



## **Innovations in Forestry and Fire Mitigation: A Report on Colorado Solutions for Senator Michael Bennet**

### **Facilitators:**

**Tony Cheng**, Colorado Forest Restoration Institute

**Carol Ekarius**, Coalition for the Upper South Platte

**Dan Gibbs**, Summit County Commissioner

# Introduction

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Senator Bennet:

At a gathering of Colorado leadership in March 2014, you asked us to develop points of consensus on how the federal government could better support our collaborative forest health and fire protection efforts. You also requested that we combine our thoughts into a report that you use and pass along to other policy makers as you work together on federal policy.

At the time, we had converged in a group of over 40 participants, after spending the morning in smaller group discussion on three specific areas of expertise: Community Mitigation, Landscape-Level Preparation, and Post-Fire Recovery. After the meeting, we continued the conversation over a number of months. We've been impressed at just how much consensus and agreement we found amongst our diverse roles and backgrounds. This report highlights the greatest agreed-upon obstacles to increased success in our work, and suggests specific federal actions towards overcoming those challenges.

Despite working primarily in small groups, as a collective it was clear that a number of themes and ideas were common to every group. In reading this report, we ask that you pay particular attention to these zones of universal agreement. Though the next three sections of this report will address challenges and solutions, more specifically within the lens of each focus group, we hope these common values will guide your understanding of this document:

- Inclusive, collaborative decision-making processes are vitally important. These advance conversations between federal decision makers and community leaders can streamline agreement in addressing wildfires, major forest management decisions, regulatory processes and other events that otherwise tend to be flashpoints for conflict.
- We recognize a need for increased education and outreach to homeowners and communities regarding their responsibility to mitigate fuels and conditions adjacent to property, infrastructure, and other at-risk values. Increased awareness of actual wildfire risk as well as the value of prescribed and controlled burns is also needed.
- At all levels, investments in preparedness, collaborative planning, capacity building and proactive work before disaster hits are a far better use of resources than spending emergency funds during and after a destructive event.
- We place a high value on local relationships and experience in forest health and wildfire preparedness—and see a need for federal resources that can better support such community leadership.

- We encourage land management agencies to reconsider how they evaluate their own work, and develop a new method that emphasizes effectiveness across the landscape. In other words, projects must target the right acres for treatment, even if these acres are more expensive to treat than other areas.
- We request that federal forest planning information be made more accessible to local and regional groups engaged in complementary work.

We recognize that many of the suggestions outlined in the following pages may be difficult to implement. Yet we believe they must be attempted if we really seek to address the issue of long-term forest health and community resiliency to wildfires in the West. We hope you will use this document to guide your efforts in Washington and Colorado, and to share with other key decision makers.

Finally, we note that while we represent a diverse group of interests, there are many others with great expertise in these areas, across Colorado and the nation. They may be helpful in continuing this dialogue.

Thank you for your consideration.

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- **Landscape Level Preparation Group**  
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# Community Mitigation

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The Community Mitigation Group is comprised of individuals who work on a local level, with individual landowners, governments, fire departments and other agencies to plan and implement the strategies necessary to protect communities from wildfire.

Neighborhoods in areas affected by the Fourmile Canyon, High Park and Waldo Canyon Fires—among others—have proven that when done properly, collaborative community mitigation reduces the number of homes and neighborhoods damaged or destroyed by wildfire. Colorado’s successful, community-wide mitigation efforts are consistently built on a collaborative foundation. The formation of these groups can feel inefficient and tedious in the early stages. Yet taking the time to meet around the theme of community resiliency—before there is an urgent need—makes the process of achieving public buy-in for wide-scale action far easier and more successful. As many of us have come to feel: sometimes you need to start slow to ultimately go fast. This may take time and energy at the outset. However, the ultimate outcome of these collaborative efforts has been to increase the pace and scale of fire mitigation.

Colorado communities also rely heavily on Community Wildfire Protection Plans (CWPPs) as an essential collaborative tool for identifying a community’s priorities, interests and values for fire mitigation. The CWPP framework clearly identifies opportunities for collaboration with other partners, and helps those partners ground their work in the true needs of the community. CWPPs also serve to help prioritize limited dollars to address the most important values first, while clarifying resource gaps that could be filled with grants or other funds.

We also rely on Colorado’s Forest Products Industry as a consistent and essential partner in mitigation. The industry is essential in getting mitigation work done cost-effectively and in a way that creates local jobs and resources. Communities that are actively working to support their own resiliency are more successful when coordinated with forest products companies, and industry is most successful when involved up-front in development of community wildfire protection efforts.

## Opportunities for Action

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- **Improve Access to Federal Forest Planning Information:**

A community-driven mitigation project focused on private land is often far more valuable and worthwhile if adjacent national forest lands are similarly managed. Since the vast majority of Colorado’s forests are federal, collaboration with the USFS is critical for local groups to ensure that their work in communities and neighborhoods is coordinated with work being done on surrounding forests. When this is successful, both parties ultimately see greater returns on their investments. Yet a lack of communication between local groups and the USFS can make this coordination difficult at times.



Forest Service plans are essential to enabling local communities to be strategic, effective, and efficient when they plan mitigation on areas that border on federal lands and would look to adjacent federal work to complement their value. Since home, neighborhood and community resiliency is more effective when paired with adjacent forest resiliency, both parties can increase the value of their efforts by performing their work concurrently. This approach is also more cost effective, stretching limited dollars to get necessary on-the-ground work accomplished.

Right now, it can be difficult to get accurate information from federal agencies regarding their plans for future forest management. This is sometimes due to a lack of outreach, or caused by an uncertain funding environment (due to fire borrowing, congressional gridlock or other issues) that denies agencies the ability to plan ahead with long-term certainty.

***Recommendation:*** We encourage the USFS to prioritize coordination and communication with local groups when planning for future forest treatments that have implications for nearby communities. Both parties can maximize the value of their work when provided with greater certainty of when and where projects will be completed. Improved sharing of mapping data would greatly strengthen this coordination.

- **Develop More Flexibility in Community Mitigation Funds:**

Many Colorado groups share frustrations with the gap that exists between the immediate need of fire mitigation funds (specifically USDA funds) and the delay in actual deployment of these funds. Because there is often a significant time lag between the creation of federal funds and the actual deployment of those funds on the ground, these resources are often unable to respond to real-time community needs.

Programs such as State Fire Assistance funds have a lag time that does not always meet the constantly changing and rapid needs on the ground. Once a request for proposals is released, there is often a 12 to 18-month delay before the money is actually available on the ground. This delay, combined with rigid project requirements, creates a funding source that, when eventually deployed, may not be as useful as it was designed and intended to be.

Fire mitigation funds are most effective when they are adaptable to rapidly changing conditions on the ground. They are most efficient when local leadership can use them in accordance with highest needs, which evolve and change along with neighborhoods and ecosystems. By allowing for such adaptation over time, BLM Community Assistance Funds are an excellent example of flexible, durable funds that have proven extremely useful for local groups working with landowners and neighborhoods. County and state-level funding has also been proven to move quickly from application to deployment, and has thus been extremely useful.

***Recommendation:*** The Government Accountability Office should examine the effectiveness of State Fire Assistance and other mitigation funds, and identify opportunities for improving their efficiency while maintaining an appropriate level of accountability for recipients.

- **Streamline the Pass-Through System for State and Private Forestry Money:**

The United States Forest Service provides a great deal of valuable assistance to non-federal partners for use on state and private lands. Unfortunately, the money that is allocated yearly to state and private forestry is subject to a 20% loss as it passes through the USFS en route to the states. This is a significant administrative cost and a drastic reduction in funding that has a major impact on the ground.

While we acknowledge the need for robust USFS funding, it should not come at the expense of these resources that have proven so effective in Colorado, and are specifically intended for state and private use. Changes to this system could help to get more money to the community, county and state efforts that have proven so effective.

*Recommendation:* The federal government should explore alternate allocation models for these funds, in a way that does not reduce USFS funding, but ensures that as much state and private funding as possible reaches its intended target. One possible solution may be to utilize the NRCS, due to their history of success working as a community-level, pass-through funding source for private landowners.

- **Ensure Federal Focus on “Best Acres”, not “Cheap Acres”:**

The current USFS administrative structure evaluates foresters by how well they are able to meet or exceed their targets for total number of acres treated. The current evaluation metrics can sometimes provide an incentive for foresters to pass over areas with a high per-acre treatment cost in favor of cheaper areas which can yield a higher total acreage for the same cost.

In Keystone, we specifically discussed instances in which “treatments” on grasslands—which are extremely cheap but do little to reduce actual fire risk—were included in acreage counts in a way that suggested that more meaningful work had been done. This is but one stark example of how mitigation treatments can be misapplied to yield high acreage with little actual mitigation value. Acres that may be overlooked in favor of cheaper, less-important targets include those within the Wildland-Urban Interface, areas with poor seasonal access, high recreational use, private inholdings, or other complex management issues. Effective reduction of wildfire risk to communities relies on a combination of treatments within these areas as well as the adjacent landscape.

While the USFS has allowances to perform all of these treatments, these resource-intensive areas often go unaddressed—even when these specific treatments are a key part of a larger community plan, and have a very high per-acre value in terms of fire mitigation. The structure leads to an emphasis on quantity over quality that can detract from the total value of work being done.

*Recommendation:* The Forest Service should review the way that fuel treatments are prioritized and success is evaluated to ensure a focus on greatest needs and total effectiveness, rather than a simple number of acres.

- **Increase Funding and Focus on Education and Outreach:**

Community mitigation groups in Colorado have seen success with community outreach and education programs. One of these is the National Fire Protection Association's Firewise Communities Program, which promotes local education and outreach on fire mitigation opportunities for homeowners. Colorado was the third state in the nation to reach 100 Firewise communities, as the program has grown rapidly.

While the actual impact of Firewise varies between each enrolled community, the program's easy accessibility is its key. By providing tools for direct and simple communication with landowners, Firewise can be the initial spark of a community-wide effort to develop long-term fuels mitigation programs.

Even with Firewise, few homeowners have accurate or complete information about real fire dangers, the steps they can take to protect their homes and homes around them, and the cost of such programs. There is often a misunderstanding about the government's role in protecting homes from fire; therefore, programs such as FireWise are critical for supporting on the ground efforts to provide wildfire risk reduction resources and information to the public.

The forest product industry's important role in fire mitigation is also frequently misunderstood and underestimated.

*Recommendation:* While locally-based outreach efforts have proven effective in Colorado, we need more tools designed to help us achieve community understanding of fire danger and proven approaches to mitigation and home protection. Firewise alone is not enough; we need more complementary resources.



# Landscape-Level Preparation

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The Landscape-Level preparation group represents Colorado groups and individuals working on landscape-scale projects that address forest restoration across broad swaths of land. While small-scale local projects are key to protecting neighborhoods and communities in the short term, planning for increased restoration and resiliency of our forests across the landscape is essential to reducing the risk of unwanted fires in the long-term.

Colorado is at the forefront of innovation on these big-picture solutions. Landscape-scale forest restoration and stewardship projects are currently being implemented throughout the state through collaborative engagement by stakeholders, including Colorado's forest products companies. These projects include the Front Range and Uncompahgre Plateau Collaborative Forest Landscape Restoration projects, several 10-year stewardship contracts, and numerous other projects encompassing tens of thousands of acres around the state.

Our work in Colorado is only the beginning of the work necessary to sustain healthy forests across the country. There are many steps the federal government can take to increase the pace, scale, and availability of these opportunities for landscape-scale restoration.

## Opportunities for Action

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- **Provide More Structure and Support for Collaboration:**

Landscape-level projects offer an opportunity to increase the pace and scale of fire mitigation efforts. These projects must go through an often thorough environmental review process as mandated by the National Environmental Policy Act (NEPA). While overall valuable, this process does not provide a venue for back-and-forth discussion between stakeholders, thus reducing opportunities for shared understanding and middle-ground solutions, and increasing the duration of the review process.

In Colorado, investment in pre-NEPA collaboration and science has proven effective in spurring landscape-scale forest restoration and stewardship success. These projects begin their collaboration well in advance of the formal NEPA process. Stakeholders engage with one another and with land managers, scientists, and other subject matter experts to develop and examine local evidence about where, what, and how to restore the landscape. When collaborative agreement is achieved prior to NEPA, the process is then far more efficient, protected from serious objections or litigation, and implemented on the ground more swiftly. The ultimate goal is to get more work done more quickly in the forest.

Colorado's example on pre-NEPA collaboration could be expanded to include the other reviews necessary for approval of landscape-scale forest projects. For example, front-end engagement

with the US Fish and Wildlife Service can limit delays in biological assessments and opinions needed to implement forestry actions in areas containing endangered wildlife species. And coordination and communication between land managers and entities such as water providers, powerline corridor managers, and contractors can reduce confusion and foster more timely action on projects in areas where public utilities are involved.

***Recommendation:*** All entities, including state, local, federal and private should take a more active role in the planning of larger landscape-scale projects. There is a need for government, non-government, and research entities to better develop the structure and resources for ongoing collaborative work in order to better define and achieve landscape-scale forest restoration objectives.

- **Provide Greater Support for the Scientific Basis of Large-Scale projects:**

Collaborative and diverse stakeholder support for landscape-scale forest management projects is often based in a mutual understanding and acceptance of the science supporting the project. Science-based monitoring and adaptive management has proven successful in Colorado as a way of building trust amongst stakeholders who are initially cautious about “landscape-scale” actions.

Collaboration and data go hand-in-hand: scientific evidence is an essential ingredient to foster consensus within the diverse range of stakeholders that accompany every project. Locally-grounded scientific evidence that a project will succeed is what keeps stakeholders engaged, at the table, and often in consensus about the path forward.

In turn, this consensus can lead to more efficient NEPA, long-term stakeholder engagement and resource leveraging, and public education and support.

***Recommendation:*** Investments in science-based, collaborative monitoring strategies and adaptive management systems will create opportunities to test the assumptions and uncertainties that would otherwise simply fuel conflict. There is a need for advocacy for these investments at the highest levels of authority and decision-making.

- **Demonstrate Sustainability Through Public Outreach and Education:**

Currently the public perspective on forest management can appear polarized between opposing views that we should either do everything (manage every forest, aggressively) or nothing (simply leave forests completely unmanaged). But as we know, the real need lies somewhere in between the two.

Recent fires and insect outbreaks have created a unique opportunity for public education that could lead to greater acknowledgement of this middle ground. Such education could elucidate the roles that natural disturbances, the forest products industry, and prescribed fire play in

developing healthy forests. Such a campaign could also highlight the link between forest conditions and quality and quantity of water.

***Recommendation:*** A public outreach and education initiative involving governmental, non-governmental, and research entities could send a powerful message on the real value of active, collaborative, landscape-scale forest restoration and stewardship projects.

- **Improve Federal Policy for Prioritizing and Completing Treatment Areas:**

Much of our time is spent working to determine high and low-priority areas for treatment within a landscape, in order to use limited resources where they will have the greatest impact. Yet the federal approach to evaluating and approving work sometimes fails to take priority into account, instead pushing to simply maximize the number of acres treated, regardless of their actual effectiveness in promoting a resilient landscape. This approach to forestry is ultimately a disservice to our planning and collaboration, and makes our valuable funding far less effective. Our planning work tends to identify treatment needs across a wide variety of specifically targeted areas within a landscape, and we need greater support in reaching those outcomes.

Our groups lay the groundwork for landscape-scale projects that require years of preparation, collaboration and outreach. Yet ultimately there are more of these planning projects in Colorado than there is money to implement them, and the money is spread too thin to take full advantage of the work that's been done. This includes areas such as the Grand Mesa Uncompahgre and Gunnison National Forests that have broad forest management plans already approved through NEPA and have had treatments funded through the CFLRP but are in need of additional funding to complete.

***Recommendation:*** Federal policy should focus on the overall natural resource value of the finished treatment, rather than a project's total acreage. There are existing tools in place to support this prioritization, which should be more frequently incorporated into project and landscape planning. Increased funding is essential for implementation of approved plans.

- **Increase Consideration of Prescribed Fire:**

Landscape-scale restoration and stewardship requires the balanced application of tools, but we're way out of balance in Colorado. Mechanical treatment, human-ignited prescribed fire, and managed wildland fire can treat forests to increase resilience to future disturbances and reduce the risks of severe fire impacts to communities and infrastructure. In Colorado, the inability to apply prescribed fires over large areas has limited the use of this valuable tool. Many more acres will be "treated" with wildfire (and insect outbreaks), with potentially catastrophic consequences to people, property, and communities.

*Recommendation:* Both the Colorado State government and the federal government should work to improve public understanding of the value of appropriate prescribed fire to reduce fuel loading and contribute to the forest restoration process. The State of Colorado and the USFS should look to build on their recent success with pile burning and smoke management in Grand and Eagle Counties.

# Post-Fire Mitigation and Recovery

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The Post-Fire Mitigation and Recovery Group is comprised of leaders who have worked with forests and communities in the days and years following significant wildfire events. These large, destructive fires are quickly followed by the arrival of many federal agencies, funds and experts intended to alleviate damage and expedite recovery. During this time, local governments and collaborative groups are key to ensuring that those resources are deployed with the benefit of local expertise and understanding, to make them truly effective on the ground. This has been exemplified by such organizations as the Coalition for the Upper South Platte and the Rio Grande Watershed Emergency Action Coordination Team, which moved swiftly into action after the Hayman, Waldo Canyon and West Fork Fires, greatly increasing the speed and value with which resources could be put to beneficial use.

Unfortunately, in recent years Colorado has gained extensive experience in forming these partnerships and responding to the changing conditions that beset communities and landscapes after large fires. As we move forward into what will most likely be an era of continued fire danger, it's essential that we continue to support and build upon this knowledge and experience, and incorporate it into future fire response, to make recovery as effective and efficient as possible.

## Opportunities for Action:

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- **Provide Funding for the Formation of Collaborative Groups Before they are Needed:**

After a fire, property owners are in shock. It takes time and effort to reach out, get permissions, understand individual wants and needs, and identify work that needs to be done in recovery. Many local governments have found that property owners are more willing to work with and trust local non-profit groups, rather than government agencies or programs. Thus when these groups act as a bridge, recovery happens more quickly through improved communication and understanding. In Colorado, groups such as the Waldo Fire Recovery Committee formed quickly after their respective fires, speeding recovery work and helping to get resources on the ground quickly.

***Recommendation:*** Given the significant and immediate value of these groups in the days after a fire, funding to build such groundwork in anticipation of future fires would significantly increase the effectiveness of post-fire efforts by ensuring that essential communication and collaborative structures are already in place before a fire even starts.

- **Incorporate Post-Fire Flooding into the Stafford Act:**

Areas recovering from a destructive fire have experienced firsthand the cumulative and damaging effects of the floods that can follow. These floods can damage and destroy life, property, and essential public infrastructure.

Individually, none of these floods are damaging enough to trigger a federal disaster designation under the Stafford Act—which comes with valuable funding and resources when a certain damage threshold is reached. Yet the cumulative effect of repeated post-fire flooding can be just as destructive as a single, large flood that would otherwise meet Stafford requirements.

***Recommendation:*** Develop a new set of qualifications for post-fire floods in the Stafford Act which takes this into account and can help to mitigate post-fire flooding impacts.

- **Identify and Reduce Holdups to Emergency Watershed Protection Program Fund Availability:**

The Emergency Watershed Protection Program (EWP) is an essential federal program that provides funding to address flooding and other hazards immediately after a fire. Unfortunately, while these funds are intended to be deployed immediately after a disaster, they are often held up in Washington D.C., significantly reducing their value and impact: Delays are sometimes caused when Congress is slow to authorize the funds needed to fund the EWP program. However, even when authorization is complete, the funds tend to sit in the Office of Management and Budget for three to five months before they can be used. This has happened with every deployment of EWP funds that our groups have worked with in Colorado.

These funds, which are designated specifically for urgent needs on the ground immediately after a disaster, are made drastically less effective every day they are held up in bureaucracy.

***Recommendation:*** NRCS administrators and possibly Congress should work to identify and eliminate these barriers to fund availability.

- **Create Opportunities to Develop Watershed Recovery Plans in Advance:**

Recent collaboration between the USFS and water providers such as Denver Water have yielded successful large-scale projects to address watershed fire hazard mitigation through forest thinning and fuel removal. Water supplies can be particularly hard-hit by severe fires which introduce sediment, ash and debris to watersheds and can even threaten infrastructure such as dams and pipelines.

Yet despite our best intentions, it is impossible to mitigate the fire hazard in every watershed. We need similar federal partnerships to assist with pre-fire planning efforts for high-risk. By developing watershed recovery plans before a fire even starts, we can minimize the impact of a large fire on our key watersheds and water supplies by implementing these plans as soon as the fire is out, beginning the recovery process immediately instead of taking weeks to create a plan.

***Recommendation:*** Provide federal resources for developing high-risk watershed recovery plans that can be deployed immediately after a fire to protect crucial infrastructure. A watershed recovery plan could analyze sub-watersheds within areas of high values at risk (utilities, infrastructure, communities) for potential post-fire mitigation. These analyses would consider a



suite of possible post-fire work, based on a variety of criteria. Among many other possibilities, the plan might target erosion control strategies such as reservoir sediment and debris removal strategies, culvert removal or resizing, bank stabilization, and placement of debris basins.

- **Allow Local Governments to Designate NGOs as EWP Sponsors:**

Local government entities are currently the only legal sponsors for Emergency Watershed Protection funding, but some do not have the staff resources to commit to the terms of sponsorship, even when there is a pressing need for EWP funds. After the East Fork Fire, Huerfano County decided not to seek EWP funds—despite having a need—because they did not have the capacity to manage the sponsorship.

A change in the law may also help to mitigate the challenge of keeping a manageably-sized group of sponsors under EWP. Sometimes when too many different governments are involved, it creates conflicts between those partners, and confusion for the public.

*Recommendation:* In cases where the local government cannot sustain sponsorship, the government should be allowed to designate a local NGO as a sponsor in their stead. The leadership of a local collaborative group could streamline and coordinate this process, if allowed to do so by local governments and federal agencies.

- **Develop a Post-Fire Funding Guide for Local Officials:**

When an emergency happens, local government officials often scramble to understand the crowd of state and federal agencies that come to assist the community. Often, they don't have an understanding of the resource pools available, the differences between them, and how they can be used to help. The lack of understanding impedes communication and diminishes the value of those resources.

Leaders who have worked through this process should work to create a post-fire guide that compiles and explains this information, to be distributed to those communities that do not have such experience.

Such a guide could also be used to communicate essential post-fire best practices, such as the restoration techniques that were used in the Waldo Canyon Fire aftermath. These techniques used both Burned Area Emergency Response and EWP funds, and were implemented quickly based on lessons learned from the Hayman Fire ten years prior. This kind of expertise, developed at such cost, should not go to waste.

*Recommendation:* Organize experienced leaders to create a post-fire guide that compiles and explains this information, to be distributed to those communities that do not have such experience.

- **Expand the Use of Local Woodchips or Wood Shred for Post-Fire Rehabilitation:**

After a fire, it can be important to cover up burnt areas and hold exposed soil in place. While there are a number of commercial products available for this, Colorado groups have had success using locally-available biomass for this purpose, utilizing a local resource—damaged trees—that otherwise may not have an use, and eventually would be removed at additional cost regardless.

Recommendation: The USFS has supported this approach and has been helpful in encouraging it, when appropriate. USFS leaders should encourage the agency to expand the use of locally-available biomass to prevent erosion, rather than importing pre-fabricated materials for that purpose.

- **Simplify FEMA Systems and Reduce Frequency of Staff Movement and Turnover:**

FEMA provides essential resources to communities working to fight and recover from fires. Yet the bureaucracy of FEMA is so complicated that even large counties such as Boulder have spent millions of dollars on consultants to help them navigate it and make it work for them. This problem is exacerbated by the constant shift of FEMA employees, who sometimes even shift roles mid-disaster.

Recommendation: The federal government should conduct an internal audit of FEMA functions and determine how to streamline them, while improving consistency of resources on the ground.