

A BLUEPRINT FOR MITIGATION

Opportunities for the Wet Mountains Community Mitigation Partners



Submitted by Community Mitigation Assistance Team I

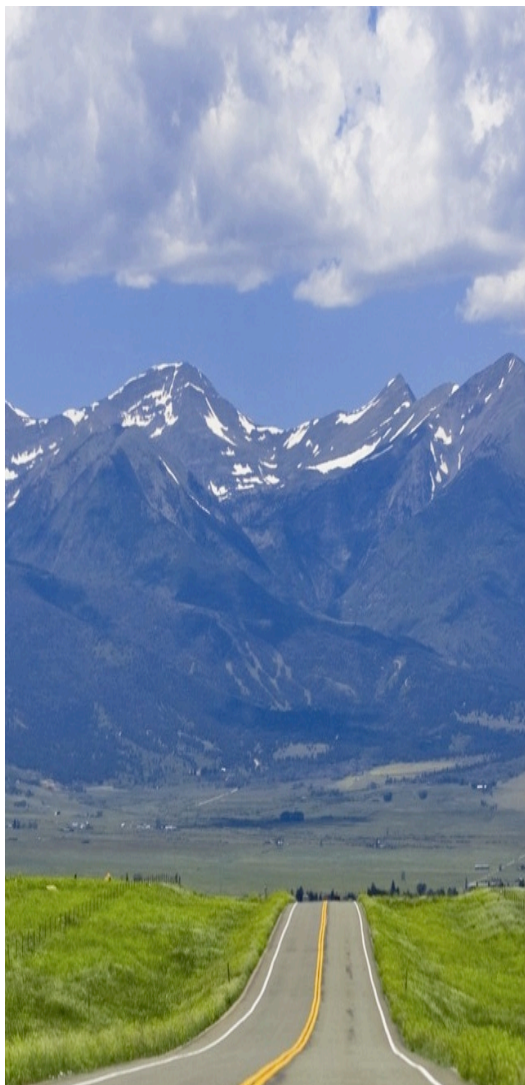


November 8, 2016

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PREFACE



South Central Colorado boasts the Wet Mountains, the Pike-San Isabel National Forest, and Custer, Fremont, and Pueblo Counties. Nearly 40% of the land in Custer County is in federal ownership; over 36% in Fremont County and 93% of the wildland urban interface (WUI) in the three counties is yet to be developed. Historically, the mixed conifer forest of the Wet Mountains, on the eastern slope of the Sangre de Cristo Range, burn about every 30 years; the subalpine forest at higher elevation burns on a 90-year cycle. But fire hasn't been prominent on the landscape in over 70 years. And contrary to its name, the Wet Mountains are experiencing unusually dry conditions that are expected to last into the next decade. Add dispersed homes in the densely forested hills, narrow access roads, difficult terrain that makes even prescribed burns challenging, and two wind events that felled thousands of trees (one in 2000 and one this season) and you now have high wildfire risk.

In 2016 the Beulah Hill, Junkins, and Hayden Pass fires burned more than 40,000 acres and destroyed 41 structures. The Mason Gulch Fire in 2005 burned 11,300 acres. Wildfire professionals are concerned this is just the start of a prolonged dry and dangerous period for the Wet Mountains, the Wet Mountain Valley and the people who live there.

Over the last decade Custer, Fremont, and Pueblo Counties, volunteer and career fire departments, federal and state land managers, non-profit groups, and residents worked to maximize their limited resources to reduce wildfire risk. Limited staffing, funding, and a

widely dispersed population over a large geographic area are a challenge to sustained mitigation efforts. In spite of those challenges, the three counties and their associated cross-boundary partners have made progress.

But in light of the 2016 wildfires (some still burning in November), the regional partners felt it was time to join forces, share experience and knowledge, and work toward a mitigated and safer valley. They identified several goals of high importance to address sustainable capacity for implementing wildfire risk reduction projects. The partners collectively asked for a U.S. Forest Service Community Mitigation Assistance Team (CMAT) to help. [See Toolbox "A"](#) for more information on CMAT.

METHODOLOGY

The Wet Mountains Community Mitigation Partners (the Partners) are highly motivated and committed to wildfire risk reduction. CMAT and the Partners worked to identify strengths, weaknesses, opportunities, tools and resources.

The Custer and Pueblo counties' Community Wildfire Protection Plan (CWPP) provided solid data on population, risk, fire occurrence, hazard areas, and mitigation.

CMAT and Partners held two working sessions to identify: needs, existing and potential practitioners, barriers to success, opportunities to resolve barriers, and discuss best management practices.

PREFACE

CMAT augmented the working sessions by conducting individual interviews with Partners and performing analysis of written and historical data.

The Partners felt that sharing resources, personnel, knowledge, skills, and motivation is an effective way to accomplish mitigation goals. Historically, each organization functioned separately with little collective planning; projects were identified on an ad hoc basis: successes were not shared among the partners or with the public, and shared boundary efforts weren't identified.

The Partners and CMAT identified these primary needs to increase risk reduction on the ground:

- Develop a mitigation blueprint for a strong partnership
- Identify ways to build the program
- Identify needed information, tools, resources



Wet Mountains Community Mitigation Participating Partners

- Beulah Fire Protection & Ambulance District
- Bureau of Land Management (BLM)
- Colorado Department of Transportation (C-DOT)
- Colorado State University Extension - Custer County
- Custer County Board of County Commissioners
- Custer County Chamber of Commerce
- Custer County Economic Development Corporation
- Custer County Office of Emergency Management
- Custer County Roads & Bridges
- Custer County Sheriff's Office
- Fremont County Emergency Management
- Local Residents
- Mattie Burt Realty, Inc.
- Middle Arkansas Wildfire Prevention Partnership
- Natural Resources Conservation Services (NRCS)
- Pine Drive Water District
- Pueblo County Emergency Services Bureau Office of Emergency Management
- San Isabel Land Protection Trust
- USDA Forest Service – PSICC
- Watson Land Company
- Westcliffe Chamber of Commerce
- Wet Mountains Fire Protection District



A MITIGATION BLUEPRINT

THE PARTNERSHIP

CMAT and Partners agreed on the need for a reinvigorated effort to partner and collaborate on appropriate projects as a foundation to the mitigation blueprint. A cooperative partnership can be strategic in nature, offering opportunities to work together on shared-boundary projects and sharing resources where it is practical and beneficial. Partnerships increase the capacity to support more than one mitigation project simultaneously and offer the flexibility and nimbleness to take advantage of just-in-time opportunities. Ownership and the burden of mitigation is shared or balanced among partners, and resources may be shared or pooled for long-term benefit. Partnerships can accomplish more through a shared strategic, coordinated effort especially when it involves shared borders. Funding requests are often stronger when submitted by a collaborative partnership.

SHARE

The communities in the Wet Mountains Valley are small but close-knit and, in general, the Partners know one another. But it's a good idea to share pertinent contact information with all members of the Partnership and to encourage ad hoc communication and information sharing that doesn't depend on frequent meetings. Phone calls, emails, Facebook Pages, and websites can augment face-to-face meetings.

It's helpful to maintain an updated contacts list, include areas of expertise and post it in easy to find location(s) and share that information widely with the community. When someone needs information it's easier to point them toward the expert.

A COHESIVE STRATEGY

As the saying goes, two heads are better than one and an informal partnership expands on that concept. Cross-boundary planning and outreach strategies are more inclusive, can reach broader audiences, and influence community values in ways that promote continual risk reduction action. Take a strategic approach to collaboratively planning and implementing mitigation projects. But don't stop there. Be strategic about growing the larger partnership. Include people with like values and goals to strengthen the outcome. It's not about the number of people, it's about the *right* people; people who act, who accomplish, who reduce the risk throughout the Wet Mountains Valley.

- Potential partners must bring added value; do not add partners just to add partners. Ask what these new partners bring to the table.
- Target new partners who can fill carefully identified voids in current participation.
- For examples of the diverse partnerships built by a similar organization [see Toolbox "J"](#) or visit www.cusp.ws/partners.

IDENTIFIED RISKS

Highest Population/Heavy Fuels

- Cuerno Verde / Eastcliff / Rosita Hills - East Hills 839 improved parcels
- Sangre Foothills – 390 improved parcels (Tanglewood)
- Silver Cliff Heights and East - 405 improved parcels
- Beulah Valley & Signal Mountain subdivision
- Rye / Camp Jackson
- San Isabel / Boy Scout Camp / Greenwood
- Aspen Acres / East 165
- Oak Creek Grade / HWY 165
- Bull Domingo South
- HWY 78 / 12 Mile

Infrastructure

- Roads and Ingress/Egress
- Utilities / Right of Way
- Drinking water (collection, storage, treatment)
- Irrigation ditches and headgates
- Watersheds / Water works

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MEETINGS MANAGEMENT

Partners indicated they are over-burdened with meetings so finding more effective ways to share knowledge is critical. But face-to-face meetings periodically (perhaps quarterly) are essential to maintaining the camaraderie needed to cement a strong multi-jurisdictional partnership. It's important to make meetings useful, well managed, and focused.

Here are some suggestions:

- Focus on tasks that lead to mitigation, not just discussion.
- Don't have a meeting if the work can be accomplished in other ways (emails, webinars, conference calls)
- Plan a tight agenda and provide it in advance
- Assign tasks and track accomplishments
- Start on time, end on time
- Use sub-committees or task groups to help solve problems, do work, or collect information before the meeting
- Make meetings a shared responsibility. This is particularly important in a partnership.
- Consider having partners host meetings in different locations.
- Hold meetings when most people can attend and are not too tired to participate effectively.

DESIGNATE CHAMPIONS

When a group of people comes together to work on a common goal it's easy, over time, for the

defined goal to blur -- it's called mission creep. It's helpful to designate several organizational "champions" whose role is to, when needed, remind the group of it's original intent. These champions are empowered by the full partnership to be the standard bearers for the mission and given express permission to remind the group that they are drifting off course. This might be a thankless job, but by formally designating several champions to protect the mission, defend the intent, and advocate for focus, the organization avoids becoming side tracked, losing momentum, and wasting valuable resources. The group must also agree that there are no negative consequences for the champions to speak up. Appoint several champions for a defined term and empower them to speak up if the effort gets distracted.

SUBJECT MATTER EXPERT WORKING GROUPS

One benefit of an informal partnership is sharing resources and avoiding duplication. For instance: there is a need for smaller communities, scattered neighborhoods, or dispersed populated areas to create a CWPP. Often that means community

- *Identify partners with the capability to provide, compile and store geospatial project data across ownerships. Map these things:*
 - *Jurisdictional boundaries*
 - *High risk areas on public and private property (including blow-down areas)*
 - *Structures and infrastructure (communication towers, roads, power lines)*
 - *Past and planned mitigation projects*
 - *Location of resources*
- *Create clear and concise maps in digital and print formats.*
- *Post maps in accessible locations to "paint the picture" of wildfire risk and demonstrate successes to partners and citizens.*

members must seek out CWPP expertise or educate themselves before the process can effectively begin. If the partners created and trained a CWPP Subject Matter Expert Group they would serve as the "go to" local experts to help jump-start a community's CWPP effort thus reducing frustration, duplication, and

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timeline. The same concept of creating subject matter experts on other common topics provides a valuable resource to help satellite populated areas jumpstart the work they want to do to reduce wildfire risk. This enables those that know to share with those that don't and broadens both knowledge and understanding of the concept as well as the level of risk reduction actions on the ground.

COORDINATE MAPPING AND MITIGATION TRACKING

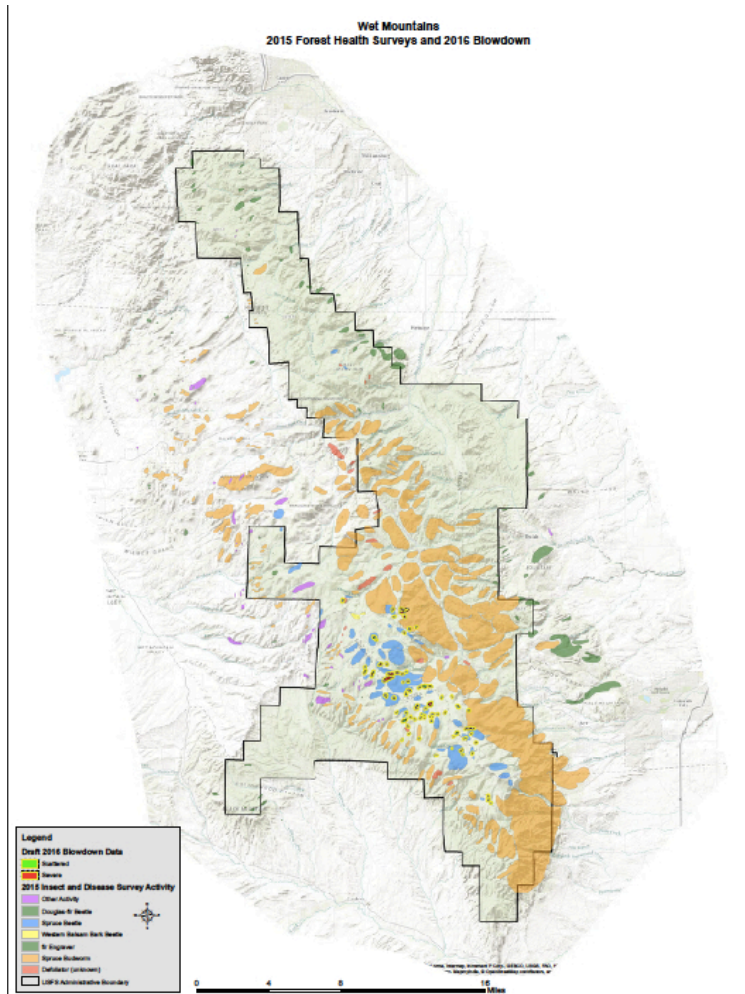
A collaborative map that shows Partner jurisdictions, high-risk areas, fuel loads, homes and structures, as well as the mitigation projects that are planned or already accomplished is both a visual way to illustrate the Partnership and identify valuable information across boundaries.

Consolidated maps provide one clear, concise tool showing a common mitigation/threat picture for all partners. A good map acts as a tool to promote awareness, encourage individuals and communities to mitigate, and help provide a visual picture to prioritize mitigation.



THE STEPS TO MITIGATION

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*“Maps are like campfires,
everyone gathers around them,
because they allow people to
understand complex issues at a
glance, and find agreement about
how to help the land.”*

Sonoma Ecology Center

BUILDING THE PROGRAM

The success of any risk reduction effort depends on the commitment of individual citizens to do the work on their own property first, then work in the wider community to promote and assist with mitigation projects, community involvement, inclusiveness, and consistent participation of all members. This provides the cornerstone for capacity, longevity and opportunity for growth.

- Share risk information widely with the public.
- Identify and engage community leaders to facilitate mitigation and increase capacity.
- Train individuals to conduct Home Ignition Zone assessments and provide homeowner education. This is the risk reduction conversation that will increase the pace and scale of risk reduction work.
- Facilitate annual or semi-annual engagement and training opportunities for Partners and the public to promote increased ownership and awareness of current events, funding mechanisms, ecological issues, treatment prescriptions and more.
- Hold meetings in locations and at times when engaged citizens are more likely to attend, such as early evening.

COMMUNICATIONS, STRATEGY, AND BEHAVIOR CHANGE

Messaging, outreach, and communications are often confused. *Messaging* uses literature, news releases, articles, announcements, flyers, and highly popular, well-used, current websites to educate the audience

about wildfire risk and available technical assistance or meeting times and dates. *Messaging* is effective in educating people. It is not effective in moving people to action.

Outreach, when it comes to mitigation, means literally reaching out to others personally and face-to-face to talk about the value of mitigation, why homes burn, and how property owners can help themselves. It also involves sharing personal values about homes, risk, and responsibility. *Messaging* can't do that; moving people to mitigate takes the personal touch.

- Research shows and experience confirms that general messaging through news releases, announcements, websites, Facebook, brochures, and other general audience methods, are useful to inform people but does not have as much value to move them to act. Here's why: Media messaging is valuable to educate people about risk. Once they understand that "Yes, there is risk" they tune out the message because they've "got it." Further risk messaging is redundant unless there is other information to share like the availability of funding, a developing wildfire, or other changes in risk.



- If your goal is education or information sharing, use messaging
 - News releases, literature drops, media articles, websites, Facebook pages, Twitter accounts, and meetings are valuable in educating people about wildfire risk but they don't result in significant mitigation action.
 - Social and electronic media is useful in educating the public about wildfire risk but require constant updating and maintenance. This maintenance requires a substantial time commitment that can take away from resources committed to mitigation.

BUILDING THE PROGRAM

- When messaging is needed, the Partnership may develop shared tools such as flyers, press releases, and other literature.

Messaging alone doesn't result in behavior change.

Engaging with a homeowner one time through an assessment, handing out brochures, sending postcards, or creating a website may help message but it doesn't result in behavior change. In fact, each of those things alone can be fairly unproductive in spurring action. Behavior change is based on developing trusted relationships over time and is shaped by personal values and beliefs. It's a process with several steps.

The first step is face-to-face personal engagement on a repeated basis. You are far more likely to get a property owner to mitigate all or part of their property if they know and trust you -- if you've built some kind of positive relationship. Add some financial incentives, technical support and advice, some peer pressure, a neighbor doing mitigation, the realization that wildfire is part of the landscape in their neck of the woods and soon a community-wide culture of mitigation starts to grow and things start to happen.

It's like a seesaw with all the weight on one side: first you move personal engagement to the other side, then technical assistance, then some more one-on-one, then incentives, and the seesaw starts to balance out. Move a neighborhood peer group and a

few more discussions to the other side and you've reached the tipping point where the seesaw balance changes. You must reach the tipping point before mitigation happens.

It's also important to understand the reasons residents don't mitigate as you formulate a strategic plan for achieving mitigation. According to Sarah McCaffrey in "Outreach Programs, Peer Pressure, and Common Sense: What Motivates Homeowners to Mitigate Wildfire Risk?"

http://www.nrs.fs.fed.us/pubs/jrnl/2011/nrs_2011_mccaffrey_001.pdf . See Toobox "J."

"Reasons offered for not taking action included work already being completed by the previous owner, lack of knowledge on what to do, part-time residency, lack of time, and low-risk perception."

Sarah McCaffrey

If your goal is mitigation action, then focus on face-to-face engagement and relationship building over time.

- Work with those who are anxious to mitigate in high risk areas first
- Use their mitigation examples to persuade others
- Let them know what they need to do, why they need to do it and how you can help them
- Continue to build relationships with community members
- Be persistent; offer incentives in the form of cost-share funds, free home risk assessments, on-site advice, shared learning
- Share wildfire risk information often and in visible public locations
- Some residents in low risk areas may want to mitigate, carefully consider if you want to invest resources in those low risk locations.
 - Don't make it an all or nothing proposition; a little mitigation is better than none.
 - Use the local trusted authority to help move people to action
 - Neighbors
 - Wildland fire fighters
 - Fire departments members
 - Local political leaders

If local uniformed fire department staff or wildland firefighters understand mitigation principles, and are good communicators they can be valuable in building relationships with homeowners and moving them to mitigate.

Use existing activities, such as chipper days, to engage residents by discussing their individual concerns,

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addressing most efficient methods, offering suggestions, and identifying other ways to assist. Collect the names and contact information of people who participate in chipper days so you can follow-up with them later regarding their mitigation efforts and any help you can provide.

RISK REDUCTION FROM THE FRONT DOOR TO THE FOREST

Community risk reduction moves from the front door to the forest. It focuses on individual residents hardening homes and creating defensible space to neighborhoods, fire departments, and communities adapting to wildfire then to the larger landscape fuel reduction projects.

THE HOME AND YARD

Research shows that ember exposure is the leading cause of home loss during a wildfire incursion. Risk reduction should start at hardening the home. Performing a home-ignition zone assessment identifies areas that require further work to harden a home against ignition. A link to the [Insurance Institute for Business & Home Safety Wildfire Home Assessment and Checklist](#) and other resources are included in [Toolbox "C."](#)

THE COMMUNITY

Risk reduction in the larger community means supporting a fire department, helping others reduce

risk on their property, addressing hazardous fuels in parks or green spaces, keeping road, power, and pipeline rights-of-way mowed and removing deadfall or trees too close to power lines.

PUBLIC AND PRIVATE FORESTS

Hazardous fuels treatments are necessary on public and private forested lands to reduce risk to communities. Fire on the larger landscape is an essential part of the ecosystem and helps keep forests healthy. There will always be wildfire. But reducing hazardous fuels in selected areas, including areas near values at risk (homes, communities, communication towers, etc) greatly reduces risk by slowing wildfire down when they hit those treated areas.

Grassroots efforts led by citizens can and do achieve amazing results. In Nederland, CO a group of concerned citizens created the "[Saws and Slaw](#)" program. See [Toolbox "J."](#)

Considerations for community preparation are unique to each community, but should always place an emphasis on being proactive instead of reactive. Help plan community chipper days or Community slash

disposal days. See [Toolbox B](#) for additional ways to think about chipping events.

In addition to home preparedness, community preparedness contributes significantly to suppression effectiveness and firefighter/public safety.

- Convey in messaging that risk reduction is a cycle, not a checklist.
- Aid public understanding by clearly illustrating the relative effectiveness of home preparation and fuel reduction tactics such as structure hardening, defensible space, thinning, and prescribed fire.
- Coordinate with neighborhoods and communities to identify individual preparation steps, fuel reduction projects, emergency access and egress, evacuation plans, and safe zones.
- Develop incentive programs that help promote overall community preparedness, not just defensible space.

Set goals. Instead of saying "reduce risk in Beulah Valley" consider "harden homes and create defensible space in at least 25 adjoining properties in the Beulah Valley highest risk areas". (Remember that creating "walls" of homes with defensible space is more effective than having scattered mitigated homes in a subdivision.)

According to the group, they... are a group of mountain folk who celebrate living in the Rockies by purposefully working to mitigate around our homes then feasting together as neighbors".

BUILDING THE PROGRAM



RECOGNIZE AND CELEBRATE SUCCESS

Tracking accomplishments, especially acres treated and homes mitigated, is important to a) help you recognize and celebrate success and b) engage more property owners in mitigation. Most people shy away from “tooting their own horns” but one of the best ways to get and keep individuals and the community engaged is to acknowledge accomplishments. It can be a shout out with some photos on Facebook, a blog post, part of an annual accomplishment report or better yet, in the local newspaper. It can be a recognition ceremony or nominating a resident or community for an award. The [National WUI Mitigation Awards See Toolbox “J,”](#) are a great way to highlight successes at the national level.

Having an understanding of where you are starting is key.

- Set mitigation goals for the year. EX: Create defensible space around 10% of the homes in Beulah Valley.
- Track progress toward that goal. This will help keep mitigation efforts on track.
- Announce, celebrate, and document the mitigation successes.
- Map the completed mitigation projects for all to see and to aid in planning next steps.

TOOLS, RESOURCES, AND INFORMATION

SPUR OWNER-INITIATED MITIGATION

Wildfire mitigation on private property is primarily the responsibility of the individual property or homeowner. While cost-share funding can be an effective incentive for encouraging homeowners to take action, other engagement strategies can be equally effective. Community events such as chipping days provide additional value beyond just the reduction of fuels. Removing fuels is one half of the hazard mitigation process. It is equally important to modify the home to increase the resistance to flames and burning embers. True mitigation requires both fuel modification and structure hardening. Encourage homeowners who complete mitigation outside of a cost-share program to self-report their project. Consider sending a postcard or letter to residents asking them to report their mitigation efforts so the Partners can update accomplishment maps.

- Use parcel level risk assessment information to send homeowners a notice regarding their wildfire risk. Ask them to report actions they've taken to reduce their risk.
- Reinforce that effective home/structure mitigation requires both removing vegetation and improving the fire resistance of the structure.
- Ask chipping participants to report the work they completed including the number and size of piles.

While homeowners can and should reduce wildfire risk to their homes by doing simple things like screening eaves and vents, boxing in decks, cleaning gutters and roofs, raking the lawn, removing vegetation from near the structure, and keeping flammables stored away safely, there is a time when contractors with heavier tools and equipment are needed. Some homeowners don't have the skill or equipment to remove large hazard trees and do landscape scale fuel reduction projects. The Team has attached a list of local contractors in [Toolbox "D."](#) In addition to the private sector, there are several other opportunities that offer mitigation assistance. These additional workforce resources are:

- Colorado Correctional Industries SWIFT Team
- Colorado Youth Corps
- Local fire department personnel

Landscape scale wildfire risk provides ample room for a healthy public as well as private role in fuel reduction. Here are several examples from across the state that highlights unique approaches to accomplish mitigation.

Coalition for the Upper South Platte (CUSP)

Immediately after the 2002 Hayman Fire, CUSP formed a mitigation crew with a small grant from the Colorado State Forest Service. The grant provided funding for a chipper and one chainsaw. Today the crew of eight is funded primarily through fees

received for mitigation work completed on private lands. The CUSP crew completes hand work with the aid of community volunteers to haul slash and move logs. Logs from projects are donated to a local not-for-profit that provides firewood to low-income residents, with the slash being piled for burning or chipping.

Colorado Springs Fire Department

The Colorado Springs Fire Department Wildfire Mitigation Unit, under the office of the Fire Marshal, creates awareness of wildfire risk in the City of Colorado Springs WUI. The program works hand in hand, through stewardship agreements, with homeowners and neighborhood organizations to reduce wildfire risk. The Unit uses primarily grant and matching funding to complete mitigation projects and offer the community services to assist in their efforts.

La Veta Fire Protection District Wildfire Mitigation Service (WMS)

The WMS program, through the La Veta Fire Protection District maintains a certified saw crew that completes mitigation projects on private land. The WMS program uses grant funding and owner contributions to complete projects and conduct on the job training for District fire fighters. For more information visit <http://lavetafire.org/hmpg.htm>.

TOOLS, RESOURCES, AND INFORMATION

COMMUNITY WILDFIRE PROTECTION PLANNING

The Custer and Pueblo County CWPP's provide analysis of each county's wildfire risk and recommends actions to reduce risk. Risk is based on population density and fuel loadings. Since the Custer County CWPP was created in 2007, the county completed several mitigation projects, conducted volunteer days, and did more mitigation education with the public. Pueblo County's CWPP was done in 2006. It identifies 17 communities at risk from wildfire. Several communities completed mitigation efforts and the CWPP documents some successes and accomplishments.

These CWPPs are guiding documents for mitigation at a county landscape level and are essential to increase mitigation efforts but those efforts should not be constrained to only those identified in the document. These countywide documents help communities understand wildfire risk, mitigation limitations, challenges and constraints that enable risk reduction at a larger landscape level.

Communities can also develop a Subdivision-level CWPP that might be attached as an addendum to the countywide CWPP. Subdivisions and smaller communities can collaborate and share assets that enable mitigation actions. Subdivision level CWPPs benefit the overarching CWPP as it provides an opportunity to document parcel level mitigation successes that is important to progress.

- Continue to use the CWPP as a guiding document for mitigation.
- Ensure the public is aware of the CWPP process and can participate in mitigation.
- Communicate the limitations, challenges, and time constraints associated with the planning and review processes required to implement fuel reduction projects.
- Recognize the limitations posed by the scale of a countywide planning effort and seek opportunities to engage in smaller scale (neighborhood or subdivision) efforts.
- CWPPs do not need to be completed by a consultant. Local groups can create high quality CWPPs. See Toolbox E for more information.
- Communicate mitigation progress

FUNDING

Multi-partner grant applications show broad involvement, help leverage matching funds, and secure larger amounts of funding. They can also add to the collaborative effort of mitigation at the landscape level. Grants are the incentive uniting partners that have a common interest in mitigation. Grant funding can come in many forms, amounts and with varying levels of reporting requirements.

- Take advantage of the strong partnerships in grant applications.
- Develop a single transparent process for awarding funding to property owners, regardless of the funding source.

DIVERSIFY FUNDING

Seek diverse local, state, and federal funding sources to allow grant managers to leverage funds and diversify programs. Funding can be generated from many organizations, authorities or partnerships. Funding can be cooperatively identified and homeowners' cost-share augments the original amount. The Colorado State Forest Service maintains a comprehensive database of available mitigation grants for communities. It's viewable at [CSFS Grants Database](#). See Toolbox "F."

- Provide and post on Partnership websites a list of local grant opportunities.
- Consider one multi-county application for FEMA mitigation funding.
- Pursue Secure Rural Schools Act Title II and Title III funds. Counties have the option to select the percentage of Secure Rural Schools Act funding that goes into Title I, II, and III. Title III funding can be used for wildfire mitigation efforts. Secure Rural Schools funds are time sensitive and should be used by a specified deadline, should follow guidance on appropriate usage, and remaining funds returned to the program.
- Pursue non-conventional funding mechanisms such as:
 - Private business support
 - Foundations & local charities
 - Utility Companies
 - Fundraisers

TOOLS, RESOURCES, AND INFORMATION

- Additional resources should be considered to aid in communications, engagement, planning, monitoring and staffing.
- Some grants are very specific but can help fund mitigation projects. An example is [Great Outdoors Colorado](#) funding, which provides financial resources to local governments and properties under conservation easement for forest restoration and for hiring Youth Corps to complete forestry projects. [See Toolbox” G.”](#)

CODES, ORDINANCES AND REGULATIONS

Wildfire risk reduction may be encouraged by codes, ordinances or regulations in the built environment. There are several documents available to introduce the use of these concepts. These range from guidance offered in the form of a do-it-yourself wildfire assessment checklist for homeowners, to more formal model building codes. [See Toolbox “H.”](#)

Integration of these wildfire risk reduction methods fosters increased public awareness that community values are at risk from wildfire. Codifying wildfire risk reduction into planning documents promotes fosters a culture of wildfire awareness and concern.

Building codes establish minimum construction material and vegetation management requirements to reduce home combustibility in high hazard areas for new construction. Typically codes do not apply to existing development and this is a gap that must

be addressed with the existing housing stock. It is also important to incorporate wildfire risk reduction values into all County planning documents when they are revised.

REAL ESTATE AND INSURANCE

Individual property owners are primarily responsible for mitigation on their land, and companies that insure these properties have a major stake in encouraging wildfire mitigation efforts.

Each insurance company operating within the state of Colorado uses their own underwriting guidelines that are filed and approved by the state insurance department. Many of the guidelines are based on each company’s individual risk capacity and appetite.

In addition to underwriting guidelines, many companies also use a wildfire hazard assessment model. There are several wildfire hazard assessment models (i.e. Verisk FireLine, CoreLogic Brushfire, RedZone RZRisk) available to insurers, and each insurer selects the model that best aligns with their risk tolerance. These underwriting guidelines have a direct impact on insured properties. The guidelines can impose restrictions and requirements for current property owners and can affect transfers of properties.

Local realtors raised several property insurance concerns related to recent wildfires. When there are active wildfires in an area, insurance companies frequently implement suspensions or moratoriums

while fires remain uncontained. The suspensions prohibit insurance agents from writing new policies for residents seeking insurance coverage on newly purchased residences.

Colorado has specific guidelines relative to binding suspensions during wildfires. Generally an insurance company cannot suspend an entire geographic area (i.e. ZIP code), but must implement a “prior approval” process to evaluate each location based on distance and threat by the fire. The decision to implement a binding suspension is made by each individual insurance company. Property owners needing insurance coverage may need to contact several different insurers to find those that did not implement a suspension.

Additional information regarding insurance issues and wildfire is available from the Rocky Mountain Insurance Information Association.
http://www.rmia.org/catastrophes_and_statistics/Wildfire_and_insurance.asp

WILDFIRE MITIGATION IN A HOME OWNER ASSOCIATION

Many neighborhoods in Custer and Pueblo Counties fall within the jurisdiction of a Homeowner Association (HOA). HOAs are essentially, a “private” government — an organization that has the legal authority to levy “dues” and to manage the common interest of the property owners by involving its community on making decisions. HOAs provide an

TOOLS, RESOURCES, AND INFORMATION

excellent setting in which to create successful wildfire mitigation efforts since a person who buys a residence in the area covered by an HOA must become a member of the association and agree to obey its restrictions. HOAs are governed by a document called “Covenants, Conditions, and Restrictions” (CCRs).

Many of the HOA communities in Pueblo and Custer counties are located in areas at risk of wildfire. The HOA organization creates a “ready made” cooperative community that can incorporate mitigation efforts that lead to fire adaptation

As stated by the national Fire Adapted Communities Coalition, a fire adapted community takes responsibility for its wildfire risk. Actions address resident safety, homes, neighborhoods, businesses and infrastructure, forests, parks, open spaces, and other community assets. The more actions a community takes, the more fire adapted it becomes.

Adapting a community to wildfire is a process and includes the following characteristics:

- It is in or near a fire adapted ecosystem in which many of the HOAs in Custer and Pueblo counties are.
- It has adequate local fire suppression capacity to meet most community protection needs.
- Its structures and landscaping are designed, constructed, retrofitted and maintained in a manner that is ignition resistant.

- It has ignition-resistant home design and building materials. This is often accomplished through the use of codes or ordinances. A HOA can modify its existing CC&Rs to incorporate these types of codes.
- Fuels on land near and inside the community are treated and maintained for safety. The HOA organization can take on these treatments.
- It has and implements a community wildfire protection plan (CWPP). The HOA provides a ready made organizational structure for creating a CWPP.
- It has built other safety features such as buffers between fuels and the community; safe designated evacuation routes; and safe zones in the community when evacuation is not advisable. These can all be readily accomplished within a HOA.

SLASH MANAGEMENT

Managing the by-products of fuels mitigation projects can be challenging. Partners voiced this as a significant limitation in implementing projects in the three county area. Here are options:

- Local landfills accept and burn slash
- The U.S. Forest Service accepts and burns piled slash on its property off of County Road 78
- The Middle Arkansas Wildfire Prevention Partners conducts community chipper days several times per year

- Work to increase local qualifications for pile burning
 - Numerous methods to manage slash are available and every tool must be considered to reduce fire risk.
 - Connect with local contractors and woodlots, such as Pueblo Wood Products to remove slash
- To learn more refer to “Slash Management Methods in [Toolbox “I.”](#)

CONCLUSION

The dispersed communities in the Wet Mountains area, like so many in the Nation's wildland urban interface, are at risk from wildfire. If there was any doubt, the risk to homes, lives, property, and a way of life was brought home during the 2016 fire season. Fremont, Custer, and Pueblo Counties experienced three late season wildfires that burned over 40,000 acres of public and private land, destroyed 41 structures, and kept the region under a cloud of smoke for over a month.

Those fires spurred a wide array of wildfire mitigation partners to take a look at their mitigation efforts and re-commit to a robust mitigation future. The Wet Mountains Community Mitigation Partners have individually accomplished some effective mitigation. But they recognized it wasn't enough as the area goes into what seems to be prolonged dry conditions in an area rich in hazardous fuels and homes tucked into the dense forest. We know that people, structures, forests, beautiful mountains and surroundings, can coexist with wildfire. Constant mitigation vigilance is the never-ending price for living in these beautiful mountains.

The Community Mitigation Assistance Team worked with the Partners to identify their highest risk areas, their major barriers to accomplishing more mitigation, and opportunities for them to address these barriers and build the partnership. An impressive roundtable of partners participated in the working sessions and follow-up interviews. Career and volunteer fire departments, County offices of

Emergency Management, Colorado Department of Transportation, County Road and Bridge Department, the U.S. Forest Service, the Conservation District, the Custer County Board of Commissioners, individual citizens, realtors, Chambers of Commerce and others identified the challenges they face and what they can each contribute to making the three county area safer for residents, firefighters and the environment when the inevitable wildfires occur.

The Wet Mountains Community Mitigation Partners have the right people at the table. They have the passion to increase risk reduction on public and private lands. They love the land and have a good understanding of wildfire and what needs to be done to prepare for it. They have the ability to rally more residents, community leaders and landowners to do more wildfire risk reduction in high risk areas. Through their efforts lives, homes, and a way of life in the shadows of the Wet Mountains can be saved

and communities can continue to enjoy the beauty that surrounds them.

CMAT and Partners developed a strong foundational blueprint to guide future wildfire mitigation efforts.

CMAT strongly encourages the partners to use this blueprint to continue and expand cooperation, engage in cross boundary efforts that recent discussions re-energized, and help one another maintain the passion to reduce wildfire risk across the landscape.



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TOOLBOX A - COMMUNITY MITIGATION ASSISTANCE

TEAM OVERVIEW



The Community Mitigation Assistance Team (CMAT), is a national pilot sponsored by the US Forest Service to assist communities impacted by wildfire.

CMATs are comprised of public and private wildland-urban interface (WUI) mitigation professionals from across the country. The Team provides technical and strategic mitigation support to build and strengthen sustainable mitigation programs. The team mentors organizations, helps to identify and provide tools, advises on the highest priorities for risk reduction, and shares best management practices for mitigation.

U. S. Forest Service CMAT Lead

Pam Leschak - National WUI/FAC Program Manager, U.S. Forest Service, State and Private Forestry, Fire and Aviation Management

Office: 208-387-5612, Cell: 218-341-1952, pleschak@fs.fed.us



TOOLBOX B – CHIPPER PROGRAM

CHIPPING PROGRAMS

Chipper Rental Rebate Program: This program used by FireWise of Southwest Colorado is very simple to run and puts the onus back on the homeowner and/or the HOA or other governance structure. This program provides an incentive to residents that are doing mitigation on their own or using a contractor. The organization will need to promote the program and be prepared to write a rebate check, collect photos, and track rebate requests. Basically, it offers the homeowner the lesser of a \$100 day or 50% of the cost to rent a chipper or have a mitigation contractor do their chipping. If a Homeowners Association / Property Owners Association / Metro District / Road District or other governance structure sponsors a chipping day for residents, they can get reimbursed up to the lesser of \$300/day or 50% of the cost, up to \$1500.

WRWC Community Chipping Program:

The West Region Wildfire Council (WRWC) Chipping Program (www.COwildfire.org/chipping) is run largely on community collaboration and organization. The Community Chipping Program is intended to assist communities and homeowners reduce their wildfire risk by providing a curb-side chipping service.



This is a FREE service to participating communities and residents within the West Region, however, each participant must track and document the amount of time that is spent cutting, dragging and making piles. WRWC chips up to five (5) piles that are a maximum of 5' x 5' x 7' each.

The WRWC uses an online pile registration form (built through Google forms) that residents use to indicate their desired participation in the chipping program (www.COwildfire.org/pile-registration). Each enrolled community has a pile registration deadline and all participants within that community must register their physical address, number of hours spent making the piles and other information on or before that deadline date. A WRWC chipping crew will mobilize to each enrolled community after the pile registration deadline and chip piles at registered addresses. Chips will be piled or broadcast on site depending on the participant's choice on the registration form.

The WRWC Chipping program is funded through County funding commitment, other leveraged grant funds and homeowner in-kind match.

TOOLBOX B – CHIPPER PROGRAM

Coalition for the Upper South Platte (CUSP) Neighborhood Fuels Reduction Program:

CUSP has operated an in-house chipper program since 2003. CUSP provides curbside chipping services as well as the staff to chip slash in neighborhoods around our work area. To request chipping residents call the CUSP office or access an online form located on the CUSP website at: <http://cusp.ws/forest-issues-2/chipper/>

The program is designed around the concept that CUSP is not a contracted chipper service and neighborhoods MUST participate in the entire process. CUSP only provides chipping services when the neighborhood has worked together, has numerous sites, and has led the planning and coordination efforts. CUSP uses resident volunteers to haul the slash while CUSP staff operate the equipment. Liability issues are limited through the use of Liability Release forms, and tailgate safety trainings. CUSP provides all of the necessary PPE for volunteers. In many communities, CUSP returns every year on the same date. CUSP provides this service to over 275 acres per year.



CUSP requires that residents document slash accumulation hours. Be able to pay an \$85/hour fee for two staff (\$25/hr per additional staff)

The CUSP chipper program is an outreach and education tool. Prior to chipping, CUSP may provide a staff forester to review the piles and make recommendations regarding additional defensible space needs. Throughout the chipper event planning process CUSP provides D-space, Home Ignition Zone, Community Wildfire Protection Plan, FireWise, forest management and fire information to the homeowner. Emphasis is placed on the “neighborhood” not the individual and the program requires broad community support to be successful. Many of our chipping clients have increased the level of mitigation over the years. CUSP believes the noise of a chipper grinding in the neighborhood moves people to act better than any PSA.

TOOLBOX C – HOME AND YARD

WHAT EXACTLY IS THE HOME IGNITION ZONE?

- <http://www.firewise.org/wildfire-preparedness/be-firewise/home-and-landscape/what-exactly-is-the-home-ignition-zone.aspx?sso=0>

INSURANCE INSTITUTE FOR BUSINESS & HOME SAFETY WILDFIRE HOME ASSESSMENT AND CHECKLIST

- <https://disastersafety.org/wildfire/wildfire-checklist/>

INSURANCE INSTITUTE FOR BUSINESS & HOME SAFETY ROCKY MOUNTAIN REGIONAL WILDFIRE RETROFIT GUIDE

- http://disastersafety.org/wp-content/uploads/2015/09/wildfire_rockymountain-guide.pdf

PROTECTING YOUR HOME FROM WILDFIRE - COLORADO STATE FOREST SERVICE

- http://static.colostate.edu/client-files/csfs/pdfs/FIRE2012_1_DspaceQuickGuide.pdf

FIREWISE LANDSCAPING AND CONSTRUCTION GUIDE - NATIONAL FIRE PROTECTION ASSOCIATION

- [Download our Firewise Landscaping and Construction Guide](#)

BE EMBER AWARE - UNIVERSITY OF NEVADA COOPERATIVE EXTENSION

- <http://www.unce.unr.edu/publications/files/nr/2009/fs0905.pdf>

TEN WAYS TO PROTECT YOUR HOME FROM WILDFIRE - INSURANCE INSTITUTE FOR BUSINESS & HOME SAFETY INFOGRAPHIC

- https://disastersafety.org/wp-content/uploads/2015/06/Top-10-Wildfire-Graphic_IBHS-735x1024.png

REDUCE YOUR WILDFIRE RISK - KNOW YOUR ZONES - INSURANCE INSTITUTE FOR BUSINESS & HOME SAFETY

- https://disastersafety.org/wp-content/uploads/2015/09/Defensible-Space-Graphic_IBHS4-452x1024.jpg

TOOLBOX D – MITIGATION CONTRACTORS

WILDFIRE MITIGATION CONTRACTORS *

Colorado State Forest Service

- Mark Loveall (719) 742-3588

ForestWise, LLC

- Scott and Mary Canda (719) 846-2057 P.O. box 521 Aquilar, CO 81020

H & H Forestry

- Tyler and Nace Huff (719) 250-1108

LVFPD Wildfire Mitigation Service

- Jake Thomsen (719) 742-6207 or lvfpd.wms.gm@gmail.com

RAI Enterprises

- Robert Ingoldby (719) 859-3799 or (719) 846-3956

Terra Firma Forestry

- Angie Jenson (719) 539-4944, info@terrafirmaforestry.com

Swota Enterprises

- Ray Swota, 85 Kiowa Drive, Canon City, CO 81212, 719-783-4477

Fire Shield

- Casey Christensen, Wetmore, CO, 719-429-6181

Young's Forestry

- Mitch and Robin Young, Westcliffe, CO 719-783-0397

*** NOTE: CMAT does not endorse any of the contractors listed and this is by no means a complete listing of contractors in the area. Please do your own research to locate a qualified contractor.**

TOOLBOX E - COMMUNITY WILDFIRE PROTECTION PLANNING (CWPP)

**FOR A LIST AND EXAMPLES OF EXISTING CWPPs ACROSS THE
STATE PLEASE VISIT**

<http://csfs.colostate.edu/wildfire-mitigation/colorado-community-wildfire-protection-plans/>

TOOLBOX F - FUNDING

COLORADO STATE FOREST SERVICE GRANTS AND FUNDING

- <http://csfs.colostate.edu/funding-assistance/>

GREAT OUTDOORS COLORADO

- Available for properties with conservation easements, and local governmental orgs.
 - <http://www.goco.org/grants>

TAX INCENTIVE PROGRAMS

- Forest Ag Program - Property tax valuation similar to agricultural lands
 - <http://csfs.colostate.edu/forest-ag-program/#1455303390712-d073c937-38fb>
- Income Tax Deduction for Qualifying Wildfire Mitigation
 - <https://www.colorado.gov/pacific/sites/default/files/Income65.pdf>

NATURAL RESOURCES CONSERVATION SERVICE

- Environmental Quality Incentives Program
 - <http://www.nrcs.usda.gov/wps/portal/nrcs/main/co/programs/financial/eqip/>

FEMA

- Assistance to Firefighters Grant
 - <https://www.fema.gov/welcome-assistance-firefighters-grant-program>
- Hazard Mitigation Assistance
 - <https://www.fema.gov/hazard-mitigation-assistance>
- Pre-Disaster Mitigation Grant Program
 - <https://www.fema.gov/pre-disaster-mitigation-grant-program>

- Emergency Management Performance Grant
 - <https://www.fema.gov/fiscal-year-2015-emergency-management-performance-grant-program>
- Flood Mitigation Assistance Grant
 - <https://www.fema.gov/flood-mitigation-assistance-grant-program>
- Tribal Homeland Security Grant
 - <https://www.fema.gov/fy-2015-tribal-homeland-security-grant-program>

DEPARTMENT OF NATURAL RESOURCES WILDFIRE RISK REDUCTION GRANT

- <https://cdnr.us/#/programs>

COLORADO HEALTHY RIVERS FUND

- <http://cwcb.state.co.us/LoansGrants/colorado-healthy-rivers-fund-grants/Pages/main.aspx>

BUREAU OF RECLAMATION WATERSMART PROGRAM

- <http://www.usbr.gov/watersmart/grants.html>

USFS WOOD INNOVATIONS GRANT

- <http://www.fs.fed.us/science-technology/energy-forest-products/wood-innovations-grants>

NATIONAL WILDFIRE COMMUNITY PREPAREDNESS DAY

- <http://www.nfpa.org/public-education/campaigns/national-wildfire-community-preparedness-day>

TOOLBOX G - WORKFORCE

COLORADO CORRECTIONS INDUSTRY - LOW COST INMATE BASED FUELS CREW

- <https://www.coloradoci.com/serviceproviders/swift/index.html?intro>

AMERICORPS

- <https://www.colorado.gov/pacific/servecolorado/americorps-colorado>

COLORADO YOUTH CORPS

- <http://www.cyca.org/>

LA VETA FIRE PROTECTION DISTRICT'S WILDFIRE MITIGATION SERVICE

- A great example of a fire district taking the lead toward mitigation -
 - <http://lavetafire.org/cwpp.htm>

TOOLBOX H - CODES, ORDINANCES AND REGULATIONS

Several NFPA standards may be referenced to address wildfire mitigation issues in the built environment. NFPA 1141 provides guidance for land development and planning, and NFPA 1144 is the guiding document for reducing structure ignitions due to wildfire.

USA FIRE ADMINISTRATION - WUI - CODES AND ORDINANCES

- https://www.usfa.fema.gov/wui_toolkit/wui_codes.html

REVIEW OF STATE AND LOCAL REGULATION FOR WILDFIRE MITIGATION

- http://www.srs.fs.usda.gov/pubs/ja/ja_haines005.pdf

IGNITION RESISTANT CONSTRUCTION DESIGN MANUAL - COLORADO SPRINGS FIRE DEPARTMENT

- https://csfd.coloradosprings.gov/sites/default/files/fire/images/hillside_design_manual_kms_061714.pdf

WILDFIRE MITIGATION LAW IN THE MOUNTAIN STATES OF THE AMERICAN WEST: A COMPARATIVE ASSESSMENT

- <http://www.ucdenver.edu/academics/colleges/SPA/Research/EAWG/Research/wildfires/Documents/WhtPprIntrstStdy15jul13.pdf>

TOOLBOX I - SLASH MANAGEMENT

SLASH MANAGEMENT METHODS



1. Broadcast Burning

If funding is limited or a minimal amount of slash has been produced, scattering and broadcast burning the slash can be a viable option over a larger area.

Advantages - Low-intensity fires release nitrogen into the ecosystem and can stimulate understory plant growth. Prescribed burns reduce the risk of catastrophic wildfire by decreasing the overall forest fuel load.

Disadvantages - Broadcast burns feeding on heavy loads of slash can be destructive to soils, fungi, the seed bank, and plants, and can kill trees remaining after thinning. Smoke from large broadcast fires may be burdensome to the public. Only very skilled and qualified practitioners can initiate broadcast burns. Broadcast burns require a significant planning and permitting process. Social and political barriers may exist to implement broadcast burns. Liability concerns must be considered.

Recommendations - Scatter slash away from leave trees in order to protect them during prescribed fire. If large amounts of slash remain, broadcast burn during cooler, wetter periods when the slash is damp. Ensure that slash quantities are small enough to retain some open burn windows. Only qualified personnel should undertake broadcast burning.



2. Pile and Burn

Piles can be created within treatment units or a large pile can be created offsite.

Advantages – Pile burning can be a cost effective and lower risk way to manage forestry residue both on site and at offsite locations.

Disadvantages – Similar to broadcast burning, pile burns can impact soil and vegetation. Smoke impacts may impact the public. Piles are often burned in the winter and in poor conditions – access and crew safety must be

considered.

Recommendations – Burning also requires permits and plans; however, there is a reasonable process available for local governments, non-profits and fire departments (See Colorado Pile Burning Guidance below).

TOOLBOX I - SLASH MANAGEMENT



3. Lop and Scatter

The slash is lopped to within 2 or 3 feet of the ground. It naturally compresses over time and then can be broadcast and burned at a later date. Alternatively, a bulldozer can also be used to compress the slash.

Advantages. Compressed slash breaks down faster than undisturbed coarse woody debris. Mechanical compression can reduce the intensity of prescribed burns. Compressed slash holds less oxygen and is not in a vertical arrangement, resulting in lower tree mortality when broadcast burned.

Disadvantages. If slash is mechanically compressed, increased use of machinery and operator time results in higher expense. Soil compaction and disturbance can result. Tightly packed slash can cause high soil temperatures during fire. Lop and scatter may be viewed as aesthetically displeasing. Reclassification, or rearrangement of fuels is not removal of fuel.

Recommendations. Rake slash away from old-growth trees to further ensure that they are not damaged by broadcast burning.

4. Haul It Away

This method is generally used only if the project is small and minimal slash has been produced. The slash is loaded on trucks and taken to another location, where it is usually burned or chipped.

Advantages - Since the slash is not piled or burned on the restoration site, damage to the soil, fungi, or seed bank will be minimal.

Disadvantages - This can be a very expensive method for removing slash and is limited if there is no drop off location nearby.

Recommendations - Try to limit soil impacts at the restoration site by driving and parking trucks only in designated areas.

TOOLBOX I - SLASH MANAGEMENT



5. Chipping / Mastication

Where applicable this method can be useful to reduce slash materials into smaller sized chunks better able to decompose. This method can be used to 1. Broadcast chips for decomposition and soil moisture retention, or 2. Piled to be used by property owner at a later date.

Advantages. Chipped slash breaks down faster than undisturbed coarse woody debris.

Disadvantages. If slash is Chipped increased use of machinery and operator time results in higher expense. Chips dispersed at a depth greater than 3" can limit regeneration of grasses and forbs.

Recommendation. Spread chips no greater than 3" depth. Aim chip direction at areas of minimal ground cover and away from live trees. Mastication and chipping rearranges the fuel loading on the surface.

Colorado Pile Burning Guidance

According to the Colorado Department of Public Safety Division of Fire Prevention and Control, within Rules and Regulations Concerning 8 CCR 1507-32, Prescribed Burning in Colorado, any person undertaking prescribed fire projects, which includes pile burning must adhere to a set of minimum standards. Often cited as a limitation under this guidance is the requirement that a National Wildfire Coordinating Group Burn Boss be on-site for the duration. For many reasons a qualified Burn Boss may not be available. In Colorado a Certified Burner may meet the necessary requirements. Additionally, if the pile burning occurs on private lands the standards are not required. For more information please visit - [Rx Fire Rules](#)

TOOLBOX J - ADDITIONAL REFERENCES

COALITION FOR THE UPPER SOUTH PLATTE

- www.cusp.ws/partners

WHAT IS COMMUNITY FIRE ADAPTATION?

- FAC Field Guide (Jan 2015)
 - http://fireadaptednetwork.org/wp-content/uploads/2015/12/2015-FACFieldGuideI_reduced.pdf

WILDLAND FIRE ASSESSMENT PROGRAM - NATIONAL VOLUNTEER FIRE COUNCIL

- http://www.nvfc.org/wp-content/uploads/2015/10/WFAP_Toolkit.pdf

OUTREACH PROGRAMS, PEER PRESSURE AND COMMON SENSE: WHAT MOTIVATES HOMEOWNERS TO MITIGATE WILDFIRE RISK?

- http://www.nrs.fs.fed.us/pubs/jrnl/2011/nrs_2011_mccaffrey_001.pdf

JACK COHEN: PROTECTING YOUR HOME FROM A WILDFIRE

- https://www.youtube.com/watch?v=9cThrGnR_L4

DYNAMICS OF WILDFIRE

- Brief slide presentation from NFPA/Firewise discussing the basic elements of a wildfire
 - <http://firewise.org/wildfire-preparedness/teaching-tools/interactive-modules-and-quizzes/dynamics-of-wildfire.aspx>

NATIONAL WUI MITIGATION AWARD

- <https://community.nfpa.org/community/fire-break/blog/2016/09/19/2017-national-wildfire-mitigation-awards-nominations-being-accepted>

SAWS AND SLAWS

- <http://sawsandslaws.org/saws/home/>