

**KOOTENAI COUNTY
WILDLAND URBAN INTERFACE**

**FIRE
MITIGATION
PLAN**



Special recognition is necessary for the members of the

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and Task Force for volunteering their time and energy in
assisting in the development of the plan.

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INTRODUCTION

Wildland fires are a part of the natural ecological cycle of forest ecosystems. However, as humans encroach on these forests, the risk of catastrophic disaster increases. These areas are known as the wildland urban interface. They can be sharp geographical edges or zones of ever increasing risk potential. Regardless, they pose a threat to human life and property. The National Fire Plan calls for reducing this risk through a variety of measures including the creation of local wildland urban interface fire mitigation plans. The Kootenai County Local Emergency Planning Committee received a grant to prepare a wildland urban interface fire mitigation plan to identify actions and priorities for reducing wildland fire risk.

The following plan is the culmination of six months of work conducted by the Kootenai County Wildland Urban Interface Fire Mitigation Planning Committee, a subcommittee of the Local Emergency Planning Committee. It includes a variety of measures designed to reduce the impact of wildland fires.

This plan is divided into seven sections beginning with this brief introduction. It is followed by a summary of the fire mitigation goals and actions for quick reference. Next is a description of the planning process. The individual goals and actions are listed with suggestions for who should complete the action, when it should be completed and the possible resources for completing the action. These sections are then followed by technical information and references. Finally, there are a series of appendices describing various data collected during the process.

No plan is complete until it is implemented. This document describes what can happen over the next several years to help reduce the damages caused by wildfire in the wildland urban interface. However, it is up to the community to insure that these actions are taken.

SUMMARY OF WILDLAND URBAN INTERFACE FIRE MITIGATION GOALS AND ACTIONS

Listed below is a summary of Kootenai County's wildland urban interface mitigation goals and actions that evolved from community participation and the accompanying technical information. This summary is provided as a quick reference to the detailed statements appearing later in the plan. The symbol that precedes each of the actions identifies the time frame for completion of that activity: short-range ❶, medium-range ❷ or long-range ❸. Short-range actions should be accomplished within a year or two, medium-range within 1 to 5 years, and long-range 5 or more years. Some actions may also be ongoing without regard to assigned time range.

FIRE MITIGATION GOALS

Emphasize prevention of wildland urban interface fires using a proactive, cooperative approach with incentive measures.

Ensure that the land development ordinances and building codes in Kootenai County support the mitigation of wildland urban interface fire danger.

Develop a county wide road and street system that provides for efficient fire fighting and clear evacuation routes.

Promote effective fuel treatment programs for homeowners and businesses that are carried out on an ongoing basis in all wildland urban interface areas in Kootenai County.

Advocate responsible practices for land development, recreational activities, and commercial operations to reduce loss from wildland urban interface fire on public and private land in Kootenai County.

Provide the appropriate resources to maintain an effective emergency response system to wildland urban interface fires in Kootenai County.

Sustain a coordinated and cooperative program of timely information and educational programs for county residents, businesses, and recreational home owners.

FIRE MITIGATION ACTIONS

PREVENTION

Activities that reduce and/or keep hazards from getting worse.

①*Institute a program for creating and maintaining neighborhood fire prevention plans in wildland urban interface areas.*

①*Designate the Kootenai County Local Emergency Planning Committee's Wildland Urban Interface Task Forces as the responsible entity for ensuring the mitigation plan is implemented.*

③*Work toward developing county regulations for enforcing access requirements of the fire code.*

③*Encourage utility companies to reduce ignition fuels and windfall hazards in power line corridors and install underground lines in new subdivisions and when replacing older lines.*

①*Advocate for water districts to provide emergency access to water supply via hydrants along service delivery lines.*

①*Limit burning from May 10 through October 20th and in other situations as needed.*

①*Encourage the North Idaho Building Contractors Association and other local land development professionals to build a model residential development demonstrating best management practices for fire safety.*

①*Contact outside communities and agencies to learn what wildland urban interface fire prevention techniques worked and those that did not and incorporate this knowledge in future fire mitigation activities.*

③*Encourage all land development ordinances and codes to include:*
-requirements for adequate water supply for fire fighting,
-two means of ingress and egress where feasible,
-incentives for construction with fire resistant materials,
-additional fire protection measures for large structures
-pertinent sections of the Wildland Urban Interface Fire Code.

PROPERTY PROTECTION

Activities undertaken by property owners.

①*Establish a program for home owners offering an assessment of the fire safe worthiness of their property and an incentive system to use fire safe building materials and reduce fuel loads on their property.*

①*Promote research and development projects such as a model program to research use of an emergency generator connected to home electric and pump systems.*

②*Offer individual homeowners a fuel treatment plan that reduces large pieces of wood into fireplace wood and disposes of other debris.*

①*Publish an annual list of local contractors who build fire safe structures and/or create survivable space.*

①*Sponsor an annual clean-up, fuels reduction week with incentives such as business related discounts and free pickup of waste materials.*

①*Offer individual homeowners a fuel treatment plan that reduces large pieces of wood into fireplace wood and disposes of other debris and organize a community service projects to assist elderly and handicapped homeowners reduce fuel loads on their property*

NATURAL RESOURCE PROTECTION

Activities to preserve or restore natural areas or natural functions.

⑤*Identify “road blocks” federal agencies encounter in treating slash fuels and fuels in general.*

②*Encourage property owners to use grant programs to create retention facilities which can serve a dual purpose as water supplies.*

①*Explore the potential of making slash and deadfall available for firewood for senior citizens and handicapped or low income residents and use good wood for lumber for charitable purposes.*

EMERGENCY SERVICES

Measures taken to prepare for, during and after a fire to minimize its impact.

⑤*Maintain and activate an interagency joint information center of local, state and federal agencies during wildland fires that ensures accurate, up to date information is delivered to the public.*

①*Maintain an interagency radio link to assure effective communication and coordination between Kootenai County Disaster Services, Fire Districts and state and federal agencies.*

② *Assist efforts of fire districts to coordinate a minimum standard for wildland urban interface training, have Public Information Officers, and maintain a sufficient number of Type III qualified personnel.*

① *Produce, on an ongoing basis, up-to-date hard copy and electronic county maps with evacuation routes, hospitals, road names, and current addresses and latitude and longitude.*

② *Keep current and distribute evacuation plans with safety zones and information which encourages homeowners to evacuate in a timely manner.*

① *Encourage families to designate a meeting place and phone contact during and after fire evacuation.*

PUBLIC INFORMATION

Activities that advise about hazards and ways to protect people and property.

① *Develop an interagency agreement to assure consistency during emergencies between information and education programs for homeowners to avoid people getting “different stories”.*

⑤ *Purchase, install and maintain Smokey Bear Signs (high, moderate, low fire conditions) in wildland urban interface neighborhoods.*

① *Work with insurance companies and Realtors to publish a “Welcome to Fire Country” type pamphlet to distribute with building permit applications and residential sales agreements.*

① *Build and maintain a demonstration trailer with a good/bad example of residential building materials and survivable space.*

① *Supply real estate professionals, insurance providers, and building contractors with information on wildland urban interface fire risks and hazards to assist buyers and sellers to be better informed.*

⑤ *Work with local educators to establish a wildland fire component in the public schools’ fire education program.*

① *Develop an interactive internet site with a wildland urban interface fire theme for questions, comments, sign-up for home evaluations, volunteer opportunities, and targeted information for recreational home owners.*

① *Support the efforts of the Kootenai County Fire Prevention Co-op and other agencies at the County Fair and Safety Day at Silver Lake Mall.*

THE PLANNING PROCESS

During the fall of 2001, the Wildland Urban Interface Task Force Subcommittee of the Local Emergency Planning Committee of Kootenai County received several grants to develop a wildland urban interface fire mitigation plan. Subsequently, a consultant team was hired to assist in the development of this plan and met with the committee in December to establish the scope of the plan and the schedule for conducting the plan.

At this meeting, the committee accepted the consultant's recommendation that the committee be expanded to include citizens. At various times during the planning process there were over 40 participants not all of whom attended all meetings, but who received information developed through the process. Also, the committee established January 8, 2002 as the first meeting of the larger committee.

The citizen participation program for the plan was based on the following goals developed by the Wildland Urban Interface Planning Committee at their January 8th Committee Meeting. These goals were:

INSPIRE THE PUBLIC TO ACTION.

BROAD BASED, EFFECTIVE PARTICIPATION - CRITICAL TO INVOLVE AS MANY FOLKS AS POSSIBLE.

UNDERSTAND COMMUNITY BASED, SPECIFIC CONCERNS.

RAISE AWARENESS.

The committee selected a set of participatory methods for the program from a combination of those recommended by the consultant team plus additions made by the committee.

Information/Comment Handout

A one page information/comment handout with wildland urban interface fire information on the front and a space for comments on the back was prepared to develop interest in fire mitigation planning and collect information from citizens on their perceptions of risks and hazards. This handout was distributed by Committee members, provided to all the Kootenai County Fire Districts, and available at the March Home and Garden Show and the Silver Lake Mall Priorities Display.

Workshop Series

First, Problem Identification Workshops were held in February on Tuesday, February 5 at the Coeur d'Alene Casino; Wednesday, February 6 in the Commons at Lakeland High School, Tuesday, February 12, Eastside Fire Station, and Wednesday, February 13

Northern Lakes Fire Station, Hayden. At the workshops citizens were asked to identify problems and strategies related to wildland urban interface fire hazards, risks and issues. Information provided by citizens was used to help the Committee develop a set of preliminary actions.

A second set of workshops was conducted to ask the public to review draft goals and the preliminary action steps generated by the Committee at their February 26th meeting. The workshops were held on Tuesday, March 12 at the Coeur d'Alene Casino, Wednesday, March 13 in the Commons at Lakeland High School, Tuesday, March 19 at East Side Fire Station and Wednesday, March 20 at the Northern Lakes Fire Station, Hayden. People had a chance to look over preliminary actions, suggest new ideas and select their top five priorities.

Interactive Displays

The Committee decided another effective way to reach many people would be to sponsor a booth at the Kootenai County Home and Garden Show, March 15, 16, and 17th and a display at the Silver Lake Mall on April 6th. A very short informal questionnaire called Welcome to Fire County was developed to offer citizens a way to select their individual priorities for action steps for the plan at Home and Garden Show. Over 300 people stopped by the Home and Garden Show. After tabulating the results from this activity, a smaller subset of activities were chosen for display boards at the Silver Lake Mall. . People voted for the activities by attaching dots to the activities in the display. Nearly 100 citizens participated in this activity. Both displays were staffed by Committee members and the planning consultant team. These events also offered the opportunity for Committee members to listen informally to individual citizens.

Public Review

One final public meeting was held on the evening of June 7 at the U. S. Forest Service building in northwest Coeur d'Alene. There were no participants at this meeting; therefore, the Committee made their final recommendations to the consultants.

Complete detailed results of the participation program can be found in Appendix A.

Fire Department and State and Federal Agency Interviews

During the data collection process the fire chiefs of each of the individual fire districts were interviewed as well as personnel from state and federal agencies. They were asked to identify specific problems they face in the wildland urban interface and suggest some solutions to these problems. In addition, they located the sites of specific fire hazards and summarized the capabilities and apparatus of their department or agency.

Technical Data Collection

Additional technical information was collected concurrent with the participatory activities. Secondary information on fire history, climate, fuel loading and fire risk was included in this research. Summaries of this data are contained in a subsequent section of this report and in the appendices and maps available on disk at the Kootenai County Disaster Services.

Figure 1 Citizens Describe Fire Problems at East Side Fire Station



Figure 2 Fire Mitigation Committee Reviews Action Statements



Figure 3 Citizens View Fire Display at Home and Garden Show



Figure 4 Citizens Choose Action Statements at Home and Garden Show



FIRE MITIGATION ACTION PLAN

The following fire mitigation goals and actions for Kootenai County are the results of an extensive community participation program and the work of the Wildland Urban Interface Planning Committee. The symbol that precedes each of the actions identifies the time frame for completion of that activity: short-range ❶, medium-range ❷ or long-range ❸. Short-range actions should be accomplished within a year or two, medium-range within 1 to 5 years, and long-range 5 or more years. Some actions may also be ongoing without regard to assigned time range

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Provide the appropriate resources to maintain an effective emergency response system to wildland urban interface fires in Kootenai County.

Sustain a coordinated and cooperative program of timely information and educational programs for county residents, businesses, and recreational home owners.

FIRE MITIGATION ACTIONS

.PREVENTION

Activities that reduce and/or keep hazards from getting worse.

❶ *Institute a program for creating and maintaining neighborhood fire prevention plans in wildland urban interface areas.*

Discussions with the committee, fire chiefs and citizens emphasized the need for citizens to take some actions for themselves. Neighbors helping neighbors to establish a fire prevention program would help build familiarity with local fire issues and create neighborhood preparedness.

- Who: Kootenai County Disaster Services, Local Emergency Planning Committee's (LEPC) Wildland Urban Interface Fire Mitigation Committee (WUI); County Fire Districts.
- When: Within the next 3 years.
- Resources: Wildland Urban Interface Community & Rural Assistance Program, BLM; Community Development Block Grant Program, planning only.

① *Designate the Kootenai County Local Emergency Planning Committee's Wildland Urban Interface Task Force as the responsible entity for ensuring the mitigation plan is implemented.*

The Local Emergency Planning Committee was the sponsor of the plan and, thus, became the logical responsible entity for insuring its implementation.

- Who: Kootenai County Board of Commissioners, Local Emergency Planning Committee
- When: As soon as the plan is completed.
- Resources: Policy decision, none needed

⑤ *Work toward developing county regulations for enforcing access requirements of the fire code.*

Road access and maintenance was a primary concern of fire districts. The inability to access properties through narrow, poorly maintained, or steep driveways or roads increases risk to the individuals living along these roads and the amount of possible property damage is one of the most important issues that needs to be addressed by this plan.

- Who: WUI Task Force; Kootenai County Planning and Building Departments; Kootenai County Fire Coop, East Side, Lakes, Post Falls and Worley, Highway Districts, Idaho Department of Transportation..

When: 5 years or more

Resources: Policy action, none needed

③*Encourage utility companies to reduce ignition fuels and windfall hazards in power line corridors and install underground lines in new subdivisions and when replacing older lines.*

Downed power lines are a source of ignition for wildland fires. Firestorm 1991 was started by high winds downing power lines and igniting fuel on the ground. Reducing fuel in these corridors and placing lines underground would help reduce the hazard.

Who: WUI Task Force, Kootenai County, Highway Districts,
Local Emergency Planning Committee

When: 5 years.

Resources: Policy action, none needed.

①*Advocate for water districts to provide emergency access to water supply via hydrants along service delivery lines.*

Lack of sufficient water supply makes it difficult for firefighters to suppress fires. Whenever possible, water districts can help this problem by increasing access to water along their delivery lines.

Who: WUI Task Force, Fire Districts and Departments, Water
Resources, Local Emergency Planning Committee

When: As soon as the plan is adopted

Resources: Policy action, none needed.

①*Limit burning from May 10 through October 20th and in other situations as needed.*

Open pit fires and brush burning are two of the primary sources of ignition for a wildfire. Permits help notify the fire districts of the location and timing of burns and provide an early warning system for wildfires.

Who: USFS, BLM, County Fire Districts and Departments, State
Fire Marshal

When: 1 year

Resources: Permit fees.

①*Encourage the North Idaho Building Contractors Association and other local land development professionals to build a model residential development demonstrating best management practices for fire safety.*

Homeowners are not always aware of the proper materials for fire safe construction or how to create survivable space adjacent to their homes. By constructing a model subdivision containing these fire safe actions, there will be an excellent example for builders as well as contractors.

Who: WUI Task Force, Idaho Department of Lands, North Idaho Building Contractors Association, Kootenai County Fire Coop and Local Emergency Planning Committee

When: Within 2 years.

Resources: Idaho Department of Lands grants assistance, North Idaho Building Contractors Association

①*Contact outside communities and agencies to learn what wildland urban interface fire prevention techniques worked and those that did not and incorporate this knowledge in future fire mitigation activities.*

Wildland fires and wildland urban interfaces exist throughout North America. There is no need to reinvent the wheel. Ideas can be shared by staying in contact with the activities of these communities.

Who: WUI Task Force, Kootenai County Fire Coop, state and federal agencies with responsibilities for fire mitigation in the wildland urban interface.

When: Ongoing.

Resources: Individual entities budgets.

⑤*Encourage all land development ordinances and codes to include:*
-requirements for adequate water supply for fire fighting,
-two means of ingress and egress where feasible,
-incentives for construction with fire resistant materials,
-additional fire protection measures for large structures
-pertinent sections of the Wildland Urban Interface Fire Code.

Enforcement of fire safe development codes was another top priority of the fire chiefs. The codes need to be reviewed and means explored for improving development and construction in the wildland urban interface zone.

Who: WUI Task Force, Kootenai County Fire Coop, state and local fire marshals, Kootenai County Planning and Building Departments, Board of County Commissioners.

When: 5 years or more

Resources: Policy decision, none needed.

PROPERTY PROTECTION

Activities undertaken by property owners.

❶ Establish a program for home owners offering an assessment of the fire safe worthiness of their property and an incentive system to use fire safe building materials and reduce fuel loads on their property.

One of the major actions that can reduce risk and property loss is the creation of a fire safe home and property. Currently, the Local Emergency Planning Committee has the ability to assist property owners in the creation of survivable space through its grant award. This needs to be a major short range goal.

Who: WUI Task Force, Fire Districts and Departments, Kootenai County Planning and Building Departments, Kootenai County Fire Coop, Student Conservation Association.

When: Immediately and ongoing.

Resources: 2002 Grant Programs, and in the future, the following programs: Wildland Urban Interface Community & Rural Fire Assistance, BLM; Economic Action, State Fire Assistance and Volunteer Assistance, USFS, RC& D

❷ Promote research and development projects such as a model program to research use of an emergency generator connected to home electric and pump systems to help reduce risk and damage from wildfire.

Various research and development programs were suggested during the planning process. These programs need field testing. Some monies need to be allocated to this process.

Who: Idaho Department of Lands, Bureau of Land Management,

University of Idaho

When: Ongoing

Resources: Agency research and development budgets, university grant programs

❶ *Publish an annual list of local contractors who build fire safe structures and/or create survivable space.*

Some property owners may want to hire contractors who specialize in the construction of fire safe homes and the creation of survivable space. This list would allow them to contact the appropriate contractors.

Who: North Idaho Build Contractors Association

When: By January 2003 and annually thereafter.

Resources: North Idaho Building Contractors Association, Insurance Companies

❷ *Sponsor an annual clean-up, fuels reduction week with incentives such as business related discounts and free pickup of waste materials.*

Fuels will continue to collect on the floors of the wildland urban interface zone even after their original clean-up. Sponsoring an annual clean-up day will encourage property owners to continue to clear their property.

Who: WUI Task Force in cooperation Kootenai County Fire Coop and local businesses.

When: Spring 2003 and annually thereafter.

Resources: Business sponsors, volunteers.

❸ *Offer individual homeowners a fuel treatment plan that reduces large pieces of wood into fireplace wood and disposes of other debris and organize a community services projects to assist elderly and handicapped homeowners reduce fuel loads on their property.*

Often fuel treatment programs dispense of the debris on a property. The property owner may be more likely to be involved if the debris can be put to use rather than discarded. Assisting homeowners who are not capable of clearing their own property helps reduce risk to neighboring properties.

Who: Community service agencies.

When: Initiate in 2002 and annual thereafter.

Resources: 2002 WUI grant programs; Student Conservation Association; Wildland Urban Interface Community & Rural Fire Assistance, BLM; Economic Action, State Fire Assistance and Volunteer Assistance, USFS

NATURAL RESOURCE PROTECTION

Activities to preserve or restore natural areas or natural functions.

① Identify “road blocks” federal agencies encounter in treating slash fuels and fuels in general.

Federal agencies must deal with a variety of environmental constraints to fuel treatment. Also, public perceptions can create confusion about treatment issues. Can some of these restraints be reduced? Are there methods to insure that environmental damage is minimal during fuel treatment activities? Can public perceptions be changed? These questions need to be explored to help make federal fuel treatment activities efficient and timely.

Who: USFS, BLM and other local land management agencies.

When: 5 years or more

Resources: Web sites, ongoing education programs, publicity.

② Encourage property owners to use grant programs to create retention facilities which can serve a dual purpose as water supplies.

As noted above, water supplies for fire fighting are critical. Having additional water supplies at the location of homes can help provide an additional resource.

Who: WUI Task Force, Kootenai County Building and Planning Departments, Fire Districts and Departments

When: Ongoing.

Resources: USDA, Natural Resource Conservation Service

①*Explore the potential of making slash and deadfall available for firewood for senior citizens and handicapped or low income residents and use good wood for lumber for charitable purposes.*

Again, making good use of debris encourages efficient clean-up and helps those not capable of clearing their property.

Who: WUI Task Force, volunteer groups, i.e., Boy Scouts and Girl Scouts

When: Immediately.

Resources: 2002 WUI grant programs, Student Conservation Association; Wildland Urban Interface Community & Rural Fire Assistance, BLM; Economic Action, State Fire Assistance and Volunteer Assistance, USFS, volunteer programs

EMERGENCY SERVICES

Measures taken to prepare for, during and after a fire to minimize its impact.

①*Maintain and activate an interagency joint information center of local, state and federal agencies during wildland fires that ensures accurate, up to date information is delivered to the public.*

Emergency service personnel noted that information that is provided to the public by different agencies involved in fire fighting is often confusing if not contradictory. Having one public information officer who coordinates all information would lead to better clarity.

Who: County Disaster Services and all local, state and federal fire agencies, Coeur d'Alene Interagency Dispatch Center.

When: Immediately

Resources: Agency budgets

①*Maintain an interagency radio link to assure effective communication and coordination between Kootenai County Disaster Services, Fire Districts and state and federal agencies.*

Effective communication between various agencies during a wildland fire is imperative. Often there are too many people on a network causing confusion and

increasing the possibility of misinformation. Maintaining an effective link is an important tool in being effective.

Who: Kootenai County Disaster Services, Fire Districts and Departments and all other government entities with wildland urban interface fire responsibilities, Kootenai County 911 and Board of County Commissioners

When: Immediately and ongoing thereafter.

Resources: Assistance to Fire Fighters Grant Program, USFA

① *Assist efforts of fire districts to coordinate a minimum standard for wildland urban interface training, have trained Public Information Officers, and maintain a sufficient number of Type III qualified personnel.*

Local fire districts struggle to recruit and train personnel. An effort to increase their training capabilities helps to improve the effectiveness of fire fighting in the wildland urban interface zone.

Who: Kootenai County Disaster Services, County Fire chiefs Association, USFS, IDL, BLM and Coeur d'Alene Interagency Dispatch Center.

When: Ongoing.

Resources: Assistance to Fire Fighters Grant Program, USFA.

① *Produce, on an ongoing basis, up-to-date hard copy and electronic county maps with evacuation routes, hospitals, road names, and current addresses and latitude and longitude.*

Property owners who must evacuate during a wildland fire or are in need of emergency services need to know where appropriate facilities are located. The purpose of these maps would help inform them in case of an emergency.

Who: Kootenai County Assessor and Mapping, Idaho Department of Lands, USFS and BLM.

When: Ongoing.

Resources: County Assessor Budget, fees for map duplication.

②Keep current and distribute evacuation plans with safety zones and information which encourages homeowners to evacuate in a timely manner.

Evacuation routes need to be predetermined to assist homeowners in case of emergencies. Delivering these evacuation plans to homeowners would assist in this.

- Who: Kootenai County Fire Coop, Local Emergency Planning Committee
- When: By 2004 and ongoing thereafter.
- Resources: Fire Districts; Kootenai County Sheriff Department; Volunteer Agencies, e.g. American Red Cross; Telephone companies; State Fire Assistance Program.

①Encourage families to designate a meeting place and phone contact during and after fire evacuation.

Maintaining contact with family members during an emergency reduces fear and anxiety. Having a known place to call or go to during the emergency helps family members know where each other are.

- Who: WUI, Kootenai County Fire Coop, state and federal agencies with wildland urban interface fire responsibilities.
- When: Ongoing
- Resources: None needed.

PUBLIC INFORMATION

Activities that advise about hazards and ways to protect people and property.

①Develop an interagency agreement to assure consistency during emergencies between information and education programs for homeowners to avoid people getting “different stories”.

During discussions about education programs, several people mentioned the information coming from different agencies was often contradictory. Creating consistency helps the learning keep facts and actions straight.

- Who: Kootenai County, Fire Districts and Departments, Idaho Department of Land, Bureau of Land Management and Forest Service.

When: Within the next 2 years.

Resources: WUI Task Force

⑤ *Purchase, install and maintain Smokey Bear Signs (high, moderate, low fire conditions) in wildland urban interface neighborhoods.*

Smokey Bear signs help inform the public about the fire danger in the wildland urban interface zone. More of them placed in strategic places would help keep everyone informed.

Who: Kootenai County Fire Coop in cooperation with USFS.

When: As requested by neighborhoods.

Resources: Business sponsorship, volunteer contributions.

① *Work with insurance companies and Realtors to publish a “Welcome to Fire Country” type pamphlet to distribute with building permit applications and residential sales agreements.*

Many migrants to Kootenai County are unaware of the potential hazards of living in the wildland urban interface zone. These materials would alert them to these hazards and assist them in finding appropriate locations for their homes.

Who: WUI Task Force

When: Within 1 year.

Resources: Insurance Companies, Kootenai County Realtors, Kootenai County Building Department.

① *Build and maintain a demonstration trailer with a good/bad example of residential building materials and survivable space.*

Demonstrating the effectiveness of appropriate building materials and survivable space can help in the education process.

Who: Kootenai County Fire Prevention Co-op

When: In 2002.

Resources: 2002 grant programs.

①Supply real estate professionals, insurance providers, and building contractors with information on wildland urban interface fire risks and hazards to assist buyers and sellers to be better informed.

Who: WUI Task Force, Kootenai County Planning and Building Departments.

When: As soon as the plan is adopted and ongoing thereafter.

Resources: Publications available from University of Idaho Extension, FEMA, USFS, and BLM along with WUI Task Force

⑤Work with local educators to establish a wildland fire component in the public schools fire education curriculum.

Current emphasis on testing and other structural curricula problems make it difficult to build fire education into public school programs. Fire prevention personnel need to work closely with the schools to help insert these programs into the normal education program.

Who: Kootenai County Fire Prevention Co-op

When: Within the next 5 years.

Resources: Broaden current education program.

①Develop an interactive internet site with a wildland urban interface fire theme for questions, comments, sign-up for home evaluations, volunteer opportunities, and targeted information for recreational home owners.

Given the extent of the use of the internet, the creation of a wildland urban interface home page would make it possible for the public to have quick access to appropriate information.

Who: Kootenai County Fire Prevention Co-op

When: Within 2 years.

Resources: Wildland Urban Interface Community & Rural Fire Assistance Program (development), annual funding from Kootenai County Fire Prevention Co-op budget, University of Idaho Extension and advertising.

①Support the efforts of the Kootenai County Fire Prevention Co-op and other agencies at the County Fair and Safety Day at Silver Lake Mall.

The purpose of this action is to help increase exposure to the problems and solutions to wildland fires. The designated locations might be a beginning to finding other venues for disseminating information.

Who: Kootenai County Board of Commissioners, Kootenai County Fire Coop, Local Emergency Planning Committee, Fair Board, Mall Management.

When: Ongoing

Resources: Kootenai County, University of Idaho Extension and other supporting agencies (e.g. IDL, BLM, USFS) budgets and educational materials.

TECHNICAL INFORMATION

General

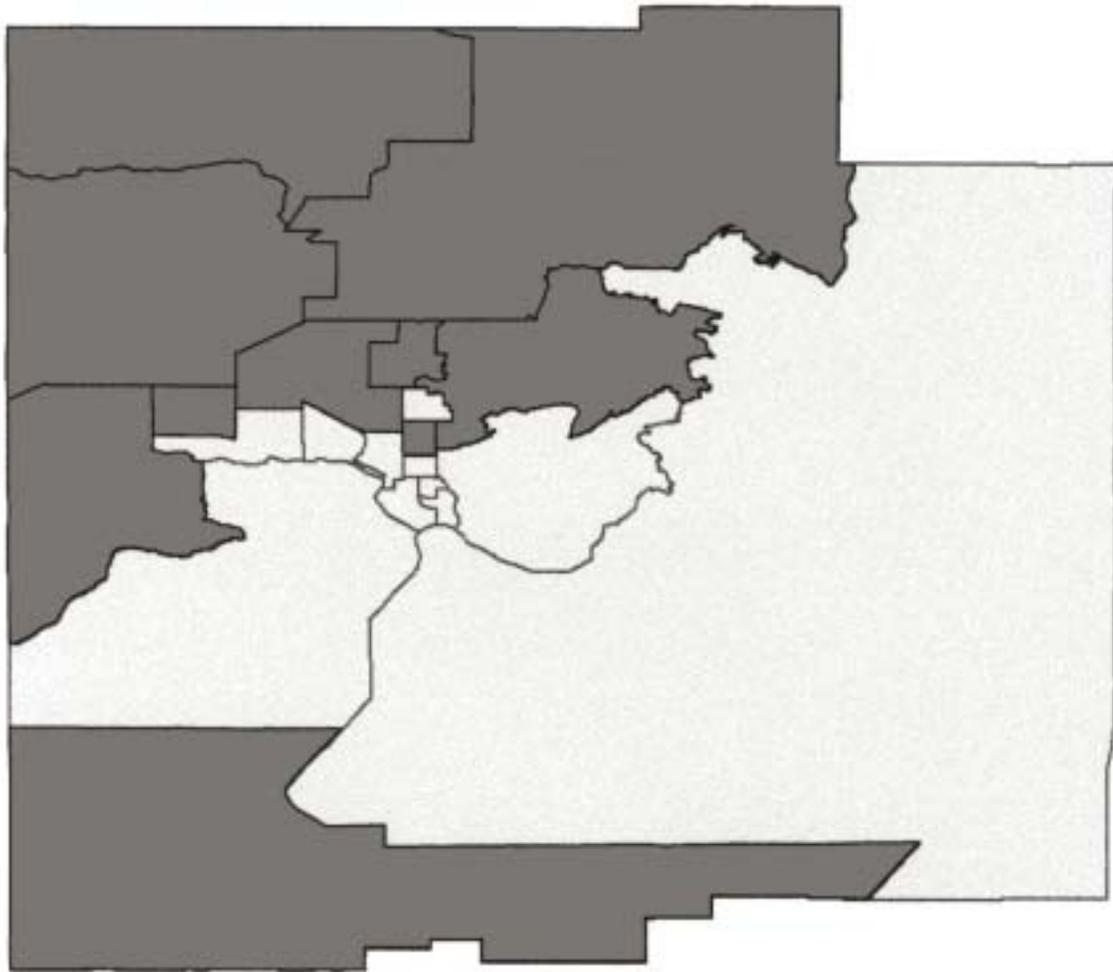
Kootenai County is in the northern panhandle of Idaho. Spokane County, Washington forms the western border of the county, Bonner County, Idaho the northern, Shoshone County the eastern, and Benewah County the southern. The county's topography is scenic and varied rising from alluvial filled valleys into steep mountainous terrain in the north and east. The Selkirk Mountains rise to 5000 feet in the northwest portion of the county. Some portions of the forested, mountainous terrain in the eastern half of the county rises to 6000 feet. The rising terrain in the northern, eastern and western portions of the county is particularly hazardous for wildfires. These areas are difficult to reach with fire fighting apparatus and can create fires with serious drafts that can carry uphill quickly.

Kootenai County's population and housing are rapidly growing. The 2000 census places the population of the county at 108,685 up from 69,795 in 1990, a 56% increase. Likewise, the number of households increased from 26,942 in 1990 to 41,308 in 2000, an increase of 53% (U. S. Census Bureau 2000). The population figures exceed those expected by the Kootenai County Planning Department which, in 1995, forecasted the 2000 population to be 102,000 (Kootenai County Board of County Commissioners 1995)

Most importantly, much of this increase is in census tracts that lie in the areas that could be considered as part of the wildland urban interface (See Figure 5). These tracts lie in the Hauser Lake, Spirit Lake and Hayden Lake areas, sites with steep terrain rising up from the lakes giving owners commanding views but placing their homes at risk. Likewise, areas to the south of the Spokane River have experienced the same level of development. While other tracts of the county may not have grown as rapidly, they have increased significantly over the past decade. The only slow growing or stable tracts are those lying in areas that were fully developed in 1990. Coupled with an ever increasing fuel load, this population and housing growth continues to place more and more people at risk.

Climate

Storms carrying from the Northern Pacific coupled with the higher terrain to the east of the county influence the climate of Kootenai County. Prevailing maritime air is lifted and cooled by the mountains producing precipitation throughout the county. Average annual precipitation can range from 25 inches in the lowlands to 70 inches in the mountains. The wettest months are November through January and the driest are June through September. Table 1 below demonstrates the monthly averages in temperature and precipitation over the past five years.



Legend

-  Greater Than Average Change
-  Slower Than Average Change

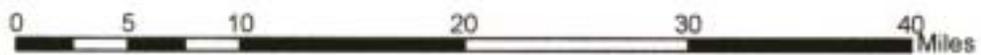


Figure 5 1990-2000 Fast Growing Census Tracts

The wet winters and springs give way to hot, dry summers and early falls. The fuel on the forest floors grows with the spring rains and then becomes more and more flammable later in the year. The wildfire season is usually in the late summer and early fall when fuels have dried and precipitation is low.

TABLE 1

MONTHLY AVERAGES 1997 - 2001			
	Maximum	Minimum	Total
	Temp.	Temp.	Precip.
MONTH	(°F)	(°F)	(in.)
January	36.8	25.8	4.2
February	41.0	27.1	2.9
March	48.5	30.9	2.3
April	55.9	35.0	2.1
May	65.6	43.6	2.6
June	71.2	49.5	1.7
July	81.8	56.0	0.9
August	84.4	56.4	0.7
September	74.8	48.4	0.9
October	58.3	38.1	2.2
November	45.9	32.2	3.3
December	36.5	26.2	3.5
Annual	58.1	38.8	26.3
Source: National Oceanic and Atmospheric Administration 2000			

Fire History

Wildfires are normally a natural ecological event that helps rejuvenate the forest by releasing seeds from pine cones or activating germination. However, as humans move into the forests to live, the risk to property and life increase and the potential for human caused fires increases. In fact, human activity is 7 times more likely to cause wildfires (see Table 2) below (U. S. Fire Administration 2000b).

The first wildland fire control program was established in 1885 (U. S. Fire Administration 2000b). Since that time the methods of control have varied from complete suppression to allowing some wildfires to burn as part of the natural forces. The changes in policy through the years have been a direct result of the variation in risk associated with humans living or recreating in these wildlands. Questions rise over two basic areas: suppression and reduction of fuels. Should homeowners be required to create survivable space and build with survivable materials or should fire fighters be required to attack fires in dangerous locations to save homes? Should fuels be reduced by controlled

burns or mechanical means? These questions lie at the core of the development of any wildland urban interface fire mitigation plan.

Table 2

10-Year National Average of Wildland Fire Causes (1988-97)

	Human Cause	Lightning Cause
Number of Fires	102,694	13,879
Percent of Fires	88	12
Acres Burned	1,942,106	2,110,810
Percentage of Acreage	48	52

Source: U. S. Fire Administration 2000b.

The Big Blowup of 1910

Historically, there have been three major wildland fires in North Idaho since European settlement. The first of these is the Big Blowup in August 1910 documented in Stephen Pyne’s *Year of the Fires*. As Pyne notes, 1910 was a bad fire year across the country, but the fire in Northeastern Idaho and Western Montana was perhaps the most disastrous (Pyne 2001). More than 3,000,000 acres burned and 88 people died. Although the fire was primarily in adjoining Shoshone County, some acreage in Kootenai County was also involved. The City of Wallace was partially destroyed during this fire.

A dry spring and summer followed a normal winter in 1910. July was intensely hot with dry southwest winds (House 1996). On August 20, these southwest winds reached gale force resulting in a numerous small fires, both human and lightning created, fanned into one of the worst wildfires in the history of the country. It was during this fire that forest service employee Ed Pulaski saved the lives of many of his crew. He subsequently invented the wildland firefighter’s primary tool, the Pulaski.

The Sundance Fire

1967 was one of the worst fire seasons on record with 59 days of very high or extreme fire danger. National forests were closed until September 11 (House 1996). Lightning started fires throughout the summer. For example, on July 12 there were 131 fires and 818 throughout August. Several fires began on Sundance Mountain near Coolin and Priest Lake at the end of August. Northeast winds began to blow at 60 miles per hour. Humidity was less than 35%. The winds then quickly shifted from the southwest and the fire on the mountain made a big run on September 1 consuming over 56,000 acres in a single day and night. Although this fire presented an enormous risk, property damage was not equivalent to the 1910 fire.

Firestorm 1991

A dry and warm summer and early fall helped set the stage for a fire in mid-October near Hauser Lake. By October 15, there had been no rain for 42 days (House 1996). Several small fires caused by downed power lines were fanned into a firestorm on the 16th. Neighboring Spokane County suffered the most damage with 92 wildfires consuming 35,000 acres and causing 2 deaths and \$15 million in damage. (Barker 1996).

2000 Wildland Fire Season

The 2000 wildland fire season was the worst since 1910 (U. S. Fire Administration 2000a). 15 firefighters were killed. 7 million acres were burned and losses exceeded \$10 billion dollars. Total suppression costs for all federal agencies in 2000 were \$1,362,367,000, 4 times the average over the previous 7 years (National Interagency Fire Center 2002). Over 2 million of these acres were located in Central Idaho and Western Montana. At a western governors' meeting, the governors and Clinton administration officials agreed to lobby Congress for \$2.8 billion for fire prevention. Thus, wildland fire prevention became a national priority. Included in these budgets were monies for prescribed burns as well as mechanical fuel treatment.

Recent Kootenai County Fire Statistics

The National Fire Incident Reporting System compiles information on types of fires by fire district. Table 3 below indicates the number of vegetation fires and forest or wildland fires from 1996 to those that have occurred until the time of this report in 2002. Note that forest or wildland were not carried separately from 1996 to 1999. Also, there may have been only one department reporting in the new version of the system in 1999. Although early years would indicate an ever increasing number of fires, the past three years suggest stabilization. Lightning causes 70% of the wildfires in the National Forest. Humans cause 70% of the wildfires in the wildland urban interface zone (Kootenai County 2001).

Table 3

**FOREST/WILDLAND AND VEGETATIVE FIRES IN
KOOTENAI COUNTY 1996-2002**

Year	Vegetative Fire	Forest/Wildland Fire
1996	180	
1997	181	
1998	224	
1999	266	6
2000	161	21
2001	239	19
2002	11	3

Source: National Fire Incident Reporting System

Fire District Assessments and District Capabilities

During the planning process fire chiefs of all of the fire districts servicing Kootenai County were interviewed and asked to describe the problems they perceived in the wildland urban interface. They also suggested possible solutions many of which were used in the construction of the action plan. They identified possible potential hazards in their district and located them on a map. Finally, they summarized the capabilities of their districts in fighting wildland urban interface fires and listed their apparatus and equipment. Specific remarks are contained in Appendix B. Locations and types of hazards are described in Appendix C. The following is a summary of the problems identified by these fire chiefs.

Lack of adequate access to properties was the most frequently mentioned problem. First, nearly all private and some public roads provided only one means of access to structures in the wildland urban interface zone. In addition, many of these roads were not well maintained and substandard in width. Others were gated making them completely inaccessible.

Lack of adequate water supply was the next most frequent problem. Water systems were fragmented. Water supply on individual properties provided little support for fire suppression.

Another cluster of problems related to the density and location of land development. Subdivisions and individual homes were being built on steep slopes next to the county's lakes and on the hillsides with commanding views without thought to creating survivable space. The density of this development had also increased placing more homes and people at risk.

Public awareness of risk and ways to management this risk was weak. Very few homeowners took advantage of creating survivable space adjacent to their homes or used non-flammable building materials in the creation of these homes. Some form of concerted public education was needed to inform these folks of the danger.

Open burning, including parties and keggers, created potential ignition points for fires.

Finally, fuel treatment is a major problem. The 1996 Ice Storm increased the amount of dead fall as well as major tree diseases. However, homeowners were not clearing their properties and, thus, increasing the potential for wildfires.

Fuels

Wildfire depends upon vegetative fuels. This mix of native vegetation and the changes in that vegetation due to human activity create the resources for possible wildfire. Types of forest and grasslands vegetation have been classified into various fuel models. Anderson (1982) describes four major groups: grass and grass-dominated, chaparral and shrub

fields, timber litter and slash. These are further divided to create 13 different categories based on the characteristics in each group. Obviously, as the amount or height of each increases the potential for intensive fire rises. Of particular concern is when ground fuels burn intensively enough to ignite ladder fuels that help carry the fire upwards from the ground to the taller trees setting off the potential for a crown fire where the fire can spread rapidly through the forest given the intensity of the wind and other climatic conditions.

The fuel composition in Kootenai County is mixed varying from grasslands in the south and southwest to large timber stands in the Eastern half of the county. These vegetative types are represented in an ArcView map provided with the plan with each type identified and the representative fuel type noted and defined in Appendix D. Figure 6 is an overview of this map with the shaded areas representing various vegetation types representing over 70 types of vegetation. The variation in shading represents various types of vegetation and not the fuel model. Thus, light and dark are not indicative of potential for fire.

In those areas most prone to wildfires, human activity has changed the nature of the fuels in the region. Logging and disease have reduced the number of fire-tolerant species increasing the probability of wildfire. In addition, fire suppression has increased the amount of ground and ladder fuels within the region (Jerome 2001, 3). Utilizing ArcInfo and models of fire behavior, Jerome developed a fuel hazard model for the Coeur d'Alene River Ranger District of the Idaho Panhandle National Forest. Figure 7 is map of this region which includes Kootenai County. Fuel hazards in the county range from low to very high with the low hazard areas confined to the grassland prairies in the southwest and northwest. Higher risk areas are concentrated in the upland areas and along steep slopes next to the lakes and rivers of the county. Jerome warns that, given the scale of this study, it should not be used for site specific analysis but can be an aid in determining overall policy.

Risk Assessment

The accumulation of fuels in the forests of Kootenai County poses risks to those who inhabit the wildland urban interface zone. There are risks to resources as well, i.e., wildlife habitat, water, and timber resources. However, the focus of this plan is to reduce risk to people and homes. The following discusses several assessments of risks to property and life in the county: the National Fire Plan, the fire chiefs' and agency assessments, a U. S. Forest Service assessment, and the Jerome study noted in the previous section.

National Fire Plan

The National Fire Plan (www.fireplan.gov) identifies all of the major communities in Kootenai County as at risk communities. The risk was assessed by the cumulative information from those federal agencies dealing with wildland fire hazards. It

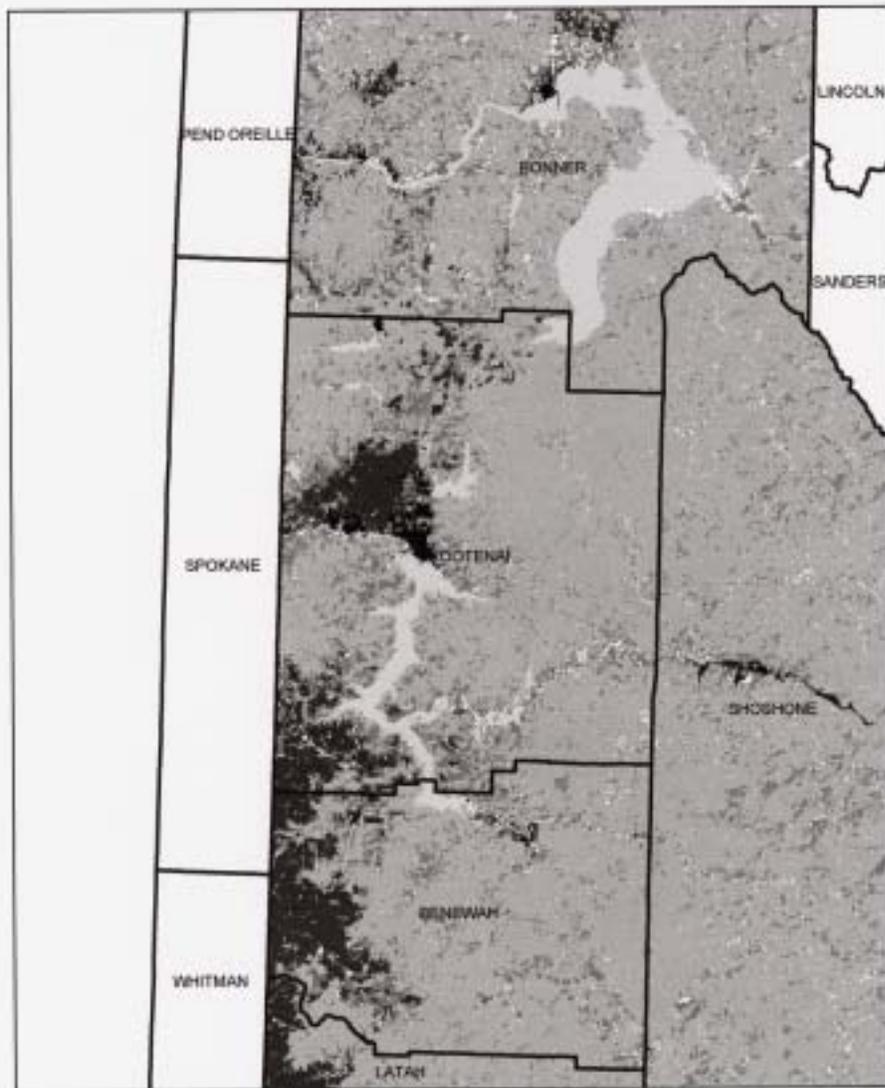


Figure 6 Fuel Vegetation Types



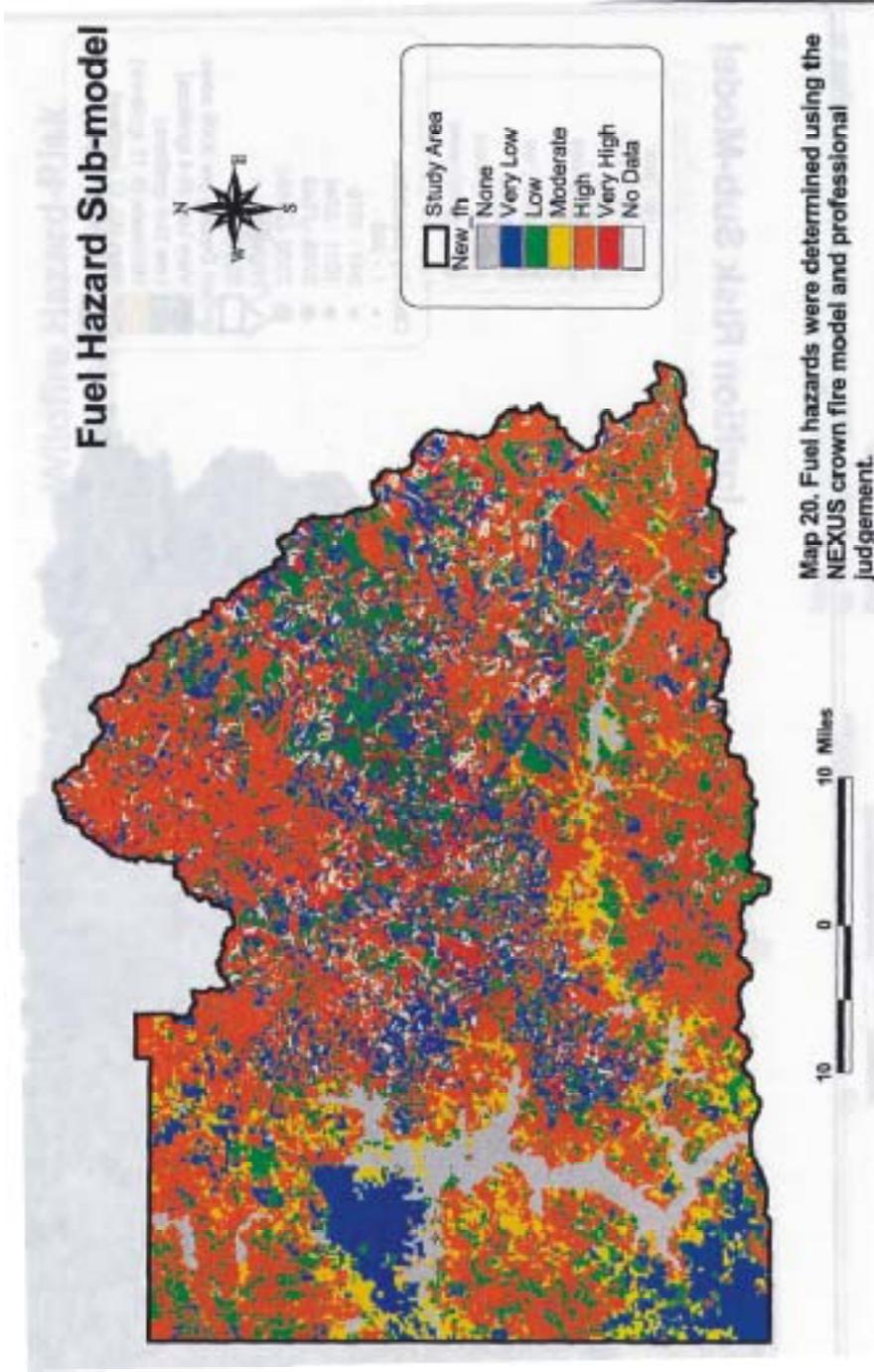


Figure 7 Fuel Hazards from Jerome (2001) by Permission of Author

is this fire plan that helps set the stage for providing for funds for hazardous fuels treatment in which the county is now participating. Although this is a broad brush stroke of assessment, it provides evidence that the county does, in deed. have a serious wildfire risk and that there is a threat to property and person.

U. S. Forest Service Risk Assessment

The U. S. Forest Service risk assessment was provided by their GIS laboratory in Kalispell, Montana. Figure 8 represents a portion of larger risk map generated by assessing several factors. The first of these included an assessment of the potential for fire within the region. Using the 2000 census data and estimating where people might live within each census tract, the Forest Service created a grid map allocating people and housing to locations within these tracts. This grid was then placed over the potentially dangerous crown fire zones to produce a map that assesses the risk to the population of the region.

The darkest areas of the map indicate the highest risk. Thus, although much of the eastern portion of the county north of Interstate 90 is in forest land, there are few inhabitants in this area and the risk is low. However, the risk is greater in the lower elevations nearest developing areas. This coincides with those census tracts that have seen the greatest growth over the last decade. These are also the areas most prone to ignitions caused by people rather than lightning. In addition, those areas of the county adjacent to the lakes and rivers are also at risk. These are places that are very attractive to people looking for recreational as well as permanent homes but are potentially hazardous due to the vegetation and steep slopes adjacent to these bodies of water.

Jerome Study

As noted in the fuels section above, Jerome studied wildfire risk within the region. Although the study covers the Coeur d'Alene River Ranger District of the Idaho Panhandle National Forests, it includes Kootenai County. Thus, while it is not possible to utilize statistics from this study, the map of human structures at risk resembles the larger Forest Service study. See Figure 9. The study indicates that most of the county is contained within high or very high risk zones particularly the lower altitude areas where development has occurred at a rapid pace over the last decade and along the water's edge.

Again as with the Forest Service study, much of this risk is predicated on the location of structures within the wildland urban interface area. The county has GIS records of the location of structures that was a major factor in the study. This structural location information is available in ArcView and is located on the county's ftp site (<ftp://ftp.co.kootenai.id.us>) and is included in the compact disk of maps included with this plan. The Jerome study maps were not available in ArcView but might be obtainable by contacting the author.

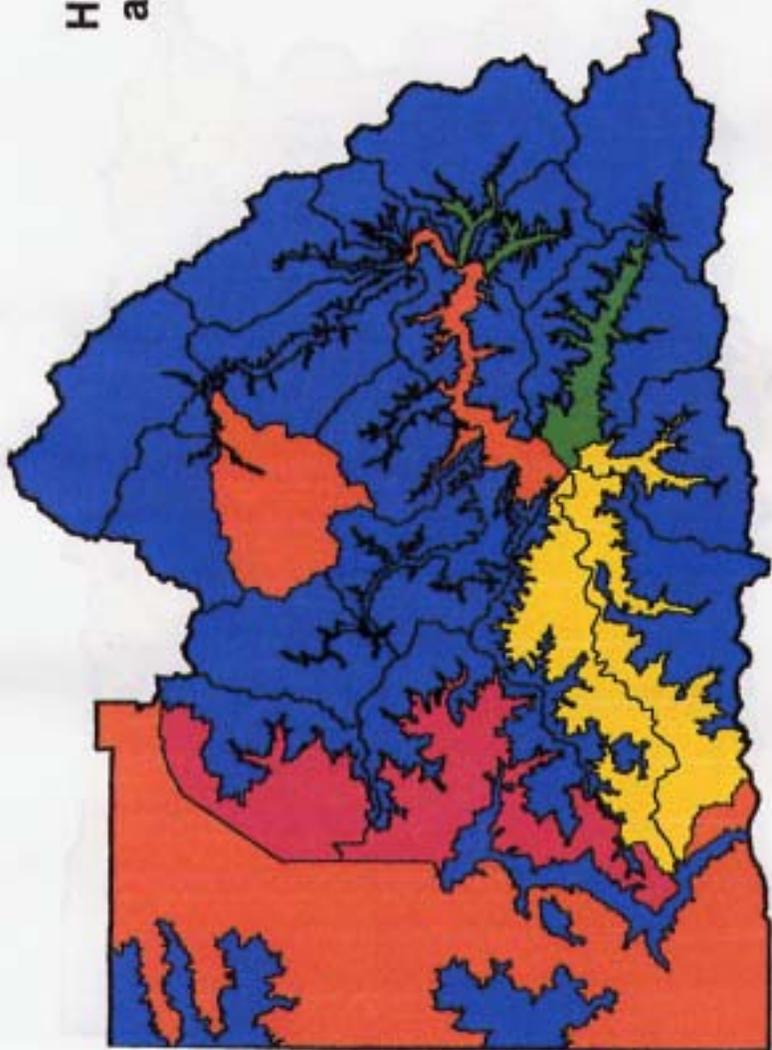
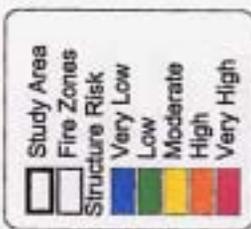
Fire Chiefs' and Local Agency Assessments

As noted previously, interviews were conducted with the chiefs of the local fire districts and departments. During these interviews each was asked to identify specific hazards within their operational areas. Specific information on each site or sites is contained in Appendix C. These sites were identified by longitude and latitude on a GIS mapping system other than ArcView. The results are contained on the disks provided with the plan. Figure 10 represents a portion of the larger map zoomed to show the type information and is a general example of local district concerns: homes on steep slopes, inaccessible lake fronts and general home development in other inaccessible areas deep into the wildland urban interface. The chiefs also expressed concern about development in lowland areas in the northern portions of the county. Since the interface zone is very close to potential hazards in upland areas, a serious wildfire coupled with winds could spread easily to the more urbanized areas at lower elevations and on the valley floors where intense urbanization has occurred over the last decade. The Hauser Lake fire was a good indication of this potential.

Summary and Conclusions

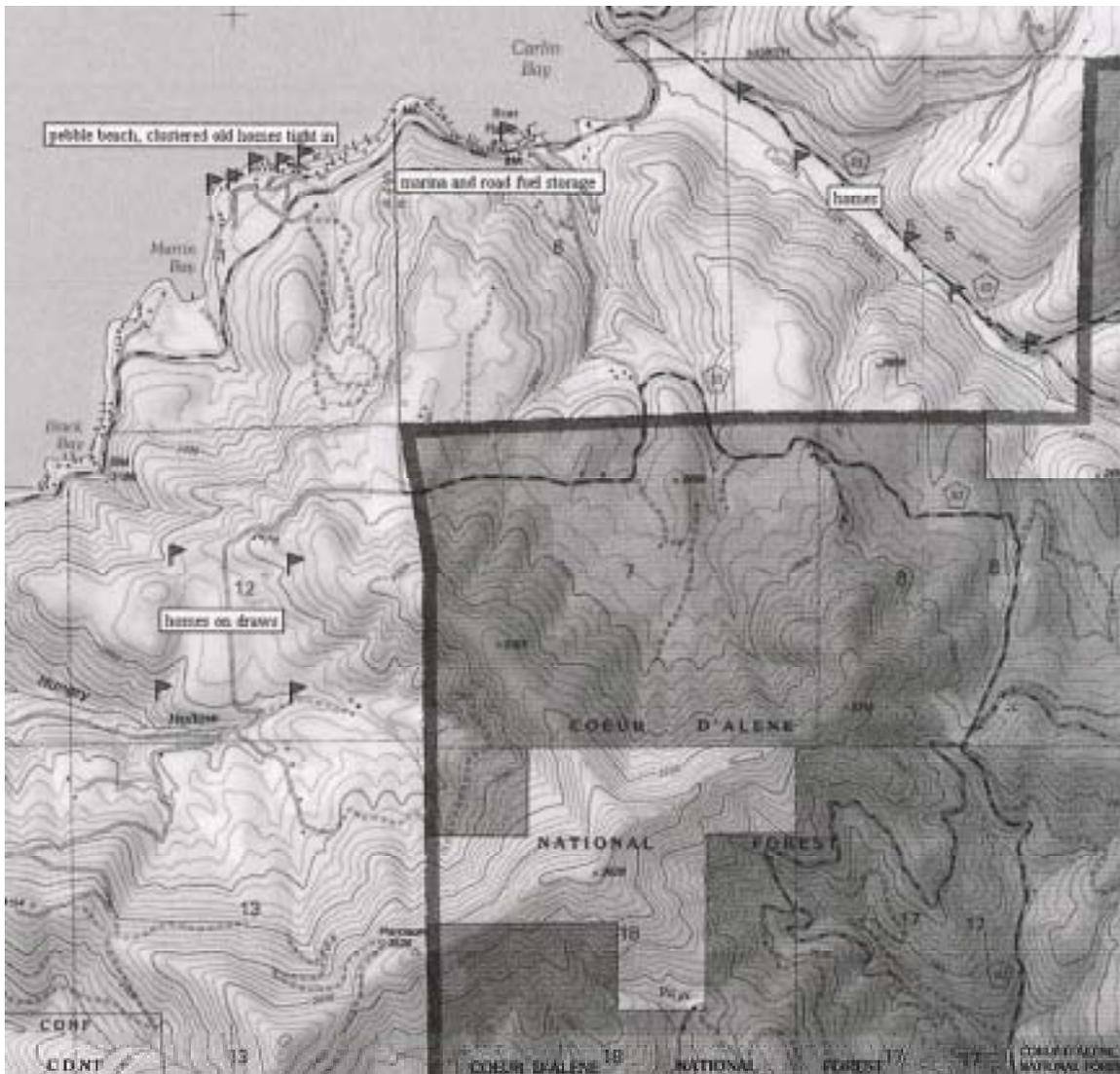
All these assessments indicate that the potential for severe losses due to a potential wildfire is significant throughout much of the county. Most of the locations for these wildfires are located where the ignition sources are human rather than natural. Thus, with ever increasing urban development, the potential for losses increases as well. Emphasis on fuel reduction can help reduce the hazard, but continued efforts to restrict development and increase standards for building and encouraging property owners to create survivable space in the wildland urban interface can also be effective in reducing disastrous losses.

Human Structures at Risk to Wildfire



Map 22. A coverage of human structure density on forested lands was combined with the wildfire hazard-risk model to estimate the risk to structures from uncontrolled wildfire.

Figure 9 Structures at Risk (Jerome 2001) by Permission of Author



N

Figure 10 Portion of Fire Chiefs' Map
No Scale

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APPENDIX A COMMUNITY PARTICIPATION

The Kootenai County Wildland Urban Interface Fire Mitigation Task Force established a citizen participation program at the beginning of the wildland urban interface fire mitigation planning process. The purpose of this program was to offer ample opportunities for citizens and businesses to make contributions throughout the planning process. Four specific methods were selected to carry out the program: a handout and comment sheet “You Too Can Help Prevent Wildfire Damage”; a series of eight workshops held throughout the county; an informal survey called “Welcome to Fire Country”; and two interactive displays, one conducted at the March Home and Garden Show at the Kootenai County Fairground and one conducted at the Silver Lake Mall. The data below represents the results of these activities.

“You Too Can Help Prevent Wildfire Damage” Handout

The “You Too Can Help Prevent Wildfire Damage” is a handout which has wildland urban interface fire facts on one side and a comment section on the other. The comment handout was distributed throughout the county by Committee members and Fire Districts. People were asked to list their most important issues concerning wildfire management or write comments, draw or sketch anything else they wanted to say about wildfire in the wildland urban interface areas of Kootenai County.

The following statements were received from citizens, businesses and agencies that completed and returned the comment portion of the handout. Comments are recorded exactly as written thus they may contain spelling and grammatical errors. Please note one exception, negative references to specific individuals or businesses have been deleted to respect privacy.

- During building permit process include informational material concerning fire safety, vegetation, etc.

- 1. Proper address & mark driveways. 2. Downed trees. 3. Proper maps & road signs.

- My impression of much of the individual damage that occurs during wildfires is due to unaccessible residential structures. Wildfires are a natural occurrence in all wooded areas. The increased human activity greatly effects the rate of frequency & the amount of damage caused by wildfires. Greatly reduced & restricted development on the fringes of Kootenai Co specifically to reduce the need for heroic, life-saving efforts to limit the damage to human artifacts during a perfectly natural occurrence.

- Public education. College/school visits (software development.) Bldg contractor education.
- Set up fund @ county level to give homeowners one time “tax relief” (property) for taking measurable actions on property.
- Increased public awareness as to the need to maintain property, ie proper clearance of brush and trees. And as a last resort, some sort of annual requirement to maintain property - with a warning system if there is non-compliance. (And at the very last - contractor hiring to complete the prevention process). Its important to make us aware of lack of maintenance not only effects the individual property exposure to wildfire but everyone else as well. Although we resist more government control, this is an issue that truly impacts the community as a whole. Prevention should be the first & best step to stopping wildfires.
- Increase the foundation height for houses and out buildings and deck supports. Talk with insurance agency's to participate in programs with awards and if they have funds to sponsor the programs or prizes.
- Do the homeowners insurance companies offer any incentive (\$) for fire mitigation and home preparation? This would possibly motivate some action.
- I work for and represent Williams Gas Pipeline. We own and operate high pressure natural gas pipelines that cross the state of Idaho. We are always concerned about our facilities during fires and coordinate with local Emergency Response Agencies. One of our largest concerns is heavy equipment working above and around our pipelines. Our right of ways make natural fire breaks and good access routes. So we focus on educating the public and local emergency crews. If you can assist me in identifying the appropriate platform for input into your needs for this process it would be greatly appreciated.
- Encourage water districts to place water available (fire hydrants or stand pipes) at intervals along their pipelines.
- Lower insurance rates ? if address are correctly posted (with new addresses) and driveways are wide enough for emergency vehicles. (Get insurance companies involved for incentives.) Could Boy Scouts, etc. be used in community service projects such as clean up for elderly or disable persons? There are people who have to do court ordered community service could they be used in parks and such for clean up?
- I live in a small development (20 lots, .75 acres avg.). Our main problem with wildland interface is absentee owners. There are 8 homes in the area and the rest of the lots are vacant and overgrown. The best way to get the vacant lots

in better shape would be some sort of \$ incentive. This is probably an expensive approach and may be financially unfeasible. Another thing that may be effective is a fire danger survey of some sort if landowners got a report on the fire-worthiness of their lot, that might motivate them to do some clean-up.

- As station captain for Rockford Bay in the Worley Fire District I am very familiar with wildfire management issues for our area. The greatest need for wildfire management is educating and even providing homeowners with information on how to protect their property. This is ideas clearing, green zones, limbing trees etc. This is especially true for the summer residents. Many of these folks have homes that are not defensible in a major incident. We have offered meeting at the grange to help educate homeowners. Unfortunately, the only attendees were member of the Fire District. If education doesn't work perhaps offering to do the work for the homeowners would.
- 1. All public education & information materials should emphasize individual citizen responsibility. The "Government" does not always take care of you - they may assist, but it is ultimately an individuals responsibility to care for themselves & their property. 2. Create a checklist for homeowners/landowners etc. that would assist them in identifying hazards and how they could address identified problems & issues. Action step suggestions. 3. Continue to interact with agencies & organizations that are involved in similar programs to minimize duplicate efforts - build on what is already there. 4. Emphasize prevention not reaction - if you have to react - the event has already happened. 5. Educate with examples of past fires. 6. Participation in these types of efforts should emphasize that it is "the right thing to do". 7. List of suggested resources - both for prevention & then response - if something does happen.
- Addressing - many fire depts have programs. Fuel treatment along roads. Fire safe building materials - educating builders. Fire danger signs for rural neighborhoods. Fire safe landscaping information for natural settings.
- We need to get Insurance Companies to help those people get involved in doing what is needed to protect there properties. We have people moving from the cities into the rural areas and the need to receive an education in the responsibilities involved with owning a wood lot. They need to know that even though they no longer have a sidewalk that needs to be shoveled they now have land that they need to clean to help themselves and there neighbor.
- I live on Cda. lake, so my main concerns are that a fire will start then spread to several homes & timber. There is a lack of green space around many of the lake homes and many have a lot of brush along with the trees. Unfortunately

it sometimes takes a fire to wake a lot of us up to the fact that there are measures we can take to reduce our risk to a fire. Education is necessary to teach the people before something happens. Worley Fire Dist. has put on several programs on Fire Prevention in the Wildland Urban Interface. This helps but the attendance is not what it should be at these programs. Another concern of mine is fire works, especially around the 4th of July. Bottle rockets & other air borne fireworks are shot off by children who are unsupervised, also by some adults who could use some supervision. I am afraid that some day this will set off a huge fire that could change the views as well as burn houses and also endanger the lives of the property owners and fire fighters.

- Zoning ordinance requiring removal of weeds, trash, and any combustible material within 30' of any residence, accessory building, structures or property lines.
- 1. Where the timber companies log they leave too much wastage on the ground to dry out which fuels the fires. 2. I have seen slash piles burning in high wind weather. 3. Can't you hire or deputize some of the locals who love to ride in the mountain to patrol for illegal camp fires etc. and be able to issue tickets - this would also spot meth labs. 4. I have seen good logs in slash piles, why couldn't these logs be piled by the road so people looking for fireweed can get to them or bring i.e. inmates who have been assigned community service or juveniles to cut this wood up to give to the economically challenged to use for heat in the winter. 5. If the ground floor was cleaned up & old dry snags cleaned out this would help with the control. 6. eliminate the large amount of clear cutting make the timber companies log more thoughtfully - clear cutting leaves too much wastage on ground which acts like kindling.
- Fireworks. Ban Fires in the woods. Clearing of brush from railroad tracks. Cigarettes & cigars.
- I don't begin to see the answers to your dilemma. Fire truly caused by nature can't be stopped, and so-called thinning the trees just leaves an abundance of drying branches and small cut trees to fuel future fires more so than green trees left in place. Educating the public doesn't seem to be the answer for those among us who are careless or uncaring can see the results of TV of fires burning, lives possible lost and the devastation left behind. Too many of the people today are too selfish to change their habits if it's not their own personal property involved.
- I find it a little strange that this lightning that causes 70% of the forest fires in National Forests appears more times than not to hit the inaccessible areas with the big trees. If I really believed this I would consider myself a follower and

not a self-thinker. How convenient for these private logging companies out there that us taxpayers build them roads in for their sole profit to log our fallen trees. Is this akin to the ice storm where you quickly grab all the good trees you can, leaving behind a mess of fallen trees and slash piles as future fuel? Maybe if the laws were changed to leave the forest as is after a fire the tax payers would end up with more money, a larger area of good trees standing, as well as no additional roads where trespassers could build threatening camp fires during dry seasons, since once the loggers have finished their demolition there is no chain across a road that will keep all people out. Why bother logging once the fire is out? There is more damage and cost to the taxpayer that doesn't benefit - only a private company or two, probably a few legislatures, and/or maybe a few Forest Service secret payoffs. After all, a perfect example is what has been done to forest lands around the lake and as a taxpayer I don't remember voting they should do away with my forest land at a cost to me for every tree cut. How stupid of me that I thought National Forests were set aside for the people to enjoy and didn't know I only got to enjoy them until the trees got big enough for the fires and greed to take over.

- In seems to be a coincidence, but more forest fires at a time when big trees are getting scarcer and the logging companies are beginning to see the future handwriting on the wall? Ever watch them racing back and forth with their loads on 97 or I-90? They can't get those trees quick enough. Sure you have kooks out there, and it's a fact lightning strikes, but why the appearance of so much more in national forests than private land forests?
- 1. Need to provide a cadre of people to help the public understand all the options they have to treat fuels on their property. (ie can reduce fuels but still have a variety of wildlife) 2. Provide plans for long term maintenance of fuels reduction programs. 3. Develop fire plans, escape routes, water sources, inform people of weeks and how fire fighters will be able to respond and needed changes to better response. 4. Provide \$ to provide water sources ie farm ponds. Coordinate with Soil Conservation Service on this. 5. maintain option for local burning and fuel treatment during wet periods. 6. Provide examples so people can see what a safer area like.
- Part of your answer might be pressure to do away with legislative stall (and payola?) and quick action regarding current and future National Forest logging practices, to be supervised by a non-political board, and to include strict penalties for payoffs for all this indiscriminate logging going on both before and after fires, to include a clause banning their jackpot logging in burned areas. These forests will grow back without the necessity of careless and disruptive abuse to the rest of the surrounding trees. this needs to be done prior to total National Forest depletion by the kooks, the careless, and mostly the greedy logging companies and out "honest" elected officials. After all, among other things we all know or should have observed, besides the

financial benefits of a very few those most benefiting by our stupidity in logging are foreign countries who get the better wood, while the junk stays here.

- At the rate of greed these loggers and forest service personnel are depleting our resources, not only will my grandchildren have to say “What is a forest?” and to look in a book to see one, but you won’t have to worry about fires in the forests because THERE AIN’T GOING TO BE NONE.
- While dry season dictates a ban on campfires in all but designated areas, and even last summer completely banned for a period of time, why were chain saws and logging equipment operating during these times, whether it was on public or private land? Do they hold so much power their sparks couldn’t start a fire?
- You have to start at the top and work down, showing good examples along the way. So why plan as a select few continue to do as they please why not everybody else? You might as well close up shop, go home and save us taxpayers of the cost of your grant money. No matter how hard you plan and how good your ideas and intentions, the big and powerful dance to their own tune.
- The vast majority of wildfires are caused by human activity. One need only to take a walk in the woods anytime of the year and encounter people logging in and out of protected areas, hunting and fishing partys with camp fire blazing, off road vehicles roaring up and down restricted trails and roads to clearly see what contributes to and causes most of the fires that devastate our wildland and protected areas.
- The best immediate solution to this problem would be to levy heavy and stiff fines and penalties for all those who violate the rules by conducting illegal activities in restricted and protected areas and even heavier fines and penalties for those who cause damage to these same areas. This would bring in revenue to hire more personnel to police and manage these wildlife areas and send a strong message that our wildlands and protected areas are not to be violated and harmed by illegal and destructive activities.
- Man causes many of the forest fires: camp fires not watched, cigarette butts flicked into dry brush, sparks from machinery and motorcycles. Solution: post signs, stiffer sentences and fines, hiring more people to police area.
- Management of one’s own home should be left to the individual - it is their responsibility! (re: chimneys). Perhaps charging certain fees for the need for fire extinguishing services for negligence i.e. burns, chimney, campfires/bar fires. Cost per acre per forest Svc lands is an invalid figure in determining

wildfire management. People involved w/process get paid when fires burn. They have an added incentive to allow “extra” burning to occur. I’ve heard stories to support my belief that this occurs. Fire fighting equipment is a real plus as long as funds are also available to utilize/run equipment. I do not support any tax increases for these activities. Smart people cannot stop stupid people from doing stupid things, but they can be prepared to respond to some things.

- Absolutely oppose any gov’t requirements on new construction or maintaining chimneys, there are already too many over-priced, gov’t imposed “solutions” that treat people like little kids to be “protected”. Ban all slash burns in springtime. Fire can go into ground through roots and resurface during hot dry season creating a major burn. Slash should be burned in fall/early winter only. No logging or poor logging creates a lot of forest debris w/beetle kill, blow-downs, slash and underbrush creating a bigger fire danger. Proper forest management is needed. Creating fire brakes around certain areas of private property/properties to prevent spread of fire or negative impact from poorly managed neighboring properties.
- The County should be divided into geographic sectors. Risk evaluations should be conducted in each sector and the high risk areas need to be identified. (Private and public land should be included) Risk factors: If fire what are possible loses/damage. What equipment and other resources are needed to mitigate the risk if fire occurs? Immediate Response. Secondary Response Needs. What obstacles or hazardous exist within each risk area? Access - Roads - Winter access - Water Supplies - Natural Obstacles, etc. After risk areas are identified pre-planning is a must to address problems. What equipment and resources are currently available? Where should the equipment and resources be housed for best responses. What are additional equipment and resource needs? Ideal. Minimum. How to achieve at least minimum standards. (Grants - Taxes - etc.) Timelines to resolve problems and who is responsible. Public contact in high risk areas with public officials and one on one with private owners. (Not just pamphlets and flyers) The program should address what is needed and how to achieve it and where can assistance be obtained. (It be improved access - development of water supplies - brush clearing - etc.) Stricter controls on big slash burns and a more watchful eye on burn permits for small normal burns.
- Clean up flammable debris in woods. Increase number of pumping stations. Get rid of trees by power lines.
- My major concern is the substantial amount of open woodland that is in very inaccessible terrain making firefighting difficult or impossible. This directly affects me as the land behind my home falls into this category. If there was a woodland fire, it would be difficult to fight because there are no roads and the

terrain makes off road driving impossible. It appears to me that the only viable way to fight this type of fire is through air tankers. This also has the advantage of being able to stop these fires before they get out of control. I don't know what the availability of this type of aircraft is, but it would be worth looking into on a contractual basis with a private concern that has this type of aircraft for other purposes or some kind of multi-jurisdictional purchase or contract, as this is obviously a very large capital outlay and significant upkeep expense.

- Problem 1: Heavy fuel loads in the woods due to poor logging practices and ice storm damage. Solution: Have landowners, loggers or possible grant personnel clean up the woods on their properties starting closest to structures and working away. South facing (drier) hillsides would be the priority.
- Problem 2: Power lines through wooded properties where easement aren't maintained. Solution: Power companies are responsible to maintain their easement to prevent trees and limbs from falling on wires, bringing them down then starting fires (Fire Storm 1990).
- Problem 3: Landowners burning slash on dry and/or windy days. Solution: Education, including information on permits. Fines for firefighting resources needed to extinguish someone's foolishness.
- Problem 4: lack of firefighters in the area late in the summer due to many reasons. Solution: Hire more firefighters locally. During the off-fire season, they could be used to help solve Problem 1 or prevention activities.
- Problem 5: Poor wildland road access for firefighting apparatus. Solution: Fire districts should require better roads to structures and key areas and have access to them.
- Problem 6: Lack of water supply in the upper reaches of Mica-Kidd Island area. Solution: Incentives for landowners to build usable ponds, tanks or reservoirs to supply water for fire protection. More hydrants in subdivisions.
- Problem 7: Mica-Kidd Island Fire District has old fire apparatus. Solution: Replacements are being worked on, but this is a slow process. Grant money is available and would be most helpful.

- Perhaps assistance could be provided for senior citizens to remove fallen trees and clean forest debris around their homes.

- It is my opinion as a homeowner & forest property owner in a wildland urban interface (probably borders USDA-Forest Service) that the best way to work with property/homeowners is through a combination of education and incentives.
- Education
- Experts should work closely with interested individual homeowners to develop site specific plans. I envision this process as similar to the development of a forestry management plan. In fact, the fire management plan should be integrated with forestry management & other plans that have

been developed for the property. When the Fire Management Plan is complete the homeowner should receive a written plan with recommendations specific to the property. The homeowner receives an education by participating with the expert in the development of the plan and has the written plan to review at a later time.

- Incentives
- The development of a fire management plan with the homeowner is in itself an incentive. If additional dollars are available the implementing agency can offer additional incentives to the homeowners to implement the plans, portions of them or other fire mitigation measures. Incentives include cost sharing, payments for satisfactorily implementing plan, continued involvement of experts, and/or other mechanisms to help landowners defray the costs associated with implementing fire mitigation measures.
- Thanks for the opportunity to comment.

- Contract Mont./Bitterroot local area police & fire depts. & their reaction to the fires. -What could be done differently? -What was done right? -What plans should already to in place?
- More ideas from homeowners.
- Local emergency shelters, cots, basic food. -Public know where shelter is. KMC ready - burns, shock, respiratory problems. trauma teams?
- Rural citizens -escape access - ph 3's - maps for F.D. locating homes? -fire breaks -ground fuels clean ups.
- Known areas for Fire Crew base camps.
- Flyers mailed to rural citizens w/info in case of a fire - what to do, where to go & of course prevention.

- I live in rural Kootenai County in a wooded area. I would like to make my 8 acres reasonably Firesafe. Education would be of formost interest to me. Ideally, an on-site assessments would be nice to help understand what steps we could take to make the property more firesafe. Videos, handout county fair booths, etc. would all be helpful but an on-site evaluation either free or at-cost would be most useful. A list of Agencies or private contractors that were approved by some "Fire Authority" would also be helpful.
- I think homeowners want to do the "right" thing when it comes to wild fires. Often, we are just not educated to accomplish that.
- Another possible education issue might be the establishment of gravity feed, non-potable water storage for fire fighting rural fires.

- Down fall from clearing 92-93 and current snowfall damage. Standing dead snags (beetle & root damaged) Need mobil water tender. Generator for Pump House (In case electricity is turned off or goes off)

- This form asks me what I can do to help. As an Independent Logging contractor I feel I am a minimal issue as to cause of fire. I am frequently

called upon to help if a fire occurs, however. I feel the funding and granting could be best directed toward empowering and training my employees to assist whenever a crisis occurs.

- The minimum that should be afforded the timber producers would be equipment (checked out from the DOL at the beginning of the fire season) to actually equip the people who most likely are already in the field. Examples of such equipment might be backpack pump extinguishers, minimal first aid (for use @ events only) and pulaski and or Mcl ? systems. The equipment would be marked as property of the DOL and listed as to whomever has it. So equipped and in the filed I feel these timber workers might help out quite a bit. Additionally if actually called to a crisis they might form part of a core of early response.

- I have a wonderful Keep Idaho Green song that I wrote. Mae Connor, 1966 Blanchard Elk Rd, Blanchard, Id 83807.

- Timber Contractor & owner. To do: Grant money to private landowners who must use it for mitigation of fuels presently in overabundance. Money available by application through Soil Conservation, Grange or via DOL/BLM. Any amounts would help. It is evident that much of the fire issue will exist on non-timbered ground, yet these are vector sites for fire to move from timber to timber. Somehow the grant \$ could be early enough to help yet earmarked to be used either way.

- I feel any funding, grants or money available to address fire in Rural areas of Kootenai County should be used to off set the expense of dealing with the long-lasting impact of Ice Storms several years ago. Some areas are clearly in need of cleaning or they will be the hardest to deal with if fire occurs. Landowners can't afford cleanup expenses, often and only proactive help for them will make a difference. Area power companies can advise the DOL and land owner of parcels in especially dangerous condition. A group could regulate the money the cleanup would justify. Thanks.

Community Sub-Area Problem Workshops

The purpose of the first set of community workshops was to provide an opportunity for citizens to identify wildland urban interface fire problems and suggest solutions to those problems. The data below is recorded as presented by people attending the workshops and represents their viewpoints on problems and solutions. Workshops were held from 7 to 9 pm at the following four locations:

Tuesday, February 5	Wednesday, February 6
Southwest Area	Northwest Area
Coeur d'Alene Casino	Lakeland High School

Tuesday, February 12
Southeast Area
East Side Fire Station

Wednesday, February 13
North East Area
Northern Lakes Fire Station

Wildland Urban Interface Fire Problems

Southwest Area

- Brush growing next to homes.
- Standing dead trees.
- Absentee landowners; brush piles up, is not clean up and don't seem to care.
- Left overs from Ice Storm.
- Road access for fire trucks.
- Car accidents can lead to wildfire.
- May have impact of Black Rock Development (developer is building a Fire Station).
- Maintenance on older small homes for sale that are not selling.
- 2nd home folks expect more resources than are available - don't want responsibility for solving problems.
- Weed problems, especially thistle, due to lack of maintenance of areas cleaned up.

Northwest Area

- Lack of a system to know which homes have defensible space (reverse and make action step, can be on GIS system, registered house)
- Insurance companies do not provide incentive for defensible space and best management construction practices.
- No sense of urgency from home owners.
- Regulations on outside fires too loose.
- Research into "outside" opinions, e.g. outside information "lesson learned", don't be repetitious doing same things.
- Bigger pool of management teams available ASAP for Type 3 incidents.
- Need for more local folks to be trained.
- Need more volunteers.
- Barriers by agencies: contractors are not allowed to participation in training.
- All positions, EOC (Emergency Operations Center), lacking a full staff of qualified people.
- People are not taking a "pro-active" approach to protecting their homes.
- Communications for emergency services, not all on same network including Fire districts, difficult to communicate initially.
- Lack of Public Information Officers (PIO's) in area, need trained PIO's during incident.

Southeast Area

- Majority of folks say gov't (Fed) not taking care of problems on public land; roads, clean up.
- Use of roads, especially at hunting season.
- Summer folks not as concerned as year folks.
- No communication between fire personnel and citizens.
- Getting water to the fire, accessibility to the lake.
- Checker board ownership patterns.
- People from out of state don't know if they are in Fire District.
- Individual fire plans for property owners.
- Getting to folks/ how to communicate during wildfire incident.
- Address grass and brush land fires.
- Slash burning on public lands? What is the right time to burn.

Northeast Area

- Interagency communication improvements.
- Often people don't notice problems.
- Long term consideration, do it now, people will forget.
- Interagency cooperation, training/field practice, how often is it done.
- Public hasn't been utilized as much as anticipated - student project.
- Folks think they are protected but really aren't.
- Example, Florida people understand 'proscribed fires' as opposed to this area.
- Focus on grass burning, people are so anti smoke complicated other burning issues.
- Influx of people.
- Areas without water.
- Fuel loading, some neighborhood clean up some don't.
- View lots at top of slope.
- Accessing some areas, narrow drives 1 way in 1 way out.
- Some folks don't want to be bothered.

Wildland Urban Interface Fire Solutions

Southwest Area

- Responsibility for carrying out the Fire Mitigation Plan is done by Fire Districts.
- Require burn permits at all times.
- Call in when burning.
- Overseer with ongoing responsibility for the plan.
- Property owners using grant programs should have a choice of who does the work, although property owner has final responsibility.
- Fire Districts have oversight of grant projects for homeowner clean-up.

- Distribution of grant \$'s related to the density of development.

Northwest Area

- Visual tools for public, organizational charts to show how emergency operations get done.
- Visual aids in public education efforts.
- Pre scripted messages for PIO's.
- Identifying communities for "lessons learned" to help in Kootenai County.
- 2 PIO's in each Fire District.
- Program to encourage more volunteer firefighters for local districts.
- More local personnel trained for type 3 positions.
- Minimum 3 deep for all EOC (emergency Operations Center) positions.
- All emergency providers and dispatch centers be able to communicate (set aside channel).
- Public information at time of incident, Emergency Alert System and "joint information center" trained PIO's so field people can direct to PIO's.
- Evacuation routes/plans: need to think of alternatives, better evacuation map in both telephone books, educate kids about map.
- Registration system GIS of property owner with defensible space w/reward system e.g. driveway sign recognizing fire safe homes certified.
- Information about companies who can fire safe homes, option a Master List of trained contractors.
- Enforcement regulations to keep fuel management ongoing.
- Incentives for property owners: businesses give discount during Fire Week, tax break.

Southeast Area

- Model program with research component for survivability of homes for individual home owners involving installation of an outside switch for a generator at the home and building small mobile kits (home protection system in a box) w/generators, hoses and sprinklers which can be dropped off at homes during a fire or stored by homeowners.
- More emphasis for individual home owners about realities of "saving your home".
- Program teaching people to be responsible for own fire protection.
- Support Fire Co-op in schools, also helps to educate parents.
- Escape route system with distinctive signs.
- Programs to involve people in fire protection.
- Form partnerships with insurance companies to convey incentives to home owners.
- Develop a comprehensive media plan for public information.
- Add mitigation projects to science curriculums in schools and 4-H programs.

- Interactive “net site” for questions, comments, information, sign-up for home evaluation, volunteer activities.
- Plans that “call in a crew” at the right time.
- Interagency radio link for effective communications.
- Scenic fire breaks.
- Identify “road blocks” federal agencies encounter in treating slash fuels and fuels in general.

North East

- Consistency w/all agencies, same plan same explanations.
- NRCS finding and developing water supplies i.e. pond, wetland dual purpose for water supplies.
- Power source for well only. (water source)
- New more rural subdivisions re water source.
- More teeth in code, legislation for looking at helping self.
- NIBC group as an educational outlet for developers.
- Look at fire plans for neighborhoods.
- Incentives for home owners i.e. “tax break”, “insurance break” fire resistant construction materials.
- Small acreage's ongoing land management plan.
- Keep power lines corridors open.
- Coordinate with utilities for underground lines for new subdivisions and replacements.
- Creating incentives for people to use fire resistant materials.
- Provide a cadre of people beside fire fighters to show people they can treat fuels and still have amenities. (educate public)
- Public information - attend homeowners associations.
- Follow-up on student projects/evaluation of activities.
- Fuels Reduction fire week “this is the week to do it” ie haul off, chips need to work w/agencies

Community Sub-Areas Action Steps Workshops

The purpose of the 2nd set of workshops was to provide an opportunity for citizens to identify their priorities for actions for wildland urban interface fire mitigation. At each workshop people were asked to select the 7 action steps most important to them from a list of preliminary actions developed by the Wildland Urban Interface Fire Mitigation Plan Committee. Additional comment data is recorded as presented by workshop attendees. Workshops were held from 7 to 9 pm at the following four locations. No attendance at the Northwest and Northeast Area Workshops except for 2 committee members at each.

Tuesday, March 12
Southwest Area

Wednesday, March 13
Northwest Area

Coeur d' Alene Casino	Lakeland High School
Tuesday, March 19	Wednesday, March 20
Southeast Area	North East Area
East Side Fire Station	Northern Lakes Fire Station

Workshop Action Step Priorities

Priorities ranking from most important to least important:

- Ensure all land development ordinances and codes include:
 - requirements for adequate water supply,
 - two means of ingress and egress,
 - incentives for construction with fire resistant materials,
 - additional fire protection measures for large residences, and
 - pertinent sections of the Wildland Urban Interface Fire Code.
- Develop a county wide public/private road system with a minimum standard of 20' maintained roadway width with clearly posted road names and individual addresses signs.
- Explore the potential for converting slash and deadfall into firewood for senior citizens and handicapped or low income residents and use good wood for lumber for Habitat for Humanity.
- Encourage property owners to use grant programs to protect and/or create wetlands and ponds which can serve a dual purpose as water supplies.
- Work with local educators to establish a fire education component in the public schools curriculum.
- Require utility companies to reduce ignition fuels and windfall hazards in power line corridors and install underground lines in new subdivisions and when replacing older lines.
- Secure funding for a model program to research use of an emergency generator connected to home electric and pump systems.
- Sponsor an annual clean-up, fuels reduction week with incentives for property owners such as business related discounts and free pickup of waste materials.
- Enforce slash clearing agreements on public lands.
- Organize a multi agency strike team for pre order response.

- Assist efforts of fire districts to coordinate a minimum standard for wildland urban interface training, have 2 trained Public Information Officers, and increase the number of Type III qualified personnel.
- Develop an interagency agreement to assure consistency between information and education programs for homeowners to avoid people getting 'different stories'.
- Develop a brochure to be included in tax bills reminding homeowners in the wildland urban interface about fire mitigation.

Additional Comments

- Ask insurance people to look at a property that is not fire safe and one that has been cleaned and is fire safe to estimate difference in fire rating, will show reduction in cost.
- Require green zones as part of building (process) regulations.

Welcome to Fire Country Booth at Kootenai County Home and Garden Show

Over 300 people stopped by the Welcome to Fire Country Booth sponsored by Wildland Urban Interface Fire Mitigation Plan Committee at the Kootenai County Home and Garden Show, March 15, 16 and 17. Committee members and the consultant team staffed the booth. Featured was a display, video, information for homeowners, and a checklist form, "Welcome to Fire Country" with 32 possible actions to mitigate wildland urban interface fires. People were asked to look over the checklist and select the 10 actions they felt were the most important. A total of 263 checklists were completed. Below is a ranking of the actions showing citizen's priorities, most important to least important.

- Require utility companies to reduce ignition fuels and windfall hazards in power line corridors and install underground lines in new subdivisions and when replacing older lines.
- Sponsor an annual clean-up, fuels reduction week with incentives for property owners such as business related discounts and free pick-up of waste materials.
- Explore the potential of converting slash and deadfall into firewood for senior citizens, and handicapped or low income residents and use good wood for lumber for Habitat for Humanity.
- Organize a community services project to assist elderly and handicapped homeowners reduce fuel loads on their property.
- Ensure that the county controls knapweed infestations.
- Enforce slash clearing agreements on public lands.
- Encourage families to designate a meeting place during and after fire evacuation.
- Work with local educators to establish a fire education component in the public school curriculum

- Establish a program for home owners offering an assessment of the fire safe worthiness of their property and an incentive system to use fire safe building materials and reduce fuel loads on their property.
- Support the efforts of the Kootenai County Fire Prevention Co-op and other agencies at County Fair and Safety Day at the Silver Lake Mall.
- Enforce land development and building regulations related to wildland urban interface fire prevention.
- Ensure all land development ordinances and codes include:
 - requirements for adequate water supply,
 - two means of ingress and egress,
 - incentives for construction with fire resistant materials,
 - additional fire protection measures for large residences, and
 - pertinent sections of the Wildland Urban Interface Fire Code.
- Inform public about noxious weed programs.
- Call for water districts to provide emergency access to water supply via dry hydrants along service delivery lines.
- Require burning permits at all times of the year.
- Institute a program for creating and maintaining neighborhood fire prevention plans in wildland urban interface areas.
- Develop a county wide public/private road system with a minimum standard of 20' maintained roadway with clearly posted names and individual addresses signs.
- Produce, on an ongoing basis, up-to-date hard copy and electronic county maps with evacuation routes, emergency shelters, trauma units, road names, and current addresses.
- Keep current and distribute evacuation plans with safety zones and information which encourages homeowners to evacuate in a timely manner.
- Purchase, install and maintain Smokey Bear Signs (high, moderate, low fire conditions) in wildland urban interface neighborhoods.
- Organize an educational program for real estate professionals, insurance providers, and building contractors on wildland urban interface fire risks and hazards to assist buyers and sellers be better informed.

- Encourage property owners to protect and/or create wetlands and ponds which can serve a dual purpose as water supplies.
- Publish an annual list of local, trained certified contractors who build fire safe structures and/or create survivable space.
- Develop a brochure to be included in tax bills reminding homeowners in the wildland urban interface about fire mitigation.
- Along with insurance companies and realtors publish a ‘Welcome to Fire Country’ pamphlet to distribute with building permit applications and residential sales agreements for non local new home owners.
- Develop an interactive internet site with a wildland urban interface fire theme for questions, comments, sign-up for home evaluations, volunteer opportunities, and targeted information for recreational home owners.
- Offer individual home owners a fuel treatment plan which provides for:
 - large diameter material, over 12” set aside and sliced into 3/4” disks,
 - small straight sticks, i.e. 2/3” diameter in lengths of 4/8’, set aside
 - anything suitable for firewood cut to length and piled
 with any material not in these categories disposed of in the standard approved manner.
- Identify “road blocks” federal agencies encounter in treating slash fuels and fuels in general.
- Inform public that land under trees can be used for crops and other planting.
- Secure funding for a model program to research use of an emergency generator connected to home electric and pump systems.
- Build and maintain a demonstration trailer with a good/bad example of residential building materials and survivable space.
- Partner with the North Idaho Building Contractors Association and other local land development professionals to build a model residential development demonstrating best management practices for fire safety.

Welcome to Fire Country Display at Silver Lake Mall

An interactive display featuring story boards with 27 possible actions to mitigate wildland urban interface fires, a display, information for homeowners and stickers and candy for children was held from 10 am to 5 pm on April 26th at the Silver Lake Mall.

People were invited to put a 'sticky dot' on the five actions on the story boards they considered to be most important. Approximately 105 people participated in this activity. The following list of represents a ranking of most to least number of sticky dots' placed next to the actions by participants.

- Explore the potential of converting slash and deadfall into firewood for senior citizens, and handicapped and low income residents and use good wood for lumber for habitat for Humanity.
- Ensure all land development ordinances and codes include:
 - requirements for adequate water supply,
 - two means of ingress and egress,
 - incentives for construction with fire resistant materials,
 - additional fire protection measures for large residences, and
 - pertinent sections of the Wildland Urban Interface Fire Code.
- Sponsor an annual clean-up/fuels reduction week with incentives for property owners such as business related discounts and free pickup of waste materials.
- Require utility companies to reduce ignition fuels and windfall hazards in power line corridors and install underground lines in new subdivisions and when replacing older lines.
- Enforce slash clearing agreements on public lands.
- Support the efforts of the Kootenai County Fire Prevention Co-op and other agencies at County Fair and Safety Day at the Silver Lake Mall.
- Establish a program for home owners offering an assessment of the fire safe worthiness of their property and an incentive system to use fire safe building materials to reduce fuel loads on their property.
- Work with local educators to establish a fire education component in the public school curriculum.
- Purchase, install and maintain Smokey Bear Signs (high, moderate, low fire conditions) in wildland urban interface neighborhoods.
- Support the efforts of the Kootenai County Fire Prevention Co-op and other agencies at County Fair and Safety Day at the Silver Lake Mall.
- Organize a community services project to assist elderly and handicapped homeowners reduce fuel loads on their property.

- Produce, on an ongoing basis, up-to-date hard copy and electronic county maps with evacuation routes, emergency shelters, trauma units, road names, and current addresses.
- Enforce land development and building regulations related to wildland urban interface fire prevention.
- Encourage property owners to protect and/or create wetlands and ponds which can serve a dual purpose as water supplies.
- Require burning permits at all times of the year.
- Publish an annual list of local, trained certified contractors who build fire safe structures and/or create survivable space.
- Develop an interactive internet site with a wildland urban interface fire theme for questions, comments, sign-up for home evaluations, volunteer opportunities, and targeted information for recreational home owners.
- Call for water districts to provide emergency access to water supply via dry hydrants along service delivery lines.
- Along with insurance companies and realtors publish a ‘Welcome to Fire Country’ pamphlet to distribute with building permit applications and residential sales agreements for non local new home owners.
- Develop a county wide public/private road system with a minimum standard of 20’ maintained roadway with clearly posted names and individual addresses signs.
- Keep current and distribute evacuation plans with safety zones and information which encourages homeowners to evacuate in a timely manner.
- Encourage families to designate a meeting place during and after fire evacuation.
- Inform public that land under trees can be used for corps and other plantings.
- Institute a program for creating and maintaining neighborhood fire prevention plans in wildland urban interface areas.
- Offer individual home owners a fuel treatment plan which provides for:
 - large diameter material, over 12” set aside and sliced into 3/4” disks,
 - small straight sticks, i.e. 2/3” diameter in lengths of 4/8’, set aside
 - anything suitable for firewood cut to length and piled

with any material not in these categories disposed of in the standard approved manner.

- Inform public about noxious weed programs.
- Develop a brochure to be included in tax bills reminding homeowners in the wildland urban interface about fire mitigation.

Combined Total of Citizen Ranking of Fire Mitigation Actions

Below is the total ranking, most important to least important, of actions selected by Kootenai County citizens at area workshops, Home and Garden Show and Silver Lake Mall display. This ranking represents the views of approximately 400 citizens.

- Explore the potential of converting slash and deadfall into firewood for senior citizens and handicapped or low income residents and use good wood for lumber for Habitat for Humanity.
- Require utility companies to reduce ignition fuels and windfall hazards in power line corridors and install underground lines in new subdivisions and when replacing older lines.
- Sponsor an annual clean-up, fuels reduction week with incentives for property owners such as business related discounts and free pickup of waste materials.
- Organize a community services project to assist elderly and handicapped homeowners reduce fuel loads on their property.
- Enforce slash agreements on public lands.
- Ensure all land development ordinances and codes include:
 - requirements for adequate water supply,
 - two means of ingress and egress,
 - incentives for construction with fire resistant materials,
 - additional fire protection measures for large structures
 - pertinent sections of the Wildland Urban Interface Fire Code.
- Establish a program for home owners offering an assessment of the fire safe worthiness of their property and an incentive system to use fire safe building materials and reduce fuel loads on their property.
- Work with local educators to establish a fire education component in the public schools curriculum.

- Support the efforts of the Kootenai County Fire Prevention Co-op and other agencies at the County Fair and Safety Day at Silver Lake Mall.
- Enforce land development and building regulations related to wildland urban interface fire prevention.
- Encourage families to designate a meeting place during and after fire evacuation.
- Ensure that the county controls knapweed infestations.
- Require burning permits at all times of the year.
- Inform public about noxious weed programs.
- Call for water districts to provide emergency access to water supply via hydrants along service delivery lines.
- Institute a program for creating and maintaining neighborhood fire prevention plans in wildland urban interface areas.
- Produce, on an ongoing basis, up-to-date hard copy and electronic county maps with evacuation routes, emergency shelters, trauma units, road names and current old addresses.
- Develop a county wide public/private road system with a minimum standard of 20' maintained roadway with clearly posted road names and individual addresses signs.
- Keep current and distribute evacuation plans with safety zones and information which encourages homeowners to evacuate in a timely manner.
- Encourage property owners to use grant programs to protect and/or create wetlands and ponds which can serve a dual purpose as water supplies.
- Publish an annual list of local, trained certified contractors who build fire safe structures and/or create survivable space.
- Develop a brochure to be included in tax bills reminding homeowners in the wildland urban interface about fire mitigation.
- Organize an educational program for real estate professionals, insurance providers, and building contractors on wildland urban interface fire risks and hazards to assist buyers and sellers be better informed.

- Along with insurance companies and realtors publish a “Welcome to Fire Country” pamphlet to distribute with building permit applications and residential sales agreements for non local new home owners.
- Develop an interactive internet site with a wildland urban interface fire theme for questions, comments, sign-up for home evaluations, volunteer opportunities, and targeted information for recreational home owners.
- Offer individual home owners a fuel treatment plan which provides for:
 - large diameter material, over 12” set aside and sliced into 3/4” disks,
 - small straight sticks, i.e. 2/3” diameter in lengths of 4/8’, set aside,
 - anything suitable for firewood cut to length and piled,
 with any material not in these categories disposed of in the standard approved manner.
- Inform public that land under trees can be used for crops and other plantings.
- Identify “road blocks” federal agencies encounter in treating slash fuels and fuels in general.
- Purchase, install and maintain Smokey Bear Signs (high, moderate, low fire conditions) in wildland urban interface neighborhoods.
- Build and maintain a demonstration trailer with a good/bad example of residential building materials and survivable space.
- Secure funding for a model program to research use of an emergency generator connected to home electric and pump systems.
- Partner with the North Idaho Building Contractors Association and other local land development professionals to build a model residential development demonstrating best management practices for fire safety.

PUBLIC COMMENTS ON DRAFT PLAN AND
COMMUNITY REVIEW AND COMMENT MEETING

No comments were received at community review and comment meeting.

APPENDIX B FIRE DISTRICT INTERVIEW DATA BY DISTRICT JANUARY 2002

COEUR D' ALENE FIRE

Key problems/threats related to wildland urban interface fires

- Residential impacts key for Coeur d' Alene.
- People who don't realize they are living in a wildland urban interface because their homes are in the city limits.
- Building in non defensible areas.
- Dense building on steep hills.
- Groups of homes with single road access.
- Marginal water supply.
- Poor practices with open burning.
-

Ideas for action steps/projects for the Kootenai County Wildland Urban Interface Fire Mitigation Plan

- Review ordinances to assure adequate water supply.
- Address site specific types of construction requirements through implementation of appropriate sections of the ICBO Wildland Urban Interface Fire Code.
- Ongoing education efforts.
- Purchase and install Smokey Bear Signs (high, low moderate fire conditions).
- Find financing for a good/bad residential example display to put on a trailer to use for a visual way to educate area homeowners on prevention measures.
- Look at adding a wildland urban fire education component to the educational efforts of the Kootenai County Fire Prevention Co-Op for local school districts.
-

District Overview

Coeur d' Alene Fire is a department of the City of Coeur d' Alene. Personnel includes 39 line firefighters, 18 volunteers, 2 chief officers, fire inspector and public education specialist. The Department provides 24, hour 7 day week coverage with 13 officers on duty per shift. All professional firefighters are red card qualified for wildland fires. The Department also furnishes emergency medical services. Response time for fires in the city's wildland urban interface areas ranges from 4 to 7 minutes. The current insurance rating is a 3; however, the City is currently working to become a 2.

Apparatus

3 Class A Engines = 750 gallon tank, Class A Foam

Type 6 Engine = 4 x 4, 200 gallon tank, 60 gpm, Class A Foam

EAST SIDE FIRE DISTRICT

Key problems/threats related to wildland urban interface fires

- Fuel loads: thick brush, downed trees, leftovers from Ice Storm 96.
- Access related to dead end roads.
- Roads in timber, single road access.
- Residences in major draws.
- People move to the country for aesthetics reasons.
- Lightening.
- Large residences.

Ideas for action steps/projects for the Kootenai County Wildland Urban Interface Fire Mitigation Plan

- Education program that provides contact for property owners to give information on property maintenance. (Property owners should be responsible for cleaning up their lands.)
- Additional protection for large residences.
-

District Overview

East Side Fire has a chief and 28 volunteers with 3 red card qualified for wildland fire fighting. Approximately 80% of property owners are members of the district. Structure fire fighting is provided only to members. The District provides assist only for emergency medical services and does not transport. Response time for fires wildland urban interface areas ranges from 4 to 30 minutes. The current insurance rating is a 6 for structures within 600 feet of a hydrant and 8 for all other areas.

Apparatus

Arrowpoint

Quick attack/Type 4 = 4 x 4, 200 gallon tank, 150 gpm

Type 2 Engine = Class A Structural, 350 gallon tank, 500 gpm, 6 x 6

Type 3 tender = 6 x 6, 1200 gallon tank

East Point

Quick Attack/type 4 = 4 x 4, 200 gallon tank, 200 gpm

Type 3 Tender = 6 x 6, 1200 tank

Gotham Bay

440 gpm float pump

Morgan

Quick Attach/type 4 = 4 x 4, 300 gallon tank, 200 gpm

Type 2 Engine = class A Structural, 350 gallon, 750 gpm, 6 x 6

Type 2 Tender = 2600 gallon tank, 300 gpm

Fire Boat = 750 gpm

HAUSER LAKE FIRE

Key problems/threats related to wildland urban interface fires

- Narrow, steep, unimproved private roads.
- Groups of homes with a single road access access.
- Canyon areas with single road access access.
- Challenge of serving Idaho/Washington border including having to drive around into Washington to reach properties in Idaho.
- New improved subdivisions surrounded by wildland.
- Unimproved subdivisions.
- Fragmented multiple water systems.
- Leftover fuels from Ice Storm 96 '96.
- Public doesn't see how much in the way of financial resources is needed to support the District.
- Trend seeing insurance companies changing to zip codes for fire rating.
-

Ideas for action steps/projects for the Kootenai County Wildland Urban Interface Fire Mitigation Plan

- Ask people to put in small reservoirs on a case by case basis to provide back up water supply.
- Require emergency ingress/egress for all new developments.
- Encourage the County Building Department to support fire safety measures.
- Some incentives to get folks to reduce fuel load on their property.
- Reduce fuel load by a selective clearing program of dead trees.
- Evacuation plan.
- Methods to encourage people to leave danger areas during a wildland urban fire emergency.
-

District Overview

Hauser Lake Fire has a chief and 16 volunteers with 8 red card qualified for wildland urban interface fire fighting. The District also provides emergency medical services. Response time for fires wildland urban interface areas ranges from 4 to 16 minutes. The current insurance rating is a 6 for structures within 600 feet of a hydrant and 8 for all other areas.

Apparatus

Brush Truck = 4 x 4, 250 gallon tank, 50 gpm pump, portable foam unit

Class A Engine = 500 gallon tank, 1000 gpm pump

Rescue Truck = 4 x 4, Type III Ambulance

Type 3 Tender = 6 x 6, 1500 gallon tank, 150 gpm

Type 3 Tender = 6 x 6, 2000 gallon tank, 250 gpm, portable foam unit

KOOTENAI FIRE & RESCUE

Key problems/threats related to wildland urban interface fires

- Building in wildland areas.
- Access: road width, grade, surface and maintenance.
- Holiday fireworks.
- Adequate information provided to buyers prior to sale.
- Lightening.
- Wind and wind storms.
- Density of new development.
- People often confused about what fees are for and who receives service, e.g. forest protection fee on timber assessments does not cover structure fires.
- Reduced manpower available for wildland fire fighting in September and October.
- Limited number of volunteers for delivery of Fire Co-Op educational programs.
- Water supply to residences.
- Problems identifying mutual aid locations tying up two way radio air time.

Ideas for action steps/projects for the Kootenai County Wildland Urban Interface Fire Mitigation Plan

- Fire dogs who can serve to assist with public information efforts as well as their fire protection duties.
- Open houses for the community at station including refreshments.
- Educational program for real estate industry on wildland urban interface fire issues to assist buyers be better informed.
- Produce on an ongoing basis up-to-date hard copy county maps with current addresses and road names.
- Minimum training standard for both wildland and structure fire fighting for consistency.
- Residential sprinklers in areas without adequate water supply.
- Well marked and posted road and individual address signs.
-

District Overview

Kootenai Fire and Rescue covers a large area in west Kootenai County. The district has 31 career firefighters with 20 red card qualified for wildland urban interface fire fighting., There are currently 45 volunteers with an addition 22 beginning recruit training the winter. The Department furnished emergency medical services and is the Kootenai County official HAZMAT provider. Response time for fires in the district wildland urban interface areas ranges from 4 to 20 minutes. The current insurance rating is a 3; however, the City is currently working to become a 2.

Apparatus

3 Brush Trucks

3 Brush Trucks = 4 x 4
6 Class A Engines
Class A Engine = 1000 gpm
Ladder Truck - 75' Tower
2 Rescue Trucks
Tender = 2500 gallons
2 Tenders = 1800 gallons
Tender = 1500 gallons
Tender = 1250 gallons
Tender = 10,000
Tender = 3000 gallons

MICA-KIDD ISLAND FIRE DISTRICT

Key problems/threats related to wildland urban interface fires

- Access to small parcels on dirt roads.
- Attitudes of second home owners regarding the visual environment who hold out for aesthetics over fire safety.
- Water supply in the areas of the District away from the lake.
- Grassland and cultivated fields among forest lands.
- Have to deal with gated, private roads.
- Response time related to road quality and distance.
- Seasonal road problems: snow in winter and mud in spring.
- Density along lake.
- Variability of the lake level.
- Increasing subdivision activity.
- Developed areas along the lake with boat access only.
- No different requirements for very large homes of 7,000 square feet or larger.
- Insurance companies changing to zip codes for fire rating.
- The 911 system has a way to go.

Ideas for action steps/projects for the Kootenai County Wildland Urban Interface Fire Mitigation Plan

- More information to people on what their actions, not having defensible space, can do to their neighbors.
- Some type of leverage for small developers to put in water supplies.
- Consider a program used in the foothills in Colorado where every property is systematically surveyed, the information entered into a data base and from this data base a District can run wildland urban interface fire scenarios.

District Overview

The Mica Kidd Island community voted to form the Mica-Kidd Island Fire District just 2 years ago. The District has a chief and 22 volunteers of which 12 are red card qualified

for wildland fire fighting. The District also provides community first responder emergency medical services. Response time for wildland urban interface fires is uncertain due various circumstances and can be up to 20 minutes. The current insurance rating is a 6 for structures within 600 feet of a hydrant and 8 for all other areas.

Apparatus

Brush Truck = 600 gallons, 120 gpm pump

Class A Engine = 750 gallons, 1250 gpm pump

Fire Boat = 2000 gpm pump

Fire Boat = 120 gpm pump, 25' pontoon

Type 3 Tender = 1200 gallon tank

Type 3 Tender = 1700 gallon tank, 100 gpm pump

NORTHERN LAKES FIRE

Key problems/threats related to wildland urban interface fires

- Outlying areas.
- Maintenance of serviceable private residential access roads.
- Citizen apathy regarding clean up.
- Getting the word out to folks who live on the side of hills.
- Home businesses in wildland urban interface areas.
- Accessing water around lakes in the District.
- Single access roads around lakes.
- Insurance companies changing to zip codes for fire rating.

Ideas for action steps/projects for the Kootenai County Wildland Urban Interface Fire Mitigation Plan.

- Create a model program that is a personal approach to homeowners, visits to all homes in risk areas by priority.
- Consistency between programs for residents to avoid people getting 'different stories'.
- Theme for getting people interested.
- Multi agency strike team for pre order response.
- Keep the LEPC, Wildland Urban Interface Task Force going.
- Dry hydrants to use for urban interface.
- Utility bills and newsletters for publicity.

District Overview

Northern Lakes Fire services the Hayden/Rathdrum areas of Kootenai County. Personnel include 29 professional firefighters all red card qualified for wildland urban interface fires. There are also 30 volunteers. The Department provides emergency medical and advanced ambulance services. Response is 70% of the time is up to 4 minutes; however, response to fires in the wildland urban interface areas ranges from 4 to 30 minutes. The

current insurance rating is a 6 for structures within 600 feet of a hydrant, 8 for areas within 5 miles of a station, and 9 for all other localities.

Apparatus

Chase Road

Type 3 Tender = 1000 gallon tank

Hayden

Ambulance

Brush Truck, 2

Fire Boat

Rescue Truck

Type 1 Engine = 2500 gallon tank w/1500 gpm pump

Type I Engine = 1000 gallon tank w/1500 gpm pump

Type 3 Tender = 1500 gallon tank

Garwood

Ambulance

Type 1 Engine = 1000 gallon tank w/1500 gpm pump

Type 3 Tender = 1500 gallon tank

Mokins Bay

Ambulance

Brush Truck

Type 1 engine = 750 gallon tank w/1000 gpm pump

Type 3 Tender = 1500 gallon tank

Rathdrum

Ambulance

Brush Truck

Type 1 Engine = 1000 gallon tank w/1250 gpm pump

Type 1 Engine = 1500 gallon tank w/750 gpm pump

Twin Lakes

Fire Boat

Type 1 Engine = 1000 gallon tank w/1500 gpm pump

SAINT MARIES FIRE PROTECTION DISTRICT

Key problems/threats related to wildland urban interface fires

- Poor access.
- Single road access.
- Water supply.
- Fuel management.
- Black Lake no man's land area density without fire protection.

Ideas for action steps/projects for the Kootenai County Wildland Urban Interface Fire Mitigation Plan

- Identify areas for fuels management.

- Establish water sites, e.g. ponds or dry hydrants with year around access.

District Overview

Saint Maries Fire service area covers a portion of south east Kootenai County and as well are a large area of Benewah County. The District is all volunteer with a total of 55 volunteers. Fire services are furnished to structures and agricultural land, but not forest land. The District also provides emergency medical services. Response to time is 5 to 25 minutes. The current insurance rating is 6 for those within 600' of a hydrant, 8 within 5 miles of a station and the remainder of the district is 9.

Apparatus

St. Maries

Engine, year 2002 = 1000 gallons @ 1250 gpm (April)
 Engine, year 1986 = 1000 gallons @ 1250 gpm
 Engine, year 1979 = 500 gallons @ 1000 gpm
 Tender, year 1975 = 3000 gallons @ 500 gpm
 Rescue, year 1983 = 500 gallon, extrication
 Back Up Pump = no tank, 750 gpm

Ogara

Engine, year 1972 = 1400 gallons @ 500 gpm
 6 x 6 Brush, year 1977 = 1000 gallons @ 150 gpm
 Rescue Pickup, year 1983 = extrication equipment
 Brush, year 1973 = 200 gallons @ 60 gpm

Harrison

Engine, year 1977 = 600 gallons @ 750 gpm
 Extraction Pickup, year 1983 = extrication equipment

SHOSHONE COUNTY FIRE & RESCUE

Key problems/threats related to wildland urban interface fires

- Access roads don't meet road standards.
- Widely scattered homes.
- New homes in forested areas.
- Retention of adequate number of volunteers.

Ideas for action steps/projects for the Kootenai County Wildland Urban Interface Fire Mitigation Plan

- A retirement benefit incentive for long serving volunteers
- Assure interest and services for outlying areas of the county east of 4th of July Pass.

District Overview

Shoshone County Fire and Rescue provides service in Kootenai County extends from 4th of July Pass east and a portion of the chain lakes area well as a significant portion of Shoshone County. The District has 7 career officers and 36 volunteers, approximately 18 in the Kellogg/Pinehurst area and 18 in the Rose Lake area. The District also provides emergency medical services. Response to ranges from 5 to 20 minutes. The current insurance rating is 6 for those within a hydrant area, 8 within 5 miles of a station and the remainder of the district is 9.

Apparatus

- 6 type 1 engine's, meet NFPA standards and
 - 2 = 1500 GPM pumps carrying 1000 gallons of water
 - 2 = 1000 GPM pumps carrying 500 gallons of water
 - 1 = 1000 GPM pump carrying 750 gallons of water
 - 1 = 750 pump carrying 750 gallons of water
 - 1 = 1500 GPM pump carrying 1000 gallons of water
- 1 50 foot aerial platform
- 1 2500 gallon water tender
- 3 type 6 engines with 300 gallon water tanks
- 1 rescue/extraction vehicle
- 1 HAZMAT trailer
- 1 300 gallon water donkey portable

SPIRIT LAKE FIRE

Key problems/threats related to wildland urban interface fires

- Fires getting out of permitted burns.
- Unattended burns.
- Lightening strikes.
- Parties and 'keggers' in wildland areas.
- Single access subdivisions.
- Ingress/egress out of areas.
- Private driveways not adequate for emergency response.
- Hillside development.
- Lake homes with boat access only.
- Multiple residences on loop road 20' wide.
- Increasing density of development in forested lands.
- Improved new developments surrounded by poor access and wildland.
- Lack of road maintenance.

Ideas for action steps/projects for the Kootenai County Wildland Urban Interface Fire Mitigation Plan.

- Better fire information for people who come from out of state as they are often not aware of fire wise practices.
- Targeted data to the public.
- Minimum 20' road standard for gates on private roads.
-

District Overview

Spirit Lake Fire service area cover both Kootenai and Bonner Counties. Personnel include 6 professional firefighters all red card qualified for wildland urban interface fires and 25 volunteers. The Department provides emergency medical and ambulance services. Response ranges from 4 to 10 minutes; however, response to fires in wildland urban interface areas may be up to 15 minutes. The current insurance rating is 8 and 5 in cities with a hydrant system.

Apparatus

Brush Truck

Brush Truck = EMS

Class A Engine = Extraction

Class A Engine

2 Type 3 Tenders = 1500 gallon tank

Type 3 Tender = 2500 gallon tank

TIMBERLAKE FIRE

Key problems/threats related to wildland urban interface fires

- Public attitude toward prevention and wildfire mitigation problems.
- Large response area.
- Lack of staffing, only two 24 hour people covering.
- Makeup of wildland engines which are old and slow; therefore I. A. capabilities are limited.
- Are population has doubled and people are complacent as there has no been a major wild fire in 10 years.
- Access into old subdivisions.
- Single road ingress/egress.
- Development on large single lots of 5 to 30 acres.
- Unimproved roads.
- Lightening strikes.
- Water supply to isolated lots.
- Limited regulations for manufactured homes.
- Insurance companies changing to zip codes for fire rating.

Ideas for action steps/projects for the Kootenai County Wildland Urban Interface Fire Mitigation Plan.

- Continue mitigation program.
- Continue public education and prevention programs.
- Continue to improve I. A. capabilities through training of personnel and improving equipment.
- Meetings with homeowner associations within the district.
- Model development grant to demonstrate best management practices in Bayview.
- Puppet program with a focus on wildland.
- All districts in Kootenai County adequately equipped to fight wildland urban interface fires.

District Overview

Timberlake Fire service area covers a large portion of northern Kootenai County to the Bonner county line. Personnel include 7 professional firefighters with 2 on each shift 24 hours 7 days a week and 25 volunteers. The Department provides emergency medical services. Response to fires in wildland urban interface areas range from 5 to 20 minutes. The current insurance rating is 4 for those within a hydrant area and 8 in the remainder of the district.

Apparatus

Station 1

Structure = 1000 gallon tank, 1000 gpm pump

Tender = 1200 gallon tank, 125 gpm pump

Brush, 600 gallon tank, 300 gpm pump

Station 2

Structure = 1000 gallon tank, 1000 gpm pump

Station 3

Structure = 500 gallon tank, 1000 gpm pump

Brush/tender = 2800 gallon tank, 500 gpm pump

Brush = 500 gallon tank, 500 gpm pump

Station 4

Structure* = 500 gallon tank, 1000 gpm pump

Station 5

Structure = 500 tank, 1250 gpm

Sagle Street/Carrywood Street = Structure*, 500 gallon tank, 1000 gpm

Note: *Replaced with newer engines + a refurbished 3000 gallon water tender will be in service in May 2002 .

WORLEY FIRE

Key problems/threats related to wildland urban interface fires

- Lack of land management by land owners.
- Density around lake.
- Summer holidays.
- CRP fields with weeds and no fire breaks.
- Slash burning related to logging activity.
- Design and signs on private roads.
- Road maintenance for seasonal homes.
- Road access in winter.
- Some problems with water pressure in older subdivisions.
- Boat parks with fire pits and no road access.
- Need to know when and where people are burning
- Left over Ice Storm 96 fuels.

Ideas for action steps/projects for the Kootenai County Wildland Urban Interface Fire Mitigation Plan

- Public education, an example is the District's current workshops for home owners with video, 45 slides of problem locations in the District, seed packets and informational handouts.
- CRP set aside maintenance.
- Better logging clean up practices.
- Building permit practices consistent throughout the county.
- Careful consideration of ongoing operation and maintenance costs of programs under consideration before final decisions.
- See that joint education efforts have local folks who live in the area as the main speakers/trainers with guest experts available as a secondary resource.
- Mandatory sprinklers for very large residences.
- Have information available for 2nd home owners on the Kootenai County internet site.
- Need to assure enforcement of building and fire codes.

District Overview

Worley Fire service area covers a large portion of southern Kootenai County. Personnel include a chief and 65 volunteers. The Department also provides emergency medical services. Response to fires in wildland urban interface areas is variable depending on mileage, but usually no more than 10 minutes. The current insurance rating is 4 for those within a hydrant area and 8 in the remainder of the district.

Apparatus

Station 1 Worley

- Rescue Truck = 4 x 4 Crew Cab

- Type 1 Engine = 1000 gallon tank, 1500 gpm pump
 - Type 3 Engine = 4 x 4 Brush Truck, 250 gallon tank, 250 gpm pump
 - Type 3 Tender = 1500 gallon tank, 250 gpm pump
- Station 2 Sun Up Bay
- Fire Boat = 500 gpm pump
 - Type 3 Tender/Type 4 Engine = 1200 gallon tank 250 gpm pump
- Station 3 Conklin Park
- Fire Boat = 250 gpm pump
 - Type 1 Engine = 600 gallon, 1000 gpm pump
 - Type 3 Tender/Type 4 Engine = 1200 gallon tank, 250 gallon pump
- Station 4 Rockford Bay
- Type 3 Tender/Type 4 Engine = 1500 gallon tank, 250 gpm pump, 100 gpm hi pressure pump
- Station 5 Cave Bay
- Rescue Truck = 4 x 4
 - Type 1 Engine = 500 gallon tank, 1250 gpm pump
 - Type 3 Engine = 4 x 4. 450 gallon tank, 2 es 250 gpm pumps
 - Type 3 Tender = 1500 gallon tank, 250 gpm pump

APPENDIX C FIRE HAZARDS IDENTIFIED BY FIRE DEPARTMENTS AND AGENCIES

The table below identifies the hazards listed by the fire fire chiefs during their interviews and by personnel from state and federal agencies. The table is divided into quadrants of the county, northeast, northwest, southeast and southwest. The table also lists the longitude and latitude of these locations as well as the quarter section of the township in which they are located.

Description	FD	Latitude North	Longitude West	Sec.	Twn	Range	¼
Northwest Quadrant							
NE corner of Spirit Lake response area	SI	48.09.690	116.59.349	32	56n	5w	ne
Sawmill		48.03.859	117.01.474	1	54n	5w	ne
Spirit Lake RFD Blanchard Station 2	SI	48.00.994	116.58.802	20	54n	5w	nw
Brickel Creek rec site, OHV's		47.55.290	117.01.259	19	43n	5w	sw
Fish Creek rec site, party site		47.52.993	116.59.807	5	52n	5w	ne
Three forks 25+/- homes in canyons		47.49.058	117.00.651	30-31	52n	5w	*
Homes: WA access only	HI	47.47.854	117.02.274	1	51n	6w	*
Homes: steep topo, poor ingress	HI	47.47.409	117.00.538	6	51n	5w	s
Hauser Lake RFD station	HI	47.46.041	117.01.106	18	51n	5w	sw
Subdivisions	HI	47.45.844	116.59.711	17	51n	5w	sw
Industrial: aluminum plant and other	HI	47.44.837	117.00.699	19	51n	5w	sw
Electrical substation	SI	48.01.457	116.57.665	16	54n	5w	se
Outdoor party site		47.56.203	116.57.800	16	53n	5w	se
Outdoor party site		47.49.087	116.57.189	27	52n	5w	sw
BN fuel depot		47.47.091	116.56.357	10	51n	5w	ne
Subdivision: Crystal Springs		47.48.498	116.55.522	35	52n	5w	se
Rathrum watershed		47.48.846	116.54.636	36	52n	5w	nw

Description	FD	Latitude North	Longitude West	Sec.	Twn .	Range	¼
Communications tower		47.50.800	116.55.631	14	52n	5w	sw
Homes on Spirit Lake: poor access	SI	47.56.402	116.54.887	13,14	53n	5w	*
Saw mill		48.00.753	116.55.179	23	54n	5w	ne
Care facility: Aspen Springs		48.02.098	116.52.407	18	54n	4w	nw
Tesimini caves: outdoor party site		47.57.379	116.52.859	7	53n	4w	se
Subdivision: Holiday Acres		47.55.557	116.51.000	20,21	53n	4w	*
Homes on E Twin Lakes: poor access		47.52.964	116.52.356	5,6	52n	4w	*
Homes in heavy timber		47.42.601	116.49.714	3,4	50n	4w	*
Subdivision		47.50.134	116.48.783	22	52n	4w	se
Explosives factory: Pacific Pipe		47.52.091	116.50.064	9	52n	4w	ne
Subdivision: Elkhorn Ranch		47.52.158	116.49.439	10	52n	4w	nw
Homes in timber: Hillsdale Road		47.54.935	116.49.736	27	53n	4w	sw
USFS seed orchard: fertilizer, fuel		47.54.888	116.49.128	27	53n	4w	nw
Subdivision: Westwood Loop bad access & heavy timber		47.56.263	116.49.019	15	53n	4w	sw
Subdivision: Spirit Lake East, 300 5-10ac tracts		47.57.894	116.49.443	3,4,9, 10	53n	4w	*
Subdivision: Ramsey Estates		47.52.313	116.48.359	11	52n	4w	nw
Henley airstrip and camping:		47.54.552	116.42.293	28	53n	3w	se
Northeast Quadrant							
Subdivisions		47.42.160	116.45.057	6	50n	3w	sw
Homes: Potlatch Hill poor access		47.39.922	116.44.722	19	50n	3w	nw
Homes on edge of bluff, poor water supply		47.40.628	116.44.900	18	50n	3w	sw
Subdivisions: abut forest land		47.41.226	116.45.448	7	50n	3w	sw
Subdivision: Hayden View Estates		47.44.647	116.45.305	30	51n	3w	sw

Description	FD	Latitude North	Longitude West	Sec.	Twn.	Range	¼
Subdivision: Emerald Estates timber		47.46.848	116.46.753	12	51n	4w	sw
Explosives Factory: Rimrock		47.47.574	116.47.135	12	51n	4w	sw
5 acre lots to be developed		47.48.524	116.42.653	33	52n	3w	*
Trail System: English Point NRT, possible starts		47.46.912	116.43.009	9	51n	3w	*
Homes: east side of Hayden Lake, one-deep most of the shore		47.46.274	116.40.348	*	53n	3w	*
Communications towers: Wesr Canfield Butte		47.44.035	116.43.618	29	51n	3w	se
Homes: isolated in timber		47.42.187	116.42.979	4	50n	3w	sw
Homes: isolated in timber		47.40.268	116.41.618	22	50n	3w	nw
Camp: Mivoden		47.46.895	116.40.379	11	51n	3w	nw
Northern Lakes Fire Department: Mokins Bay		47.47.024	116.39.983	11	51n	3w	ne
Campsite: Mokins Bay		47.47.082	116.39.996	11	51n	3w	ne
Homes: isolated in timber		47.48.638	116.41.057	34	52n	3w	nw
Athol airport		47.57.456	116.40.453	11	53n	3w	nw
Homes: 5ac lots		47.58.066	116.41.336	3	53n	3w	*
Homes: 30 +/- outside of a RFD		47.39.321	116.36.722	29	50n	2w	ne
Homes: 12 +/- outside of RFD		47.38.170	116.36.039	33	50n	2w	se
Homes: 30+/- single entrance		47.34.848	116.26.457	22	49n	1w	nw
Subdivision: Farragut Village		47.56.613	116.36.598	17	53n	2w	nw
Homes: Cape Horn, poor lakeside access		47.59.044	116.33.162	34	53n	2w	nw
Southwest Quadrant							
Subdivision: 30 homes	Mk	47.40.618	117.00.837	18	50n	5w	sw
Homes: isolated, poor access	Mk	47.39.455	117.00.997	30	50n	5w	nw
Outdoor party site		47.38.520	117.02.068	35	50n	5w	sw

Outdoor party site		47.32.438	117.01.357	36	49n	5w	ne
Communication tower: mica peak	Mk	47.37.375	116.59.272	4	49n	5w	ne
Subdivision: potential 400 homes		47.41.913	116.58.734	9	50n	5w	nw
Description	FD	Latitude North	Longitude West	Sec.	Tw n	Range	¼
Homes: isolated in timber	Mk	47.42.569	116.57.520	4	50n	5w	*
No water sources	Mk	47.40.612	116.54.936	13	50n	5w	*
Communication tower: Blossom Mountain	Mk	47.39.684	116.57.048	22	50n	5w	sw
MKI fire department and IDT fuel depot	Mk	47.37.299	116.52.192	5	49n	4w	se
Homes: numerous up draws		47.39.083	116.53.510	30	50n	4w	*
Poor water availability	Mk	47.41.125	116.53.709	13	50n	5w	ne
MKI northern area point on lake	Mk	47.40.158	116.49.773	22	50n	4w	nw
Campground: Mica Bay, boat access only, firepits	Mk	47.35.793	116.51.984	16	49n	4w	nw
Camp: Sweyolaken, boat access only	Mk	47.35.820					
Worley northern area point on lake	Wo	47.32.449	116.49.461	3	48n	4w	ne
Campsite: McDonald Point, boat access only	Mk	47.33.316	116.49.115	26	49n	4w	sw
Camp: Lutherhaven	Mk	47.36.302	116.49.543	11	49n	4w	sw
Subdivision: Harborview Estates	Mk	47.37.699	116.47.058	1	49n	4w	ne
Subdivision: Kid Island Estates	Mk	47.38.704	116.47.697	26	50n	4w	se
Sawmill		47.41.941	116.49.548	10	50n	4w	nw
Southwest Quadrant							
Homes: 20 +/- clustered along lake		47.31.913	116.47.285	1	48n	4w	ne
Homes: in draws		47.30.996	116.47.661	12	48n	4w	*
Marina & gas station: fuel storage		47.32.206	116.46.598	6	48n	3w	nw
Homes: isolated in steep timber		47.32.033	116.45.197	5	48n	3w	*

Camp: Easton		47.36.064	116.46.723	7	49n	3w	se
Homes: on peninsula in heavy timber		47.36.472	116.46.468	7	49n	3w	ne
Marina & gas station: fuel storage		47.37.251	116.44.804	5	49n	3w	se
Nature preserve: Tubbs Hill	Cd	47.39.990	116.46.689	24	50n	4w	*
Homes: Tubbs Hill northside	Cd	47.40.143	116.46.628	24	50n	4w	ne
Homes: limited lakeside access	Cd	47.39.152	116.44.255	29	50n	3w	*
Sawmill	Es	47.36.413	116.43.455	9	49n	3w	ne
Homes: poor access	Es	47.36.495	116.42.755	10	49n	3w	*
Outdoor party site		47.35.194	116.43.287	15	49n	3w	sw
Homes: at tops of draws	Es	47.34.626	116.44.069	21	49n	3w	*
Homes: Black lake not in RFD	No	47.26.935	116.39.712	1	47n	3w	*
Homes: in timber		47.30.469	116.40.663	14	48n	3w	nw
BLM seed orchard		47.36.527	116.41.324	11	49n	3w	se
Campground: Beauty Creek		47.36.299	116.40.049	12	49n	3w	sw
Campground: Beauty Bay		47.37.017	116.40.607	1	49n	3w	sw
Campground: commercial		47.37.374	116.38.095	6	39n	2w	se
Shoshone NW point of area	Sh	47.33.337	116.36.573	33	49n	2w	nw
St. Maries NE point of area	St	47.26.514	116.36.513	8	47n	2w	ne
Homes: isolated in timber	Sh	47.32.464	116.34.615	3	48n	2w	ne
Homes: 30 +/- dense, single access	Sh	47.34.776	116.26.510	22	49n	1w	ne
Homes: Rose Lake		47.32.892	116.28.014	33	49n	1w	se
Historic site: Cataldo Mission	Sh	47.32.895	116.21.495	32	49n	1e	se
Homes: Limited access		47.31.735	116.21.958	7	48n	1e	*

APPENDIX D
VEGETATION TYPE AND FUEL MODEL 1
(State of Idaho, GIS Vegetation Layer)

Value	Count	Acres	VEG_TYPE	FUEL_MODEL
1000	180619	40167.3	Urban	0
1001	897516	199595.8	High Intensity Urban	0
1002	280752	62435.6	Low Intensity Urban	0
1101	95631	21267.1	"Disturbed, High"	0
1102	53275	11847.7	"Disturbed, Low"	0
2000	32254846	7173056.9	Agriculture	0
3101	3013248	670107	Foothills Grassland	1
3102	186222	41413.3	Disturbed Grassland	1
3103	295378	65688.2	Herbaceous Clearcut	1
3104	2406422	535156.9	Montane Parklands and Subalpine Meadow	5
3105	264511	58823.8	Wet Meadow	5
3106	1653551	367728.2	Herbaceous Burn	1
3107	3643720	810315.8	Shrub/Steppe Annual Grass-Forb	6
3109	11725377	2607570.9	Perennial Grassland	1
3110	2301250	511768	Perennial Grass Slope	1
3201	2981	662.9	Mesic Upland Shrubs	6
3202	10252526	2280028	Warm Mesic Shrub	5
3301	875944	194798.5	Curlleaf Mountain Mahogany	4
3304	3719803	827235.7	Bitterbrush	6
3305	15024738	3341305.7	Mountain Big Sagebrush	6
3306	707	157.2	Wyoming Big Sagebrush	6
3307	38652492	8595809.9	Basin & Wyoming Big Sagebrush	6
3308	2847	633.1	Black Sagebrush Steppe	6
3309	6513	1448.4	Silver Sage	6
3310	2014256	447944.3	Salt-desert Shrub	6
3312	671693	149375.8	Rabbitbrush	1
3315	6060645	1347808.4	Low Sagebrush	6
3316	2783657	619049	Mountain Low Sagebrush	6
4101	3798309	844694.4	Aspen	9
4102	131126	29160.7	Cottonwood	5
4103	64458	14334.6	Maple	5
4201	382597	85084.6	Englemann Spruce	10
4203	10966921	2438900.1	Lodgepole Pine	9
4206	5467680	1215940.7	Ponderosa Pine	9
4207	3240419	720626.9	Grand Fir	10
4208	4650209	1034145.8	Subalpine Fir	10
4210	1112416	247386.8	Western Red Cedar	8
4211	660630	146915.5	Western Hemlock	8
4212	17035874	3788556.1	Douglas Fir	8
4215	739464	164447.1	Western Larch	8
4216	242	53.8	Douglas-fir/Limber Pine	8
4217	4239572	942825.5	Subalpine Pine	8
4218	647551	144006.9	Subalpine Fir/ Whitebark Pine	8
4219	238024	52933.4	Mixed Whitebark	

			Pine Forest	8
4220	8742223	1944156.3	Mixed Subalpine Forest	10
4221	8255477	1835910.4	Mixed Mesic Forest	10
4222	4233770	941535.2	Mixed Xeric Forest	10
4223	2353533	523395	Douglas-fir	
			Lodgepole Pine	10
4225	2721747	605281	Douglas-fir/Grand Fir	10
4226	2505119	557105.8	Western Red Cedar/ Grand Fir Forest	10
4227	656877	146080.9	Western Red Cedar/ Western Hemlock Forest	8
4228	439806	97807.1	Western Larch/Lodgepole Pine	8
4229	749005	166568.9	Western Larch/ Douglas-fir	10
4230	816604	181602.1	Utah Juniper	6
4231	1844163	410117.8	Western Juniper	6
4232	61226	13615.9	Pinyon Pine/Juniper	6
4301	1819523	404638.2	Mixed Needleleaf/ Broadleaf Forest	8
4401	4096	910.9	"Burnt, Standing Timber"	1
5000	213948	475794.2	Water	0
6101	750868	166983.2	Needleleaf Dominated Riparian 0	
6102	582116	129455	Broadleaf Dominated Riparian	0
6103	134295	29865.5	Needleleaf/Broadleaf Riparian	0
6104	151062	33594.2	Mixed Riparian (Forest & Non-forest)	5
6201	308853	68684.9	Graminoid or Forb Dominated Riparian	5
6202	2095236	465953.2	Shrub Dominated Riparian	0
6203	42967	9555.3	Mixed Non-forest Riparian	0
6301	205078	45606.7	Deep Marsh	0
6302	318614	70855.6	Shallow Marsh	0
6303	843	187.5	Aquatic Bed	0
6304	27216	6052.5	Mud Flat	0
7201	68233	15174.1	Sand Dune	0
7202	60454	13444.2	Vegetated Sand Dune	0
7300	2240207	498192.8	Exposed Rock	0
7301	712266	158398.7	Lava	0
7302	1776042	394968.6	Vegetated Lava	0
7800	426686	94889.4	Mixed Barren Land	0
7900	4996	1111	Shoreline and Stream Gravel Bars	0
8100	167383	37223.8	Alpine Meadow	5
9100	53537	11905.9	"Perennial Ice, Snow"	0
9800	127151	28276.7	Cloud	0
9900	91142	20268.8	Cloud Shadow	0