Wyoming: Community Wildfire Protection Plans

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

Signed: _____

Abstract

Community wildfire mitigation is paramount for the safety of the public, landowners, and firefighters. The problem statement of this applied research project is most Wyoming communities bordering Bureau of Land Management (BLM) lands do not have community level Community Wildfire Protection Plans (CWPPs) that identify mitigation goals and objectives, as do most of Utah's communities' CWPPs.

The purpose of this research was to identify what level CWPPs are completed in Wyoming and what elements are contained as compared to CWPPs in Utah. Descriptive method of research was used for the following research questions:

1. What is the difference in involvement and level of incorporation of CWPP goals and objectives in Wyoming compared to Utah's CWPPs?
2. What does Healthy Forest Restoration Action (HFRA), BLM Manuals, or other national standards recommend?
3. What agency provides the CWPP template? What does that template address?
4. How do signatories and/or community members in Wyoming and Utah believe their CWPPs are addressing wildfire mitigation issues within their respective community?

A literature review concluded the theory of how local agencies complete their master plans, how emergency management and federal land use plans play a role in developing sustainable communities, and how CWPPs are completed and what are the national requirements. A survey was developed and disseminated to a group each in Wyoming and Utah to identify their respective CWPP's level of planning, elements, and success. This information was collected, analyzed, and compared to each other and against national standards. The results indicated that Wyoming's CWPPs are not being completed by the community nor at the community level, the

majority are actually county-wide wildfire risk assessments, and do not meet national standards. Wyoming would benefit from collaboratively developing a standardized state-wide CWPP template to reduce wildfire threats to communities and firefighters.

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Introduction

One of the five 2011 National Themes released by the National Interagency Fire Center in Boise, Idaho is "Firefighters count on you to do your part," (*NIFC 2011 Themes*, 2011, p.1) due to the hundreds of thousands of homes that are located in the wildland urban interface (WUI)—the areas where homes are intermixed with forests and wildlands. Wildland firefighters are not responsible for clearing brush, trees, and other flammable material away from homes—that's the responsibility of property owners. Wildfire mitigation is becoming more and more critical to reducing the escalating costs of WUI fires, the need of firefighters having to stay and defend WUI, and if they do, reducing the risk to them as they defend the WUI.

The establishment of the National Fire Plan (2000) and the Healthy Forests Restoration Act (HFRA) (2003) identified the deteriorating health of our forests, the need for greater community protection from wildfire, and encouraged collaborative pre-fire planning among community stakeholders (*Community Guide*, 2008, p. 28). The first step in wildfire prevention education is to raise awareness of the responsibilities of living in a fire-prone environment. Individual and community action can ensure that homes and neighborhoods are prepared for wildfire.

One of the most successful tools for addressing these challenges is the Community Wildfire Protection Plan (CWPP). Yet, to date, in Wyoming there has been no systematic process or review of state, local, and county efforts for wildfire risk mitigation in the WUI and whether or not these efforts are effective (Cohen, 1999). Program evaluation is a necessary activity that facilitates increased accountability and enables program managers to make adjustments in budget allocations and activities as they gain insight into which approaches and tools may be working best to reduce wildfire risk (*Community Guide*, 2008). In Utah, one of

Wyoming's interagency wildfire management cooperators and bordering neighbor, a standardized CWPP template and process has been established and due to some of the CWPPs' effectiveness has been recognized nationally through the 2002 Excellence in Ecosystem Management Through Fuels Management Treatment Projects Award and the 2001 and 2005 National Wildland Urban Interface Award (S. Wimmer, personal communication, May 31, 2011).

Thus, the problem identified for research is that most Wyoming communities bordering Bureau of Land Management (BLM) lands do not have community level CWPPs that identify specific wildfire mitigation goals and objectives, as do most of Utah's. Most Wyoming CWPPs are completed at the county level and do not address specific actions necessary at the community wildfire mitigation level.

The purpose of this research is to identify what level CWPPs are completed in Wyoming and what elements are contained as compared to CWPPs in Utah, which is a national recognized state. This will allow interagency partners in Wyoming to assess the future needs of CWPPs to ensure communities are adequately addressing wildfire mitigation efforts through a standardized community level CWPP template.

Utilizing the descriptive method of research to identify and describe the minimum elements for Wyoming CWPPs based upon Utah's CWPPs, the following research questions will be answered:

1. What is the difference in the involvement and level of incorporation of community wildfire mitigation goals and objectives between Wyoming and Utah CWPPs?
2. What does HFRA, BLM Manuals, or other national standards or guidance recommend?

3. What agency provides the CWPP template? What does that template address?
4. How do signatories and/or community members in both Wyoming and Utah believe their individual CWPPs are addressing their wildfire mitigation issues within their respective community?

In summary, the intent of the research is to evaluate Wyoming communities' CWPPs for adequacy and effectiveness ultimately to improve the survivability of homes in the WUI and even more important, the safety of fire fighters. Protecting communities and natural resources from wildfire cannot be accomplished by any one person or entity. We must work together to identify and pursue a pathway to success (*Community Guide*, 2008).

Background and Significance

The history of CWPPs began with the landmark 2003 HFRA legislation that clearly supports the role of communities in federal land management planning. The main purpose for the HFRA is to reduce wildfire risk to communities, their municipal water supplies, and other at-risk lands through a collaborative process of planning, prioritizing, and implementing hazardous fuels reduction projects (*Community Guide*, 2008, p. 18). HFRA provides communities this opportunity by encouraging communities to collaborate with interagency cooperators to participate in the planning of where and how federal agencies implement fuel reduction projects. HFRA places priority on treatment areas identified by communities through CWPPs. Although the CWPP is not a federal planning document the CWPP-determined WUI boundary can and should be used as part of the development phase of a Land and Resource Management Plan/Land Use Plan (LUP) and a Fire Management Plan (FMP) for federal lands.

Federal LUPs are designed to project present and future land uses and identify management practices needed to achieve desired conditions. LUPs are used by natural resource

managers and the public to collaborate and accomplish the following: allocate resources and determine appropriate and multiple uses for public lands, develop a strategy to manage and protect resources, and set up systems to monitor and evaluate the status of resources and effectiveness of management practices over time (*Natural Hazards*, 2003). As LUPs are updated, they may incorporate the collaboratively developed CWPP WUI boundary through the next level of activity plans called FMPs. While the fire management planning requirements may differ among agencies, a common purpose of a FMP is to aid managers in making informed decisions and can be an opportunity to incorporate CWPP-identified project areas.

HFRA's minimum requirements for a CWPP are:

- A CWPP must be collaboratively developed by local and state governments in consultation with federal agencies and other interested parties;
- A CWPP must identify and prioritize areas for hazardous fuel reduction treatments, and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure within the Wildland Urban Interface (WUI), and
- A CWPP must recommend measures wildfire mitigation efforts that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

From a fire professional perspective, the majority of Wyoming CWPPs do not meet the second and third HFRA's minimum requirements due to Wyoming's CWPPs are mostly completed at the county level and don't specifically identify and prioritize areas for fuels reduction projects, or recommend types and methods of treatments or recommend other specific wildfire mitigation measures that homeowners and communities—not counties—can take to

reduce wildfire risk. Out of the 20 Wyoming CWPPs, only three have been developed at the local community level; the remaining 17 are completed at the county level and three counties haven't completed a CWPP at any level (National Fire Plan Operations, 2010).

Federal natural resource agencies, such as BLM Wyoming, want to and are required to work with the public to help maintain, protect, and improve values. It can be easy to identify where CWPP efforts align with BLM processes and policies, and the role they may have in developing long-term management strategies, when the public participates in the processes that federal land management agencies are required to follow.

Evidence that the BLM Wyoming is required to work with the public on the initiation, development, implementation, and maintenance of CWPPs comes from the 2010 Wyoming Fuels Management, Fire Planning, and Community Assistance Programs Evaluation Final Report. The evaluation, which was conducted May 17 to May 21, 2010, determined the extent to which the Wyoming BLM programs are meeting national requirements as described in the standards set forth by laws, regulations, policies, and procedures. The evaluation assessed the overall program performance and the adequacy of management involvement, including the integration of fuels and resource management activities. Several of the findings include:

- The state office should clearly identify the mitigation and education program lead, and
- Guidance from the state office should be provided to district and field offices to help plan, fund, and report community assistance (the BLM program where CWPPs fall into as identified workload).

Next, BLM 9211 Fire Planning Manual states "It is BLM fire planning policy that BLM fire staff should participate, to the extent possible, in the development of Community Wildfire Protection Plans" (*BLM Reference Manual*, 2007, p. 7).

The 2010 BLM Wyoming Fuels and Community Assistance Review's recommendations and the BLM's 9211 are significant, and set the stage for this applied research project (ARP) which was completed for the Executive Analysis of Community Risk Reduction (EACRR) Course of the National Fire Academy's (NFA) Executive Fire Officer Program (EFOP). The results of this research are an application of Unit 3: Interventions, Program Design, and Evaluation within the EACRR course and the United States Fire Administration's Goal 1: "Reduce risk at the local level through prevention and mitigation," and Objectives 1.1: "Encourage the State, local, and tribal adoption of risk reduction, prevention, mitigation, and safety strategies," and 1.2 "Encourage code development, compliance, safe building design, and infrastructure resilience" (USFA Strategic Plan, 2009). Furthermore, this ARP supports the BLM's Fire Leadership Team's Fire and Aviation Strategic Plan's Goal 2: "safe, efficient, and effective fire fighting operations," Goal 3: "diverse, healthy, and resilient ecosystems," Goal 4: "reduce wildland fire threats to communities," and Goal 5: "a high reliability fire and aviation organization (BLM FLT Strategic Plan, 2009). Finally, BLM Wyoming's Fire Leadership Team's Goal 4: "Reduce wildland fire threats to communities and infrastructure" and Goal 5: "Initiate and maintain strong interdisciplinary and interagency partnerships" (WY BLM FLT Charter, 2009) are in direct support of this ARP's purpose.

Literature Review

Many hazards are localized, such as floods, tornadoes, hurricanes, and wildfire. The effects of such hazards can be greatly reduced if the hazards are eliminated or mitigated within the communities through Emergency Management planning efforts. Emergency Management is a necessary function of all levels of government that stresses an integrated partnership between federal, state, and local government and the private sector. It is a comprehensive effort to mitigate,

prepare for, respond to, and recover from natural, technological, and man-made disasters. The ability of a community to effectively respond to and recover from disasters depends largely on actions taken prior to a disaster (*Resource Guide to All Hazards*, 2003).

Planning is the first function of any effective management. With an inventory of community problems and opportunities, and a subsequent comprehensive plan and associated actions, public officials can see that resources are put to best use. Comprehensive county and municipal emergency management plans are the first step in risk reduction efforts and involve land use zoning recommendations to separate hazards from communities. These type mitigation strategies should be driven by counties and municipalities because they are familiar with their local hazards. Community planning integrates this awareness of natural hazards and disaster risk mitigation into the normal processes of planning the development and/or redevelopment of a community, or otherwise known as community sustainability. No community can be "sustainable" that is not disaster resistant (*Resource Guide to All Hazards*, 2003).

Sustainable communities are characterized by development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Building sustainable communities can help local government officials better prepare and recover when disaster strikes. Reducing the effects of hazards on a community makes economic sense, and it is good public policy because it protects citizens and their future. Communities must integrate sustainable development practices into their comprehensive plans as a proactive method of hazard mitigation as opposed to traditional post-disaster responses (*Resource Guide to All Hazards*, 2003).

This integrative approach to emergency management planning recognizes that while response to emergencies is the central focus during a disaster, mitigation activities to reduce the

degree of risk, preparedness activities to increase the capability to respond, and recovery activities required to return governmental operations to normal, are equal components in a successful program that will allow public officials to meet their responsibility to provide for the protection of their citizens. A highly effective strategy to implement this integrative and proactive approach is through such actions as promulgating new codes or ordinances, or modifying existing ones by the local government (Reams, Haines, Renner, Wascoma, & Kingre, 2005, p. 9).

The community that constantly seeks to improve emergency management through integration with other resources, skills, and knowledge will make significant progress towards improved public safety and will provide the following benefits to a community (*Natural Hazards*, 2003, p. 6):

- Reduce public and private damage costs;
- Reduce social, emotional, and economic disruption;
- Increase access to funding sources for hazard mitigation projects; and
- Improve ability to implement post-disaster recovery projects.

Developing a local mitigation strategy is a process through which the vulnerabilities of the community to different types of hazards are assessed, a variety of plans, programs and projects are identified to decrease the magnitude of those vulnerabilities, and decisions are made and documented to implement the necessary activity level plans. These plans will identify the specific steps a community will need to undertake to lessen the impacts of disasters, when those steps will be taken, how they will be or could be funded, what priority they should have, and who will be responsible for each activity within a disaster. For most communities, the local mitigation strategy plan will document existing programs important for hazard mitigation, while the process of its development is also likely to result in new mitigation initiatives. While the plan documents are

necessary, the truly important part of developing a local mitigation strategy is to establish an ongoing process that will make hazard mitigation a routine part of the daily functioning of the entire community—and that begins with community ownership and involvement into the process (*Resource Guide to All Hazards*, 2003).

With the planning process established, community involvement and associated knowledge will uncover existing and potential problems, such as large accumulation of hazardous fuels and future wildfire, respectively, the community begins to control their destiny by helping to prevent or solve them these problems.

Communities are experiencing an influx of private homes with beautiful views of the landscape, but the difficulties of protecting these homes from wildfires are at the heart of the current dilemma of wildfire management in the United States. The intermixing of housing within areas that retain much of their natural state and homeowners expecting their homes to be protected has created a marked problem for government agencies, requiring them to disperse much of their firefighting resources to protect structures instead of toward wildfire suppression and increased suppression costs (McCaffrey, 2002, p. 10). But the extent of this wildfire hazard makes protecting structures an unrealistic expectation.

According to HFRA, the wildland–urban interface is considered "any area within or adjacent to an at-risk community that is identified in recommendations to the Secretary in a CWPP" (*Community Guide*, 2008, p. 28). A senior physicist at the Stanford Research Institute, C.P. Butler (1974), coined the term "urban-wildland interface" and described this fire problem in its simplest terms, "the fire interface is any point where the fuel feeding a wildfire changes from natural (wildland) fuel to man-made (urban) fuel. …For this to happen, wildland fire must be

close enough for its flying brands or flames to contact the flammable parts of the structure" (Cohen, 1999, p. 5).

Past ideologies believed that preventing the occurrence of wildfires would prevent wildland-urban fire destruction. However, contemporary knowledge understands that wildland fire is an intrinsic ecological process in nearly all North American ecosystems (Arno and Brown, 1989). Wildland fire will always occur in forest and rangeland fire ecosystems and will thus have an impact on people, property, and resources. Current wildfire management may be able to minimally influence when and where wildland fires occur, but cannot solely remove wildland fire occurrences. Thus, it is not reasonable to form agency and public expectations for the non-occurrence of wildland fires, including wildland fires encroaching on communities.

Government leaders must critically review the costs associated with the firefighting resources and staffing needed to battle the growing wildfire threat, and implement effective mitigation efforts before wildfires strike. As these costs and damages from wildfires increase, wildland resource management and fire agencies are now effectively working to meet this challenge by expanding their fire management methods beyond the historic emphasis on suppression. This means active pre-fire work—such as vegetation management, public education, and land-use planning and regulation—to mitigate the fire hazard. Current ecological conditions and social expectations and perceptions mean that wildfire mitigation is not simple (McCaffrey, 2002, p. 6).

Recognizing the inevitability of wildland fire occurrence coupled with how homes ignite during wildland fires suggests a mitigation approach specific to wildland-urban fire. Given a wildland-urban fire, the home ignition zone principally determines the potential for home ignitions. This suggests a management approach that focuses on preventing home ignitions. That is, reducing a community's vulnerability to wildland fire rather than attempting the

elimination of wildland is the goal. Homeowners need to recognize that as part of the problem they are also an integral part of the solution—wildfire mitigation (McCaffrey, 2002).

Wildfire experts point to eight basic factors that affect the risk of a home burning in a wildfire. A weakness in any of these areas can lead to a similar result – a destroyed or severely damaged home. Perhaps the most important thing for existing homeowners to know, primarily those in densely populated communities where houses are less than 30 feet apart, is the fact that these risk factors can be addressed and reduced through cooperative local fire mitigation action (*MEGA FIRES*, 2008, p. 48).

An important component of fire mitigation is the creation of defensible space around structures. Involving a variety of activities, including both vegetation and building modification, defensible space increases the ability of firefighters to protect a structure and improves the likelihood that it will survive a wildfire should protection not be available or firefighters make the safe decision to not stay and defend. Homeowners must become familiar with the affordable options available to retrofit their existing homes to increase their protection against wildfire, and local and state government leaders should encourage this education (*MEGA FIRES*, 2008, p. 48). National programs such as Firewise, funded by the U.S. Forest Service, and state programs, including Utah's Living with Fire and Fire Safe California, have proving very successful by providing interested homeowners and civic leaders with assistance in reducing their risks. These efforts could be bolstered by the establishment of broad-based partnerships from the grassroots to the upper levels of government (*MEGA FIRES*, 2008).

These activities must be coordinated under an integrative and collaborative planning approach known as a CWPP. CWPPs provide goals and objectives to guide mitigation efforts over the long term (Renner, Haines, and Reams, 2010). All CWPPs should use a credible risk

assessment to identify the community's highest priorities for fuels treatment and other mitigation needs; however, a stand-alone risk assessment should not be considered the CWPP in itself, but rather as a supplement that identifies the associated WUI risk (*Community Guide*, 2008). Risk assessments allow officials to focus efforts on areas of highest risk, while homeowner assistance through individual property assessments, defensible space creation and debris removal brings the concept of defensible space into homeowners' backyards—a CWPP in the working (Renner et al., 2010).

CWPPs are part of a national effort to improve the health of our nation's forests and reduce wildfire risk to communities. As stated above, the main purpose for the HFRA is to reduce wildfire risk to communities, municipal water supplies, and other at-risk lands through a collaborative process of planning, prioritizing, and implementing hazardous fuels reduction projects. Since the inception of the National Fire Plan, state-level wildfire mitigation programs have evolved into complex programs that appear to work synergistically to motivate homeowners to take action to protect their lives and their property (Renner et al., 2010).

Federal natural resource agencies, such as the BLM, want to work with these homeowners—as required by BLM Manual 9211 and HFRA—to help maintain, protect, and improve values, and the community's involvement will assist in these actions. It can be easy to identify where CWPP efforts align with federal processes and policies and the role they may have in developing long-term management strategies, if there is an understanding of the processes that federal land management agencies are required to follow (*Community Guide*, 2008).

Elements of successful collaboration in a CWPP begin with broad community participation. A rigorous outreach effort should be made. Potential participants include property

owners, local and state governments, tribes, fire and emergency services departments, public land management agencies, forest industry groups, insurance companies, environmental organizations, community-based forestry groups/collaborative, watershed councils and other non-government organizations, academics, scientists, and any other interested individuals (*Community Guide*, 2008). Including county and municipal social service agencies within the CWPP helps ensure that the concerns of low-income and special needs populations are identified and addressed too. Participants serve as representatives from their respective group, non-governmental organization or agency and the interests they represent within the CWPP action plan.

Collaboration among the representatives must continue throughout the CWPP process, including the assessment of existing hazard fuel conditions, identification of issues and concerns such as inadequate infrastructure, delineation of the WUI and responsible jurisdiction, identification and prioritization of action items, inventory of resources, development of an action, monitoring and maintenance plan (*Community Guide*, 2008).

HFRA specifies that the relevant local government, fire department, and state forest management agency must mutually agree on the content of the CWPP. However, the use of a collaborative process is one of the requirements that Congress established for a CWPP. Through effective collaboration, a CWPP opens the door to significant local community benefits, including being able to: (a) define and set the boundaries of the community's WUI, (b) identify and prioritize areas for hazardous fuel-reduction treatments on United State Forest Service (USFS) and DOI lands in the WUI, (c) recommend the types and methods of treatment to be used; and d) influence how federal funds for projects on non-federal WUI lands may be obtained (*Community Guide*, 2008, p. 7).

Decision-makers at a national level (including congressional representatives and agency leaders with the USFS, DOI, Federal Emergency Management Agency (FEMA), and others) are not often able to see the local successes gained from a CWPP and its projects. Data collected from monitoring and evaluation of local CWPPs can also be used to evaluate national goals for wildfire risk reduction, such as those included in the HFRA and the Revised 10-Year Implementation Plan (10-YIP) (*Community Guide,* 2008, p. 20). This can help ensure that funding and agency efforts are geared toward successful mitigation approaches.

These findings, specifically HFRA and its requirements, clarify and reinforce BLM Wyoming's role as a partner in CWPP management, as CWPPs are not federal documents. Therefore, BLM will need to continue to be a collaborator—however still maintaining a leadership role to integrate and influence the outcome since BLM does not have any authority in the process. Due to the continued growth of WUI and the inevitability of wildfires, the jurisdictional agencies must develop mitigation strategies and effective programs such as Utah's Living with Fire. The primary player for wildfire mitigation must be the Wyoming State Forestry Division and that agency's task is ensuring the development of a standardized and competitive CWPP process and template for Wyoming counties—especially the involvement of local community members. These new CWPPs must be tied into each county's master plan to strive for achieving sustainable communities for generations of Wyomians to come.

Procedures

This ARP utilized the descriptive research method to analyze and describe data discovered through personal interviews and a survey instrument to make recommendations. The first step was a thorough review of professional literature on community master planning, emergency management planning, and fire mitigation planning. The primary source for

literature came from the NFA's Learning Resource Center, both in person in November 2010, and on-line between December 2010 and March 2011. The sources searched were community master planning, emergency management, and fire service books, publications, and periodicals. The majority of theory literature reviewed on planning and mitigation came from the BLM Planning Manuals, the internet, and the NFA's Learning Resource Center, as well as personal reference material. For the ARP the author utilized the pertinent and applicable research material that was primarily published within the last four years.

Two survey instruments via SurveyMonkey (2011), an on-line questionnaire service, were developed in February, 2011 (see Appendix A) that asked the exact same questions. The Wyoming survey instrument was distributed to 26 Wyoming CWPP representatives, and 36 Utah CWPP representatives received the Utah specific survey instrument. Both respective survey links were sent via the BLM Lotus Notes email system. The survey solicited opinions and objective data on current CWPPs within both states based on the respective representative's perspective and role within their local CWPP. The survey was developed based upon the need to answer the four research questions. Survey questions were developed from experiential based knowledge, and input from fire service and research peers. CWPP representatives were selected based upon their individual and agency perspective and knowledge of their respective CWPP. A cover letter was provided to all potential survey respondents which provided a purpose statement and gave directions for completing the on-line survey, the need for the information, and requested participation. The survey was anonymous to encourage honest and thoughtful comments and as much participation as possible. The survey was available for one month with a 33.33% response rate from Utah's CWPP representatives and a 38.46% response rate from Wyoming's CWPP representatives, based upon the surveys actually completed.

A personal telephone interview was then conducted on March 15, 2011 with Paul Briggs, BLM Fuels Program Manager, Color Country District, Cedar City, Utah. He was chosen due to intimate knowledge of and participation with CWPPs within his geographic area—southwest Utah. The interview lasted approximately 20 minutes and information about theory and goals of CWPPs was gleaned to identify government/industry standards on CWPP development.

A second personal telephone interview was conducted with Sheldon Wimmer, State Fire Management Officer, BLM Utah State Office, Salt Lake City, Utah. Mr. Wimmer was chosen due to his fire management oversight of the BLM public lands within the entire state of Utah, his participation with the International Association of Fire Chiefs, and his being the recipient of the 2005 National Wildland Urban Interface Award. This interview lasted approximately 25 minutes. The information sought and received was what process BLM Utah has developed and participated as federal CWPP cooperators with the goal of answering research questions 3. and 4.

The limitations of the research procedures include subjectivity of the CWPP representatives surveyed, the survey completion percentage, the understanding of survey development by the author, and the understanding of the survey by the recipients. It is expected that most CWPP representatives have personal biases and opinions based upon their past, current, and anticipated future experiences with CWPP development—thus subjectivity comes into play. This type of survey instrument also allows the responses to be very subjective, based upon the respondent's personal opinion and commitment to CWPP development within his or her community. It is also assumed that all recipients understood and were able to answer all questions. Additionally, the author was new to the process of survey development and could have made errors in question formulation either through ineffective and/or biased questions.

Research information may not have been considered, discovered or it may have been overlooked during the research process. The resultant ARP was developed by the information and research data discovered during both the literature review and research process.

Results

To address the purpose of this APR four questions need to be answered.

Research Question 1. What is the difference in the involvement and level of incorporation of community wildfire mitigation goals and objectives between Wyoming and Utah CWPPs?

Personal interviews and the survey were used to answer this first research question. Seventy-five% of Utah survey respondents believe because firefighters can only partially control wildfire, they must adapt their communities to be resistant and resilient to wildfire; only 55% Wyoming survey respondents believe they must adapt their communities to be resistant and resilient to wildfire. On the other hand, nearly equal were Utah (58.3%) and Wyoming (60%) survey respondents stating that they had been personally or professionally affected by a WUI fire. This data indicates that nearly all survey respondents from both states have had the same experience with wildfire, thus are equally motivated to participate in a CWPP.

Research discovered that in Wyoming, not one community nor community member was involved with the development and drafting of their CWPP based upon the survey respondents' knowledge, whereas Utah 81.8% of the community and/or its members participated in the development of their CWPP. Also in Utah, counties participated in only 18.2% in the development of the CWPPs; however, Wyoming Counties participated in 62.5% of the CWPPs. Conversely though, is that Wyoming survey respondents (50%) indicated that local fire departments should have the primary responsibility for developing CWPPs—this is 16.7% more

than the next entities wanted involvement, even above the current county participation and process.

Next, 85% Wyoming's CWPPs are built for county level risk assessments (National Fire Plan Operations, 2010); conversely, 80% of Utah's CWPPs are developed for community level mitigation. These findings correspond with the involvement of Utah individual homeowners (40%), local government (40%), and local fire departments (30%) in the development of local CWPPs. In Wyoming, only 16.7% of property owners actually believed that homeowners should participate in the development of a CWPP; 50% of those surveyed in Wyoming felt that individual property owners should have the least involvement with the development of a CWPP, as compared to participation from local, county, state, and federal governments. Conversely again, the Utah survey results indicated that 60% surveyed felt that local government should have the least involvement due to local government's limited knowledge, interest, and understanding of WUI. The following graph depicts Wyoming and Utah surveyed respondents' views on the roles the community should play in a CWPP:

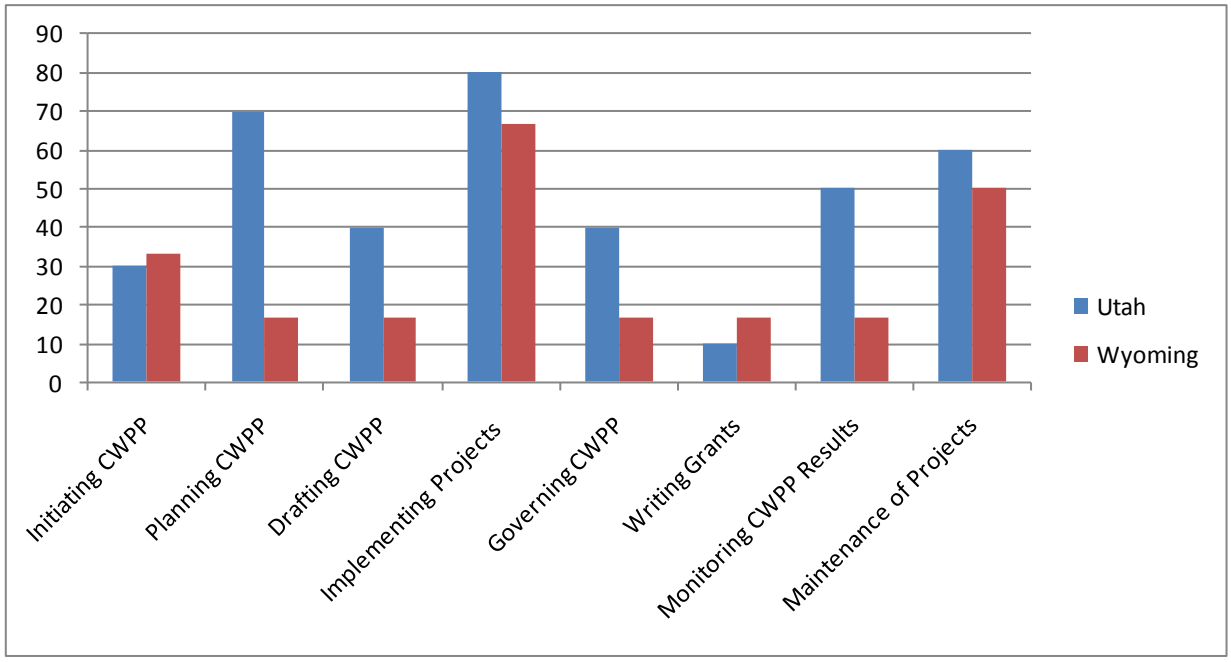

Figure 1. Views of the roles the community should play in a CWPP, as per survey respondents.

The graph supports the previous survey results that Wyoming survey respondents believe there should be significantly less community involvement as compared to Utah's survey respondents.

The next graph compares Wyoming's survey respondents overwhelming support for County CWPP involvement with only minor Wyoming State Division of Forestry involvement compared to Utah's respondents:

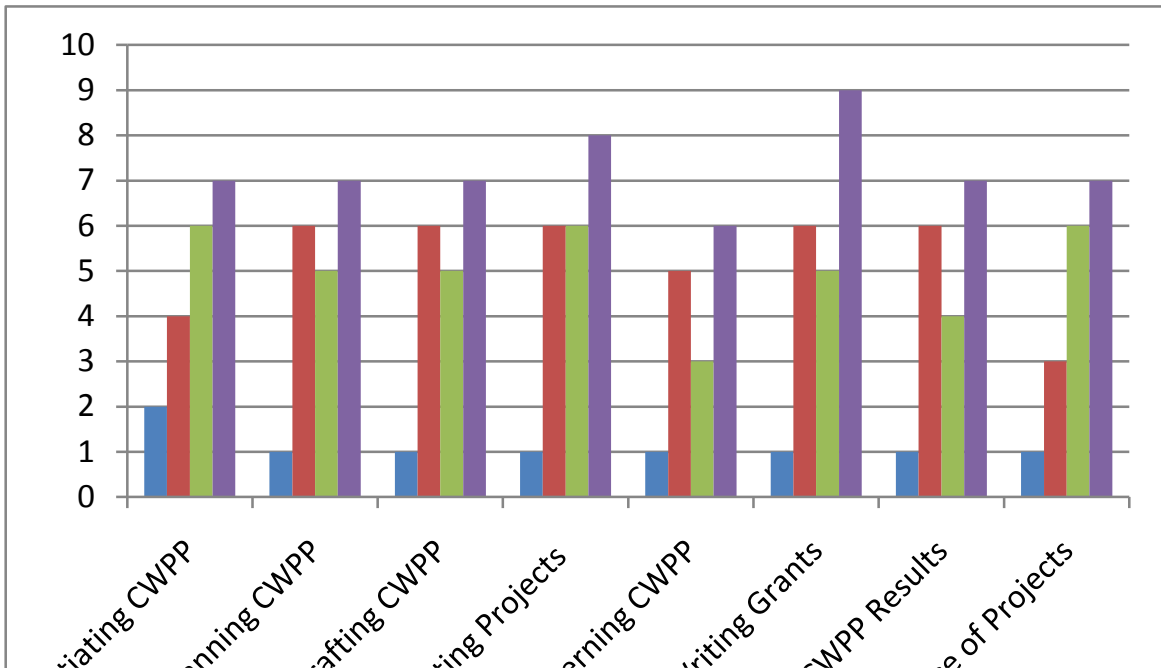

Figure 2. Comparison of survey respondents' support for County CWPP versus state CWPP involvement with specific CWPP phases.

The previous graph indicates Wyoming's strong reliance and relationship with their respective county governments, whereas Utah has more of a reliance and relationship with their state.

Federal CWPP involvement was only supported by 23.16% of Utah's respondents compared to only 20% of Wyoming respondents supported Federal involvement in their CWPPs.

Research question 1. What does HFRA, the BLM Manuals, or other national standards or guidance recommend?

Literature review was used to answer this second research question. Research on HFRA was used to answer the first part of this second research question. HFRA identifies the need for collaborative pre-fire planning among community stakeholders. HFRA specifies that the relevant local government, fire department, and state forest management agency must mutually agree on the content of the CWPP. However, the use of a collaborative process is one of the

requirements that Congress established for a CWPP. Specifically, HFRA provides communities this collaborative process by encouraging communities to collaborate with interagency cooperators in the planning of where and how federal agencies implement fuel reduction projects. Priority is given to fuels management treatments identified by the community through a CWPP by HFRA. HFRA's minimum requirements for a CWPP are:

- A CWPP must be collaboratively developed by local and state governments in consultation with federal agencies and other interested parties;
- A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure within the Wildland Urban Interface (WUI), and
- A CWPP must recommend measures wildfire mitigation efforts that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

Next, the review of the BLM 9211– Fire Planning Manual discovered that "It is BLM fire planning policy that BLM fire staff should participate, to the extent possible, in the development of Community Wildfire Protection Plans" (*BLM Reference Manual*, 2007, p. 5). Based upon the personal interviews with Sheldon Wimmer and Paul Briggs, BLM Utah District staffs are participating in the development of CWPPs (S. Wimmer, personal communication, June 1, 2011, and P. Briggs, personal communication, March 15, 2010). In addition, numerous BLM Utah fuels management projects have been identified, planned, funded and implemented both on public lands and private to include the Quichapa CWPP and the Pine Valley CWPP. The authority to enter into these necessary cooperative agreements comes from 1998 Wyden

Amendment which authorizes BLM to use appropriated funds to enter into and implement cooperative agreements with public and private entities to restore and enhance watersheds, including those outside public lands if appropriate criteria are met (*BLM*, 2004, p. 2).

Research question 3. What agency provides the CWPP template? What does that template address?

The survey instrument was used to answer this third research question. Standardized CWPPs were found in 72.7% of the Utah CWPPs that the survey respondents were involved, with Wyoming at 75%. However, the 72.7% of Utah's CWPP are from Division of Forestry**,** Fire & State Lands standardized template; Wyoming's 75% are from individualized county "standardized" templates. A variation was also found in each state's CWPPs having specific and measurable wildfire mitigation goals, objectives, and actions. Utah's CWPP respondents (90.9%) stated their plans do have these, whereas only 75% Wyoming's contain such metrics and actions.

The next survey question identified inconsistencies with Wyoming's support of County CWPP when 89% of survey respondents indicated that homeowners should have more involvement than the community (69%) as compared to the County (58%). Utah's survey found 98.3% of homeowners should have involvement compared to their communities (83%) and counties (63%).

All these research findings are supported by the following graphs that depict the type of contribution each of the entities should have in initiating, developing, implementing, and updating CWPPs.

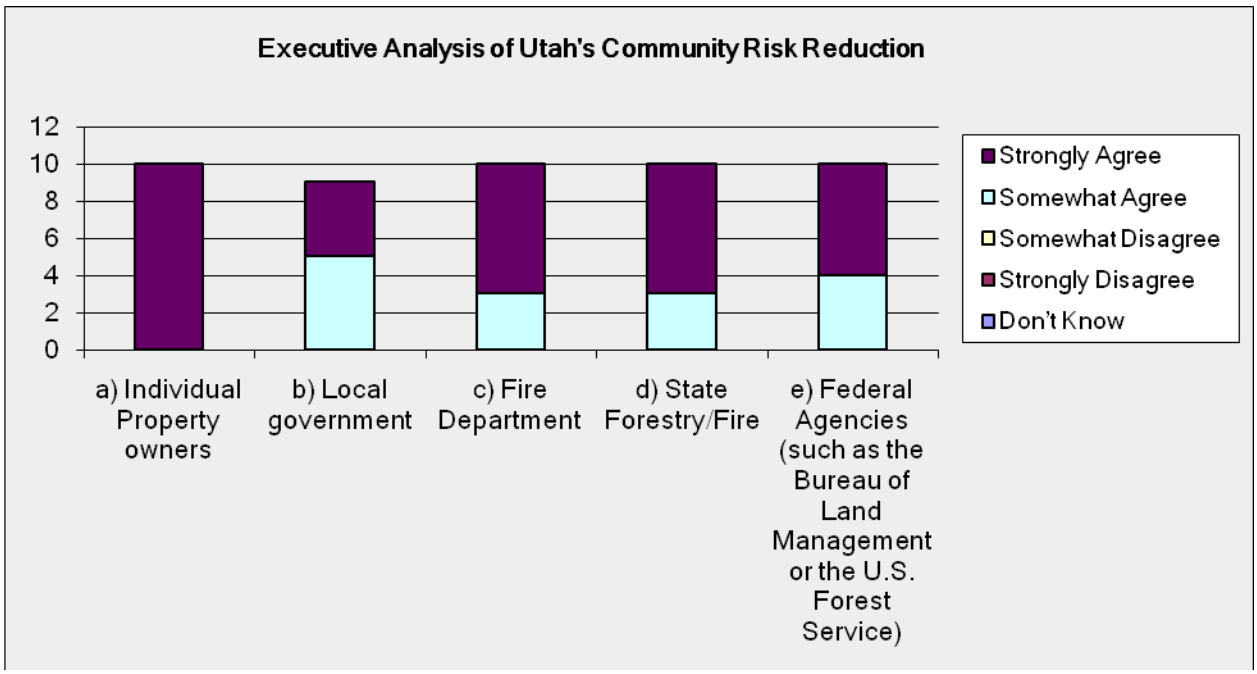

Figure 3. Type of contribution each of Utah's entities should have in initiating, developing, implementing, and updating CWPPs.

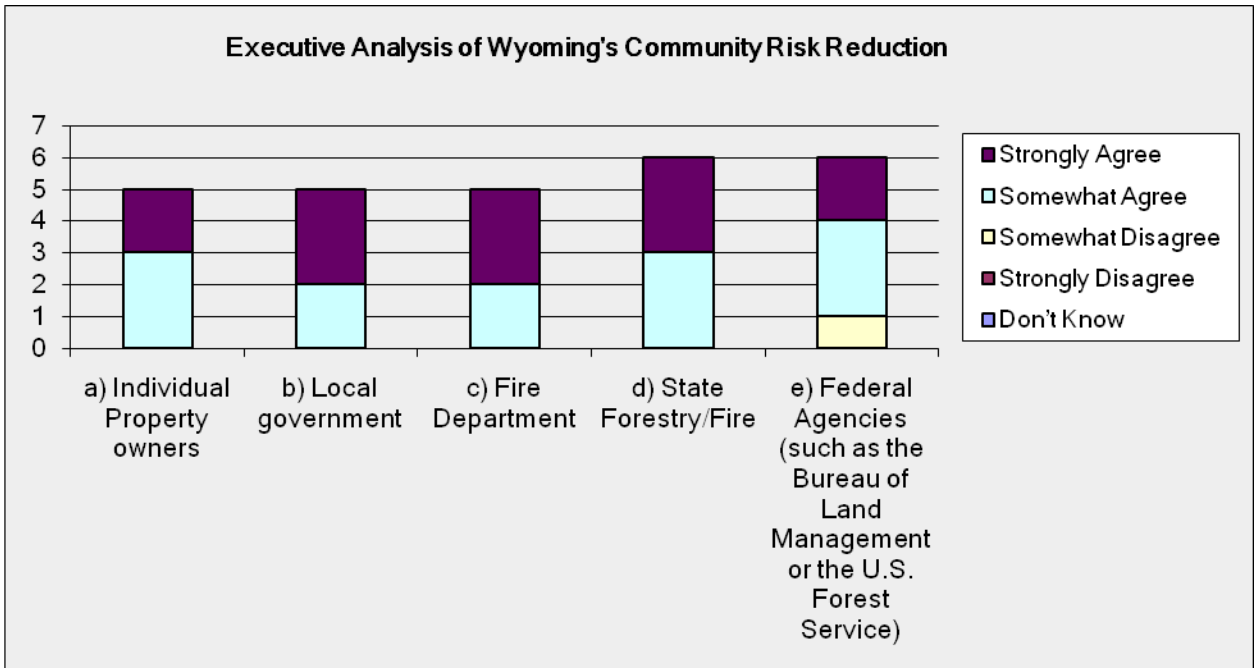

Figure 4. Type of contribution each of Wyoming's entities should have in initiating, developing, implementing, and updating CWPPs.

These results show Utah's consistency with individual property owners' involvement with assistance from other entities, whereas in Wyoming, again this datum shows the interest in local government and fire departments participation, with some even disagree with any federal CWPP participation.

In Wyoming, 40% of defensible space characteristics, e.g., fuels reduction, road ingress/egress issues, non-flammable building materials, property address clearly marked, etc., are located just on private property, wherein Utah 66% stated private properties and/or their community had these defensible characteristics. Eighty% of Utah survey respondents stated that these defensible space characteristics were completed as a result of their CWPP. These characteristics correlate with Utah having wildfire mitigation ordinances within 70% of its communities and 50% of its counties that the survey respondents are affiliated. The 40% of Wyoming's respondents who stated they have defensible space characteristics, only 50% purposely completed these mitigation measures as a result of their CWPP. These statistics correlate with only 70% of Wyoming counties and 14% of its communities having wildfire mitigation ordinances that the survey respondents are affiliated.

Research question 4. How do signatories and/or community members in both Wyoming and Utah believe their individual CWPPs are addressing their wildfire mitigation issues within their respective community?

The survey instrument was used to arrive at the following results. Utah's survey respondents (66%) answered that the highlights of their CWPPs were: (a) support from all levels of government, (b) community more educated and thus involved with wildfire mitigation, and (c) initiation of fuels reduction projects. Only 40% of Wyoming's survey respondents answered this question and also cited fewer highlights, and those included: (a) transitioning from completing

fuels project to education, (b) CWPPs identified risk and hazards, and departmental strength and weaknesses, and (c) identification of specific treatment areas.

Overall, 83.3% of Wyoming survey respondents believed that their primary entity involved with their CWPP is adequately addressing their wildfire mitigation issues, wherein Utah 80% responded positively. One hundred % of both states' respondents revealed that their CWPP has made their home and/or community safer.

Lastly, the following are elements still needing to be addressed in Wyoming's CWPPs according to survey respondents: (a) more education efforts, (b) more property owner participation, (c) maintenance of the actual CWPPs, and (d) more wildfire code enforcement efforts. Utah's survey respondents had similar needs with: (a) continuation of initiated fuels reduction projects, b) greater community participation through more community education, (c) technical planning assistance, (d) CWPP follow-through, (e) better follow-through from government entities, and (f) easier access to grant funds.

Discussion

Wildfire mitigation, whether in Utah or Wyoming, has been an ongoing effort since the National Fire Plan (2000) and the HFRA (2003) identified the deteriorating health of our forests and the need for greater community protection from wildfire. Both these initiatives encouraged collaborative pre-fire planning among community stakeholders. Individual and community action can ensure that homes and neighborhoods are prepared for wildfire.

The results component of this ARP will discuss four major findings from the results section: (a) Wyoming CWPPs are not being completed to HFRA technical requirements; (b) Utah's CWPP template is an actual community wildfire mitigation action plan, whereas Wyoming's CWPP templates are truly county risk assessments; (c) Utah's CWPPs are completed

to recommendations of community master and emergency management planning participation levels, i.e., community participation, and; (d) Wyoming utilizes many different "standardized" CWPP templates, whereas Utah primarily uses the Utah State Division of Forestry**,** Fire & State Lands CWPP template. After discussion of each finding, the ARP will address their ramifications to BLM Wyoming.

HFRA minimum requirements clearly state the following:

- A CWPP must be collaboratively developed by local and state governments in consultation with federal agencies and other interested parties;
- A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure within the WUI; and
- A CWPP must recommend wildfire mitigation efforts that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

Both states' CWPP efforts meet HFRA's first requirement of being developed collaboratively.

The second HFRA requirement is clearly met by Utah from the author's professional and personal knowledge, having utilized Utah State Division of Forestry**,** Fire & State Lands' CWPP template from 2002-2004 while employed in southwest Utah with BLM Cedar City District and also as a homeowner involved with a local CWPP. However, the majority of Wyoming's CWPPs are initiated, planned, and drafted at the county level and do not identify or prioritize hazardous fuels projects or other specific mitigation projects within the communities' WUI areas. The reason for these miscues is the majority are actually county wildfire risk assessments,

versus a true CWPP upon review of Wyoming's CWPPs in BLM's NFPORS database (National Fire Plan Operations, 2010). The literature reviewed specifically stated that CWPPs should use a credible risk assessment to identify the community's highest priorities for fuels treatment; however, a stand-alone risk assessment should not be considered the CWPP in itself, but rather as a supplement that identifies the associated WUI risk (*Community Guide*, 2008).

The third HFRA requirement states that wildfire mitigation efforts (objectives and actions) that homeowners and communities can take to reduce the ignitability of structures within the CWPP scope of influence must be identified. Wyoming survey respondents stated that only 75% of their respective CWPPs had specific and measurable wildfire mitigation goals, objectives, and actions, as compared to Utah's CWPP respondents (90.9%). CWPPs must provide goals and objectives to guide mitigation efforts over the long term (Renner et al., 2010, p. 12).

Thus, the lack of Wyoming's community-level involvement, Wyoming's CWPPs being primarily developed at the county level as risk assessments, coupled with the findings that one-quarter of Wyoming's CWPPs lack goals and objectives (possibly more due to goals and objectives reviewed by author are not specific and measurable to specific communities), leads one to the conclusion that Wyoming's CWPPs are not effectively achieving HFRA's CWPP requirements.

It appears that BLM Wyoming should be aware that while Wyoming CWPPs should be identifying collaborative WUI fuels reduction projects for BLM Wyoming Districts, they are not effectively meeting HFRA's intent. If they did, the BLM district and state offices could then prioritize these collaborative community level projects for funding considerations at the national level based upon the following criteria (*Hazardous Fuels Reduction*, 2011):

- Capacity to implement projects with existing permanent employee(s);
- Maximizing Wildland Urban Interface (WUI) projects, regardless of historical WUI/Non-WUI allocation and targets;
- Include treatments that are ready to implement in the current year, and
- Include treatments on non-Federal lands (Community Assistance acres) if BLM funds are used.

It is clear the second and fourth bulleted items above require community-developed CWPPs to identify WUI projects with objectives to treat hazardous fuels on both BLM and private land, yet in Wyoming this is not occurring to the level or amount it must for Wyoming communities to effectively compete for Department of Interior (DOI) WUI funds.

The third major finding, which is from the results section is that Utah's CWPPs are completed to recommendations of community master and emergency management planning participation levels, i.e., community hazard awareness and risk identification. The Natural Hazards Mitigation Planning Guide states the "truly important part of developing a local mitigation strategy is to establish an ongoing process that will make hazard mitigation a routine part of the daily functioning of the entire community" (*Natural Hazards*, 2003, p. 17)—and that begins with community ownership and involvement in the process. With the planning process established, those with an intimate knowledge of the community will uncover existing and potential problems, such as large accumulation of hazardous fuels and future wildfire possibilities, respectively, the community begins to control its destiny.

Research discovered in Wyoming that not one community nor community member was involved with the development or drafting of their CWPP based upon the survey respondents' knowledge, whereas in Utah 81.8% of the community and/or its members participated in the development of their CWPP, and 40% of Utah survey respondents believed that individual

property owners should have the primary responsibility for developing a CWPP. In addition, just 16.7% of Wyoming survey respondents thought that individual property owners should have the primary responsibility for developing a CWPP. Supporting this finding is that the largest percentage of Wyoming survey respondents (50%) believed that individual property owners should actually have the least involvement for developing a CWPP—opposite of Utah's beliefs.

Next, Utah counties participated in only 18.2% of the development of the CWPPs; however, Wyoming counties participated in 62.5% of the CWPPs. Conversely though, is that Wyoming survey respondents (50%) indicated that local fire departments should have the primary responsibility for developing CWPPs—this is a 16.7% greater percentage compared to the next primary entities' (individual property owner, local government, fire department, state forestry and federal agencies) expected involvement. The State of Wyoming has 148 total fire departments. Of this number, 127 departments are volunteer departments. "That translates into approximately 85% to 15% volunteer vs. paid with a +/- 5% correction factor for combination" (I. Kraft, personal communication, June 10, 2011). What is interesting about this statistic is that from an experiential perspective, volunteer fire departments' priorities are usually training and response—not planning and mitigation—therefore the survey respondents' CWPP expectations may not be met through their volunteer fire department. Instead, the survey respondents should focus on the local property owners, as per the literature review and Utah's survey results, in the development of true, local grass-roots CWPPs—again, not the current Wyoming county risk assessment.

Implications from this finding for BLM Wyoming is that Wyoming CWPPs may not be capturing true community wildfire mitigation priorities but rather low hanging fruit (easily identified and subjective projects) that the county fire warden views as priorities. The question

needs to be asked, can one person have the knowledge to develop more and better WUI projects, or would a collaborative group involving individual property owners be more effective? BLM Wyoming depends upon effective WUI projects for competitive DOI funding to initiate hazardous fuels projects within or bordering communities.

The last major finding from the results section is that Wyoming utilizes many different "standardized" county level CWPP templates, whereas Utah primarily uses the Utah State Division of Forestry**,** Fire & State Lands CWPP template. Research data showed and was supported by BLM's NFPORS data, that out of the 20 Wyoming CWPPs, only three or 15% have been developed at the local community level; the remaining 17 are completed at the county level and three counties have not completed a CWPP at any level (National Fire Plan Operations, 2010). Only 60% of Wyoming survey respondents replied that they used "standardized" CWPP templates; however, five of six of these respondents listed different standardized CWPP templates. Furthermore, four of six respondents stated that they were each using different county CWPP templates. The conclusion can be made that there is not a standardized CWPP throughout Wyoming.

The research data and BLM NFPORS presents a case that Wyoming CWPPs need to be developed at the community level with a standardized, interagency approved template to ensure all agencies' needs are being achieved. Implications to the BLM Wyoming are that currently BLM cannot submit and compete for WUI projects for DOI funds for three counties, and only 15% of counties have CWPPs developed at the local level. This inconsistent, non-standardized, and incomplete CWPP process and resultant data in Wyoming puts BLM Wyoming at a disadvantage for competing for these DOI WUI funds, ultimately affecting Wyoming

landowners and wildland firefighters' safety if a wildfire occurs on a parcel of land that has not had any wildfire mitigation completed.

Recommendations

Upon review of the literature, personal interviews, and the survey instrument data, the following recommendations were developed to address the problem and purpose of this ARP. The problem identified was verified throughout the paper, as well as the purpose, in that Wyoming communities bordering BLM lands do not have community level (nor community involvement) CWPPs that identify specific wildfire mitigation goals and objectives.

Interagency partners in Wyoming must now collaborate on the following recommendations:

1. Initiate participation from Wyoming community members to become involved and support their respective CWPP. This participation will meet the HFRA requirements, develop community specific projects through grass-roots knowledge, develop community level goals and objectives for their CWPP, and lastly, ensure BLM Wyoming's competitive for future WUI funding—for just such WUI projects—in the future. This recommendation will require an extensive education campaign by all Wyoming agencies to foster this interest and participation from their communities.
2. Develop community level (community driven) CWPPs in Wyoming. Only 15% of Wyoming's CWPPs are actually developed for community level wildfire mitigation, as compared to the remaining that are developed as county level wildfire risk assessments.
3. Involve federal cooperators in the CWPP process in Wyoming. This will meet the findings in the literature review of that community master planning must include

federal land use planning goals and objectives, as well as support the HFRA requirements. The specific HFRA requirements that would be met is: (a) the use of a collaborative process, (b) collectively identify and prioritize areas (not limited by jurisdictional or political boundaries) for hazardous fuel reduction treatments on USFS and DOI lands in the WUI, (c) recommend the types and methods of treatment to be uses, and (d) influence how federal funds for hazardous fuels reduction projects on non-federal WUI land may be obtained (*Community Guide*, 2008, p.7).

4. Develop a state-wide, standardized CWPP sponsored through the Wyoming State Forestry Division that is collaboratively developed by the Wyoming Fire Action Team (a Wyoming interagency fire management coordination group) that mirrors Utah's Division of Forestry, Fire & State Lands' successful standardized CWPP. This Wyoming standardized template would ensure all communities are meeting HFRA requirements, ensure communities are aware of and identifying all mitigation measures required, enhance the hazardous fuels reduction projects submitted for funding through the USFS and DOI agencies, and develop a level playing field for the competitive funding of all communities.
5. Review Utah and Wyoming's respective CWPPs to ensure the following elements identified by both groups of survey respondents will be addressed. Wyoming's CWPPs need: (a) more education efforts, (b) more property owner participation, (c) maintenance of the actual CWPPs, and (d) more wildfire code enforcement efforts. Utah's survey respondents had similar needs with: (a) continuation of initiated fuels reduction projects, (b) greater community participation through more community

education, (c) technical planning assistance, (d) CWPP follow-through, (e) better follow-through from government entities, and (f) easier access to grant funds.

6. Complete the five recommendations above to meet the 2010 Wyoming Fuels Management, Fire Planning, and Community Assistance Programs Evaluation's Final Report's required Corrective Action Plan developed by the BLM Wyoming Fire and Aviation Management Branch.

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Appendix A

Utah and Wyoming's Community Wildfire Protection Plan Survey, April, 2011

Q1. Please indicate how strongly you agree with each of the following statements (choose one answer for each).

Answer Options:
Strongly Agree
Somewhat Agree
Somewhat Disagree
Strongly Disagree
Don't Know

1. Naturally occurring wildfire is not the problem, it is expanding housing development that creates the problem.
2. With the proper technology, we can stop most wildfires after they have started.
3. With the proper technology, we can prevent wildfires from occurring.
4. Because we can only partially control wildfire, we must learn to live with it.
5. Because we can only partially control wildfire, we must adapt our communities to be resistant and resilient to wildfire.

Q2. Please indicate how strongly you agree with each of the following statements (choose one number for each).

Answer Options:
Strongly Agree
Somewhat Agree
Somewhat Disagree
Strongly Disagree
Don't Know

1. Wildfires are happening more often.
2. Wildfires are an increasingly hazardous.
3. Property damage from wildfires is increasing.
4. The cost of suppressing wildfires is increasing.

Q3. Have you been personally or professionally affected by a wildland urban interface (WUI) fire?

Answer Options:
Yes
No

Q4. Does your county or community have wildfire mitigation ordinances in draft form or in effect?

Answer Options:
Yes
No

Q5. Do you have a standardized Community Wildfire Protection Plan (CWPP) template given to you by an agency?

Answer Options:
Yes
No

Q6. Who completed your CWPP?

Answer Options:
Contractor
Community
County Agency
State Agency
Federal Agency

Q7. Does your CWPP have specific and measurable wildfire mitigation goals, objectives, and actions? If yes, please list them. If no, is the main intent of the CWPP to assess the risk to your community or county?

Answer Options:
Yes
No

Q8. Does your CWPP address the following:

Answer Options:
1. Need for fire department equipment and/or facilities, e.g., wildland urban interface engine or a new fire station?
2. Need for fire department training?
3. Need for better communication infrastructure, e.g., radio repeater sites, cellphone towers, fire truck radios, etc.?
4. Need for better communication plans, e.g., calling trees, interoperability of radio systems/shared frequencies?
5. Need for better or improved infrastructure, e.g., stronger bridges, better turn-outs or cul-de-sacs?
6. Need for fuels reduction, e.g., removal of trees, brush, grass?
7. Need for underground utilities, e.g., power lines, propane tanks?
8. Need for initial or better water sources, e.g., hydrant systems, ponds, helicopter dip sites?

9. Need for education and prevention programs?
10. Need for better signage, e.g., driveway address signs?
11. Need for a Pre-suppression Plan, i.e., a plan that identifies: (a) the subdivision name, (b) Parcel boundaries, (c) Lots with structures, (d) Streets with names, (e) Fire hydrant locations, and (f) Safety and helicopter landing zones, all of which that will be utilized during a wildfire threatening your community?

Q9. What are the highlights of your CWPP or of your wildfire mitigation efforts?

Answer Options:
Open

Q10. Does your CWPP address wildfire mitigation to your county level or to your specific community level?

Answer Options:
County
Community

Q11. Please indicate the letter of the one group that you think should have the primary responsibility for developing a CWPP.

Answer Options:
1. Individual Property owners
2. Local government
3. Fire Department
4. State Forestry/Fire
5. Federal Agencies (such as the Bureau of Land Management or the U.S. Forest Service)

Q12. What are the roles the primary group should play in a CWPP?

Answer Options:
Open

Q13. Do you believe the primary group involved with your CWPP is adequately addressing your wildfire mitigation issues?

Answer Options:
Yes
No

Q14. Please indicate the letter of the one group that you believe should have the least involvement for developing a CWPP.

Answer Options:
1. Individual Property owners

2. Local government
3. Fire Department
4. State Forestry/Fire
5. Federal Agencies (such as the Bureau of Land Management or the U.S. Forest Service)

Q15. What are the roles the community should play in a CWPP?

Answer Options:
Initiating CWPP
Planning CWPP
Drafting CWPP
Implementing projects to accomplish CWPP Goals and Objectives
Governing CWPP
Writing grants
Monitoring CWPP Results
Maintenance of projects

Q16. What are the roles the county or state should play in a CWPP?

Answer Options:
Initiating CWPP
Planning CWPP
Drafting CWPP
Implementing projects to accomplish CWPP Goals and Objectives
Governing CWPP
Writing grants
Monitoring CWPP results
Maintenance of projects

Q17. What are the roles the Federal agencies should assume in a CWPP?

Answer Options:
Initiating CWPP
Planning CWPP
Drafting CWPP
Implementing projects to accomplish CWPP Goals and Objectives
Governing CWPP
Writing grants
Monitoring CWPP results
Maintenance of projects

Q18. Please indicate the level at which the following activities should occur (choose all that apply).

Answer Options:
Homeowner

Community
County

1. Learning about the danger of wildfire and fire prevention activities.
2. Participating in the fire management planning process with agencies.
3. Implementing wildfire mitigation measures on their property such as fuels reduction, creating water sources, etc.
4. Participation in neighborhood homeowners associations.
5. Participating on emergency preparedness committees.
6. Making some financial contribution to a specific wildfire mitigation program.

Q19. Please choose the answer for the type of contribution you think each of the following entities should have in initiating, developing, implementing, and updating a CWPP to reduce the wildfire hazard in your community.

Answer Options:
Strongly Agree
Somewhat Agree
Somewhat Disagree
Strongly Disagree
Don't Know

1. Individual Property owners
2. Local government
3. Fire Department
4. State Forestry/Fire
5. Federal Agencies (such as the Bureau of Land Management or the U.S. Forest Service)

Q20. What is the primary motivating factor behind your participation in your CWPP?

Answer Options:
Open

Q21. Do you feel your CWPP has made your home and/or community safer?

Answer Options:
Yes
No

Q22. Does your property have any of the following Defensible Space characteristics?

Answer Options:
1. Removal of vegetation, including trees, from around the house.
2. Use of fire resistant vegetation.
3. Adequate driveway space for access and turning around of fire suppression equipment.
4. Use of non-flammable building materials, particularly roofing material.

5. Home address clearly visible from the street.
6. Precut plywood covers for windows.
7. Roof vents and eave openings covered with wire screening.
8. Have fire tools available.
9. Water sources.
10. Underground utilities (if so, please state which ones)

Q23. Were these modifications put in place by you for the purpose of reducing the wildfire hazard?

Answer Options:
Yes
No

Q24. What type of help do you still need within your CWPP?

Answer Options:
Open

Q25. Based upon your experience, what improvements need to happen to the CWPP process?

Answer Options:
Open

Q26. Do you have any comments you would like to add that were not asked within the survey?

Answer Options:
Open