operations, to work as incident business advisors and audit fire bills at fire season end. The potential cost savings of this proposal is approximately $750k in expenditures per year.

LFD ISSUE Trial Run Available

The department has the flexibility to hire the short term workers into such positions during the next fire season. The department could hire these individuals and track their activities to determine the magnitude of cost savings from utilizing these individuals. This would aid in establishing the value of the permanent positions.

No support for Centralized Services Division (CSD):

This package, as written, does not include support for the CSD of DNRC who must manage the cash flow, billing of federal partners and finalization of packages. Such an individual could, potentially, complete more thorough internal audits of fire costs, potentially saving the state money. The committee may want to consider:

- A specific FTE for the Centralized Service Division
- Reduce this package by 1.0 FTE and increase the Centralized Services staff by 1.0 FTE.

Performance Measurement Needed

The committee may wish to inquire how the agency intends to track the performance of the role of fire business specialists, whether house in the Fire and Aviation Management Bureau or the Centralized Services Division, in terms of reducing or eliminating unnecessary fire costs.

LFD COMMENT If the potential avoided costs of $1.5 million over the biennium were realized, the return on investment would be 150 percent.

P1 – 5 Operations Section Supervisor

Operations Section Supervisor to assist Fire and Aviation Management Bureau Chief. This package includes $20k capital and $10k operations annually.

Justification Provided: Currently, there is insufficient fire staff to effectively manage fire operations across the state and represent DNRC within the Northern Rockies Coordinating Group.

LFD ISSUE Increased Management Layer -This adds a new managerial level to the Fire and Aviation Management Bureau. Additional information may be needed to determine the role this person would have, such what role would they plan in day-to day management, and how would success of this position be measured.

P1 – 6 Fire Safety Specialists

Package includes 1.0 FTE as a safety and investigation specialist for the Fire and Aviation Management Bureau. Also included is $20,000 in minor capital and $10,000 in operations each year of the biennium.

Justification Provided: Increased focus on fireline and aviation safety and investigations. This proposal is an action item from 2007 DNRC aviation safety investigation.

LFD ISSUE New Position –Currently the individual responsible for implementing training programs also investigates safety complaints or incidents. If the position is intended to separate the roles to allow for increased independence in investigations, the committee may wish to ask how this will be accomplished and how success will be measured.

An estimate in costs savings was not provided.

P1 – 7 Dispatch Center Staff

Augment existing and add additional dispatch positions at all land offices. Central would receive 0.25 FTE; Eastern, Southern and Northeastern would each receive 0.5 FTE; and Southwestern and Northwestern would receive 1.25 FTE each.

Justification Provided: Increased representation in interagency dispatch centers, yielding better distribution of firefighting resources on state and local government fires.

LFD ISSUE Assurance – The committee may wish to obtain information on how resources are distributed now and how this investment would change the current situation. How would success of these positions be measured; increased resource deployment or increased coordination of resources?

P1 – 8 County Engines - OTO

One –time addition of 20 new county co-op engines to be developed through the equipment development center in the Fire and Aviation Management Bureau. This would supplement the current development of 15 engines per year.

Justification Provided - Increased effectiveness and safety of local fire departments. Continue to remove aging engines (30+ years) from local government fire departments. Potential to prevent a 5,000 acre in Eastern Montana each year, a $500,000 cost savings.

LFD COMMENT At this time, the county co-op program still has over twenty 1960s era jeeps active in the field. This package provides an additional 20 engines to the county co-op program for a total of 50 engines over the biennium to aid in replacing the aging equipment. Each engine is developed for approximately $41,550 versus purchase of the engines at $89,000. They are transferred to the counties for use under a memo of understanding.

The state retains title to the vehicles.

LFD ISSUE

Maximum Staff Capacity
The upper limit on engine development given current staffing levels is 50 engines over the biennium. If the committee is interested in increasing the number developed, staffing levels would need to increase also.

Performance Measurement
The committee may wish to inquire how the success of new engine deployment is measured. Increased local fire fighting capacity? Engine utilization?

Return on Investment
If the potential avoided costs of $1.0 million over the biennium were realized, the return on investment for this package is zero. However, an engine has an average life of 20 years; therefore the return on investment should be looked at over a longer period of time, rather than the biennium.

Condition the appropriation
To assure that this funding is utilized only for engine development, the committee may wish to request that ant appropriation be restricted. For additional flexibility, the appropriation should be biennial so that the agency may use it in either year of the biennium.

P1 – 9 Fuels Mitigation Fund- OTO
Cost-share assistance to private landowners in the wildland urban interface to reduce fuels, consistent with priorities established in the Community Wildfire Protection Plans (CWPP)

Justification Provided: Reduced fire behavior, losses, and fire costs on treated private and state lands. Prevent one 500-acre fire/year, plus prevent one home/year lost to wildfire. Potential cost savings of $1.0 million per year.

LFD ISSUE

Dwindling Federal Funds
This request would add state dollars into the fuels mitigation program. The department currently receives federal funding for such activities. However, the federal funds have been declining over time. Providing a one-time only state appropriation will address the reduced federal funding for a short time. The committee may wish to consider whether a one-time infusion of cash is sufficient to make a difference on the Montana landscape.

Condition the appropriation
To assure that this funding is utilized only for fuels mitigation, the committee may wish to request that any appropriation be restricted. For additional flexibility, the appropriation should be biennial so that the agency may use it in either year of the biennium.

Performance Measurement Needed
The committee may wish to inquire how the agency intends to track the outcome of the fuel mitigation projects, including the impact on fire costs.

LFD COMMENT

This item links fuel mitigation to Community Wildfire Protection Plan (CWPPs). Per the DNRC website, at the end of FY 2006, only 15 communities had CWPPs in place. If a CWPP is a condition of qualification, the ability to disburse the funding may be limited

P1 -10 Aircraft Hangars –
Build two aircraft hangars at Kalispell and Missoula for DNRC aircraft. **(Note: This would be submitted as a long range planning request via HB 5 and not in HB 2.)**

Justification Provided: Provide security from weather/vandalism and have an adequate maintenance facility at field level.

LFD COMMENT The department aircraft were obtained through the federal excess property program. The US Government still maintains title to the aircraft. As part of the agreement, the department must follow specific security guidelines, which include storage in a secured area. Currently, the department rents as needed and when available, space within the secured area of the Missoula airport. The lease in the Kalispell area was recently lost. Construction of the hangars would guarantee secured storage for the aircraft.

When the aircraft is deployed to a fire, the department is also responsible for security, which usually entails armed guards.

Priority 2

The "Priority Two" table shows the additional six resource needs ranked by the department. For the purpose of this analysis, the assumption was made that these requests would be funded under the current 1/3 fire protection fee and the 2/3 general fund formula. Base year numbers were provided by DNRC and were doubled to show the potential biennial impact. As these numbers are estimates, they will vary from what is presented to the executive for potential inclusion in the executive budget during the upcoming executive planning process (EPP).

Table 2
Priority Two Resource Needs

		FY 2010				FY 2011		
	FTE	GF	Protection Fee	Total	FTE	GF	Protection Fee	Total
P2 - 11	*Communication System Support*							
	2.0	$186,667	$93,333	$280,000	2.0	$186,667	$93,333	$280,000
P2 - 12	*Type 3 IMT Development & Support*							
	0.0	200,000	100,000	300,000	0.0	200,000	100,000	300,000
P2 - 13	*Eastside Capital and Mobile Kitchen*							
	0.0	76,667	38,333	115,000	0.0	0	0	0
P2 - 14	*Federal Excess Property Acquisition Staff*							
	1.0	90,000	45,000	135,000	1.0	90,000	45,000	135,000
P2 - 15	*Twenty Person Type 2 IA Crew*							
	10.0	453,333	226,667	680,000	10.0	453,333	226,667	680,000
P2 - 16A	*Additional Helicopter and fuel truck*							
	0.0	216,667	108,333	325,000	0.0	0	0	0
P2 - 16B	*Additional Crew for Helicopter and truck*							
	2.0	74,667	37,333	112,000	2.0	74,667	37,333	112,000
Total Priority Two								
	15.00	$1,298,001	$648,999	$1,947,000	15.00	$1,004,667	$502,333	$1,507,000

P2 – 11 Communications Support System
Add two Communication Technicians to existing staff. This package includes 2 vehicles ($60k), and training and operations ($98k) each year.

Justification Provided:: Increase management of existing radio network to improve system reliability. Increases the transition time to narrowband equipment, but does not include transition to digital/trunked communications network.

LFD ISSUE Vehicles should be one-time only
As proposed the cost of the vehicles would be added to the department's base budget. The committee may wish to recommend that this be a one-time only expenditure.

P2 – 12 Type 3 IMT Development & Support
Provide support to two type 3 incident management teams (IMT) include training, equipment, and vehicles.

Justification Provided: Improved success during extended attack resulting in reduced costs and losses. This may prevent one Type 2 IMT deployment per year. Potential cost savings of $1.0 million over the biennium.

LFD COMMENT

This request is to provide resources to the department to develop and support a type three team. It does not include any FTE. This type of team would handle extended attack operations. Extended attack is the period after the first 24 hours, but prior to management mode.

If the potential avoided costs of $1.0 million over the biennium were realized, the return on investment for this package is 67 percent. A type 2 team costs approximately $500,000 per day, compared to a type 3 cost of $150,000 per day.

LFD ISSUE

Vehicle Purchases

The vehicles purchased to develop this team are an up front cost. The replacement cycle of such vehicles should be considered before adding the funding to the base.

P2 -13 Eastside Capital and Mobile Kitchen

This package would provide funds for truck replacement for the eastern land offices, as well as monetary support of state mobile kitchens.

Justification Provided: Ensure readiness of state mobile kitchens. Prevent one national caterer mobilization per year. The potential biennial savings is approximately $0.5 million.

LFD COMMENT

This funding would provide for vehicle replacement in the eastern land offices on a routine basis. The mobile kitchen funding would provide annual funding for maintenance and deployment. This funding was removed from the department budget as part of cost cutting measures during the 2003 Legislature.

If the potential avoided costs of $0.5 million over the biennium were realized, the return on investment for this package is 300 percent.

P2-14 Federal Excess Property Acquisition Staff

Provide 1.0 FTE to screen Federal Excess Property Program (FEPP) & Department of Defense (DoD) equipment. This request includes annual funding for capital ($30k) and operations ($60k).

Justification Provided: Increase capability for counties and state, and reduce program costs by utilizing excess equipment. Potential cost savings of $100,000 per every 5 FEPP or DoD vehicles procured rather than purchased new.

LFD COMMENT

The fire program does use excess property and obtains parts for equipment in the same manner. The excess property program does come with strings and non-fire use is limited to 10 percent of total utilization. For this request, the savings of $100,000 per year does not exceed the cost of $135,000 per year.

LFD ISSUE

For this request, the savings of $100,000 per year does not exceed the cost of $135,000 per year. The implementation of this need would cost $35,000 each year.

P2 -15 Twenty Person Type 2 Initial Attack Team

Provide 10.0 FTE to develop a 20 person type 2 initial attack crew for DNRC use. This request also includes vehicles, equipment, training, and staffing costs.

Justification Provided: Prevent one 1,500 acre fire/year by increasing initial attack effectiveness. There could also be savings in contract or severity resources. Current crews come from federal, tribal, or contract sources. The potential biennial savings is $3.0 million.

LFD COMMENT This team would be a DNRC team that would aid initial attack efforts in areas with difficult access where hand crews could be a benefit. This team would not be dispatched out of state. These individuals would also be used for thinning and brush work to aid in reducing forest fuels.

If the potential avoided costs of $3.0 million over the biennium were realized, the return on investment for this package is 340 percent. As this is a direct increase to the initial attack program, the outcome of the investment could be measured by adjusting the initial attack goal to 97% of fires held to ten acres or less.

LFD ISSUE Vehicle and Equipment Purchases
The vehicles and equipment purchased to develop this team are an up front cost. The replacement cycle of such items should be considered before adding the funding to the base.

P2 – 16 Additional MT 205 Helicopter and Crew
Develop an additional MT 205 helicopter, and hire a seasonal pilot, manager, crew, and a fuel truck driver. Includes personnel costs ($112k), development costs ($250k) and fuel truck ($75k)

Justification Provided: Increases initial attack program effectiveness. Potential cost avoidance of $3.0 million over the biennium if two 1500 acre fires are prevented.

LFD ISSUE One-time only funding
The cost to develop the helicopter and the fuel truck are one-time only costs and should be treated as such.
Equipment needs Staff
The department is in a critical position now where there is not sufficient staff to operate the aircraft. In order to avoid compounding the problem in the future, the two items need to remain attached.

Additional Items

The following two items were not provided in the "DNRC Fire Program Critical Resource Needs – January 2008". However, these items may be of interest to the committee.

Title to helicopters
The 2007 legislature approved a $1.0 million one-time only general fund appropriation for the department with the priority use to be purchasing the title to the department helicopters from the US Forest Service. If the department is not successful in purchasing title during the 2009 biennium, the appropriation may need to be reconsidered by the 2009 Legislature.

Woody Biomass program
The 2007 legislature approved one-time only general fund to support the fuels for schools program. This program has been traditional funded by the federal government. If fuel reduction programs are considered, the biomass program may provide an opportunity to utilize the "waste" from forest management.

Appendix R
Fire Protection Fee

FIRE PROTECTION FEE

Purpose

The purpose of this report is to provide background information regarding the implementation and use of the fire protection fee. The fire protection fee is authorized under 76-13-201, MCA. This section defines who will pay the fee and the maximum amount of the fee. In addition, 76-13-207, MCA directs the fee to no greater than one-third of the appropriation for fire protection and 76-13-213 describes the assessment ratio. (Statutes are attached for reference.)

Historically the fee authorized under this statute has been set as follows:

- Pre 1985 - $0.16 per acre, with a minimum collection of $6.00
- 1985 Amendment - $0.17 per acre, with a minimum collection of $14.00
- 1991 Amendment - $30 per parcel plus $0.20 per acre for each acre in excess of 20

2007 Legislative Changes

The passage and approval of SB 145 affected the fire protection fee in three ways. First, the definition of wildland fire protection was codified and includes fire suppression.

Second, the fire protection fee was increased. The new maximums are set at $45.00 for each landowner in a protection district and an additional $0.25 per acre for every acre in excess of 20. Current rates are set at $41.65 per landowner and $0.22 per acre for every acre in excess of 20.

The third item was the establishment of a new policy to collect 60 percent of the fee from small forested land owners (less than 20 acres) and 40 percent of the fee from large forested land owners (greater than 20 acres).

Who Pays?

The fee is assessed to owners, including most government entities, of classified forest land that is within a wildfire protection district or under contract for fire protection by a recognized agency. This land is predominantly in Western Montana.

"Fire Protection Assessment Fact Sheet" developed by DNRC is attached for reference. This document summarizes the number of owners, acres, amount assessed vs. amount collected, and the six largest revenue producing counties.

What does the fee fund?

Currently the fee funds one-third of activities such as the fire-equipment development program, training programs, fire prevention, and pre-suppression coordination. The remaining two-thirds is general fund.

Historically the fund has not been used for fire suppression costs. The passage and approval of SB 145 of the 2007 legislature adds this potential use of the fund.

Revenues and Expenditures:

The following table illustrates the revenue collected and amount expended since FY 2000:

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Revenue	$2,151,574	$1,979,454	$2,158,987	$2,404,298	$2,403,350	$2,513,508	$2,445,014	$2,587,813
Expenditures	$2,063,065	$2,082,283	$3,398,265	$983,625	$2,463,994	$2,584,274	$2,565,398	$2,559,030
Difference	$88,509	($102,829)	($1,239,278)	$1,420,673	($60,644)	($70,766)	($120,384)	$28,783

During FY 2002, the fund took out a general fund loan to assist with cash flowing fire suppression expenses. This loan was paid off by the supplemental appropriation granted by the 2003 legislature. Between FY 2004 and FY 2006, the over expenditure was covered by the fund balance. The fund at the end of FY 2007 had a balance of approximately $52,400.

Issues:

Geographical disparity of fee – The forested land owners in mostly western Montana pay the bulk of this fee. The fee, however, supports statewide activities such as the county co-op program, including engines. Should a fee be enacted to expand participation to the east? How would such a fee be set to represent the value of services?

Value of structure protection – If DNRC does implement a policy to reduce structure protection services for homes in the wildland urban interface, will the perception of the fee change? Will individuals be willing to pay the current rate? Should the fee be different?

Direct protection – DNRC incurs costs to pre-position equipment prior to the fire season based on the conditions. This is commonly referred to as severity resources. These resources are paid for as suppression activities as part of the final fire suppression bill. Should pre-suppression funding appropriated by the legislature utilizing the 1/3 fee and 2/3 general fund formula? Or should it remain in the final fire suppression bill and funded with general fund?

State Land – Classified forest land within a wildland fire protection district owned by the state is assessed the fire protection fee. For example, the Department of Fish, Wildlife and Parks has been assessed $40,932 in protection fees for FY 2008. However, state trust lands have not been assessed. The value of such assessment is approximately $225,000, or $675,000 with the general fund match. The trust land fee would be paid from trust revenues. Given the way that common schools, the beneficiary of the largest trust, is funded, the loss revenues to the trust would be replaced by general fund in the budgeting process, therefore the assessment on trust lands would have a net impact of zero. The issue, is should state land be treated equally?

Options to adjust fee:

There are limited options to increase this revenue stream. They are either to expand the base of those who are assessed the fee or increase the fee. The fee is set as an upper limit. If the legislature wishes to see the program expand, the fee may need to be increased. The department can increase the per parcel fee by $3.35 and the per acre fee by $0.03 without seeking a change to the statute. Any fee increase results in an increase in general fund due to the relationship between the two funds. For example, for every $250,000 raised from the fee, another $500,000 of general fund would potentially be committed.

The option to adjust the "one-third fee - two-thirds general fund" policy also exists. If the legislature wishes to increase the percentage that landowners pay, the percentage of general fund would be lowered. For example if the legislature went to a 2/3rds fee and 1/3 general fund formula, for every $250,000 in fees raised, $125,000 in general fund would potentially be committed.

The fee could also be increased for a specific purpose. For example, to fund local fuel reduction or other local fire prevention activities an increase can be made to the fee and all or a portion of that fee can be retained by the

county. The county would be responsible for utilizing the fees in the appropriate manner. This type of revenue stream would not be available to the state.

Related Statues:

76-13-201. Costs for protection from fire. (1) An owner of land classified as forest land that is within a wildland fire protection district or that is otherwise under contract for fire protection by a recognized agency is subject to the fees for fire protection provided in this section.

(2) The department shall provide fire protection to the land described in subsection (1) at a cost to the landowner of not more than $45 for each landowner in the protection district and of not more than an additional 25 cents per acre per year for each acre in excess of 20 acres owned by each landowner in each protection district, as necessary to yield the amount of money provided for in 76-13-207. Assessment, payment, and collection of the fire protection costs must be in accordance with 76-13-207.

(3) Other charges may not be assessed to a participating landowner except in cases of proved negligence on the part of the landowner or the landowner's agent or in the event of a violation of 50-63-103.

History: En. Sec. 9, Ch. 128, L. 1939; amd. Sec. 2, Ch. 141, L. 1941; amd. Sec. 1, Ch. 188, L. 1955; amd. Sec. 1, Ch. 91, L. 1959; amd. Sec. 1, Ch. 148, L. 1967; amd. Sec. 1, Ch. 252, L. 1974; amd. Sec. 6, Ch. 253, L. 1974; amd. Sec. 4, Ch. 397, L. 1977; R.C.M. 1947, 28-109; amd. Sec. 1, Ch. 643, L. 1985; amd. Sec. 1, Ch. 360, L. 1991; amd. Sec. 6, Ch. 27, L. 1997; amd. Sec. 195, Ch. 574, L. 2001; amd. Sec. 17, Ch. 336, L. 2007.

Compiler's Comments:

2007 Amendment: Chapter 336 deleted former (1) that read: "(1) An owner of land classified as forest land by the department shall protect against the starting or existence and suppress the spread of fire on that land. This protection and suppression must be in conformity with reasonable rules and standards for adequate fire protection adopted by the department"; in (1) substituted language clarifying that the owner of forest land within a wildfire district is subject to fees for fire protection for "If the owner does not provide for the protection and suppression"; in (2) near beginning of first sentence substituted "shall" for "may" and raised the fee from $30 to $45 for each landowner and from 20 cents to 25 cents per acre per year for each acre in excess of 20 acres and substituted second sentence on assessment, payment, and collection of fire protection costs in accordance with 76-13-207 for former second and third sentences that read: "The owner of the land shall pay the charge approved by the department in accordance with part 1 and this part to the department of revenue. Payments to the department of revenue are due on or before November 30 of each year"; in (3) at end inserted "in the event of a violation of 50-63-103"; and made minor changes in style. Amendment effective June 1, 2007.

2001 Amendment: Chapter 574 in (2) in second sentence after "pay" deleted "to the county treasurer of the county in which the land is situated" and at end inserted "to the department of revenue" and inserted third sentence concerning timing of payments; and made minor changes in style. Amendment effective July 1, 2001.

1997 Amendment: Chapter 27 in (1), at end, substituted "department" for "board"; and made minor changes in style. Amendment effective February 21, 1997.

1991 Amendment: In (2), in first sentence, increased maximum allowable assessment from not more than 17 cents per acre per year with a minimum of up to $14 per owner per year to not more than $30 for each landowner in the district and up to 20 cents per acre per year for each acre in excess of 20 acres owned by each landowner. Amendment effective April 6, 1991.

Retroactive Applicability: Section 2, Ch. 360, L. 1991, provided: "[This act] applies retroactively, within the meaning of 1-2-109, to calendar years beginning after December 31, 1989."

1985 Amendment: In (2), in first sentence, after "not more than" substituted "17 cents per acre per year except that the department shall make a minimum assessment of up to $14" for "16 cents per acre per year and not less than $6", and at end of sentence, after "district", inserted "as necessary to yield the amount of money provided for in 76-13-207".

Interim Study Committee Bill: Chapter 643, L. 1985, was introduced by request of Joint Interim Subcommittee No. 2. See committee report entitled "Timber Management and Forest Fire Protection Costs in Montana", Montana Legislative Council, December 1984.

Administrative Rules:

ARM 36.10.125 Railroads and powerlines.

ARM 36.10.161 Formula to set landowner assessments for fire protection.

Collateral References:

98 C.J.S. Woods and Forests § 5.

76-13-207. Determination and collection of costs of fire protection. (1) The department shall prepare an annual operation assessment plan in which fire protection costs are determined. The department shall request the legislature to appropriate the state's portion of the cost. After the appropriation is made by the legislature, the department shall cause an assessment to be made on the owners of land, as specified in 76-13-105 and 76-13-201, sufficient to bring the total amount received from the landowners to no greater than one-third of the amount specified in the appropriation.

(2) On or before the first Tuesday in September of each year, the department shall certify in writing to the department of revenue the names of these owners of lands in each county, together with a description of their lands and a statement of the amount found to be due and owing by each of the owners to the department for wildland fire protection.

(3) Upon receiving the certificate from the department showing the amount due, the department of revenue shall extend the amounts upon the county tax rolls covering the lands, and the sums become obligations of the owner, to be paid and collected in the same manner and at the same time and subject to the same penalties as general state and county taxes upon the same property are collected.

History: En. Sec. 11, Ch. 128, L. 1939; amd. Sec. 1, Ch. 95, L. 1959; amd. Sec. 215, Ch. 147, L. 1963; amd. Sec. 8, Ch. 253, L. 1974; amd. Sec. 1, Ch. 110, L. 1977; amd. Sec. 6, Ch. 397, L. 1977; R.C.M. 1947, 28-111(part); amd. Sec. 2, Ch. 643, L. 1985; amd. Sec. 138, Ch. 27, Sp. L. November 1993; amd. Sec. 23, Ch. 336, L. 2007.

Compiler's Comments:

2007 Amendment: Chapter 336 in (1) in third sentence before "land" deleted "classified forest" and inserted reference to 76-13-105; in (2) substituted "first Tuesday in September" for "second Tuesday in August", near middle before "lands" deleted "forest", and near end substituted "wildland" for "forest"; and made minor changes in style. Amendment effective June 1, 2007.

1993 Special Session Amendment: Chapter 27 in (2) and (3) substituted "department of revenue" for "county assessor"; and made minor changes in style. Amendment effective January 1, 1994.

Applicability: Section 171(2), Ch. 27, Sp. L. November 1993, provided that the amendments to this section apply to tax years after December 31, 1993.

1985 Amendment: In (1) near end, after "total amount received" substituted "from such landowners to no greater than one-third of the amount specified in the appropriation" for "to the amount specified in the approved plan".

Interim Study Committee Bill: Chapter 643, L. 1985, was introduced by request of Joint Interim Subcommittee No. 2. See committee report entitled "Timber Management and Forest Fire Protection Costs in Montana", Montana Legislative Council, December 1984.

Administrative Rules:

ARM 36.10.161 Formula to set landowner assessments for fire protection.

76-13-213. Formula to set landowner assessments for fire protection. (1) The department shall, pursuant to 76-13-207, set the annual fire assessment fee due from landowners pursuant to Title 76, chapter 13, parts 1 and 2. The total of all statewide landowner assessments may be no greater than one-third of the amount appropriated by the legislature to fund the protection costs.

(2) The individual assessments must be established using the following criteria:

(a) Each person or corporation who is responsible for fire protection pursuant to 76-13-108 and 76-13-201 and for whom the department provides fire protection must be assessed a per capita landowner fee. The total per capita landowner assessments statewide from persons or corporations who own 20 acres or less of land for which the department provides protection must be as close as administratively possible to 60% of the total private landowner assessments.

(b) A person or corporation who owns more than 20 acres of land for which the department provides protection shall, in addition to the fee assessed pursuant to subsection (2)(a), pay a per-acre fee for each whole acre that the person owns in excess of 20 acres. The total of all assessments statewide from persons or corporations that own more than 20 acres must be as close as administratively possible to 40% of the total private landowner assessments.

(3) (a) Except as provided in subsection (3)(b), the per capita and per-acre fees must remain in effect for subsequent years.

(b) The department shall reset the per capita and per-acre fees whenever it is necessary to obtain up to one-third of the amount appropriated by the legislature.

(c) Whenever the department resets the fees pursuant to subsection (3)(b), it shall do so in accordance with 76-13-201(2).

History: En. Sec. 29, Ch. 336, L. 2007.

Compiler's Comments:

Effective Date: Section 35, Ch. 336, L. 2007, provided that this section is effective June 1, 2007.

Appendix S
Memo to OBPP

PO BOX 201706
Helena, MT 59620-1706
(406) 444-3064
FAX (406) 444-3036

Fire Suppression Interim Committee

60th Montana Legislature

TO: David Ewer, Director
Office of Budget and Program Planning

FROM: Senator John Cobb, Chair

RE: Recommendations regarding Equipment Development

DATE: August 22, 2008

Through out the interim, the Fire Suppression Interim Committee (FSIC) has been taking public comment on the variety of issues Montanans face when wildland fire occurs in our state. A considerable amount of public support has been voiced for the equipment portion of the County Co-op Program managed by the Department of Natural Resources and Conservation (DNRC). This program has allowed counties to replace outdated, potentially dangerous field equipment with new, state of the art engines. However, at current development rates, the number of outdated fire vehicles left in the field is unacceptable to this committee.

At the August 20th meeting of the committee, by unanimous vote the committee agreed to recommend to the administration to immediately purchase 25 vehicle chassis for development for the purpose of further reducing the number of aged fire vehicles currently in the field. The $1.25 million needed for this purchase is available from the fire suppression fund. Ample funding is available due to the less than average fire season the state is experiencing.

The committee would appreciate a response from the administration regarding the implementation of this initiative prior to the next scheduled meeting on September 12, 2008. This information can be provided to our staff, Barb Smith of the Legislative Fiscal Division. If you require additional information I can be reached at 562-3670 or you can reach Barb at 444-5347.

C Members of the Fire Suppression Interim Committee
Taryn Purdy, LFD
Barbara Smith, LFD
Leanne Heisel, LSD
Todd Everts, LEPO
Hal Harper, Governor's Office
Mary Sexton, Director, DNRC
Bob Harrington, Administrator, Forestry Division, DNRC
James Chamberlin, OBPP

Appendix T
OBPP Memo to FSC

OFFICE OF THE GOVERNOR
BUDGET AND PROGRAM PLANNING
STATE OF MONTANA

BRIAN SCHWEITZER
GOVERNOR

PO BOX 200802
HELENA, MONTANA 59620-0802

TO: Senator John Cobb, Chair
Fire Suppression Interim Committee

FROM: David Ewer, Director
Office of Budget and Program Planning

RE: Fire Equipment Recommendations

DATE: September 4, 2008

Thank you for your letter of August 22 regarding the Fire Suppression Interim Committee's (FSIC) recommendation that the administration immediately purchase 25 vehicle chassis to be used for the purpose of further reducing the number of aged fire vehicles currently in the field.

In light of the considerable amount of public support and the unanimous vote by the FSIC in support of this recommendation and after assessing available resources, I am authorizing the department to use fire suppression funds for this purpose. $1.25 million will allow the purchase of 25 vehicle chassis for conversion by DNRC to fire trucks for the county co-op program.

I have already notified the department of my decision and the department has begun the process of purchasing the equipment. Thank you for your work on the Fire Suppression Interim Committee.

CC: Members of the Fire Suppression Interim Committee
Mary Sexton, Director, DNRC
Bob Harrington, Administrator, Forestry Division, DNRC
Hal Harper, Governor's Office
Taryn Purdy, LFD
Barbara Smith, LFD
Leanne Heisel, LSD
Todd Everts, LEPO
James Chamberlain, OBPP

TELEPHONE: (406) 444-3616 FAX: (406) 444-4670

Appendix U
Eastern Montana Talking Points

INTERIM FIRE SUPPRESSION COMMITTEE
EASTERN MONTANA FIRE SUPPRESSION DISSCUSSION POINTS:

OVERVIEW:

The eastern Montana wildland fire environment (fuels, weather and topography) has unique characteristics. Eastern Montana fuel types for the most part consist of lighter fuel types (grass, shrub and shrub grass mix) in a general continuous fuel arrangement. These fuels are intermixed with a forest component and where we have the forest component intermixed and adjacent to our shrub grass component we get wildland fires occurring on a regular basis.

During droughty conditions these fuels become much more available to burn as a result of natural fire ignitions (lightning) and to a lesser degree person caused ignitions. All fire management cooperators (local government "RFDs & VFDs", federal and state) are experiencing increased wildland fire activity in what is beginning to be called our "shoulder fire seasons". As a general rule our Montana fire seasons have been established from June through September, but during the past drought (nearly a decade) our fire seasons have noticeably expanded from nearly March through November during most years. Our grass component is becoming available to burn much early due to limited precipitation in both the spring and fall.

Because of the characteristics described above our eastern Montana wildland fires burn much more rapidly and at a much quicker pace. This requires the initial attack resources to be activated in a very timely and organized manner.

The geographic distribution of initial attack resources is very important to our success in wildland fire suppression efforts in eastern Montana due to the response time and distances required to travel to our new fire starts.

Another consideration the eastern Montana wildland fire suppression community must address daily is our mixed ownership patterns across eastern Montana. While there is a significant amount of federal land mixed in with State of Montana land and private land the primary suppression entity for the federal agencies is the Bureau of Land Management. Other federal agencies can play a primary role in any given wildland fire occurrence depending upon the incident location the primary federal fire suppression cooperator for eastern Montana is the Bureau of Land Management.

DISCUSSION POINTS:

- Extended drought conditions provide eastern Montana's fuels to be exposed for a much longer burning period in pre and post fire season (the shoulder season).

- Eastern Montana fires exhibit rapid growth and reach considerable size due to the nature of the low fuel moistures in the fuels, even under moderate wind driven conditions.

- Eastern Montana fires also do not tend to be very long lasting events due to the same fire behavior elements that make them grow large quickly. That is; they are primarily located in light to moderate fuels under a wind driven event. Another duration factor is the eastern Montana terrain.

- Eastern Montana wildfires are initial attacked on private land exclusively by volunteer local government firefighters. Land ownership patterns throughout eastern Montana require close coordination of initial attack efforts with federal cooperators.

- Eastern Montana fire seasons are becoming longer with a more continuous commitment throughout the core fires season (June through September). That fact requires VFD personnel to be on fire assignments much more frequently for longer periods of time. This commitment is making it harder for VFD personnel to commit to the time required by VFD training and fire fighting duties. As fire season length and fire frequencies increase it is becoming harder for VFD employers and self employed VFD personnel to provide for their availability while still be fully employed making a living. This longer commitment of VFD personnel to the role of being a VFD fire fighter is in turn making it more difficult to staff fires throughout the year.

- The current average age of eastern Montana communities and general rancher population is getting older. This fact of the average aging of our eastern Montana population is becoming most apparent in the current and expected potential for VFD personnel recruitment. The duties of the eastern Montana VFD firefighter are becoming more dependent upon an older workforce that is having great difficulty in recruitment of younger personnel.

Appendix V
Staff Letter to Rep. Wilson

PO BOX 201706
Helena, MT 59620-1706
(406) 444-3064
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Fire Suppression Interim Committee

60th Montana Legislature

TO: Representative Bill Wilson
FROM: Leanne Heisel
DATE: November 8, 2007
RE: Statutes and programs related to wildland-urban interface

You requested information on what exists in the Montana Code Annotated with regard to defensible space around structures, standards for construction within the wildland-urban interface (WUI), and whether the Legislature could require that people living in the WUI meet certain requirements. Your questions indicate a need for attention to the larger subject of what laws and programs are currently in existence that local governments and communities can implement to help mitigate fire danger in fire-prone areas. This information is intended to provide a basis for the committee's consideration of options to address development in the WUI.

Defensible space around structures is not required by Montana state law. Standards for structures are governed by building codes for certain buildings, but again, there is no specific state law that requires certain building features for structures in the WUI. A number of methods do exist, however, for local governments to impose requirements on developments and structures and there are programs to assist homeowners in creating defensible space and mitigating fire danger around their homes. Those methods available to governmental bodies include subdivision regulations, zoning regulations, and local adoption of a building code enforcement program. Firewise, Community Wildfire Protection Plans, and grant assistance are some of the voluntary programs, outside of the structure of state law, in which communities can participate to help mitigate fire danger.

One school of thought is that local governments and communities need only use the tools that are already available to them; that new laws and regulations are unnecessary. Others maintain that there are significant barriers--politically and culturally--to exercising the authority provided in the laws and that the laws are too limited to make any real difference. The committee may choose to build on land use laws that are already in place, propose an entire new and separate area of law, propose a combination of both, or simply propose nothing new and encourage communities to use laws and programs already in place.

Subdivision regulation, growth policies

Title 76, chapter 3 of the Montana Code Annotated governs local regulation of subdivisions that create parcels of land containing less than 160 acres. Before the 2007 session, fire was implied as a hazard that subdivision regulations must address, and subdivision regulations in many jurisdictions contain specific provisions for fire protection. Fire and wildland fire or direct

reference to other sections that contain those terms now appears in a handful of subdivision and growth policy statutes.

1. Section 76-3-501 requires the governing body of every county, city, or town to adopt and enforce subdivision regulations that reasonably provide for "the avoidance of subdivisions that would involve unnecessary environmental degradation and danger of injury to health, safety, or welfare by reason of natural hazard, **including but not limited to fire and wildland fire**, or the lack of water, drainage, access, transportation, or other public services or that would necessitate an excessive expenditure of public funds for the supply of the services."

2. Section 76-3-504 provides the list of items subdivision regulations must contain at a minimum. Subsection (1)(e) requires that the regulations must "provide for the identification of areas that, because of natural or human caused hazards, are unsuitable for subdivision development. The regulations must prohibit subdivisions in these areas unless the hazards can be eliminated or overcome by approved construction techniques or other mitigation measures...". The subsection goes on to provide that approved construction techniques or other mitigation measures may only include building regulations if those regulations are identified by the Department of Labor and Industry (DLI) through rules authorized under section **50-60-901**.

3. Section 50-60-901 requires DLI to "adopt rules identifying appropriate construction techniques that may be used by a local government in mitigation of **identified fire hazards** pursuant to 76-3-504(1)(e)." This section and section 50-60-902 make it clear that these techniques are not part of the state building code and that the rules may be enforced only as provided in Title 76, chapter 3 part 5.

4. Section 76-3-504(1)(g) requires that subdivision regulations prescribe standards for the design and arrangement of lots, streets, and roads. A governing body may use this provision to require appropriate ingress and egress in fire-prone areas.

5. A governing body may exempt subdivisions from certain review criteria if the governing body has adopted a growth policy pursuant to Title 76, chapter 1. Growth policies are not required and are not regulatory, but zoning may not occur in the absence of a growth policy. Section 76-1-601(3)(j) provides that a growth policy must include "an evaluation of the **potential for fire and wildland fire** in the jurisdictional area, including whether or not there is a need to:

   (i) delineate the wildland-urban interface; and

   (ii) adopt regulations requiring:

   (A) defensible space around structures;

   (B) adequate ingress and egress to and from structures and developments to facilitate fire suppression activities; and

   (C) adequate water supply for fire protection."

4. Subdivision regulations themselves often have fire protection and mitigation provisions. The September 2006 model regulations, prepared collaboratively by a number of organizations and available through the Montana Association of Counties, contains a section on fire protection that reads:

> All subdivisions must be planned, designed, constructed, and maintained so as to minimize the risk of fire and to permit the effective and efficient suppression of fires in order to protect persons, property, and forested areas. Measures must include:
>
> a. The placement of structures so as to minimize the potential for flame spread and to permit adequate access for fire fighting equipment.
>
> b. The presence of adequate fire fighting facilities on site, including an adequate water supply and water distribution system.
>
> c. The availability, through a fire protection district or other means, of fire protection services adequate to respond to fires that may occur within a subdivision.

The model regulations also recommend specific special requirements for subdivisions proposed in areas that have been designated as wildfire hazard areas by the Forest Service, DNRC, a local fire protection authority, or a growth policy.

Some jurisdictions have adopted the model regulations entirely or nearly verbatim. Others barely mention fire. Ravalli County's regulations contain vegetation reduction standards for principal structures.

Local governments have a number of ways to impose development standards and DLI-approved construction techniques for new subdivisions. However, they are not able to apply regulations retroactively and, while the course of the development can be dictated, once the final plat is approved, the governing body no longer has any authority or enforcement capability. Defensible space or water supply standards required in the regulations may not be maintained through the life of the subdivision.

Zoning

Another land use tool available to a local government to address fire is zoning, governed by Title 76, chapter 2. The Helena city commission recently adopted zoning regulations to prohibit the use of certain roof materials within a designated area for new construction and to require fire-safe roof materials if more than 50% of a roof is being replaced. The commission amended its growth policy first, then adopted the zoning regulations.

Zoning is divided into three parts in the MCA. Part 1 zoning is also known as "citizen initiated" zoning. Part 2 is county zoning, and Part 3 is municipal zoning.

1. Part 1 zoning

Section 76-2-101 provides that a county commission may create a planning and zoning district upon receipt of a petition signed by 60% of the affected freeholders. However, if freeholders representing 50% of the titled property ownership protest the establishment of the district within 30 days of its creation, the district may not be created and the area may not be considered again for zoning for 1 year.

2. Part 2 zoning

Section 76-2-201 provides that a county governing body that has adopted a growth policy may adopt zoning regulations for all or parts of the governing body's jurisdictional area. The regulations must be in accordance with the growth policy and must be designed to, among other things, "secure safety from fire, panic, and other dangers."

The procedure for adopting regulations (76-2-205) provides for a public hearing and a protest period. The protest provisions read:

> [I]f 40% of the freeholders within the district whose names appear on the last-completed assessment roll or if freeholders representing 50% of the titled property ownership whose property is taxed for agricultural purposes under 15-7-202 or whose property is taxed as forest land under Title 15, chapter 44, part 1, have protested the establishment of the district or adoption of the regulations, the board of county commissioners may not adopt the resolution and a further zoning resolution may not be proposed for the district for a period of 1 year.

3. Part 3 zoning

Section 76-2-301 and 76-2-302 authorize a city or town governing body to establish zoning districts and, within those districts, "regulate and restrict the erection, construction, reconstruction, alteration, repair, or use of buildings, structures, or land." Municipal zoning regulations must also be in accordance with the growth policy and must be designed to, among other things, "secure safety from fire, panic, and other dangers."

Section 76-2-305 governs amendments to zoning regulations and the protest allowed under those circumstances:

> An amendment may not become effective except upon a favorable vote of two-thirds of the present and voting members of the city or town council or legislative body of the municipality if a protest against a change pursuant to subsection (1) is signed by the owners of 25% or more of:
>
> (a) the area of the lots included in any proposed change; or
>
> (b) those lots 150 feet from a lot included in a proposed change.

Section 76-2-310 allows for extension of municipal zoning and subdivision regulations beyond municipal boundaries if there are no county zoning or subdivision regulations in place.

It has been argued that counties simply need to establish zoning districts in the WUI and regulate development that way. Those who advocate other means maintain that the protest provisions, particularly in county zoning, making that extremely difficult or impossible.

Building Codes

Section 50-60-202 provides that the Department of Labor and Industry (DLI) is the only state agency that may promulgate building regulations, except that the Department of Justice's Fire Prevention and Investigation Section shall review building plans for conformity with its rules.

A local government may adopt a building code to apply in its jurisdictional area, but that code may include only codes adopted by DLI and a local government may not enforce a building code unless its code enforcement program has been certified by DLI as provided in 50-60-302.

Section 50-60-102 provides that the state building code "does not apply to residential buildings containing less than five dwelling units or their attached-to structures, any farm or ranch building of any size, and any private garage or private storage structure of any size used only for the owner's own use, located within a county, city, or town unless the local legislative body by ordinance or resolution makes the state building code applicable to those structures." It is clear that a local government that has made the state building code apply to the structures described above and that is certified to enforce the code by DLI may do so.

Other statutory provisions

Section 76-13-104 requires DNRC to adopt rules "addressing development within the wildland-urban interface", including best practices for development in the WUI and criteria for providing grant and loan assistance to local government entities to encourage adoption of best practices for development within the WUI. That rulemaking is in process.

Firewise & CWPPs

Programs outside of the confines of state law exist for communities to plan for fire in the WUI.

Firewise

That national Firewise Communities program is, according to its website "a multi-agency effort designed to reach beyond the fire service by involving homeowners, community leaders, planners, developers, and others in the effort to protect people, property, and natural resources from the risk of wildland fire - before a fire starts." The Firewise organization provides information (including grant and funding source information), contacts, and resources, but the effort is community-driven. The program works in three steps:

1. Wildland fire staff from federal, state or local agencies provide a community with information about coexisting with wildfire along with mitigation information tailored to that specific area.

2. The community assesses its risk and creates its own network of cooperating homeowners, agencies and organizations.
3. The community identifies and implements local solutions.

In Montana, eight areas have been recognized as Firewise Communities. They are:
Sorrell Springs, Frenchtown, 2005
Bigfork, Bigfork, 2005
Em Kayan Village, Libby, 2005
Elkhorn, Whitefish, 2005
Cathedral Mountain Ranch, Nye, 2006
Chain of Lakes, Libby, 2006
North Fork Flathead, Polebridge, 2006
Montana City Fire District, Montana City, 2006

Community Wildfire Protection Plans
The 2003 Healthy Forests Restoration Act (HFRA) defines a CWPP as:

> a plan for an at-risk community that:
> (a) is developed within the context of the collaborative agreements and the guidance established by the Wildland Fire Leadership Council and agreed to by the applicable local government, local fire department, and State agency responsible for forest management, in consultation with interested parties and the Federal land management agencies managing land in the vicinity of the at-risk community;
> (b) identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment on Federal and non-Federal land that will protect 1 or more at-risk communities and essential infrastructure; and
> (c) recommends measures to reduce structural ignitability throughout the at-risk community.

According to the California Fire Alliance website, "benefits of having a CWPP include National Fire Plan funding priority for projects identified in a CWPP. The United States Forest Service and the Bureau of Land Management can expedite the implementation of fuel treatments, identified in a CWPP, through alternative environmental compliance options offered under the HFRA.

Adoption of a CWPP allows a community to define the WUI to fit its needs, rather than having to adhere to the blanket WUI designation in the HFRA, which is 1/2 mile from the community boundary or 1 1/2 miles under certain circumstances. At least 50% of all funds appropriated for federal fuel mitigation projects must be used within the WUI as it is defined by a CWPP or the HFRA if a CWPP has not been adopted.

Regardless of whether a CWPP has been adopted, however, fuel mitigation funding levels are dependent on federal appropriations therefore variable.

Conclusion

Statutory tools and incentive programs do exist to assist local governing bodies and communities in addressing development in the WUI. The committee needs to determine, based on this information, testimony, and public input, if:

1. those statutes and programs are sufficient and communities need only be educated in their appropriate use;
2. the Legislature should amend the statutes in order to facilitate their implementation;
3. the Legislature should create a new set of statutes tailored specifically for the WUI; or
4. the Legislature should enact a combination of #2 and #3 above.

c. FSC Committee members
Joe Murray, Legislative Audit Division

Appendix W

Western States Treatment of WUI and Steve Erb Letter

Sampling of Legislative Treatment of Wildfire Mitigation in the Wildland-Urban Interface
Utah, Oregon, Arizona, California

Prepared for the Environmental Quality Council Assigned Studies Subcommittee
by
Leanne Kurtz, Research Analyst

March 16, 2006

Introduction

In the wake of catastrophic wildfires that destroyed homes and property, or in anticipation of such events and a "not-if-but-when" mentality, state legislatures in the West have adopted various approaches to mitigate damage, property loss, and expense. What follows is a summary of four states' statutory responses to wildfire mitigation in the wildland-urban interface (WUI), an area defined by the National Wildfire Coordinating Group's *Glossary of Wildland Fire Terminology* as "the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels."

UTAH

Citing increasing incidence, intensity, and cost of wildland fires in Utah,[1] the state's Legislature passed a resolution in 2003 entitled "Compliance Cost of Fire Program -- to study United States Forest Service and Bureau of Land Management billing to the Utah State Division of Lands and Forestry Fire program and the cost to Utah citizens from federal and state fire programs." That resolution resulted in the creation of a task force, which included legislators, county commissioners, and state fire suppression agency staff.

As the 2003 resolution's title would indicate, one of this task force's primary goals was to explore alternatives for funding wildfire suppression to meet Utah's current and projected needs. The group also looked at counties' participation in Utah's Wildland Fire Suppression Fund and incentives for county enactment of ordinances that deal with fire mitigation and suppression in the WUI.

One of the task force's findings is as follows:

> *Without wildland-urban interface development guidelines, uncontrolled development in the interface will continue to increase public safety concerns, as well as escalate the costs of fire suppression.*

[1] According to the Utah Wildland Fire Task Force report, "Wildfire Issues and Costs in the State of Utah", in 2002, over 600 wildfires burned 263,000 acres, costing the state $13 million.

Only two counties in Utah had adopted wildland-urban interface ordinances at the time the task force began its work.

A number of recommendations resulted from the work of the task force. These included creation of an actuarially-sound, dedicated Wildfire/Watershed Protection Trust Fund, providing the state and counties with a revenue source for fire suppression, training, and pre-suppression hazard mitigation projects. To participate in the funding, counties would be required to adopt WUI ordinances that comply with standards established by the Utah State Division of Forestry, Fire, and State Lands.

In order to enter into cooperative agreements for fire protection with the state Division of Forestry, Fire, and State Lands, each county is required to adopt an ordinance that meets minimum standards established by the Division.

The trust fund concept didn't fly as an alternative funding mechanism, but requiring counties to adopt WUI ordinances in order to receive state assistance did meet with the Legislature's overwhelming approval.

County Coopertaive Agreements

The 2004 Utah Legislature enacted HB 146, amending section 65A-8-6 of the Utah Code, providing the following:

> In order to be eligible to enter into a cooperative agreement with the [Division of Forestry, Fire, and State Lands], the county shall:
>
> - adopt a wildland fire ordinance based upon minimum standards established by the division;
> - require that the county fire department or equivalent private provider under contract with the county meet minimum standards for wildland fire training, certification, and wildland fire suppression equipment based upon nationally accepted standards as specified by the division; and
> - file with the division a budget for fire suppression costs.

HB 146 further provided that a "county that chooses not to enter into a cooperative agreement with the division may not be eligible to receive financial assistance from the division." HB 146 sailed through the Utah Legislature, with no dissenting votes in either the House or the Senate.

Administrative rules provide the "minimum standards" for the purposes of the ordinance requirement. The rules are based on the 2003 International Urban Wildland Interface Code, with specific modifications.

The "minimum standards established by the division" are articulated in administrative rules adopted by the Division of Forestry, Fire, and State Lands. The Division used the

2003 International Urban Wildland Interface Code as the basis for its standards, with very specific exceptions and modifications.

OREGON

Forestland-Urban Interface Fire Protection Act of 1997

In 1997, the Oregon Legislature passed the Oregon Forestland-Urban Interface Fire Protection Act. As stated in the act, it, in general:

- establishes state policy with regard to the interface that "minimizes cost and risk while maximizing effectiveness and efficiency" of fire protection;
- recognizes the risks to which structures in the interface are subject;
- recognizes that development in the interface will continue to expand;
- acknowledges that "one solution or set of solutions will not fit all situations";
- promotes involvement at all levels of government and in the private sector.

The forestland-urban interface is defined as "a geographic area of forestland inside a forest protection district where there exists a concentration of structures in an urban or suburban setting."

The act defines the forestland-urban interface as "a geographic area of forestland inside a forest protection district where there exists a concentration of structures in an urban or suburban setting."

The act requires the state Department of Forestry to establish by administrative rule a classification system and criteria for forestland-urban interface areas. The criteria must "recognize differences across the state in fire hazard, fire risk and structural characteristics within the forestland-urban interface," and the system must "include not less than three nor more than five classes of forestland-urban interface."

Under the act, a county may establish a forestland-urban interface classification committee, consisting of five appointed members, one of which must be an owner of forestland-urban interface property. The committee assigns all areas of forestland-urban interface within the county boundaries to one of the interface classifications developed by the Department of Forestry.

Using system set by administrative rule, county classification committees designate all interface areas in the county according to the degree of fire hazard posed, i.e. Moderate, High, Extreme, High Density Extreme. Property owners' specific responsibilities (also established by rule) depend on how land is classified.

Owners of property that is classified as Moderate, High, Extreme, or High Density Extreme must comply with certain standards and certify compliance with the state forester. The standards, specified in administrative rule, address defensible space and fuel breaks, building materials, ingress and egress, open burning on the property. Obviously, the higher-hazard area, the more stringent the standards.

There is no fine for failure to comply with the standards or for failure to properly certify compliance; rather the "stick" in Oregon's system is that the state may collect up to $100,000 in suppression costs from a property owner that has not complied if:

- a wildland fire originates on the property;
- the ignition or spread of the fire is directly related to the failure of the owner to comply; and
- the state forester incurs costs in suppressing the fire.

Wildfire Hazard Zones

Local jurisdictions in Oregon that have building code or life safety ordinance authority may identify Wildfire Hazard Zones (WHZ), using criteria and factors established in Department of Forestry administrative rules. Once WHZs are delineated, dormant provisions of Oregon's Building Code become active. The Building Code provisions include prohibiting the use of flammable roofing materials on new construction, requiring the use of fire-safe materials when roofing is replaced, and requiring clear identification of structure addresses.

Once WHZs are established by local governments, dormant provisions of Oregon's Building Code become active.

In both the Forestland Urban Interface Act and the WHZ processes, the specific details, standards, and directives are provided in Department of Forestry administrative rule and local jurisdictions have significant responsibility and authority.

Land Use Planning

The Oregon Department of Land Conservation and Development has established 19 Statewide Planning Goals. Oregon state law requires every local jurisdiction to adopt a comprehensive plan and the zoning and subdivision ordinances needed to effectuate the plan. Plans must be consistent with the 19 goals and must be reviewed and approved by the Department before they may be implemented.

Local governments are required to zone forest lands and adopt natural hazard comprehensive plans.

Goal 4 requires local governments to inventory, designate, and zone forest lands and to adopt plans for those zones that conserve forest lands. Goal 7 requires local governments to adopt comprehensive plans "to reduce risk to people and property from natural hazards", including wildfires. The goals all contain specific planning and implementation guidelines.

ARIZONA

The Governor's Arizona Forest Health Oversight Council, created by executive order in 2003, is an ongoing entity that studies wildland fire and issues recommendations to the Legislature, the governor and executive branch, Congress, communities, and individuals. The council also recommends areas for future study. Some of the most intense and highly publicized wildfires have occurred in Arizona over the last

The Forest Health Oversight Council issues recommendations to the Legislature.

several years,[2] prompting the Arizona Legislature to adopt some, but not all, of the council's 2003 recommendations.

Authority to adopt code

In 2004, the Arizona Legislature gave local governments specific authority to adopt a current WUI code.[3] Arizona Revised Statutes (ARS) Section 9-806 (cities and towns) and section 11-861 (counties) provide that the "code may be adapted from a model code adopted by a national or international organization or association for mitigating fire hazard to life and property." The ARS requires certain procedures for and public participation in adoption of the code.

State Forester Responsibilities

Among the responsibilities imposed on the Arizona state forester is a report during the legislative session to legislative committees with jurisdiction over forestry issues. The report must contain information about the WUI, "including the effects of county and municipal zoning policies and wildfire hazards on public and private property."[4]

State Wildland-Urban Fire Safety Committee

The 2004 Legislature also established the State Wildland-Urban Fire Safety Committee, per the Oversight Council's recommendation. Section 41-2148, ARS, established the committee and provides a definition of the WUI as a "geographical area where residential or commercial structures meet or intermingle with federal, state, tribal, or other public land that is undeveloped, other than transportation or utility infrastructure."

For the purposes of the committee, the WUI is defined as a "geographical area where residential or commercial structures meet or intermingle with federal, state, tribal, or other public land that is undeveloped, other than transportation or utility infrastructure."

The committee has 12 members, including a fire chief or fire marshal, the state forester, a member of the state fire chiefs' association, a local government planner from a high-risk area, a resident of a high-risk area, a volunteer firefighter, a watershed management expert, a member to serve as a liaison with Arizona's Congressional delegation, a Forest Service wildland fire science expert, a forest ecologist, a rural county property owner, and a registered architect.

The committee is required to develop recommendations for minimum standards for:

[2] During the 2002 wildfire season, over 400,000 acres burned. Over 500,000 acres of urban interface lands are considered highly susceptible to wildfire, according to the 2003 Executive Order (2003-16).

[3] Section 7-5-108, MCA, allows any local government to adopt or repeal an ordinance that incorporates by reference the provisions of any code or portion of code, including fire prevention codes. Section 7-5-4202, MCA, allows the governing body of an incorporated city or town to adopt technical building, zoning, health, electrical, fire, and plumbing codes in whole or in part by reference. In Arizona, the authority to adopt building codes by reference is only given to counties that have adopted zoning.

[4] Section 37-622, ARS.

- safeguarding life and property from wildland fire and fire hazards;
- preventing wildland fires and alleviation of fire hazards;
- storage, sale, distribution and use of dangerous chemicals, combustibles, flammable liquids, explosives and radioactive materials in the WUI;
- fire evacuation routes and community alert systems;
- the creation of defensible spaces in and around WUI areas as authorized by existing county and municipal laws and ordinances;
- the application of adaptive management practices to use in monitoring data from treatment programs to assess the effectiveness of those programs in meeting forest health objectives; and
- other matters relating to wildland-urban fire prevention and control.

The committee develops and recommends to the governor and the Legislature minimum standards for development in the WUI.

The committee is required to issue an annual report with recommendations to the governor and the Legislature by December 31 each year.

Forest Health Oversight Council 2005 Recommendations

In its 2005 report, the Oversight Council recommended the following:

- Authorize fire districts, cities, towns, and counties to enforce the International Urban Wildland Interface Code. The 2004 Legislature gave entities the authority to adopt the code but did not provide clear enforcement authority.

- Allow local jurisdictions, including fire districts, to require establishment of defensible space and allow the jurisdictions to develop and implement an administrative review process to enforce hazardous fuels reduction.

- Expand county planning and zoning authority to enable better management of growth in high hazard areas.

- Provide tax incentives to support utilization of small wood products

The Arizona Legislature is in session. A search of bills currently being considered did not indicate that any of the 2005 recommendations had been proposed.

CALIFORNIA

California Code addresses the WUI and hazardous fuels reduction, defensible space, building standards, classification of lands depending on their degree of fire hazard, and vegetation management.

Statutory Recognition of WUI and Hazardous Fuels Reduction

In Section 4854 of the California Public Resources Code, the Legislature recognizes that under the National Fire Plan, hazardous fuels treatment has expanded significantly, "with a greater focus on treatments intended to protect communities in the wildland urban interface." The section further provides that cutting of timber for the purpose of hazardous fuels reduction must be in accordance with regulations adopted by the Board of Forestry and Fire Protection and with the additional provisions of section 4584. No definition is provided in California's code for the WUI but the requirements for defensible space describe the area that is affected.

Mandated Defensible Space

Section 4291 of the Public Resources Code requires people who own, lease, control, or maintain structures ("owner" for the purposes of this report) "in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material" to clear and maintain firebreaks of specific distances around the structures. The law exempts individual specimens or trees, well-pruned landscaping, and grass necessary to prevent erosion. Flammable vegetation or combustible growth must be cleared in an area of not less than 30 feet around the structure, and all brush, flammable vegetation, and combustible growth that is within 100 feet must also be cleared.

Flammable vegetation and combustible growth must be cleared away for specified distances from structures in certain areas.

Penalties apply for noncompliance.

Owners must remove trees or portions of trees that are within 10 feet of a chimney and keep rooftops clear of debris.

Failure to comply subjects the owner to fines ranging from $100 to $500 and following a third consecutive violation within a specified time period, the department may conduct the work and bill the owner for costs incurred.

Certification that a structure meets applicable building standards is required for structures built in certain areas. The state fire marshal and others are required to develop fire-specific building standards.

Building Standards

Prior to construction of a new building or reconstruction of a building damaged by fire in the area described, the owner "shall obtain a certification from the local building official that the dwelling or structure, as proposed to be built, complies with all applicable state and local building standards", including those provided in Section 51189 of the state's Government Code. The owner must give the certification to the insurer of the structure.

Failure to comply subjects the owner to the same penalties as for the defensible space requirement.

Section 51189 of the Government Code states:

> The Legislature finds and declares that space and structure defensibility is essential to effective fire prevention. This defensibility extends beyond vegetative management practices ... and includes, but is not limited to, measures that increase the likelihood of a structure to withstand intrusion by fire, such as building design and construction requirements that use fire resistant building materials, and provide protection of structure projections, including, but not limited to, porches, decks, balconies and eaves, and structure openings, including but not limited to, attic and eave vents and windows.

The section requires the state fire marshal, in consultation with the director of Forestry and Fire Protection and the director of Housing and Community Development to recommend building standards pursuant to Section 18930 of the Health and Safety Code "that provide for comprehensive space and structure defensibility to protect structures from fires spreading from adjacent structures or vegetation and vegetation from fires spreading from adjacent structures."

Classification of Fire Hazard Severity Zones

Under Sections 51175 through 51189 of the Government Code, local jurisdictions, acting upon a recommendation from the director of Forestry and Fire Protection must designate Very High Fire Hazard Severity Zones within their boundaries. Defensible space and building standard requirements and penalties for noncompliance are essentially the same in these zones as for all other land described above. The only discernable differences are a requirement that disclosure of the structure's existence in the zone must be made upon transfer of the property and upon a third consecutive conviction of noncompliance, the local jurisdiction may take corrective action and cause the expense incurred to become a lien on the property.

Local governments get involved through designation of Fire Hazard Severity Zones.

The stated purpose of the classification system is to allow public officials to "identify measures that will retard the rate of spread, and reduce the potential intensity, of uncontrolled fires that threaten to destroy resources, life, or property, and to require that those measures be taken."

Local jurisdictions may impose fire and panic safety ordinances that are more restrictive, as provided by law.

Conclusion

The approaches each state has taken to address wildland fire mitigation and suppression in the WUI differ in their degrees of restriction, the sanctions used to achieve compliance, and in how standards are developed and implemented. There exist common threads in each state's approach, however. In one way or another, statutes in all four of the states recognize the WUI and the unique problems associated with fire mitigation and suppression. In addition, each state either allows or requires significant local government involvement and authorizes extensive, detailed rulemaking by the state agency with fire suppression responsibilities.

Legislation and a regulatory, statutory response to the WUI provide one means to reduce risks of catastrophic fires, thereby reducing loss of property, life, and taxpayer dollars. But it is important to note that various tools and programs are available to property owners and communities in each state and in Montana that are aimed at reducing hazardous fuels, promoting community planning, and providing funding for mitigating problems ahead of a disaster. The best approach for Montana may consist of those voluntary programs coupled with some level of legislative involvement.

To: Angie Grove, Deputy for Performance Audit, Legislative Audit Division

From: Steve Erb, Senior Performance Auditor

Date: November 14, 2007

Subject: Neighboring States' Wildland Urban Interface Statutes and Montana Statutes Related to the Wildland Urban Interface

To gather information related to other states' activities to regulate the wildland urban interface (WUI), I contacted officials from the states of Idaho, Wyoming, and Washington. I also reviewed the activities of the 2007 legislative session to identify changes to current statutes related to activities in the WUI and any changes to subdivision or building code regulations.

Washington

To identify what actions Washington is taking to deal with the WUI, I contacted the Washington Department of Natural Resources (DNR) and the State Fire Marshal's office. Washington does not have statewide regulations that guide, limit, or modify development within the WUI. Each county sets its own standards for subdivision development, building materials and practices, to include practices occurring within the WUI.

Washington has two regulations that affect development and building practices in the WUI. Washington has imposed a limit on the total levy that counties can impose on individual properties. In some counties, this limit has had the effect of encouraging more development and more housing with an increase in the total revenues available to the county. Washington also passed the Growth Management Act in 1990. Each county was required to develop a growth management plan and because of other language included in the act, DNR had standing to comment on each county's growth management plan. In areas identified as high risk for fires, DNR was able to make comments on subdivision ingress and egress routes and building codes as they related to the overall acceptability of the county management plan. Those counties that did not incorporate DNR's inputs could lose general fund money to implement their plan. Washington's DNR has attempted to incorporate National Fire Protection Association standard 299, which provides criteria for safe development in areas prone to wildfires.

Idaho

To identify activities taken within Idaho to guide, limit, or modify development within the WUI, I contacted the state fire marshal, the Idaho Department of Lands, and the Idaho Division of Building Safety. Each county in Idaho is responsible for establishing its own building and planning development codes. If requested, the state fire marshal and the department of lands will review proposed county subdivision plans, but there is no requirement for counties to request a review.

Wyoming

To identify activities taken within Wyoming to guide, limit, or modify development within the WUI, I contacted the state fire marshal, the state forestry division, and the Teton County Planning and Development office. The state of Wyoming has not implemented statewide standards for subdivision development or building within the WUI. Some counties have been very aggressive at establishing building and development standards within the WUI while other counties have not established any building codes.

In Teton County, new subdivisions must comply with the Teton County Fire Protection Resolution (adopted in 2003). The resolution establishes subdivision accessibility, water availability, and requires an assessment of WUI threats by the local fire department to determine if any additional actions are required. The assessment by the fire department may require the subdivision to complete a fuel management plan to reduce the potential for fire.

Changes in Montana Statutes Related to the WUI

During the 2007 legislative session, five pieces of legislation were introduced. Senate bills 51, 130, 145, and 147 were approved and signed into law. Senate bill 167 died in standing committee. House Joint Resolution 10 was the impetus for these changes. A summary of the bills' affects on the WUI or wildland fire is presented below.

Approved legislation

- Senator Bob Hawks sponsored SB51, which revised growth policy and subdivision laws to evaluate the potential for fire and wildland fire.

- Senator Bob Story sponsored SB130, which changed penalties for starting or leaving fires that result in a wildfire.

- Senator Jim Shockley sponsored SB145, which revised the formula used to determine wildland fire protection assessments. It also established a state fire policy and included fire prevention, hazard reduction, and loss mitigation as fundamental components of the fire policy. This bill defined the WUI, wildfire, and wildland. It also required DNRC to adopt rules to address development in the WUI.

- Senator Jim Shockley also sponsored SB 147, which clarified who has authority to close areas of access during declarations of emergency or disaster.

Defeated legislation

- Senator Bob Hawks sponsored SB167, which would have required counties to designate the WUI within the county, establish zoning regulations to guide development within the WUI, and necessitated new subdivisions be planned adequate ingress/egress routes, defensible space around structures, and adequate water supplies for wildland fire suppression. Counties that failed to comply with the requirements set forth in SB 167 would not be eligible for reimbursement of wildland fire suppression costs by DNRC.