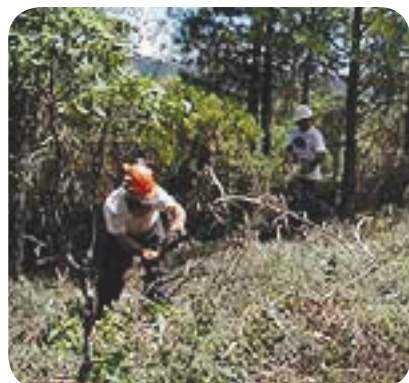
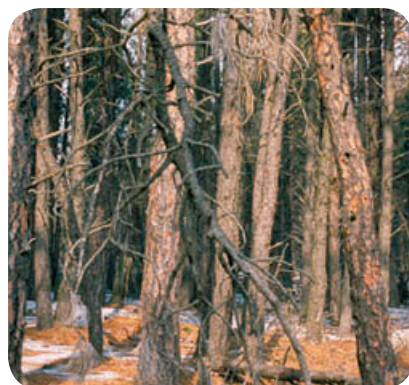


COMMUNITY WILDFIRE

DESK GUIDE & TOOLKIT

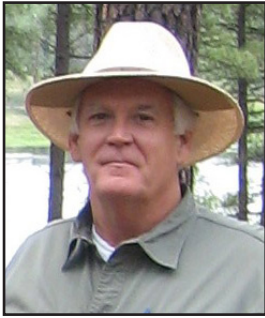


To the user:

In recent years, we've witnessed some of the biggest fire seasons on record, in terms of both acres burned and costs incurred. These fires have damaged ecosystems, impacted local economies and public well-being, and threatened many of those living in the wildland-urban interface.

The creation of the National Fire Plan in 2001 helped to raise the level of awareness for all aspects of the wildfire response – before, during and after – and I'm proud of the work local resource leaders have done to advance the objectives set forth by our federal agency partners.

Here are just a few examples of the work we've seen accomplished:



- Conservation districts have proven valuable allies to landowners in providing technical assistance, in hazardous fuels reduction, and in acting as a funnel for Emergency Watershed Protection assistance and other funds
- Resource conservation and development councils in many fire ravaged areas have served as the fundraising arm for recovery efforts and spearheaded hazardous fuels reduction, biomass utilization and community development projects
- Cooperative Extension offices have helped provide educational opportunities for landowners on forest management techniques and the benefits of woody biomass utilization

Most recently, the National Association of Conservation Districts was fortunate to join in the signing a joint letter of cooperation in fall of 2008 with the USDA Forest Service, the National Association of State Foresters, the Natural Resources Conservation Service and the Department of the Interior Office of Wildland Fire Management aimed at building collaboration among agencies and landowners in our nation's forested regions.

Local resource leaders can do a lot of good in helping communities defend against wildfire because we are often a valued link between those fighting the fire and those it directly impacts.

This publication has been made possible through NACD's five-year cooperative agreement with the Forest Service and the Department of the Interior. This collaborative partnership has allowed NACD to produce a number of valuable resources relating to woody biomass and catastrophic wildfire issues. We are grateful to both the Forest Service and the Department of the Interior for their continued commitment as both friends and resources to conservation districts, and to our partners in local Extension offices and RC&Ds nationwide.

A hearty "thank you" is also owed to the advisory team that helped to shape the information provided throughout this desk guide and much of the material featured in the toolkit. The team included Karen Berry, member of the Jefferson County Conservation District board, Colorado; Stephen Campbell, University of Arizona Extension forester; Doug Martin, director of the Nevada-Tahoe Conservation District in Nevada; Kit Sutherland, coordinator of the Bitter Root Resource Conservation and Development Council, Missoula, Montana; and Steve Ellis of the Colorado State Forest Service. The advisory team's collective experience, along with the contributions made by numerous local, state and federal resource professionals and wildfire advisors, helped to make this effort a successful one.

We encourage you, the local resource leader, to use the materials provided within this desk guide and the accompanying toolkit of resources to take action where you are equipped during the three phases of wildfire preparedness and response. Past fires have offered proof that you are an important part of wildfire prevention and recovery!

Sincerely,
Charles Holmes
Chairman, NACD Forest Resources Policy Group
June 2009

Table of Contents

Executive Summary	4
Chapter One: Before the Fire	6
Resources and partners	7
Community wildfire protection plans	8
Why have a CWPP?	8
What are goals of a CWPP?	9
Key components of CWPPs	9
What entities must agree on the final contents of a plan?	9
Mitigating the risks	10
Funding sources	10
Generate your own revenue	11
Get to work	11
Safer places to live	12
Educate, educate, educate	12
Reaching your community members	12
Tools for building defensible space: Firewise and other programs	13
Hazardous fuels reduction	13
Woody biomass	16
An alternative fuel	17
Potential obstacles	17
Planning and zoning	18
'But we don't want zoning'	18
Wildfire hazard mitigation plans	18
Local resource leader roles	19
As fire approaches	20
Chapter Two: During the Fire	21
Be available as a resource	22
In order to help, get connected early on	22
Respond to the needs of those fighting fire	22
Help manage the flow of communication	23
Multi-agency organization	24
Coordinate volunteers	24
Chapter Three: After the Fire	26
Obtaining and delivering assistance	27
EWP in action	27
EQIP has a role	28
BAER and ESR address and mitigate post-fire threats	28
FEMA	28
State programs	28
Follow the money	29
Other activities	29
Build and maintain a healthy forest	30
Identify threats of flooding, mudslides	30
Timber salvage as an option	30
Replenish the forest	31
Volunteers are central to the cause	31
Revitalize the local community	33
Assisting with emotions	33
Teach, train and tour	34
Celebrate the good work	35
In Closing	36
Appendices	37
Advisory Team Priorities	37
Joint Letter of Cooperation	42
Case Studies	44
End Notes	51
Toolkit	52



This NACD project was made possible through funding from a joint cooperative agreement with the U.S. Department of the Interior and the USDA Forest Service.

NACD's services and programs are provided without regard to race, color, national origin, sex, age, handicap, or religious affiliation.

Bill Berry and Mike Beacom served as the project coordinators for the NACD Community Desk Guide & Toolkit

Karen Wattenmaker Photography (kwphoto.com) provided a number of the photos used in this document.

Executive Summary

More than 51,000 communities in America are at risk of wildland fire.¹

Most of these communities are served by local resource leaders working for conservation districts, resource conservation and development councils, Cooperative Extension and other organizations. The NACD Community Wildfire Desk Guide and Toolkit are designed to help local resource leaders and volunteers who work with them identify their roles in keeping communities safe and enhancing the health of forests, watersheds and other natural resources.

Roles assumed by local resource leaders and volunteers will vary, depending on the makeup of their communities and collaborative strategies developed with other local, state and federal partners. In some cases, local resource leaders will take lead roles in activities. At other times, they will play supporting roles. Sometimes they will simply back away and let other experts do the job.

In almost all communities, local resource leaders bring valuable skills and expertise to the table in efforts to address wildland fire issues. Sometimes, local resource leaders will simply rely on their traditional strengths and partnerships. For instance, conservation districts provide education, technical assistance, project management and hands-on assistance to private landowners, communities and, increasingly, public lands managers. They also serve as important links to programs administered by partners such as the Natural Resources Conservation Service and the Farm Service Agency.

Local resource leaders also work closely with state forestry agencies that oversee programs and activities affecting private and some public forest resources. Many at-risk communities are located near federal lands. Here, coordination with USDA Forest Service and Department of the Interior land managers is a key to a successful effort in reducing fire risks to communities and promoting healthy landscapes.

The desk guide and toolkit are designed to be simple aids for use by local resource leaders who assume roles in these efforts. The desk guide provides information about activities prior to, during and after fires. Toolkit materials interact with and support this information and provide more thorough explanations and examples of activities.

In all cases, the activities of local resource leaders will be determined and steered by their relationships with other stakeholder groups and superseding agencies. Communication is an essential key to effective collaboration. It is important to get to know your partners and their roles. It is equally important that partners understand your roles and responsibilities. This knowledge will help clearly define activities of all partners.

While most of the activities referenced in the materials are well within the job descriptions of local resource leaders, they occasionally fall outside of what would be seen as normal duties. Catastrophes such as wildfires require that professionals occasionally be capable of stepping out of their comfort zones. As one example, if you work with a private landowner who has been victimized by fire, you had better anticipate post-traumatic stress and be prepared to direct that landowner to appropriate professional assistance. That requires a basic knowledge of how those services are provided in your community.

The materials presented here were selected based on input and direction from a team of local resource leaders who comprised the NACD Community Wildfire Project Advisory Team. The team included representatives from conservation districts, RC&Ds, Cooperative Extension and a state forestry agency. NADC staff and federal advisors also provided input. Because the desk guide is specifically intended to serve local resource leaders, the advisory team input was especially valuable. The team met for two days in summer 2008 in Denver, Colorado, and in follow-up teleconferences and email exchanges. It identified and prioritized recommendations for pre-, during- and post-fire activities. Those priorities shaped the respective sections of the desk guide and helped in identifying toolkit materials.

See the advisory team priorities for pre-, during- and post-fire activity in Appendix I

The advisory team's input was supported by numerous interviews with local, state and national experts, and source materials produced by agencies and organizations with extensive wildfire and natural resource expertise.

On the advice of the advisory team, the materials were prepared to appeal to local resource leaders and volunteers with varying ranges of experience and knowledge about strategies for mitigating the impacts of wildfire. The goal was to provide useful information to professionals across the continuum of experience.

The NACD Community Wildfire Desk Guide and Toolkit were also designed for a long shelf life. Portions of the materials will inevitably be dated shortly after publication, but the bulk of the information presented here is meant to be of value for years to come. Major sections of this desk guide and the accompanying toolkit materials are organized to provide information to assist local resource leaders before, during and after wildfires that impact communities and surrounding wildland-urban interfaces. Each section includes an introduction followed by several chapters of relevant information. Case studies are provided as examples of how local resource leaders have applied their skills and expertise in various regions of the country.

At the urging of federal partners, NACD has worked for nearly a decade to encourage local resource leaders to become involved in community wildfire protection, forest health and related issues. The NACD Community Wildfire Desk Guide and Toolkit are the next step in efforts to lend a hand to the cause.



Desk Guide & Toolkit Advisory Team members and NACD staff (from left to right): Doug Martin, Steve Ellis, Mike Beacom, Karen Berry, Fred Deneke, Doug Williams, Deb Bogar, Kit Sutherland and Stephen Campbell. Not pictured: Bill Berry.

Before the fire

Protecting people, places and resources

Most people who live in fire-prone areas know all too well that fire happens. Over the ages, fire has been one of nature's tools for achieving balance in ecological systems. Plants and animals have adapted well to areas where fire is part of the natural regime. Humans, too, have long used fire as a management tool to achieve multiple resource goals. Today, federal and state agencies responsible for managing vast stretches of public lands incorporate the use of natural fire ignition as a means of achieving resource benefits and restoring natural fire regimes.

But in many cases, decades of second growth and fire prevention/exclusion through most of the 20th century have led to conditions of unnatural vegetation and fuel accumulation. Fires now burn hotter and bigger. Human populations have mushroomed in many fire-prone areas. The results of this equation are often devastating.

When fire threatens communities, endangers humans and their homes and businesses, and impacts crucial resources such as forests and watersheds, action is required. Communities and local, state and federal partners must work together to prevent and/or mitigate the effects of fire. That's what this section of the desk guide addresses. The focus is on how local resource leaders can bring their knowledge and skills to the table in the collaborative effort to keep communities safe and to protect the resources that sustain them. These skills include:

- Communication and education about how to keep communities safe
- Knowledge of fire suppression and management tools and resources
- Cost-sharing assistance on practices to achieve forest health and fuels reduction
- Technical assistance to landowners and communities to achieve fuels reduction as well as small timber and biomass utilization
- Technical expertise in areas like resource assessment, mapping and enhancement
- A direct and trusted link to private landowners and their needs

Local resource leaders are part of a large and ever-changing group of stakeholders, and their contributions are important.

In this section, several topics are addressed. They include:

- Identifying local resources and partners
- Activating and/or enhancing community wildfire protection plans (CWPPs)
- Developing wildfire mitigation plans
- Reducing risks through fuels reduction and defensible space
- Educating communities
- Working with planning and zoning agencies to limit fire risks
- Planning for during- and post-fire activities

The desk guide also directs users to pre-fire resources included in the toolkit.



Resources & partners

Working together for safer communities

The devastation wildfires cause to communities requires that all hands on deck work to reduce the risk and incidence of fire. The National Association of State Foresters (NASF) estimates there are more than 51,000 communities at risk to wildland fire. Only a small percentage of those communities have a CWPP or equivalent plan for reducing risk. Needless to say, there is much work to be done. Living in wildland fire prone areas has to start with the premise that fire will occur, not we can prevent fire. With that premise, the process can be managed and mitigated.

“It starts with a relationship,” proclaims one guide to reducing risk through collaboration.² Actually, it starts with many relationships. Local resource leaders at conservation districts, RC&Ds, Extension offices and other community-based organizations possess important knowledge about local natural resource concerns. They are trusted advisors to private landowners and the communities where they live. They are partners with state and federal agencies that have important roles in preventing, responding to and mitigating the effects of fire. Clearly, it is essential for local resource leaders to participate in efforts to reduce fire risk and its impact on people, places and natural resources.

The primary responsibility for fire suppression and management belongs to the local, state and federal fire management teams. Local resource leaders can and should support these specialists as well as the ancillary persons, agencies and teams that become engaged directly or indirectly when and after fire occurs. Your partners in community wildfire protection may include: law enforcement, churches/schools, public works agencies, volunteer service organizations, retail associations, chambers of commerce and homeowner associations.

The resource leaders that this desk guide is designed to help often report to local boards that guide their activities. Chances are, your board already recognizes the importance of reducing fire risk. If not, you have some educating to do. Reducing fire risk should be a priority in your annual plan of activities. That gives you the green light to begin building or strengthening relationships.

Just as fire chiefs in fire-prone areas need to be engaged in dialogues with city and county officials, so do local resource leaders. The International Association of Fire Chiefs offers the following advice to its members. It's equally valuable advice for local resource leaders and other stakeholders:

- Openly discuss wildland-urban interface issues with local elected leaders
- Get engaged in prevention efforts, zoning and land-use issues
- Develop partnerships with state and federal agencies
- Discuss the needs for fuel mitigation in your community
- Examine how your community is prepared to respond to a major wildland-urban interface fire
- Embrace the Firewise program to help your community prepare. Encourage local residents to prepare their homes to be resistant to wildland fires

These steps set the stage for you and your organization to bring your distinctive and important skills into the mix.

Coordination is the key to helping communities and private landowners before, during and after fires. The toolkit contains several resources to encourage participation in these efforts.

CWPPs

Building solid community partnerships

A community wildfire protection plan (CWPP) is a blueprint and an action strategy for prioritizing the protection of life, property and critical infrastructure in your community. It also serves as a pathway to federal and state grants and other assistance. It is an excellent tool for strengthening and activating partnerships to achieve mutual goals.

CWPPs are a prerequisite for federal assistance programs that address wildfire response, hazard mitigation, community preparedness and structure protection, and other critical tasks.

CWPPs allow communities to participate in federal project planning through the opportunity to recommend projects on federal lands.

The federal Healthy Forests Restoration Act (HFRA) calls for CWPPs. Language in the HFRA provides flexibility for communities to develop and create their own plans. Many communities undertake the tasks themselves. Others seek assistance from consultants who specialize in preparing the plans. In either case, the goal is the same: a safer community and wildland-urban interface (WUI), and healthier forests and watersheds.

Does your community have a CWPP? Consult your local fire chiefs or other local leaders to answer that question. If not, you can help start the process. The toolkit contains a number of excellent resources available to assist in development of a plan.

Local resource leaders can serve as the lead agency in developing a plan or have an important place at the table. In either case, their knowledge of local natural resources issues and direct links to private landowners are vital to developing a successful plan. Your role in development of the CWPP depends on the size and nature of your own community. Regardless of your community's makeup, local resource leaders and their skill sets belong at the table along with other local, state and federal stakeholders.

CWPPs are living documents with short-, medium- and long-term goals. If your community already has a CWPP in place, your skills are still needed. Local resource leaders should seek to find a place at the table as the plan is enacted and revisited.

Why have a CWPP?³

CWPPs are essential to collaborative efforts that reduce fire risks in your communities, the surrounding WUI and other nearby landscapes. CWPPs:

- Provide for community-based decision-making
- Encourage communities and their local governments to determine boundaries of the WUI that surrounds their communities
- Identify ways to reduce wildfire risk to communities, municipal water supplies, critical infrastructure and at-risk federal lands

Communities that develop CWPPs are authorized to designate a locally appropriate definition and boundary for their WUI. The default definition for WUI is one-half to 1 ½ miles.

CWPPs can designate much more generous WUIs. This provides for streamlined National Environmental Policy Act documentation for projects within the community-designated WUI.

- Provide a mechanism to seek grants for further implementation of the plan
- Promote systematic information gathering to address goals of the plan

What are goals of a CWPP?

CWPP goals listed in the HFRA and National Fire Plan include:

- Improve fire prevention and suppression
- Reduce hazardous forest fuels
- Restore forest health
- Promote community involvement
- Recommend measures to reduce structural ignitability in the CWPP area
- Encourage economic development in the community

**Need help
developing a CWPP?
The toolkit contains
several resources that
provide guidance.**

Key components of CWPPs⁴

Major components of a CWPP can be divided into three categories. These include:

- Hazardous fuels reduction
- Public awareness through education
- Protection capability

Each of the components has a cascading list of strategies. Consult CWPP materials in the toolkit for more detailed information.

What entities must agree on the final contents of a plan?

- Applicable local units of government, such as a county or city
- Local fire department(s)
- State agency responsible for forestry

Now what?

The following pages explain how a community moves from a plan to a set of actions to reduce fire risks and increase safety of its residents.



**In many ways, the best approach
to limiting the dangers of wildfire
is to get everyone at the table.**

Mitigating the risks

Putting your plan to work

Developing a community wildfire protection plan (CWPP) takes time and effort, but it is just a starting point. The plan is only as good as the goals and strategies/actions that it contains.

Your community's plan reflects its own specific needs, but most CWPPs contain some similarities. These include, but may not be limited to:

- **Hazardous fuels reduction**, including mechanical and hand treatments, prescribed fire, grazing and herbicides
- **Public awareness**, including mitigation education, post-fire rehabilitation and restoration
- **Protection capability**, including emergency preparedness such as evacuation plans, safety zones and escape routes and wildfire suppression

Local resource leaders have roles in all three of these categories, but their strengths may best apply to hazardous fuels reduction and public awareness.

Many conservation districts and RC&Ds administer and/or carry out projects to reduce fire risk, ranging from defensible space in residential neighborhoods to large-scale fuels reduction on large tracts of private and public land. In some cases cost sharing programs have been set up to encourage homeowner participation.

Public awareness generally involves education, a major activity of local resource leaders who work directly with the public as part of their daily duties.

While protection capability is generally the province of fire and emergency experts, local resource leaders can lend assistance as appropriate. For instance, their mapping capability, including Geographic Information Systems (GIS) expertise, may enhance protection capability. Conservation districts, in particular, have emerged in many regions as leaders in GIS mapping.

Funding sources

A CWPP requires funding to accomplish its goals. The team that constructed your CWPP has likely already considered funding and identified sources. In any case, it's important to maintain open communication with your state forestry agency. Staff there can help identify state and federal sources for funds. They may also be aware of federal funding available for fuels reduction and biomass utilization.

Be prepared to offer your own expertise and connections as the CWPP team seeks to identify funding. Conservation districts, for instance, are long-time partners with the Natural Resources Conservation Service (NRCS). NRCS' Environmental Quality Incentives Program (EQIP) received enhanced funding and broadened opportunities for forestry applications in the 2008 Farm Bill. These include cost-sharing on forest health projects that reduce fuel loads. Conservation districts and their Local Working Groups play major roles in helping the NRCS state conservationist determine EQIP funding priorities in each state. Make sure your Local Working Group is active in determining your local priorities for forestry.

According to the Healthy Forests Restoration Act, WUI is considered "any area within or adjacent to an at-risk community that is identified in recommendations to the Secretary (of Agriculture) in a community wildfire protection plan."

The toolkit includes several sources for more information on funding, including NACD's "Conservation Districts' Role in Implementing the National Fire Plan, A Second Look."

Generate your own revenue

While many CWPPs are driven by program funding, your community should determine whether CWPP projects themselves can generate revenue. Many states are moving quickly to enhance their ability to generate renewable energy. Communities are exploring renewable fuel options such as heating government and commercial buildings with biomass. Is your biomass valuable? Some communities and businesses have identified niches for utilizing small-diameter wood. Explore opportunities for your community to raise revenue with your CWPP and enhance community and economic development.

Get to work

A good piece of advice is contained in the frequently asked question: What would you do if you had a lot of money? Your plan has already identified what it would do. Now's the time to get to work.

To help protect people and their property from potential catastrophic wildfire, the National Fire Plan directs funding to be provided for projects designed to reduce fire risks to communities.

A fundamental step in achieving this goal was the identification of communities that are at high risk of damage from wildfire. These high-risk communities identified within the wildland-urban interface, the area where homes and wildlands intermix, were published in the Federal Register in 2001.



Safer places to live

Defensible space in your community

Reducing the risk of wildfire to your community and the resources that nourish it is a multi-faceted task. Community wildfire protection plans (CWPPs) frequently have a long list of goals and strategies/actions. In the big picture, these are all related. But on the ground, the work of making neighborhoods safer is fundamentally different than reducing fuel loads on large forested tracts.

Educate, educate, educate

Reducing risks to residential and commercial areas is driven by public education. Despite many examples in recent years of communities being devastated by fire, many people still resist taking steps to make their homes and businesses safer. People continue to build homes in the wildland-urban interface (WUI). Some homeowners, developers and communities resist efforts to restrict growth in fire-prone areas and to reduce fire impacts to structures.

The urgent job of educating the public belongs to all the major CWPP partners. Local resource leaders have special skills to offer because they are used to communicating with local cooperators on a variety of topics and venues. Close coordination with other local, state and federal partners is needed to assure continuity of messaging. One key message is this: Fire is part of the natural regime in many regions of the country; what we do to protect our communities and their resources is the variable.

Virtually every goal and strategy/action in your CWPP can be accompanied by an educational opportunity. A U.S. Department of Agriculture document on communications⁵ notes that most adults learn more effectively when education focuses on problems they've experienced. The same USDA publication notes that people are more willing to learn after they see that a problem exists. Convincing people that a problem exists before the fire reaches their toes is the job of partners working to make safer communities.

Your state forester and local fire chiefs are leaders in determining the type and scope of educational materials to be made available in your communities. Consult with them about keeping messages consistent and about how you can help reach the public.

Reaching your community members

Local resource leaders have a variety of ways of reaching community members. Some examples include:

- Brochures, booklets, fliers and other information on defensible space made available in public places
- Regular contacts with news media. While news releases, public service announcements and other tools are important, your success depends upon establishing and maintaining personal relationships with members of the media in your community
- Special sections in the local newspaper
- Your organization's newsletters, annual reports and mailings
- Email alerts and other electronic techniques, such as Web sites or blogs
- Booths at plant sales, fairs and other gatherings where your organization interfaces with the public

- Information prominently displayed at your office
- Special events, such as a Firewise day or the anniversary of a fire
- Educational programs in the schools: Kids can educate their parents
- Walking the streets in fire prone areas
- Conducting block parties with the local fire protection program that merge erosion controls and fire defensible space

Tools for building defensible space: Firewise and other programs

Saving lives and protecting property are two primary goals in defending communities from wildland fires.

Community members need to know that they are expected to participate in efforts to protect themselves and their families, their properties and the firefighters who work at great risk.

Several organizations serve as major partners with local communities in efforts to reduce wildfire risks. Each of them promotes suites of practices that offer solutions to fire-management challenges for communities, homeowners and firefighters.

These organizations include the nonprofit, federally funded Firewise program. The organization works across agencies at multiple levels and produces a variety of educational products. At the homeowner level, Firewise has developed a series of informative brochures. It offers a fire risk assessment tool to help residents gauge the potential risk-factors that they and their homes face. Key to the Firewise program is faith in an infra-structural approach to fire safety: If homes and communities don't catch on fire, people won't be injured and firefighters won't be involved in risky situations attempting to save property. The organization has developed a Firewise Communities initiative and recognition program designed to identify entire communities that have taken fire prevention steps to ensure their safety and longevity. The communities must carefully consider a number of items, including:

- Access and escape roads
- Vegetation removal from within 30 feet of structures
- Fuels reduction in nearby forests (e.g. shaded fuel breaks, defensible fuel profile zones, thinning and/or mastication of fuels)
- Water supplies (should be dedicated for wildfire events)
- Exterior building materials



Most of the Firewise materials are available on the organization's [Web site](#).

Hazardous fuels reduction

Hazardous fuels reduction in communities and associated WUIs is essential to reducing wildfire risks. Applied in tandem with defensible space measures, reducing fuel loads enhances safety of community residents and firefighters while protecting natural resources.

In many cases, fuels reduction efforts reach but a fraction of forested acres that need treatment. But strategically reducing forest fuels by thinning or removing vegetation, prescribed fire, grazing and herbicides has proved effective in reducing the impact of wildfires on communities.⁶

Fuels reduction offers an array of other pluses for forested communities and landscapes. For example, they:

- Help restore forests to natural regimes that more closely approximate historic conditions and natural ecological functions
- Can be merged with erosion control programs
- Support local businesses, from the crews that do the work to the companies that supply their equipment, clothing, food and other necessities
- Serve as potential sources of woody biomass for renewable energy and value-added products, which in turn may be grant-eligible activities (e.g., Fuels for Schools program)
- Are living educational examples of the importance of working together to make communities safer and protect resources
- Provide opportunities to bring all voices to the table in determining a community's priorities

Local resource leaders have many potential roles in hazardous fuels reduction efforts. These include:

- Education
- Administering/managing projects
- Maintaining fuels reduction crews
- Working with local businesses and entrepreneurs to support efforts and utilize biomass

The roles of local resource organizations in fuels reduction efforts depend on their missions. RC&Ds often manage fuels reduction projects, but they also serve as effective business development agencies, helping to connect natural resources projects to community and economic development opportunities.

Conservation districts aren't bound by contracting requirements of federal and state agencies, so they are often able to accomplish fuels reduction projects on both public and private lands with less red tape. Some districts have their own fuels reduction crews. Others administer projects and hire contractors to do the work.

Cooperative Extension agents serve as important point persons for education and community development strategies.

Local watershed councils are often eligible for grants and program funds to address fuels reduction on a watershed scale.

Local resource organizations have also used authorities such as [Stewardship Contracting](#) to accomplish fuels reduction projects and return revenues to their communities.

Despite the many available programs and authorities, it's a fact that funding for fuels reduction projects falls far short of need nationally. That's why it's important for local resource leaders to collaborate directly with representatives of local, state and federal agencies in setting priorities. Developing personal relationships builds trust and helps identify pathways to funding opportunities. Some examples:

- The state forestry agency is responsible for many of the forestry decisions that affect private and state-owned public lands. It administers the USDA Forest Service's State and Private Forestry programs, including Forest Stewardship, Forest Legacy and various other programs that emphasize forest health on private and some public lands.

- Federal land managers bring invaluable tools to the table as your community prioritizes its needs. They help connect communities to program and grant dollars.
- The Natural Resources Conservation Service (NRCS) state conservationist administers the Environmental Quality Incentives Program, which can allocate cost-share funding for forest health projects on private lands.
- The County Resource Advisory Council may be empowered to allocate funds for resource projects from federal dollars under a program that reimburses counties for lost revenue from declines in traditional logging revenues.
- City, county and community leaders may be able to identify sources of funding or matches for projects within their boundaries. Also, they must be at the table to enhance communication. They oversee planning and zoning activities.
- Environmental groups are potential allies. Find members in the local community and stress the importance of public safety in addition to forest health.

As noted earlier in the desk guide, developing a community wildfire protection plan should be a key priority. Doing so makes your community eligible for federal funding under the Healthy Forests Restoration Act. But other sources of funding may be available to begin work immediately. Do not wait for funding to establish your priorities. If you have plans on the table ready to go, you'll be better able to respond when dollars become available.

The best place to learn about funding opportunities is at the table, with other local, state and federal collaborators. When it comes to getting things done, personal contacts are often most effective.



Local resource leaders can play key roles in fuels reduction projects such as this one in California's Trinity Stewardship area.



Woody biomass

Putting forest waste to work

Hazardous fuel reduction projects are expensive. Contractors have equipment and employee costs, and thinning a forest of any size is a time-consuming project. Local resource leaders can do their part to help reduce those costs by helping to find ways to create uses and markets for the material being removed from the forest during the thinning process.

Utilization of woody biomass from hazardous fuel thinnings has become an important part of wildfire mitigation efforts. There are many ways in which the material can be used after it is removed, and local resource leaders often provide the versatility or real-world contacts needed to help locate a market for the material.

Some potential benefits of utilizing woody biomass:⁷

- **Air Quality** - According to one report, the potential savings of finding uses for woody biomass verses open burning is 9.39 cents per kilowatt hour. Values are relative to open burning of biomass or accumulation in the forest (eventually to be burned or decomposed and returned to the air as methane and other emissions). Other potential benefits include maintaining good air quality by reducing wildfire and prescribed fires emissions; carbon trading and/or emission reduction credits; and reducing greenhouse gas production.
- **Social Benefits** - Utilization of woody biomass for electrical energy creates approximately four or five rural jobs per megawatt of capacity (1 MW = 1,000 kilowatts, or enough electricity for the continuous use of 1,000 average homes). And by reducing the risk of catastrophic wildfire it brings about economic stability to rural, forest-dependent communities. Finding such uses for woody biomass also reduces smoke and fire-related safety concerns, and injuries that stem from fighting those large fires. It also helps to reduce the respiratory concerns that catastrophic wildfire brings about to the at-risk public.
- **Forest Health** – The removal of woody biomass reduces unnatural forest density, and the risk of mortality to insect, disease or drought. It increases forest fiber production; and can produce valuable timber and small wood products. Biomass removal and utilization efforts also can help to reduce and avoid sediment delivery, reduce turbidity, increase water yield and stabilize flow patterns.

Some examples of how woody biomass can be utilized:

- Local resource leaders in many states have teamed up with their local departments of transportation on roadside landscaping projects using mulch or wood chips that came from hazardous thinning material.
- Wood chips and mulch can be used as the flooring for schoolyard playgrounds, animal bedding and for private landowner landscaping projects.
- Small-diameter material can be used by local private industry for many projects, such as furniture building. A resource, conservation and development council is a good link between private industry and those managing the fuels reduction efforts, but conservation districts can also help to find markets for small-diameter material.
- The rising demand for wood energy has resulted in the creation of local wood pellet operations.

Woody biomass is the accumulated mass, above and below ground, of the roots, wood, bark, and leaves of living and dead woody shrubs and trees.

An alternative fuel

Fuels for Schools has been a popular program in northeast, southwest and western states. The program has proven to help reduce annual heating expenses for schools willing to install a wood boiler system, and it provides the school with a feel-good program it can promote to local residents. Fuels for Schools requires an adequate supply of woody biomass, so it is often a perfect partner when positioned nearby a planned fuels reduction project. More information about the Fuels for Schools program can be obtained on its [Web site](#).

Other institutions also rely on wood to heat their buildings. Smaller colleges have converted to wood-fired heat, as have a Forest Ranger station and mental health facility. The decision-making process takes planning, coordination and a thorough cost-analysis.

Local resource leaders can help to identify local partners who might make a good fit for implementing a wood boiler system.

Potential obstacles

The biggest obstacle in many prospective biomass projects is transportation. Fuel and vehicle use can be costly, meaning the shorter the travel radius the more likely a woody biomass utilization project can succeed. Locating markets near to the forestland area where the fuels reduction project is taking place is important in helping to leverage the biomass against the cost of the thinning project. Local resource leaders can help to find potential markets within that radius.

A biomass thinning project in the Eagle Lake Ranger District in California's Lassen National Forest (1993-2005) yielded \$267.36 per acre.



The wood chips that are generated from biomass projects can be used in a number of ways, including electric power production, highway landscaping and mulch for local residents.



Planning & zoning

Nipping fire in the bud

As communities expand into forested areas, wildland-urban interface (WUI) areas grow, and wildfire becomes a direct and potent threat to more human lives and property.

Many communities in fire-prone areas have taken steps to reduce the risk to existing development through risk mitigation programs. They are also increasingly taking steps to limit potential risks associated with new development. Planning and zoning agencies juggle the need for communities to grow with the responsibility to protect lives, structures, infrastructure and natural resources. Local resource leaders can assist in the task. Coordinating messages and activities with county or community agencies responsible for planning and zoning is important.

The [national database of state and local wildfire hazard mitigation programs](#) provides information about reducing loss of life and property through hazardous fuels projects on private lands.

‘But we don’t want zoning’

Resistance to zoning controls can be anticipated in many communities. When it comes to wildfire, the case for prudent steps to reduce threats to people and property is strong. Long after a wildfire has ravaged an area and federal and state agencies have moved on, the costs and burdens of dealing with the aftermath are left to communities. Many states have passed the power over land-use policy to local governments, enabling them to adopt regulations to control situations that pose threats to life and property. In response to the high costs and dangers associated with fire-related losses in the WUI, many counties and communities have established regulatory programs to reduce wildfire hazards in high-risk areas.⁸

Taking prudent steps to limit risk does not mean prohibiting growth. Taking such steps does assure that new and existing developments comply with sensible rules that improve safety and reduce a community’s exposure to long-term fire costs.

Wildfire hazard mitigation plans

Many communities have adopted wildfire hazard mitigation land-use plans, regulations, and policies that employ strategies to reduce fire hazards. Sometimes, these are linked to a community wildfire protection plan. Frequently the task of enforcing wildfire mitigation measures falls to county or community zoning/land use departments. These plans require wildfire mitigation measures in the land use review and/or building permit process.

The plans provide guidance for homeowners and developers to properly site homes and developments, build with ignition-resistant materials, create defensible space, provide for emergency access and water supply and perform maintenance around properties.⁹

Local resource leader roles

Ways to work with planning and zoning departments to accomplish mutual goals include:

- Assisting partner agencies by providing maps and other information about vegetation, soils, land use and related natural resource characteristics in the WUI
- Educating community members about the hows and whys of mitigation plans
- Contracting with county or community agencies for providing technical assistance, installing practices and assuring compliance
- Keeping and sharing lists of qualified contractors



**Defensible space measures
afford homeowners protection
from wildfire, even in
forested settings.**



As fire approaches

Response calls for calm, organization

How well a community deals with wildfire depends on preparedness, but also on actions taken during the event.

Local resource leaders won't play direct roles in fighting fires, unless staff are members of local fire departments or certified to assist at incident command posts or in other capacities. But while firefighters scramble to control the blaze, other agencies can serve important secondary roles and also prepare for post-fire tasks. The extent of engagement during fires likely will depend on how well local resource leaders have sought to collaborate on pre-fire activities described in earlier sections of this desk guide and in toolkit materials. Your roles may already be defined in a disaster plan.

Major fires that require multi-agency response will include establishment of an incident command center, sometimes called a fire camp. Incident management teams may host public meetings to help keep affected residents informed. Law enforcement agencies may also designate a point of contact for information and updates.

Local resource leaders can assist in getting the word out to their cooperators. Keep in close contact with fire and law enforcement information officers and ask how you can help. Some conservation districts and resource conservation and development councils have served as contact points, providing updated information to citizens who have been evacuated from their homes.

There is no precise formula for the roles local resource leaders may be asked to assume during a fire. That will depend on the direction you receive from incident command officials as they identify needs.

A final word

Stay calm. True leaders emerge in difficult times. Community members will be bolstered by the knowledge that you are doing what you can to help. You may be called upon to act in a professional capacity even as you face personal challenges as a community member. People will be reassured by the sense that the professionals they rely upon in their community are doing their best to address the disaster in a measured manner.

During the fire

Get connected and lend a hand

Most would agree that the least active phase for local resource leaders to be engaged in is when the wildfire is burning. Some may have security clearance and be out working on the fires themselves. In general, this is a time for trained firefighting and law enforcement organizations to take the lead. But there is work to be done.

Local resource leaders can help with secondary roles or spend their time preparing for the proper time to act. Another way to assist is to help familiarize outside agencies with the local community. This can include taking them on tours of the community, introducing them to civic leaders, plugging them in with local media, and making them aware of roads, bridges and other access points.

Pre-fire collaborations with other agencies will help define what, if any, roles local resource leaders can assume during a wildfire. The key is to communicate and be willing to help as needed. Firefighting and law enforcement agencies may have an assortment of needs at various stages of the fire, and local resource leaders can provide valuable services.

Local resource leaders can also act as a conduit for information at this stage, relaying fire details from the command center to people it affects.

This period can also be used as a time to train for post-fire activity. This may include gathering fire suppression data from the incident command team, or requesting to attend fire briefings to gain knowledge that can be used to prepare for the work ahead.

In this section, several topics are addressed. They include:

- Offering assistance to agency leaders
- Activating the multi-agency team
- Working closely with the incident management team information officer
- Acting as an aggregator of information for landowners
- Preparing to help provide financial and technical assistance for rehabilitation and restoration
- Planning for post-fire activities

The desk guide also directs users to during-fire resources included in the toolkit.



Be available as a resource

Listen, respond, inform

Although local resource leaders may not have central roles while a fire is active, they can play a part in assisting those who do. Firefighting agencies and community residents need support, and local resource leaders are in a position to provide it.

In order to help, get connected early on

The best way for local resource leaders to get engaged is to make important connections with local, state and federal partners prior to the fire. If those relationships are established ahead of time, it allows for trust and acceptance during the fire. Agencies will be more aware of the many skills the local resource leaders have to offer, and more comfortable about accepting help. Once rapport is established with a forest district manager, resource area manager, or parks superintendent, it opens the door to cooperation and input.¹⁰

Respond to the needs of those fighting fire

Here are some examples of how to be a resource:

- Provide landline phones during the fire to field calls from citizens offering to volunteer, and also from those in need of assistance.
- Be prepared to provide equipment and volunteers, such as trucks and drivers to haul supplies to the incident command center. As experts note, the key to helping during the fire is responding to the needs of the firefighting and law enforcement officials rather than trying to do good work on one's own.¹¹

Local resource leaders can also offer assistance that has a direct impact to the firefighting effort. Some examples:



Local resource leaders can offer a variety of resources to firefighting agencies, including transportation, communication and mapping.

- In some cases, local resource leaders can coordinate trained teams of volunteers to perform defensible space work on areas where the fire might be heading.
- Local resource leaders' expertise in Geographic Information Systems (GIS) mapping may provide valuable data to assist agency personnel locate crossings, roads, water supplies or property boundaries. Firefighters may also need to know the whereabouts of critical habitat or wildlife species.
- Where water has been contaminated or its use restricted, local resource leaders might work with the Red Cross or other organizations to collect drinking water for landowners upon returning to their properties. In some Coastal Plains operations, local resource leaders have been asked to handle water management in disasters.¹²

Help manage the flow of communication

One of the central figures of every incident command center is its information officer, whose goal is to get plugged into the local community and help to transmit information about the fire. Local resource leaders will want to get connected with this individual immediately. A close working relationship can offer a way for local resource leaders to gain high-level knowledge about fire activity and the progress firefighters are making on the ground.

Here are a few ways to help spread fire information to the people it affects:

- Act as aggregators of information for landowners. Often, landowners have become familiar with a Web site or bulletin board where information is shared. There, local resource leaders can relay the knowledge they've gained about the fire to those it affects. Local resource leaders can also act as the link between the information officer and local media, but only if requested to do so. Information releases to the media must be coordinated with and originate at the incident command center.
- Seek out local civic groups, such as church groups or service organizations, and work with those organizations to provide information to landowners.
- To effectively trade information with landowners who have been evacuated, local resource leaders can set up a voicemail box where people can leave their contact information and receive updates on the fire.

Another way local resource leaders can offer assistance to fire-fighting agencies is through the gained knowledge they have of the residents occupying the areas threatened by the fire. Local resource leaders may have information about which properties are owner-occupied and which have absentee landownership. They often have contact information, and act as friendly voices when trying to gain approval for land access.



Multi-agency organization

Gear up while the fire is still active

A multi-agency organization can be defined as a local organization composed of public, private, and not-for-profit agency representatives. Its purpose is to enhance a community's ability to mitigate, prepare for, respond to, and recover from disasters of various kinds.

The Bitter Root RC&D in Montana acted as the coordinating entity for its local multi-agency team both during and after its fire in 2002, helping to coordinate the efforts of its more than two dozen member groups.

The purpose of a multi-agency organization is to bring together leaders from a number of groups in order to offer a wealth of experience when dealing with fire-related issues. Such an organization should be assembled before the fire, but while the fire is active it is time for leaders to revisit the organization's objectives and plan of attack. A local resource organization such as a conservation district or RC&D can be the catalyst to engage that discussion.

A multi-agency organization can also help to eliminate the need for landowners to make multiple stops when seeking information or assistance. It's important to be organized locally to spare citizens confusion about where to seek information and help. Local resource leaders can get fire-related agencies together and begin to discuss the possible outcomes of fire in their area.¹³

Possible roles of the multi-agency organization during the fire:¹⁴

- Donations management
- Facility acquisition for warehousing and distribution
- Managing volunteers
- Receiving and distributing goods
- Sharing resources
- Coordinating of human services
- Staffing the multi-agency resource center
- Sharing information with people impacted by the fire
- Coordinating release of confidentiality forms
- Reducing duplication of effort
- Holding regular meetings and providing timely communication

Coordinate volunteers

Fires and other natural disasters bring an outpouring of people who want to help. Local resource leaders have strong relationships with community members who can be invaluable to post-fire volunteer efforts. Local resource leaders should work with fire managers to provide safe working environments and to limit the legal liability of volunteer actions. It is important to connect with fire specialists during the fire to ensure that resources and information they have collected on the fire can be utilized in post-fire work.

Preparation of volunteer activities and coordination with the incident command center is essential. When the fire-fighting agencies leave the area, key information may no longer be available.

After identifying and prioritizing the community's needs, local resource leaders can organize some of the available assistance. Volunteers do not belong to one generic bin. Their involvement depends on their skills and abilities. Some will be needed to help with

restoration efforts in the forest, others may be best at the difficult job of removing burned material. Others may have skills best applied in staffing the multi-agency information center. Experts recommend creating a database that organizes volunteer schedules and areas of interest.

Local resource leaders will have already gathered a list of willing participants prior to or while the fire was active. When the fire is nearly suppressed, local resource leaders can begin to contact the volunteers to inform them about plans and to ensure any training requirements are met.

It is important that the volunteer coordinator understand the potential liabilities involved with organizing volunteer assistance. The Federal Volunteer Protection Act grants immunity from personal liability to those who volunteer for non-profit organizations, but the law does not cover every instance of when a volunteer may suffer an injury or cause damage to property. As added protection, local resource leaders can take out insurance policies, and all volunteers should be given proper training before conducting work of any kind.

Chapter 8 of The Phoenix Guide in the toolkit offers a wealth of information about the volunteer liability issues local resource leaders need to be aware of.



Volunteers are an important ingredient during each phase of wildfire.

After the fire

Work to make the community and landscape whole again

There is much to be done following the fire. At this stage local resource leaders must be prepared to help organize and coordinate some of the many relief efforts.

A key to restoring and rehabilitating the community and the landscape is the assistance of volunteers. Local resource leaders can help to match up volunteers with projects, reduce the possibility for liability, and recognize the accomplishments made by these individuals.

The multi-agency team that has been established before the fire will get to work at this stage, and local resource leaders will, in many cases, help to activate and/or organize the efforts of this collaborative group during the recovery.

Local resource leaders can also help to identify post-fire threats. In some cases, establishing appropriate vegetative cover quickly is important to help safeguard against flooding and mudslides. Local resource leaders can work to identify areas of high risk, hire contractors to remove unwanted debris and hazardous material, and educate the community on the impacts of fire on landscapes and communities.

Perhaps the most important part of the recovery phase is to connect landowners with the proper tools to repair their lands. Local resource leaders can explain the various programs available to those who qualify and assist in locating funding to help offset the landowner's costs.

Topics in this section include:

- Obtaining and delivering technical and financial assistance to landowners
- Coordinating volunteer efforts
- Evaluating possible hazardous trees and waterway impediments
- Exploring timber salvage options
- Responding to post-traumatic stress disorder
- Replenishing the landscape with appropriate plant materials
- Offering education and outreach
- Celebrating and promoting the work that has been accomplished

The desk guide also directs users to post-fire resources included in the toolkit.



Obtaining & delivering assistance

The clock ticks after fires are controlled

Large wildfires are catastrophic events that will long be remembered by those who witness them. But even as the fire burns, local resource leaders and others will need to turn their attention to post-fire work.

When it comes to restoration and emergency rehabilitation, experts say that conservation districts, RC&Ds and other local resource agencies play critical roles. Their contact with private landowners is essential to these post-fire efforts.¹⁵

This chapter outlines some of the key programs that will help heal the land and the roles local resource leaders need to play in the process.

Federal and state emergency stabilization and rehabilitation efforts are being organized even as a wildfire continues to burn. The State Emergency Rehabilitation Team (SERT) focuses on public and private lands, and local resource leaders may have direct roles in this process. The USDA Natural Resources Conservation Service (NRCS) is the key agency for SERT. Teams of experts assess risks and develop recovery plans for approval and funding through the Emergency Watershed Protection Program (EWP), administered by NRCS.

Following are examples of relevant programs and activities:

EWP in action¹⁶

EWP's purpose is to alleviate threats to lives and property that remain in watersheds in the aftermath of disasters such as, but not limited to, wildfire. It provides technical assistance to reduce threats to life and property in the wake of natural disasters. Assistance includes establishment of vegetative cover, gully control, stream bank protection, debris removal and levee stabilization. Local resource leaders may possess skills and expertise in several of these areas.

EWP requests are sponsored by local subdivisions of state government and states themselves. In most states, conservation districts are subdivisions of state government. They sometimes serve as local sponsors for EWP assistance. Sponsors must have legal authority to obtain property rights, water rights and permits. They must also agree to provide operation and ongoing maintenance of completed emergency measure. Duties of local sponsors include the following:¹⁷

- Contact the NRCS Service Center for direction on the application process
- Cooperate with NRCS in efforts to assess whether EWP is necessary
- Apply for assistance within 60 days of the event
- Allow NRCS to coordinate and plan the EWP project
- Help secure land rights and other permits

EWP provides up to 75 percent of the funds needed to restore natural functions of a watershed. The community or local sponsor pays the remaining 25 percent in cash or in-kind services. Assistance can go to affected public and private lands. Some local agencies shy away from sponsorship because of the cost factor, but volunteer hours count toward the local match. In any case, the board that oversees the activities of local entities will need to commit to participation.

EWP provides invaluable services in the wake of disasters such as wildfires, but its roles are generally short-term and limited. More detail on EWP can be obtained at the [NRCS EWP Web pages](#).

EQIP has a role

NRCS also administers the Environmental Quality Incentives Program (EQIP), which provides cost-share assistance to private landowners. In some cases, EQIP can be used to assist landowners in post-fire restoration efforts. EQIP funding may also be available to landowners for longer-term restoration activities, such as tree planting and forest health improvements. Local resource leaders should work closely with the NRCS personnel in their county and state to access these funds. Also, conservation district Local Working Groups assist the NRCS state conservationist in determining EQIP state allocations by providing lists of local priorities.

BAER and ESR address and mitigate post-fire threats

Burned Area Emergency Response (BAER) is a USDA Forest Service program that assesses and mitigates post-fire threats on Forest Service lands. The forest supervisor in your area usually selects the team leader. The BAER team acts quickly: It submits proposed actions within seven days of containment. Resulting BAER projects focus on emergency stabilization activities that prevent further degradation, but do not repair or improve lands.¹⁸ For more information on BAER, visit the [Forest Service Web pages that describe the program](#).

Information on program assistance specific to landowners and local resource leaders is provided in the toolkit.

The Emergency Stabilization and Rehabilitation (ESR) team focuses its attention on Bureau of Land Management, Bureau of Indian Affairs, National Park Service, U.S. Geological Survey and U.S. Fish and Wildlife Service lands. Learn more about ESR at the [Bureau of Land Management's ESR Web site](#). BLM lands, in particular, are often inter-laced private lands, providing opportunities for collaboration on projects.

While local resource leaders may not have direct roles in the activities of BAER and ESR, they may be called upon to provide information about nearby private lands affected by fires on public lands. Geographic Information System (GIS) maps and other information at local agencies can be valuable aids in the process.

FEMA

Severe wildland fires may be declared national disasters. The Federal Emergency Management Agency (FEMA) leads efforts to manage federal response and recovery efforts in these cases. The agency also initiates proactive mitigation activities. Relevant to this chapter are FEMA's hazard mitigation grants, which provide assistance to state and local governments to implement long-term hazard mitigation measures after a major disaster declaration; and public assistance funding to repair, replace or supplement parts of a community's infrastructure following a disaster. Visit the [FEMA Web site](#) for more information.

State programs

Stay in close contact with the state forestry agency regarding state programs to mitigate the impacts of wildfire.

Follow the money

Crises often create action by drawing attention to underlying causes of problems. Your community may find itself eligible for higher levels of funding for various fire mitigation, fuels reduction and forest health funds following a major fire. Local resource leaders can fill many of the roles needed to successfully enact these programs. Stay in close contact with local, state and federal partners in efforts to seek and effectively implement activities supported by program dollars.

Other activities

Even before wildfires approach, local resource leaders and their partners will benefit from planning meetings to delineate responsibilities, locate supplies and determine where to cache supplies and equipment for post-fire.



The Douglas County Soil and Water Conservation District in Oregon provides technical assistance necessary to construct fire ponds used to fight fires on both public and private lands. District Manager Walt Barton (pictured here) designs the ponds.

Build & maintain a healthy forest

Cooperation and organization are keys to help make the forest green again

A burned forest is often a daily reminder of the tragedy communities and their residents have endured. If the fire is severe, many residents may never again view the forest they once knew. The cultural and economic impacts can be great. In time, however, the forest will repair its wounds.

Depending on the severity of the fire, local resource leaders can help to expedite restoration activities through the help of funding from various government programs and with the assistance of volunteers. Local resource leaders can restore the forest floor, replace its vegetation and, in some cases, remove debris created by the fire.

Identify threats of flooding, mudslides¹⁹

Flooding, landslide and erosion threats increase exponentially in mountainous areas following a fire. And, in some instances, these events can cause greater damage than the fire. For example, they often threaten community water supplies.

Runoff from rain and snow melt can cause floods long after fires are out and carry debris into inhabited areas. Mudslides can be caused by slope grade changes, saturated surfaces or a change in surface temperature after the fire. The risks remain with the charred landscape, and in general, it can take eight to 10 years for flooding and mudslide flow risks to return to their pre-fire levels.

Often, it is necessary to work quickly on revegetation efforts and the removal of hazardous trees in the forest. All activities must be coordinated with state and federal forestry agencies that have extensive knowledge about appropriate treatments following fires.

In many cases, native plantings will bring stability back to the landscape and help the ground to return to its natural setting. This also provides local resource leaders with an opportunity to rid the area of noxious weeds and other non-native vegetation.

To identify possible hazardous trees:

- Look at the trunk of the tree and determine if there are any heavily burned areas, hollow areas, or cavities. Then look at the base of the tree and determine if the fire has burned down into the tree's root zone
- Look up into the crown of the tree and determine if there are any partially burned large branches, snapped or burned-through hanging branches, or if the tree has a broken or partially burned through top
- Look for insect activity (boring holes, frass, boring dust)

State forestry agency staff can be asked to help identify hazardous trees, and can often provide a list of local contractors to mark and remove those trees.

Timber salvage as an option

In some cases, timber may be salvaged after the fire, with earned profits used toward matching program funds or for other restoration efforts. Revenue will depend on the

A geotechnical expert can evaluate landslide and debris flow hazards. This person can also advise the best ways to prevent or reduce landslide risk, without creating further hazard.

type of tree, diameter of the wood and of the available markets in the surrounding area. In some instances, timber salvage operations may qualify for funds through the Environmental Quality Incentives Program administered by the USDA Natural Resources Conservation Service.²⁰

But community education may be needed for salvage logging. It can be a delicate issue, as some groups may oppose it as unnecessary disruption of nature and wildlife habitat. Community meetings may help alleviate or address these concerns. Following one fire, local residents voted overwhelmingly to salvage timber from the remains of the fire, and as much as 40,000 acres of land had been approved to be harvested until a legal dispute put everything on hold. In the end, the community was able to salvage timber from 10,000 acres of the burned area.

To avoid the legal entanglements that may await timber salvage, experts say the best approach is to bring all of the interested parties to the table prior to a fire to prepare a plan for what may occur after a fire. That establishes a level of trust that can eliminate legal battles later on. This way, citizens groups have been briefed as to what the potential stakeholder wishes are, and educated on why timber removal may have a positive effect on restoration efforts. Also, this allows environmental groups an opportunity to voice their objectives in maintaining a healthy post-fire forest.

Cooperation is essential, as there is a small window of opportunity to salvage timber once it has burned and begins to decay.

When a decision to salvage timber has been made, local resource leaders can then help landowners and other agencies in the process by providing information on contractors, administering projects and, in some cases, actually doing the work with their organization's crews.

Replenish the forest

Local resource leaders are often involved with tree sales or nurseries and have knowledge about appropriate plant types and their care.

Forbs and grass seed can be expensive, especially following a busy fire season when seed will be in high demand, but assistance may be available to offer cost-share or cost reduction on replanting efforts. In one instance, state Department of Natural Resource money was used as match for aerial seeding, and the USDA Forest Service provided a helicopter for use, with the understanding that the proper seed would be used.²¹

The restoration process often presents landowners and those performing the work on federal lands with an opportunity to restore the landscape to its natural setting using native species. Local resource leaders can organize bulk purchases for landowners in order to buy the seed at a reduced price.

Funds may also be made available for tree replanting. Following one western fire, grant funds were used to offer 100 Ponderosa pine seedlings to willing residents. Volunteers helped to transport and plant the trees.

Volunteers are central to the cause

Local resource leaders frequently work with and keep lists of volunteers, and these con-

A relatively small fire near Denver in 1996 was the indirect cause for the destruction of the town of Buffalo Creek. A thunderstorm brought 2.5 inches of rain to the area in less than an hour, causing a flood that carried debris through the town, ruining homes, destroying roads and utilities, and taking three lives.

nections will be valuable in post-fire rehabilitation. People can be trained to prepare soils, sow seed, spread mulch or replant trees, and the commitment is often more enticing and less taxing for volunteers than other restoration projects.

Volunteer hours frequently are used to provide matches for program funds, and hours logged by private landowners can also count as in-kind matches. Volunteers signed up in cooperation with federal agencies such as the USDA Natural Resources Conservation Service and the Forest Service can also qualify for worker compensation to cut down on liability issues.²²

Local resource leaders should inquire with the program managers about volunteer requirements.

To obtain program assistance, local resource leaders will need to offer a detailed volunteer plan, often assembled by the multi-agency organization, if one is at work. The best approach may be to borrow from another plan that has already proven successful.²³

Montana's Bitter Root RC&D partnered with a local high school science teacher and his students to help in the restoration efforts following a wildfire. The class already had a greenhouse to grow seedlings, and through the relationship the students learned how to germinate and grow Ponderosa pine seedlings later used in reforestation efforts.



Local resource leaders can assist in the efforts to restore native grasses to a fire-burned area.

Revitalize the local community

The landscape isn't the only thing in need of repair

After the fire is out and the damage to the land assessed, another step in helping the community to become whole again may involve restoring infrastructure and meeting the needs of those who have been impacted by the fire.

Residents and business owners have been evacuated in many cases, and upon their return these people may need help to repair what has been broken by the fire. In some cases this is as simple as returning the evacuated livestock to a ranch, or assisting with the resumption of business within the community.

But this can also be a complex matter. Residents can experience high levels of stress, and communities can feel overwhelmed by the damage and the extent of necessary restoration work.

To remedy these issues, local resource leaders have the ability to organize recovery efforts and connect those in need with the proper assistance.

Assisting with emotions

The lasting impacts of the fire will not be felt by many residents until after the flames are out. Often, the emotions are sudden. Community members begin to realize the many ways in which their lives have been impacted, and a combination of emotions that may include grief, anger, frustration and severe depression can set in.

While local resource leaders cannot treat residents in a clinical sense, they can help to identify potential problems and direct those individuals to the proper facilities. This requires local resource leaders to be familiar with local human service agencies, clinics, churches and other organizations that provide these services.

According to the Mayo Clinic, post-traumatic stress disorder symptoms may include:²⁴

- Flashbacks, or reliving the traumatic event for minutes or even days at a time
- Shame or guilt
- Upsetting dreams about the traumatic event
- Trying to avoid thinking or talking about the traumatic event
- Feeling emotionally numb
- Irritability or anger
- Poor relationships
- Self-destructive behavior, such as drinking too much
- Hopelessness about the future
- Trouble sleeping
- Memory problems
- Trouble concentrating
- Being easily startled or frightened
- Not enjoying activities you once enjoyed
- Hearing or seeing things that aren't there

Post-traumatic stress disorder is a type of anxiety disorder that's triggered by an extremely traumatic event. People can develop post-traumatic stress disorder (PTSD) when a traumatic event happens to them or when they see a traumatic event happen to someone else.

Frustrations can also stem from a landowner's desire to repair the wildfire's destruction immediately. There can be a vacuum for providing services. Landowners may feel that their individual problems are of top priority. The recovery team must deal with many such concerns at the same time.

One way to help alleviate conflict is to have a coordinated plan of action before the start of the post-fire phase. In areas where people know who to contact and how the post-fire efforts are organized, recovery operations can proceed smoothly. But when there isn't a centralized group of organized professionals, things can go wrong.²⁵

In addition to organizing post-fire cleanup efforts, local resource leaders can also help reduce residents' stress by making available a resource center where those affected can receive progress updates on the fire recovery and interact with others sharing the same experiences.

Teach, train and tour

Local resource leaders can play a major role in educating landowners, public officials and community leaders about fire. Better understanding about the many impacts of fire can lead to wise decisions by landowners and public officials for the future.

Private forest landowners looking to restore their landscapes may need the training to do so, or they may seek knowledge on where to locate contractors able to do the work for them. Local resource leaders can offer information to help landowners gain the know-how they need. Information sources can include print materials such as brochures, additions to a regularly distributed newsletters and online sources including Web sites, electronic newsletters and other forms of electronic communications.

Tours in the months and years following the wildfire are valuable educational opportunities. Local resource leaders can partner with other agencies and organizations to provide important learning experiences.

Some organizations hold special anniversary events as reminders of what fire is capable of and as a means of showing landowners how restoration efforts and natural processes have helped forested landscapes begin to heal.

In some cases, fuels reduction efforts can be highlighted as examples of how healthy forests are better able to respond to fire.

Tours can be conducted with guided comments from specialists or escorted by those able to answer questions on demand. It can be enlightening for people to see burned areas that are already starting to re-vegetate.

Examples of educational opportunities available to local resource leaders as part of tours include:

- Fire is a natural part of the ecosystem. People often perceive fire as a man-made tragedy when in many cases it is a natural occurrence.
- Show tour participants how the fire acted. Concepts such as ladder fuels, fuel

Local resource leaders may want to consider asking a wildfire recovery effort volunteer to maintain a blog of the group's activity from start to finish. This provides readers with an informative, yet informal, account of the work being done, and is something that can be looked back on for years after the recovery work has been completed.

breaks and defensible space around homes and other buildings can be understood by most. The more people know about the hows and whys of fires, the more acceptance and understanding is gained.

- Point out the different types of vegetation in the area – both native and invasive – to explain what role each might play in a fire.
- Home demonstration projects and model sites are effective ways to teach locals how to safeguard their homes, especially people living in classified wildland-urban interface areas and at-risk communities. This can include discussions about materials and defensible space. Residents should always be reminded that deterrence is the best defense against the inevitability of fire.

Celebrate the good work

The work needed to restore a community following a wildfire can emotionally drain volunteers, community members and local resource leaders. Volunteers provide valuable assistance for lengthy periods during rehabilitation efforts.

The efforts rarely go unappreciated, but one thing often forgotten is the need to celebrate and share word of that good work with others. According to one conservation district official, more important than a thank you, people need to know their efforts are helping to meet a particular goal.²⁶

Local resource leaders are called upon to be communicators and, in many cases, users of an assortment of communication tools. One of the easiest and most effective ways to honor the work provided by wildfire volunteers and showcase accomplishments is through the use of newsletters, both print and online, and bulletin boards housed at the incident command center or at other locations where residents know to get information related to the fire. Web sites can also be an effective tool, and a place where photos and news of the collaborative work can be done.

It is important for local resource leaders to also involve local media and state and federal partners in this process. Keep a list of contacts to share news with as recovery efforts proceed, or when a good story about one of the volunteers can be told. State and federal partners want to know about progress, and often will relay that information on to their audiences.

Awards are an effective tool for raising awareness of the work being done and paying back to those sacrificing their time and energy for the cause. In some counties and communities, groups that work to reduce fire risks host annual awards programs recognizing the most active councils and volunteers of the past year.

Other recommended methods for celebrating and promoting good work include:

- Holding anniversary celebrations with the intent of remembering the recovery work rather than the destruction brought on by the fire
- Identifying a “volunteer of the week”
- Placing a volunteer hour counter in a well-seen location within the community so that residents are able to see the contributions being made

Disasters such as wildfires leave scars that take time to heal. But disasters also provide community members the opportunity to pull together and move forward. Leadership guides the way in difficult times. Local resource leaders are respected members of their communities and offer skills and knowledge that can help the healing process.

A main objective for conducting wildfire tours is to help current and future generations of landowners learn from the mistakes of those that came before them. Local resource leaders can emphasize this, as tours and other educational events are not merely informational tools, but also an effective preventive measure.

In closing

Much has been written about wildfire and its impacts on communities and natural resources across the country. The NACD Community Wildfire Desk Guide is one more tool, but it is directed specifically at local resource leaders and their partners. Its goal is to identify roles and courses of action for those who serve locally based organizations such as conservation districts, resource conservation and development councils, Cooperative Extension and other organizations.

The materials organized in the following appendices are supplement information and are intended to help the same audience.

Of value for readers is the list of priorities for action as developed by the NACD Wildfire Advisory Team. As with the other materials, the priorities are offered as activities that fall well within the scope of duties and responsibilities for local resource leaders.

A series of case studies provides examples of how peer organizations have taken steps to help fire-prone communities. In most cases, contact information with these case studies directs users to more information.

Following the appendices, the toolkit serves as a companion to the desk guide. It connects users to more information about steps recommended in the desk guide. Links are provided to a variety of materials that provide step-by-step advice for local resource leaders working before, during and after fires. Also provided is background information on programs, agencies and organizations that can help make the job easier.

There is no way to design a one-size-fits-all source of information that will match the needs of the diverse communities and regions affected by wildfire. But the desk guide, toolkit and related materials will open doors to better understanding and help local resource leaders take practical and meaningful steps to address the needs of their communities.

Appendix I

Priorities for pre- during and post-fire activities

Compilation of the NACD Community Wildfire Desk Guide and Toolkit was guided by an advisory team comprised of local resource leaders. The team included Karen Berry, board member of the Jefferson County Conservation District, Colorado; Stephen Campbell, University of Arizona Extension forester; Doug Martin, director of the Nevada-Tahoe Conservation District in Nevada; Kit Sutherland, coordinator of the Bitter Root Resource Conservation and Development Council, Missoula, Montana; and Steve Ellis of the Colorado State Forest Service. Their work was supported by a broader circle of advisors that included NACD staff and representatives of local, state and federal agencies.

Team members were chosen because they were “fire-tested”: All had direct experience dealing with wildfires, working to protect communities at risk, conducting fuels reduction efforts and addressing other issues in fire-prone areas.

A key outcome of the team’s work was development of a list of priorities for local resource leaders engaged in addressing community wildfire issues before, during and after fires. Their focus was on roles and responsibilities in helping protect people, property and resources. A two-day meeting focused on identifying priorities, and follow-up teleconferences and email communications were used to rank the priorities. Team members assigned values of “3” for high priority, “2” for medium and “1” for lower. Scores were tabulated to determine placement within categories. While the scoring helped to rank priorities according to levels of importance, team members stressed that even those that received low ranks in the scoring system still merited attention from local resource leaders.

While team members are all local resource leaders who have extensive experience dealing with wildfires and its impact on communities, professionals from other backgrounds will likely identify other priorities and assign different values to those listed here. But since the focus of this project was to develop materials for local resource leaders, the input of team members provides valuable insights.

QUICK SUMMARY

As documented here, team members viewed the scope of activities for local resource leaders to be broad. It identified activities prior to and after fires to be of highest priority. It assigned lower values to activities during the fire, when fire-fighting professionals are doing their jobs. This finding corresponds with resources developed by other professionals, including “Interagency Coordination Guides” developed by the USDA Forest Service in cooperation with other partners.

The range of priorities identified in all three categories parallels much of the traditional work done by local resource leaders. There is strong emphasis on educating various audiences, engaging with other partners, providing technical assistance and arranging financial assistance. There is also emphasis on serving as important connectors to programs and services that will benefit communities in planning for, dealing with and responding to wildfires. Following is a list of priorities in each of three categories.

PRE-FIRE

Analysis: The team emphasized the need for local resource leaders to first understand their roles and the roles of those working with or around them. Educating community members about reducing risks and working with local agencies to accomplish that are key priorities. The emphasis here focuses on how to minimize the impact of fire with the understanding that it is a likely occurrence in many settings. It is also crucial to determine if a CWPP is already in place or being developed, and how local resource organizations such as conservation districts and resource conservation and development councils can help develop and/or implement the plan.

High Priority

Educate community members about fire and the need to prepare for it: It is natural, and it will happen. (Score of 10)

Reduce risks: Community members and landowners need to be educated about necessary steps to reducing risks from wildfires, including reduction of hazardous fuels, appropriate landscaping, building to fire-safe codes and other steps. (10)



Education is an important tool local resource leaders use to help defend against wildfire. Here school children learn about the many benefits of the Fuels for Schools program.

Work with community planning and zoning: Team members felt that local resource leaders should be engaged in decisions about how and where communities develop, providing expertise about natural resource issues and concerns and how they interface with other development issues. (10)

Define the hazards: This was seen as part of the educational process. (9)

Educate citizens about incident command centers: These centers are hubs of activities during fires. (9)

Reference identified resources and players, and fill gaps or niches: Team members said

this is related to developing strong relationships and important to developing and implementing strong CWPPs or hazard mitigation plans. (8)

Determine if a CWPP already exists or if another group is working on one. Help develop the plan or work to maintain and strengthen the existing plan. (8)

Medium Priority

Understand roles and relationships and what is and isn't being done: Seen as part of the CWPP process. (7)

Empower and assist locals in creating community disaster mitigation plans. (7)

Plan for post-fire activities, roles and responsibilities. (7)

Establish common ground with partners: Seen as related to the CWPP and partner-building priorities. (5)

Lower Priority

Locate water supplies. (Originally listed as during-fire activity, but more appropriately placed here.) This was seen as a necessary activity by all local fire departments, federal, state and private landowners. Local resource leaders with knowledge of water resources can provide valuable assistance. (4, as a during-fire activity)

Identify people living in the wildland-urban interface. (3)

Emphasize the value of memoranda of understanding. (3)

Learn about and seek to qualify for red and/or yellow cards: Here the committee noted that partners such as NRCS personnel and conservation district and RC&D staff may want to obtain these qualifications ahead of time so they can assist on private property or on burned area emergency recovery teams. (2)

DURING FIRE

Analysis: Top priorities here focus on serving as a resource to fire-fighting teams and community residents by sharing knowledge and information.

Be available as a resource; ask incident command how you can help. (8)

Help familiarize outside resource professionals with the community: This could include serving as guides and linking outside professionals with community leaders and resources such as GIS maps. (8)

Gain knowledge about the fire and relay it to landowners. Here the team acknowledged the importance of working with incident command to gather and disseminate correct information. (6)

Educate and create awareness during the “panic,” or active fire stage. Related to above item. (6)

Continue planning efforts for post-fire. This could include creating a checklist of needs/ actions and beginning the search for financial and technical assistance. (6)

Medium/Lower Priority

Activate the multi-agency group, including conservation districts, RC&Ds, incident command representatives and other entities that can help in recovery efforts. Activities may include assisting in evacuations and assuring timely and accurate information is available to landowners and other residents. (5)

Let the pros in each area do what they do: Stay out of their way. (5)

Assist with evacuation of pets and livestock. This was identified as an unmet need by two team members. (4)

Help to retain infrastructure. (4)

Distribute an evacuation fact sheet. (4)

Organize supplies and link with partners. (4)

Be involved as part of the rehabilitation team. This was seen as being covered by several other points above. (2)

POST FIRE

Analysis: Local resource professionals are well schooled in identifying financial and technical assistance. Post-fire situations are seen as crucial times for filling that role. Coordinating volunteer activities, helping to rebuild community infrastructure and supporting people who have been through a stressful event are also seen as important.

High Priority

Explain financial and technical assistance processes and timelines to community members and partners, and secure and implement financial and technical assistance. (10)

Help people deal with post-traumatic stress, which was identified as an important and often unmet need in the wake of fires, especially those that cause heavy damage. Team members emphasized the key here was not trying to serve the role of providers, but rather connecting those who need services to those who can provide them. (10)

Work to revitalize community infrastructure if needed. This may include helping businesses get up and running after the fire. (9)



When the fire is active, local resource leaders should offer to help however they can, but it's important to let the firefighting agencies take the lead in the suppression efforts.

Coordinate volunteer efforts. People want to pitch in, and volunteer hours serve as an important match for some recovery programs. (8)

Build and maintain a healthy forest. (8)

Identify mutual aid needs based on experiences during and after the fire. Seen as a good activity for a multi-agency group. (8)

Work to assist incident command team and burned area emergency recovery team on access, crossing boundaries and jurisdictional issues. (8)

Medium Priority

Celebrate good work. Seen as important to rebuilding community spirit and serving an educational role. (7)

Coordinate long-term follow-up with residents. (7)

Address rebuilding issues and avoid replicating the problem of building in the wrong place. Seen as important but difficult to accomplish among those who have suffered fire

loss. (7)

Work with fire chief and other entities in the CWPP. (7)

Conduct a private land hazard survey. (6)

Help people protect lives and property in a post-fire situation. (6)

Facilitate the salvage of timber when appropriate: Seen as an important step in rebuilding a healthy forest and also important to protecting lives and property. (6)

Implement demonstration projects and/or utilize examples from fire. Organize tours and educate about hazardous fuels reduction. (6)

Pool resources and purchase in bulk to save money. Context here deals with reforestation efforts. (6)

Evaluate short-term options. (5)

Lower Priority

Think outside the box. (1)

Appendix II

Joint letter on cooperation



SUBJECT: Improving Communication about Wildland Fire Activities

TO: Conservation and Natural Resource Leaders from the:
National Association of Conservation Districts
National Association of State Foresters
Natural Resources Conservation Service
Forest Service
Department of the Interior

As conservation and natural resource leaders we are all very aware of the need to communicate effectively with citizens and communities, at the local level, about our programs and activities. We also know that our ability to communicate important information is often dependent on strong working relationships with the owners and managers of farms, forests, and ranches.

Communication with private landowners during emergency situations, such as the suppression of wildland fires, is a challenge faced every year by State and Federal agencies with wildland fire protection responsibilities. This communication challenge can be even more acute when out-of-state interagency incident management teams are rotated through local areas and called upon to plan and implement complex strategies to combat large, severe fires.

The purpose of this memorandum is to encourage you, at the regional, State, and local levels, to take coordinated actions to facilitate improved communication with private landowners and other interested citizens about wildland fire activities, including fire suppression, burned area emergency rehabilitation, and prescribed fire. All of our organizations are involved in one or more of these activities. Therefore, we should strive to support each other by both increasing our knowledge of each others programs and activities and then using that knowledge to inform landowners and other citizens, particularly those that are impacted during emergency situations.

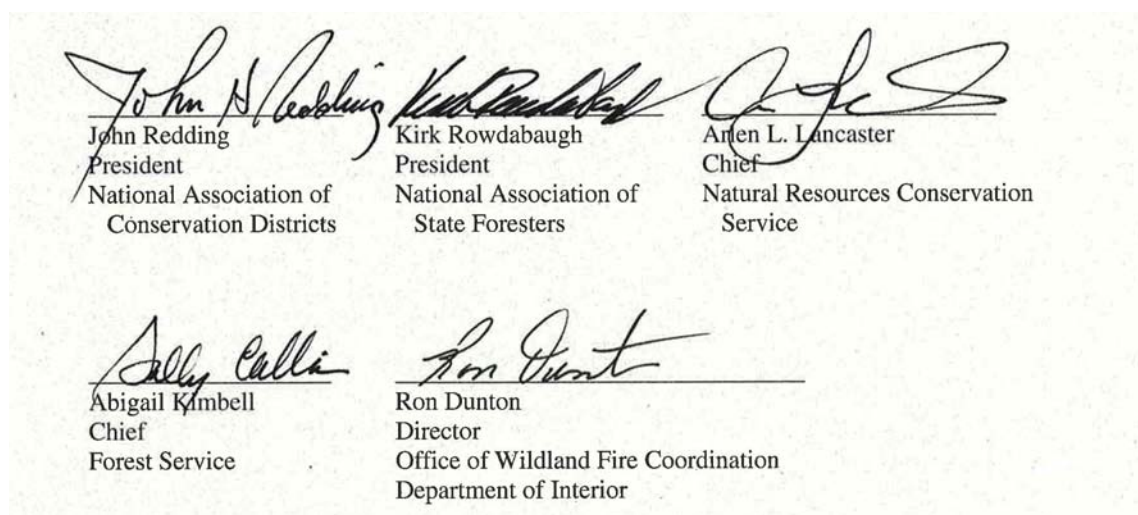
We ask that the regional and State leaders of all our organizations utilize existing forums to meet and discuss what actions are most appropriate to take, given historic and expected wildland fire activities. At these forums we ask that you consider at least the following actions:

- Recommend that all supervisors complete the training course ICS-100 – Introduction to the Incident Command System (available online through Aglearn for USDA employees). Consider jointly sponsored training and invite all personnel to participate.
- Recommend that local wildland fire protection agencies meet at the local/field office level with NRCS and conservation districts to develop/improve understanding of local fire protection and prescribed fire procedures/protocols.

- Recommend that NRCS and conservation districts meet with wildland fire protection agencies to discuss ways to coordinate delivery of assistance to private landowners for post-fire recovery and restoration (e.g., Emergency Watershed Protection Program and Burned Area Emergency Response assessments).
- Recommend that NRCS and conservation districts increase their awareness and knowledge of wildland fire activities in their local areas and know where to direct the public to get timely information (e.g., fire websites, telephone hotlines, and post timely information in front offices).
- Recommend that NRCS and conservation districts, during wildland fire activities, be prepared to direct concerned landowners and citizens to the appropriate agency incident management team, preferably a local knowledgeable person that can help address their concerns.
- Recommend that NRCS and conservation districts consider making employees available as resource advisors or agency/landowner liaisons, particularly when private land is impacted and the situation requires extra attention to communication with private landowners.

Two resources that you may find useful are:

- Montana Interagency Coordination Guide: Working with Communities and Private Landowners, Before, During, and After Wildfires, which was cooperatively developed by the U.S. Forest Service, Montana Department of Natural Resources and Conservation, and Bitter Root Resource Conservation and Development Area, Inc. The guide is available at: http://www.fs.fed.us/r1-r4/spf/coopfire/IG_Guide_FINAL1.pdf
- Earning Bridges, a toolbox designed to provide managers with an array of ideas, resources, and proven techniques – all focused on the task of preventing problems that can occur when a wildfire is threatening your partners and local publics. This resource was developed by the Bureau of Land Management and is available at: <http://www.ntc.blm.gov/krc/viewresource.php?courseID=188>



Appendix III

Case studies

A tale of two California counties

On the surface, Trinity County in northern California and San Diego County in the southern reaches of the state don't share many similarities. Trinity is sparsely populated, with 14,177 people. It has only one major population center, Weaverville, home to about 3,800 people. About 80 percent of the county is federal land. San Diego County is home to 2,974,859 people who live in dozens of communities. The county has a large wild-land-urban interface (WUI), but population density is high, even in these areas.

The counties share at least two characteristics of interest to local resource leaders working to mitigate wildfire impacts: Both counties are in fire-prone areas, and resource conservation districts (RCDs) in both counties have played leading roles in developing and implementing CWPPs.

Trinity RCD

The Trinity County RCD has been working to mitigate fire impacts for a number of years, says District Manager Pat Frost. It took the lead in developing a county CWPP in 1999. The district worked with 16 volunteer fire departments in the county to host meetings, assess risks and develop plans for mitigating fires. Fire behavior experts were consulted to help develop plans to reduce risk in the WUI.

Mitigation measures addressed how to prevent the spread of wildfire and how to keep fires that start in populated areas from spreading to the forest.

The RCD has undertaken dozens of hazardous fuels reduction projects with its own crews and has been active in landowner and neighborhood education. The latter activity serves to help fire departments in pre-planning efforts.

The CWPP enabled the district to seek grants from the California Fire Safe Council, the county Resource Advisory Committee and other sources. The district has also used forestry provisions in the Farm Bill's Environmental Quality Incentives Program to assist landowners on forest improvement projects that reduce fire risks.

In major fires that struck the county in 2008, fuels management zones and fuel breaks resulting from the county's CWPP were credited in at least two cases with protecting property and reducing fire risk.

Advice for other local resource professionals: "Never look for funding in just one place. Use one funding source to leverage others."

For more information, contact Frost at pfrost@tcrd.net, and visit the [RCD's Web site](#).

Resource Conservation District of Greater San Diego County

The RCD plays a major role in reducing fire risks in the county. It has helped communities develop 20 CWPPs. District Manager Marty Leavitt says the district created its own template, review team and review process for developing CWPPs. "We give CWPP

training to folks on how to write plans and do the process,” she says. Completed and approved CWPPs are posted on the RCD’s Web site.

The RCD has helped to form more than 85 Fire Safe Councils in the county. It collaborates with 84 local, state and federal agencies that share a common goal of reducing fire impacts.

State and federal grants support district fuels reduction and education efforts. The RCD hosts community chipping days. Homeowners working to reduce fuel loads on their properties bring materials to a central site for chipping. At the same time, the district makes educational materials and presentations available.

Is the county safer for these and other efforts? “The County of San Diego has done studies and has statistical data showing in areas that were cleared, fires were lower in heat and flame length. Fires did much less damage around communities that have Fire Safe Councils and did fuels reduction work,” Leavitt says.

Advice for other local resource professionals: “We went where the need was. To be valid entities in your communities, you need to become active and involved as project managers, not just local non-regulatory agencies. With Fire Safe work, you’re able to get back to working one-on-one with your communities in a very successful way.”

For more information, contact Leavitt at info@rcd.org, and visit the [RCD’s Web site](#).

MOU clinches work in New Mexico

The Claunch-Pinto Soil and Water Conservation District in Mountainair, New Mexico, was first in the nation to sign a memorandum of understanding with the USDA Forest Service and state conservation agency.

That helped propel the district into a leading role in healthy forests work in New Mexico. The work, funded by Forest Service and state grants, has provided direct financial benefit to private landowners in an area with many low- and moderate-income residents. Fuels reduction and watershed health goals for the WUI are being addressed as a result of the work.

District projects also achieved natural resources goals on a landscape scale by complementing work on Forest Service lands in the Cibola National Forest and elsewhere.

The district has also helped to encourage development of a business infrastructure for small diameter woody biomass utilization, including a growing sign business and cogeneration electrical facilities.

Claunch-Pinto also cooperated with other conservation districts on a \$292,000 State Water Trust Grant that thinned pines and water-consuming junipers on private lands in the Mensano Mountains. The East Tarrance, Edgewood and Ciudad districts also partnered in that program. The grant was funded by the New Mexico Finance Authority. The goal is to cut both water demand and fire danger in the Estancia Closed Basin. Again, it complements work being done on Forest Service land.

For more information on district fire protection programs, visit the [district’s fire protection Web site](#).

Conservation districts, RC&D boost stewardship contract

Achieving resource goals sometimes calls for partners to go the extra mile. That was the case for a stewardship contract on the Medicine Bow National Forest.

Several partners worked across various political jurisdictions to make a biomass component of the project a success and to help a local sawmill make a go of it. Two Wyoming conservation districts, a resource conservation and development council and other local entities cooperated with the USDA Forest Service, state and local development agencies and other partners.

Four years ago, the Little Snake River Soil and Water Conservation District in Baggs, Wyoming, signed a five-year stewardship contract with the Medicine Bow National Forest for fuels reduction, biomass utilization and habitat restoration work. The contract called for 2,000 acres of forest will be treated.

The neighboring Saratoga-Encampment-Rawlins (SER) Conservation District in south central Wyoming was called upon to lead a multi-agency steering committee that looked at how to assist a sawmill in Encampment, Wyoming.

Keeping the sawmill in business was a key to the biomass component, which included small yields of timber for house logs and saw logs coming from 1,000 acres of spruce beetle sanitation salvage. The majority of the contract is for small diameter wood. Some marketable wood will be used for posts and poles and firewood.

Larry Hicks, natural resources coordinator at the Little Snake District, put together a group that includes two conservation districts, the towns of Encampment and Riverside, North Platte Economic Development, Carbon County Commissioners, the Carbon County Economic Development Council, the Historic Trails RC&D and Wyoming State Forestry. The group received a \$10,000 grant from state forestry. Partner funds totaling \$14,000 were added for a study and improvements for the mill.

The Casper Star-Tribune newspaper featured the work in a 2009 story, reporting: “The original contract has grown to a project worth about a quarter of a million dollars for the 2009 field season, and it’s growing.” The partners are working to manage beetle-killed conifers, restore aspen habitats and reclaim oil and gas fields.

“They’re on the cutting edge of statewide efforts,” Bob Budd, Wyoming Wildlife and Natural Resource Trust executive director, told the newspaper.

RC&D program increases safety, supports local economies

Hazardous fuels reduction work by the Northwest Regional RC&D in Montana has increased safety and provided a big boost to local economies.

The RC&D has been coordinating fuels reduction projects in Flathead, Lincoln and Sanders counties for several years. It focuses on fire-prone subdivisions in the four-county area. The work is supported by grants, including Forest Service funds administered by the Montana Department of Natural Resources Conservation and its Forestry Division.

Firefighters have credited the work with measurable increases in safety, including halting a fire in the Eureka area that started on public lands 20 miles away. Firefighters on the Chippy Fire in Sanders and Flathead counties remarked that those homes that had taken the initiative to make their property Firewise made a significant difference in allowing firefighters to safely and aggressively fight the fire.

Safety comes first, but RC&D Coordinator Sue Sutherland says there's another benefit. She estimates that from 2004 to 2009, projects in high-risk communities have also created or sustained 124 jobs and 102 businesses. More than 80 percent of the fuels reduction work was completed by contractors. Displaced timber industry workers are often part of crews now creating defensible space around homes.

The projects also incorporate education and stress collaboration with local, state and federal agencies. All planned work was set up through local communities in conjunction with the local fire departments.

Participating property owners reduced the threat of wildfire to their property by meeting the intent of a fuels prescription for their property. Thinning, fuels reduction and pruning were achieved on each property, creating defensible space around homes. Cost-sharing is available from grant funds.

Several communities invited speakers to their homeowner association meeting to discuss weed management and insects and disease in the forest. People attended classes offered by local Extension agents and conservation districts. The RC&D also met with local planning boards to help define fuels treatment needs in new subdivisions.

The RC&D has also worked with the Stone Container paper mill in Missoula, which buys pulpwod from fuels reduction projects.

RC&D Community Forester Bill Swope coordinates much of the work. "One of the things that most impresses me is we started out talking to homeowners about hazardous fuels, but it wasn't long until we started to talk forest health," he says. "Now, we talk forest health first and hazardous fuels second."

The targeted counties have community wildfire protection plans. Some communities are developing their own plans.

For more information on the RC&D's programs, visit its [Web site](#).

Oregon District Oversees Fire Pond Construction

Firefighters in the rugged Cascades Mountains of western Oregon need water to knock down blazes before they reach catastrophic proportions. The Douglas County Soil and Water Conservation District in Roseburg, Oregon, is helping to assure an adequate supply.

In cooperation with the Bureau of Land Management, the district constructs fire ponds accessible by helicopters and trucks. The ponds are located on private lands and are available for use in fighting fires on both public and private lands. Land ownership in the county follows a checkerboard pattern, with BLM, Forest Service and private lands intermingled across 3 million acres.

In addition to contracting for design and survey work, the district hires contractors and supervises construction.

Forestry remains a major industry in the county, despite the loss of several mills over the past few decades. Protecting resources and productive timber land is important. Most of the remaining mills have retooled to accept smaller diameter wood products. Much of the wood comes from private lands.

In addition to constructing several fire ponds in recent years, the district also constructed a water tank. Funding for work has come from Title III of the Secure Rural Schools and Community Self-Determination Act. Other partners have included the Douglas County Forest Protection Association and private landowners.

Ponds are a minimum of eight to 10 feet deep and contain at least one million gallons of water, which fills in naturally once they are dug. Locations are prioritized based on fire frequency and hazard. GIS maps are made available to fire-fighters.

For more information, visit the district [Web site](#).

New Mexico district helps to remove non-native threat

Following two large fires in the summer of 2003, the Ciudad Soil and Water Conservation District in Albuquerque, New Mexico used state grant money to remove non-native vegetation through a 22-mile stretch of the area's Bosque region. The area is used by public citizens as a park.

In just one summer the district teamed with other local agencies, such as the Middle Rio Grande Conservancy District and the Albuquerque Open Space Division, to treat close to 800 acres of the unwanted vegetation. The treatment helped to reduce the risk of wildfire and conserve water in the desert region. Trees such as Russian olive, Siberian elm and salt cedar are known to consume large quantities of water and can act as ladder fuels during a catastrophic wildfire.

The biomass pulled from the treatment was used for landscaping along public trails and made available to landowners for garden mulch.

After the treatment was completed, Ciudad Soil and Water Conservation District was then contracted to help re-plant native trees in the Bosque in order to help restore it to its natural setting.

For more information, visit the district [Web site](#).

Wyoming district helps to make use of biomass

Wyoming's Teton Conservation District participated in a biomass project that addresses the need for forestland thinning by offering a byproduct local landowners could appreciate.

Following a 2003 fire that cost \$15 million to suppress, local agencies began to look at ways to safeguard against future fires. Teton Conservation District was one of several partners brought in to explore value-added uses for biomass.

The material pulled from fuels reduction projects in the Grand Teton National Park, the Bridger-Teton National Forest and on public lands, was mixed with domestic stock manure and other components to produce a rich blend used for mulch.

The project helped to address several needs in the area: in addition to removing unwanted fuel from the forests, it helped to find a use for the excess horse manure produced on the many horse operations in the area. The Wyoming Department of Transportation used some of the mulch for a roadside reclamation on a nearby 37-mile highway project.

As Teton Conservation District's executive director pointed out, interagency cooperation was the key to making the project work, requiring cooperation for transportation, financing and other needs.

For more information, visit the district [Web site](#).

Washington district helps to educate landowners through Firewise

In the state of Washington, Firewise has been a helpful tool for one local conservation district. The Spokane County Conservation District has used the program to educate local landowners on the many ways to safeguard their properties from wildfire.

The district offered landowners a free home site assessment to rate each home's ability to withstand a wildfire and to examine the property's defensible space and construction.

Said the district's forestry program manager, the Valley View fire that ripped through the area did not cause as much damage as it could have due to the preventative steps taken by many of the landowners enrolled in the program.

Following the fire, the district again helped to educate its landowners. It partnered with the Washington Department of Natural Resources and the local fire district to offer educational workshops about cost-share programs, how to work with a contractor to remove dead wood, and why landowners should avoid bringing noxious weeds back into the landscape.

For more information, visit the district [Web site](#).

Arizona district does its part to help restore the forestland floor

A large number of wildfires in Arizona prompted the creation of the Northern Arizona Native Seed Alliance (NANSA), whose mission is to help make available native grass seed to those agencies and private landowners doing re-plantings. According to one expert, commercial and non-native seed have a low success rate, and the cost of native seed is often expensive due to the high demand following fire season.

The initial money used to start the Alliance was made available from grant money through the Arizona Association of Conservation Districts and Northern Arizona University.

The Coconino Natural Resource Conservation District was one of several partners involved in the Alliance, which works closely with the NRCS Plant Materials Center in

Los Lunas, N.M. NANSA searches for new techniques to improve the success rate and advance the local native seed industry.

For more information, visit the district [Web site](#).

California district shows versatility, willingness to help where needed

California's Bureau of Land Management's Redding Field Office had \$650,000 in federal grant dollars to help clean up the 13,000 acres of land that was impacted by the French Gulch Fire. Of the 14 tasks the field office compiled, BLM awarded 12 of the tasks to the Western Shasta Resource Conservation District.

The district's work included erecting flood hazard signs, culvert cleaning and monitoring and hazard tree mitigation.

Following the Bear Fire in the same region, the National Resource Conservation Service relied heavily on Western Shasta Resource Conservation District to help with recovery efforts. The district helped to position more than 11,000 sandbags and seed and mulch 87 acres.

Montana RC&D makes livestock removal quick

When fire ripped through western Montana in 2000, the Bitter Root RC&D offered its assistance to firefighting agencies in a several ways. One was to assist in the removal of livestock from nearby ranches. One call requested the removal of 600 head of cattle in a single evening. Because Bitter Root RC&D had already collected a list of volunteers willing to donate their vehicles and/or driving time to assist in fire defense efforts, the need was met. The cattle were relocated to the nearby fairgrounds within a matter of a few hours.

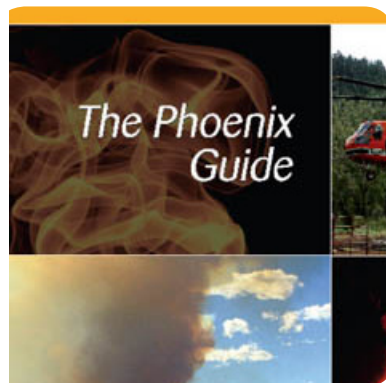
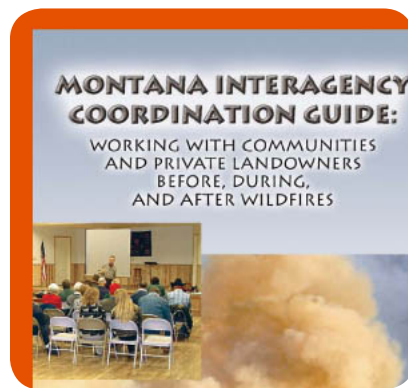
Colorado conservation district makes the best of a bad situation

Timber salvage options are limited following a fire, often because lawsuits can tie up projects in court until the timber is no longer viable. The Jefferson Conservation District in Colorado found a way to satisfy all interested parties following the Hayman Fire in 2002.

Fishing is a \$3 billion industry in the state, and stream conditions are important in keeping that industry thriving. Over time, however, stream flow and depth has been impacted by development and erosion.

With more than 150,000 acres of burned forestland to deal with, the district and a number of partners, including the Coalition for the Upper South Platte, USDA Forest Service, the Colorado Division of Wildlife, Trout Unlimited, and a local Boy Scouts of America troop created the Trees for Trout project. The partners salvaged more than 150 trees which were used as streambed habitat. The project found public approval, in large part because it brought scientists and wildlife experts together early to help with its planning.

- 1 National Association of State Foresters Communities at Risk Report, November 2007
- 2 “Southwest Community Wildfire Protection Plan Guide,” Southwest Strategy Wildland Urban Interface Task Team
- 3 “A Handbook for Developing Community Wildfire Protection Plans,” Navajo County, Arizona, in cooperation with US Forest Service Southwest Region and White Mountain Natural Resources Working Group
- 4 “Southwest Community Wildfire Protection Plan Guide”
- 5 “Unlocking the Barriers – Keys to Communicating with Under-Served Customers,” USDA Office of Communications, Office of Outreach, 1998
- 6 “Reducing the Threat of Wildland Fire: Fuels Reduction Success Stories Around the Nation,” National Interagency Fire Center
- 7 Portions of this section taken from the December 2006 NACD Forestry Notes Special Report: Cost of Fire
- 8 “A Review of State and Local Regulation for Wildfire Mitigation,” Haines, Renner, Reams
- 9 Boulder County, Colorado, Wildfire Mitigation Plan
- 10 Interview with Erik Christiansen, National Fuels Program Coordinator for the U.S. Fish & Wildlife Service
- 11 Interview with Kit Sutherland, coordinator for the Bitter Root RC&D in Montana
- 12 Interview with Dan Smith, National Fire Director for the National Association of State Foresters
- 13 Interview with Rob Ethridge, Montana Department of Natural Resources and Conservation Service Forestry Bureau Chief
- 14 List acquired from the Corporation for National and Community Service’s Web site on creating a community inter-agency disaster organization
- 15 James Hubbard, U.S. Forest Service deputy chief for state and private forestry, made these comments in a 2004 NACD special report, “Out Front on the Front Range.” Hubbard was Colorado state forester at the time
- 16 Sources for information on EWP include NRCS Fact Sheets and “The Phoenix Guide: A handbook for watershed and community wildland fire recovery”
- 17 “The Phoenix Guide,” page 50
- 18 *ibid*, page 45
- 19 Portions of this section taken from “The Phoenix Guide,” Chapter 8
- 20 *ibid*, p 90
- 21 Interview with Kit Sutherland, coordinator for the Bitter Root RC&D in Montana
- 22 Interview with Kit Sutherland
- 23 Interview with Kit Sutherland
- 24 Symptoms list provided by the Mayo Clinic
- 25 Interview with John Owens, Fire Management Specialist for the Bureau of Land Management
- 26 Interview with Karen Berry, member of the Jefferson County Conservation District in Colorado



This toolkit contains materials that supplement NACD's Community Wildfire Desk Guide. The materials are intended to help local resource leaders and their partners take steps to mitigate risks before, during and after wildfire events. Links are provided to assistance, information and practical examples provided by government and nongovernment partners with similar goals.

Unless otherwise noted, these resources are provided as links to documents, web sites and other materials. They include:

- General resources, including hands-on tools for education, prevention and response to wildfire, and other materials that serve to frame discussion and understanding of wildfire risk and mitigation.
- Before-fire resources that focus on two key areas: Protecting communities at risk and reducing fuel loads in forests and rangelands.
- During-fire resources that outline roles for local resource leaders who seek to support activities of fire crews and serve community members.
- Post-fire resources that focus on the important roles local resource leaders play in restoring communities and ecosystems.
- Outreach and education resources that help with the important job of raising community awareness about wildfire dangers and mitigation strategies.
- Media materials that help maximize efforts to reach general audiences through effective communication in local, regional and state media.

General Resources

These resources provide both practical advice and background information on the hows and whys of community wildfire protection. Special attention is drawn to the "Montana Interagency Coordination Guide" and "The Phoenix Guide," two comprehensive resources that provide information on aspects of community wildfire protection before, during and after fires. Also provided in this section are materials that focus on fire prevention and education, both key roles for local resource leaders.

[Montana Interagency Coordination Guide: Working with Communities and Private Landowners Before, During and After Wildfires](#). Produced by the USDA Forest Service, Montana Department of Natural Resources and Conservation and Bitter Root RC&D, the guide provides information on local, state and national agencies involved in wildland fire work, programs that support their efforts and other valuable information. While focused on Montana, the resource has broad value across fire-prone areas.

[The Phoenix Guide](#). A product of the Jefferson County Colorado Conservation District, USDA Forest Service and other partners, this guide is directed at local resource leaders and landowners who experience fire.

[Cost of Fire: An Analysis](#). This December 2006 NACD Forestry Notes Special Insert offers a detailed look at both the direct and indirect costs associated with catastrophic wildfire.

[Creating a community inter-agency disaster organization](#). The corporation for National and Community Service Resource Center offers this resource on its Web site. It provides a list of principles, goals and roles involved in the establishment of a community inter-agency disaster organization.

[Forest Health and Wildfires – A Net Cost Approach to a True Wildfire Protection Program](#). This Washington State Department of Natural Resource report offers figures related to the cost of wildfire suppression and explains the forest and fire relationship.

[The Changing Role and Needs of Local, Rural and Volunteer Fire Depts. in the WUI.](#) This 2003 National Association of State Foresters report offers a detailed look at fire department training and equipment needs, and the obstacles involved in fighting fire in the wildland-urban interface. The report also addresses coordination among fire departments' prospective partners.

[The True Cost of Wildfire in the Western U.S.](#) This 2009 Western Forestry Leadership Coalition report examines direct and indirect costs associated with several of the catastrophic wildfires that occurred in western states over the past decade. The document also includes a series of case studies and comparisons.

[Western State Processes for Implementing the National Fire Plan & 10yr Strategy.](#) This 2002 Western Forestry Leadership Coalition report takes a state-by-state look at how federal and local partners interact under the National Fire Plan. The report's question-and-answer approach makes it easy to follow, and each state entry offers agency contact information to help satisfy reader follow up questions.

Fire Prevention and Education

[The Fire Safe Council](#) provides resources for establishing and maintaining local Fire Safe Councils. Since its formation in April 1993, the Council has united diverse membership to speak with one voice about fire safety. The Council has distributed fire prevention education materials to industry leaders and their constituents, evaluated legislation pertaining to fire safety and empowered grassroots organizations to spearhead fire safety programs.

[Firewise Communities](#) is a multi-agency effort designed to reach out to homeowners, community leaders, planners, developers, and others in the effort to protect people, property, and natural resources from the risk of wildland fire before a fire starts. The Firewise Communities approach emphasizes community responsibility for planning in the design of a safe community, as well as effective emergency response and individual responsibility for safer home construction, design, landscaping, and maintenance.

[Healthy Forests and Rangelands](#) is a portal to information about the National Fire Plan, Healthy Forests Initiative and related initiatives. Healthy Forests and Rangelands is a cooperative effort between the U.S. Department of the Interior, the U.S. Department of Agriculture and their land management agencies.

[The National Interagency Fire Center Prevention and Education link](#) provides materials on a variety of topics that serve as handy references and guides to action for local resource professionals. Topics include: Communicator's Guide: Wildland Fire; Wildland Fire Prevention and Mitigation Resources; Burning Issues, an interactive multimedia program that explores fires that occur on wildlands; Protecting Your Home from Wildland Fire; Education Materials on Line; and Public Service Announcements to promote understanding about wildland fire.

[Living With Fire in the Lake Tahoe Basin](#) provides homeowners with wildfire threat reduction recommendations developed by Nevada and Lake Tahoe's firefighting experts. The program also provides suggestions about what to do during and after a fire. While some of the information is specific to the Lake Tahoe region of Nevada and California, the site includes information and resources that can be used by local resource leaders in many regions of the country.

[Combustibility of Landscape Mulches](#) is a streaming video produced by the Nevada Tahoe Conservation District in Nevada, the Carson City Fire Department and Nevada Cooperative Extension. The video address questions about suitability of various landscaping mulches in fire-prone settings.

Before Fire

These resources address two general areas – protecting communities at risk and reducing fuel loads in forests and rangelands. Special attention is focused in the communities at risk section on materials that help develop community wildfire protection plans (CWPPs). These plans are essential components of community efforts to minimize the impacts of wildfire on people, property and other community resources. They are also required in order for communities to qualify for grants and program funds to help reduce wildfire risk. Fuels reduction materials are provided as examples for communities and organizations that seek to address fire risks by employing strategies such as mechanical treatments, prescribed fire and other strategies that promote healthy forests and rangelands. More examples are also provided in the case studies appendix of the desk guide.

Communities at Risk

[Community Guide to Preparing and Implementing a Community Wildfire Protection Plan](#). This 2008 publication of the International Association of Fire Chiefs is intended to assist CWPP participants by providing innovative strategies, case studies and additional resources to develop, implement and monitor their CWPPs

[Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities](#). This 2004 publication is a joint effort of the Communities Committee, National Association of Counties, National Association of State Foresters and Western Governors Association. The publication came out in response to enactment of the Healthy Forests Restoration Act (HFRA) in 2003 and provides clear direction on how communities can build their CWPPs and qualify for funding under HFRA. It is intended to provide communities with a concise, step-by-step guide to use in developing a CWPP.

[Handbook for Developing Community Wildfire Protection Plans](#). The handbook is published by the USDA Forest Service, Navajo County, Arizona, and White Mountain Natural Resources Working Group. In addition to providing information on CWPP development, the handbook underscores the value of “public working groups” that encourage open debate and common understanding in forest communities.

[Montezuma County, Colorado, Community Wildfire Protection Plan](#). The plan is offered as an example of a local CWPP. It provides information on how the plan was developed, who collaborated and action steps that were developed.

[National Association of State Foresters Field Guidance for Identifying and Prioritizing Communities at Risk](#). This document provides national uniform guidance for identifying and prioritizing communities at risk while allowing for flexibility at the state and regional level.

Fuels Reduction

[Reducing the Threat of Wildland Fire: Hazardous Fuels Reduction Success Stories Around the Nation](#). The National Interagency Fire Center in Boise, Idaho, offers a collection of success stories from around the country, underscoring the fact that many regions of the U.S. need to reduce fuel loads and reduce fire risks.

[Stewardship Contracting, NACD Forestry Notes Special Report](#). This 2004 NACD Special Report shows how conservation districts and their partners are achieving fuels reduction and forest health through the use of stewardship contracting authorities. Stewardship contracting allows communities to contract with private organizations or businesses to do the necessary thinning and remove small trees and undergrowth. As partial payment, stewardship contractors are able to keep part of what they remove. Receipts from the work are returned to local communities.

[NACD Woody Biomass Desk Guide and Toolkit](#) is intended to equip natural resource professionals and outreach specialists with the information and tools needed to increase awareness of the use of woody biomass for energy in the U.S. Communities today are challenged to develop effective strategies that support forest ecosystem health, mitigate the effects of climate change, satisfy growing energy needs, and provide local economic opportunities. For some communities, woody biomass may be a viable option for meeting these needs and deserves serious consideration. Forests in the U.S. represent an important potential energy and biobased product resource. The guide provides an overview of woody biomass production and utilization in the U.S., tips on how to provide effective outreach for your clientele, and educational handouts to share with your audiences.

During Fire

The “Montana Interagency Coordination Guide” and “The Phoenix Guide” are offered in this section (in addition to the general resources section) because they provide valuable information about the roles of local resource leaders as wildfires are occurring.

[Montana Interagency Coordination Guide: Working with Communities and Private Landowners Before, During and After Wildfires](#). Produced by the USDA Forest Service, Montana Department of Natural Resources and Conservation and Bitter Root RC&D, the guide provides information on local, state and national agencies involved in wildland fire work, programs that support their efforts and other valuable information.

[The Phoenix Guide](#). A product of the Jefferson County Colorado Conservation District, USDA Forest Service and other partners, this guide is directed at local resource leaders and landowners who experience fire.

Post-Fire

The emphasis in this section is on roles local resource leaders assume in helping to restore communities and key natural resources once the fire is out.

Restoration

[A Landowner’s Post-Fire Decision Making Guide](#). Published by the Butte County Resource Conservation District in California, this brochure includes a list of do’s and don’ts

for landowners. It serves as a model that can be easily replicated by local resource professionals in other communities.

[After the Fire: A Landowner's Guide to Programs and Services For Assistance in Montana](#). A publication of the Montana Department of Natural Resources and Conservation Forestry Division, this guide directs landowners to programs and services for assistance. It includes information on programs that support restoration and rehabilitation treatments for landscapes. While directed at Montana residents, the guide offers valuable information for people across the country.

[What We Leave on the Land](#). A 2003 NACD Special Report on the economic and environmental impacts of wildfire using the Colorado Hayman Fire as a case study .

[Out Front on the Front Range](#). A 2005 NACD Special Report revisits the Hayman Fire to feature the work of conservation districts and their partners in rehabilitation efforts.

[The Experience of Community Residents in a Fire-Prone Ecosystem: A Case Study on the San Bernardino National Forest](#). The 2008 report analyzes personal stress consequences of experiencing wildfires and living in communities threatened by wildfires. It also addresses perceived level of responsibility for wildfire prevention, participation in fire management activities and perceived barriers to effective fire management, and views about preferred ways of receiving communication and education about wildfires and management.

Outreach/Education

These materials are intended to help accomplish the important jobs of outreach and education to community groups. Some of the materials can be replicated for use in other communities.

Outreach and education are crucial to building awareness about forest health, fuels reduction, defensible space and related topics. The work is ongoing and never done. Many local resource organizations have newsletters, Web sites and other tools for communication. They host tours, open houses, educational days and a variety of other activities to reach adults and children with important messages. Effective outreach efforts will employ several strategies and regularly monitor their impact.

General

[Wildland Fire Communicators Guide](#). The National Interagency Fire Center (NIFC) and National Wildfire Coordinating Group make this interactive guide available to assist people who have communications responsibilities in wildfire-prone areas. It provides background information, ideas, sample materials, and sources for further information. Each section is written to stand on its own, ready to be extracted and used as a hand-out. It includes educational materials for adult and student audiences, information on working with media and an array of supporting resources.

Outreach Tools Used by Peer Organizations

Brochures

Brochures have the advantage of flexibility. They can be placed in strategic locations, mailed, handed out at public meetings and events, inserted into other materials and

made available in bulk on request. Two examples are provided here:

[Firewise Landscaping](#) is a quarter-fold brochure produced by the Three Rivers Resource Conservation and Development Council in Idaho and other partners. It can be easily replicated based on the landscaping recommendations for other regions.

[Forest Improvement Tour](#), Trinity County, California, encourages people to tour forest improvement projects conducted by the Trinity Resource Conservation District. It provides educational information for each tour stop.

Posters

Posters placed at public places where people gather can be effective ways to communicate your message. Here we provide a [link](#) to a variety of free posters provided by the U.S. Fire Administration. Posters are free and can be customized for your use. Follow instructions for ordering at the Web site. Orders can also be placed by telephone at (800) 561-3356.

Special Publications

Special publications that you print and distribute can be effective ways to reach broad audiences. Included as an example here is [Living With Fire: A Guide for the Homeowner](#), a 12-page publication produced by the [Pacific Northwest Wildfire Coordinating Group](#).

Web

Web presence is essential in today's communications world. Web pages offer flexibility, immediacy and cost-effectiveness. Examples of Web sites/pages that educate about wildfire and fuels reduction are many. Here are a few:

[The Cascadia Conservation District](#) in Chelan County, Washington, features web sections on wildfire preparedness. It highlights district activities, educational materials, links and other information for county-wide fire protection.

[The Yosemite/Sequoia RC&D](#) in California features information on fire hazard reduction and biomass utilization.

[Living with Fire in the Lake Tahoe Region](#) includes information for residents on what to do before, during and after fires, along with information on resources and programs, and a calendar of events.

Media

Included here are materials and information about effective communication with media before, during and after fires.

News Releases

News releases issued to local and regional media are effective ways to get the message out to broad audiences. Make sure they include basic information outlined in the sample news releases provided here.

Some general tips:

- Learn which media cover your communities and regions
- Establish personal relationships with editors, news directors and reporters
- Learn how and when news media outlets want to receive information
- Provide local voices and local examples for your stories
- Include tip sheets with valuable background information
- Be sure to provide contact information
- Think “visual” for media that work with images. Is there an effective photo opportunity or illustration for your story?
- If media makes an error, politely inform them and, as necessary, ask for a correction
- Remember to say “thank you” for a job well done

Public Service Announcements

Public service announcements or PSAs are defined by the Federal Communications Commission as unpaid announcements that promote the programs of government or voluntary agencies or that serve the public interest. PSAs can be produced for television and radio broadcast. A few tips:

- Find out which broadcast media run PSAs and how they want to receive them
- Keep PSAs short, usually no longer than 30 seconds
- Choose your words carefully: A general broadcast rule of thumb is 180 words per minute; a 30-second PSA would have about 90 words; a 15-second PSA 45 words
- Some broadcasters will use their staff to read the PSAs; some will ask you to provide a voice. If asked to provide a voice, a good strategy is to choose a local leader who is known and respected in the community

PSA Examples:

Examples from the [Nevada Fire Safe Council](#) provide lists of PSAs focusing on wildfire risk and defensible space. They are easily adapted to other communities and regions.

News Release Examples

[NACD sample news releases](#). NACD provides three fill-in-the-blank news releases. The releases include “Sample NACD News Release on fire assistance from conservation districts and local resource organizations,” “Sample NACD release on costs of wildfire and district services,” and “Sample NACD release on wildfire.” These handy releases provide basic information that can be modified slightly and used in a variety of settings. Fill in the blanks to localize.

[Fire Safe Council of San Diego County](#), California, news releases shown at this link are examples of the many opportunities for reaching out to broad audiences with media releases. Fire Safe Council activities are administered by the Resource Conservation District of Greater San Diego County. Note the variety of news releases and how they recognize the efforts of volunteers and partner organizations.