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A Planning Guide for Wildfire Agencies & Practitioners



Agency-Stakeholder Trust: An international collaboration drawing on research and management experience in Australia, Canada and the United States



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# The Australian context...

In the state of Victoria wildfire planning and response have historically belonged to two primary government organizations: 1) The Country Fire Authority (CFA) is responsible for fire and rescue services orginating on private lands and 2) the state Department of Environment and Primary Industries (formerly Sustainability and Environment) manages and responds to fires on public lands. The CFA is generally volunteer-based with brigades drawn from local communities. Large, devastating wildfires over the last decade have caused high suppression costs and increasingly complex incident management arrangements. Several government inquires into these events have targeted the need for agencies to work together on both pre-fire fuel reduction activities and protecting communities during wildfires. Additionally, all states and territories adhere to a policy which advises community members



to create a Bushfire Survivial Plan prior to the fire season that details their plans to prepare, stay, and defend their properties from wildfires or leave well before a fire arrives.

# The Canadian context...



Most of Canada's 400 million hectares of forest are under public ownership. Wildfire management is primarily the responsibility of the 13 provincial and territorial governments. A combination of pine beetle infestation and climate change is a potential threat to western forests. As in other countries, communities and industrial development are expanding into forested areas. Each province employs year- round forest protection personnel and hires seasonal firefighters. Private contractors are used to supplement agency resources. The number of volunteer wildland firefighters has diminished over the years. While the provinces have historically involved major stakeholders (local government, forest industry) in planning and recovery efforts, the active engagement of communities and local citizens is relatively new. These efforts now focus on increased awareness of wildfire risk and mitigation activities.

FireSmart is gaining popularity among wildfire management agencies across Canada. Recent devastating wildfires are providing the impetus for local adoption of these programs by citizens and agency personnel.

# The U.S. context...

In the U. S. over 40% of the nation's homes are in the wildland-urban interface. Adjacent public lands are managed largely by federal or state agencies. Fire suppression efforts in these areas are typically coordinated by the Forest Service and Bureau of Land Management, although many states (e.g., California, Texas) contribute significant resources in the form of fire cooperatives and volunteers. Some jurisdictions also employ private contractors. All local, state, and federal agencies respond and cooperate during a fire event. Pre-fire and post-fire management is more situational—depending on the need and leadership in local areas. In a growing number of locations, agencies and residents are working together for fuels reduction on public lands as well as defensible space activities in WUI neighborhoods. Community Wildfire Protection Plans and programs for Fire Adapted



Communities are increasing. Some states (e.g., Oregon) require home- owners in the WUI to certify they have taken action to mitigate risk. Recently, federal initiatives have targeted problems at the landscape level and involve multiple agencies, NGO's, and community groups.

# Introduction

In increasing numbers, agency personnel, interest groups, and residents of at-risk communities are coming together to consider wildfire problems and taking steps to solve them. Particularly with regard to fire management, trust among parties is an essential element to successful local programs (Olsen & Shindler 2010, Lachapelle & McCool 2012). Despite a growing body of research literature on this topic, there are few practical guides for fire managers and practitioners about how to build and evaluate trust amongst stakeholders. Our intention here is to bring clarity to the trust concept and focus it specifically for use in fire management settings.

# **Project Overview**

This document—a planning guide—is the outcome of an international collaboration of researchers and practitioners/field managers in support of fire management personnel. Initially, our team of social scientists from Australia, Canada, and the United States utilized our collective research from fire affected communities to examine factors that influence stakeholder trust. We then crafted a working draft of this quide and shared it with experienced agency personnel and community leaders in Victoria (Australia), Alberta (Canada), and Oregon (U.S.). We followed this with workshops with these individuals and field visits to local wildfire sites. This allowed us all to engage one another and deliberate the essential features of building trust among parties. This interactive practitioner/stakeholder assessment provided useful insights and helped shape this final document. The discussion, quotations, and figures that make up this Planning Guide represent the primary outcome of these deliberations. Throughout, we reference the ideas and contributions of our workshop participants. See page 19 for more information about this research process.

# **Using This Guide**

The information presented here draws on management experience and the research of scientists working in interface communities in Australia, Canada, and the U.S. While each local setting has its own distinguishing features and each country has its own agency organizational structures, our research suggests there are common characteristics that lead to trust in relationships. Our primary purpose is to focus on these central elements.

We also recognize that personnel are involved in numerous tasks—from daily operations to large-scale (multi-agency or multi-partner) projects. Thus, this guide is intended for use by individuals across the agency spectrum. First, it is designed as a reference point to summarize key concepts and helpful resources. It is also a diagnostic mechanism where single components (notably section 2 on management actions and desired outcomes) can be used as stand-alone tools for building trust within agencies and with stakeholders. Overall, the guide is intended to help communities achieve better fire management outcomes.

**Section 1:** We begin this planning guide by describing the relevance of trust in fire management planning and operations. The focus here is on the role of trust and trust-building—particularly for practitioners who implement programs and engage stakeholders. We also consider the critical responsibility of agencies to support these individuals.

**Section 2:** An essential part of this guide is a set of strategies for building trust at both the agency and practitioner level of fire management. In this section we differentiate between these roles and then outline a set of specific actions that agencies and personnel can take to help achieve desired outcomes.

**Section 3:** Based on feedback from our agency and stakeholder participants, we have included examples from each country to illustrate the role trust played in various fire management efforts. These local cases describe a range of management contexts and activities.

**Section 4:** We conclude by providing an assessment tool for management personnel. This involves a questioning process for assessing progress—to examine the local fire context, evaluate stakeholder interactions, acknowledge management challenges, and address factors that contribute to productive relationships.



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**In Brief:** Trust is a two-part conundrum. Trust exists within an individual; however, it is influenced by the qualities people look for in others they want to view as trustworthy. This section describes these relationships in the context of fire management. Here we 1) discuss the dimensions and different types of trust, 2) provide a set of trustworthy characteristics, 3) examine the intricate art of trust-building, and 4) recognize some of the management challenges inherent to building trust among stakeholders.

# The relevance of trust in fire management and operations

# Relationship of Trust and Fire Management

The primary participants in wildfire management are represented by three groups:

- **Management agencies**–government organizations responsible for wildfire management.
- **Practitioners/field managers**–local, on-theground personnel of a management agency. These individuals are in a position to interact with agency administrators, interpret organizational decisions and communicate with stakeholders, and implement programs on the ground.
- Stakeholders—all other management organizations, companies, communities, and citizens who have an interest or stake in local resources and the outcomes of fire management programs.

In recent years, each of these groups has seen the social impacts of wildfires in Australia, Canada, and the U.S. increase substantially. This is particularly true in the wildland-urban interface (WUI) where steady population growth has resulted in greater risk to people and property. These conditions present a serious challenge to forest management agencies and citizens. Effective strategies are needed for 1) pre-fire fuels reduction, 2) response during a fire, and 3) post-fire restoration programs. In response, management agencies have placed greater emphasis on community-based partnerships to build capacities—understanding, agreement, and support—for wildfire protection. Included in these efforts are programs such as FireSmart

Planning and trust-building absolutely have to happen together. If there is a disconnect between expectation and what people see, trust erodes. (community leader—U.S.)

(Canada), Fire Adapted Communities and Community Wildfire Protection Planning (U.S.), and Community Fireguard and Township Protection Plans (Australia).

Although ecological conditions and how agencies are organized vary between our countries, our collective research has consistently pointed to the importance of stakeholder trust in fire management agencies (e.g., Toman et al. 2011, McFarlane et al. 2012, Sharp et al. 2012). Relationships based on trust contribute to building effective programs in each country—particularly at the local level in at-risk communities. For example, where trust exists:

- *Individual managers* have the respect of stakeholders—they are viewed as credible and reliable.
- *Information sharing* is encouraged—people are more likely to communicate openly.
- *Problem solving* is encouraged, which leads to mutual acceptance of plans and outcomes.
- *Shared values and common problems* become the focus, rather than positions or egos.
- *Trust serves as an indicator* that stakeholders feel practitioners are effective land stewards.

To consider trust (and trust-building) as part of the planning process it is useful to recognize its various dimensions. Research in risk analysis describes *trust* as an attribute that exists in an individual who is willing to rely on another person or group (Siegrist and Cvetkovich 2000). In wildfire situations, trust usually involves an expectation that something will be forthcoming from the person being trusted, and there is some uncertainty about the outcome (Paton 2008).

Four preconditions have been identified that make trust an important dynamic among individuals—namely the presence of *interdependence*, *uncertainty*, *risk*, and *expectations* (Sharp et al. 2012). The table below helps describe these preconditions from a fire management perspective.The very nature of wildfire means all four elements are generally present in fire affected communities and highlights why trust plays such a critical role in successful management efforts.



Preconditions	Explanation
Interdependence	In most fire management situations, the interests of one party cannot be fulfilled without depending on actions of another. Fire and fuels cross ownership boundaries, requiring cooperation among agencies and property owners throughout the fire management cycle—whether it is to mitigate risk, respond during a wildfire, or recover after a fire.
Uncertainty	Both the physical and social conditions influencing fire management are complex and continue to change; this uncertainty is a source of risk. We can never be fully sure that others will fulfill obligations such as building capacity for wildfire protection or adequately communicating during a fire event.
Risk	People are vulnerable to the actions of others. For example, homeowners can feel at risk from conditions or practices on adjacent property. This situation often requires a leap of faith that others will act responsibly. In this sense, the presence of risk creates the opportunity for trust.
Expectations	Individuals anticipate that others will fulfill their obligations in a relationship. Essentially, this is faith in both the ability and follow-through of others. This could be an expectation that agency personnel will meet with the community to discuss options or that neighbors will do their share to mitigate fire conditions.

# **Different Types of Trust**

Fire management agencies operate within a structure where personnel—as individuals or in teams—plan activities and carry them out, often in public settings. Thus, multiple players exist in the trust-building equation. This includes management agencies (local, state/provincial, and federal) and more generally everyone who has a stake in the outcomes (e.g. property owners, recreationists, and organized groups). All have roles and responsibilities that contribute to the success of both long-term fire management efforts and agency-stakeholder interactions. Individual personnel—field managers and practitioners—are usually involved locally at all levels. They are in a position to interact with agency administrators, interpret organizational decisions for stakeholders, and implement programs on the ground. Within this organizational context it is useful to recognize there are different types of trust.

### Trust in agencies

How stakeholders feel about the (state/provincial or federal) management agency has been described by researchers as **organizational trust** (Earle 2010). Essentially, the key question is how well the organization demonstrates competence in its actions and fairness in decision-making. This often translates to procedural mechanisms such as how the agency coordinates efforts with other organizations, provides a legitimate role for the public in decision-making, and effectively implements management plans (Olsen and Sharp 2013, Shindler et al. 2011). It also involves how well an agency empowers its individual personnel to carry out these responsibilities. A trustworthy agency will support its field managers in achieving multiple objectives accomplishing projects on the ground as well as engaging stakeholders.

We should note that this form of trust can be confounded by people's views and opinions about the larger institution of government itself. When citizens have negative feelings, they frequently stem from frustration with the bureaucracy or its leaders in general, and not the personnel on local management units (Mazur and Curtis 2006, Smith et al. 2012). These feelings often are attributable to tension over politics and positions versus the public's view about the need to manage forest conditions at the community level. This situation amplifies the need for strong locally-based agency programs.

### Trust in individuals

*Interpersonal trust* usually involves relationships between individuals. From the stakeholder standpoint, this often means trust in field managers and outreach specialists who are the "face of the agency." The manner in which they carry out their jobs and interact with stakeholders influences the level of interpersonal trust in these settings. Stakeholders look to these personnel to make good decisions and effectively implement practices in local places. This highlights the need for individuals in these positions to have an understanding of community values as well as a good track record for both doing the job and having positive interactions with interested parties.

In many cases, especially in smaller communities, the nature of a field manager's involvement as a community member also influences views about their trustworthiness. Our workshop participants noted that their ordinary, dayto-day interactions with other residents—as neighbors, parents, and regular citizens—could not be separated from their role as agency practitioners. Most saw these relationships as a way to reinforce and maintain trust within the community.

Regarding the organizational versus interpersonal trust situation, our research indicates that where trust has been earned by individual personnel it can override a lack of trust in the larger agency or government itself. For example, we have observed settings where local agency practitioners have developed genuine relationships with residents who otherwise have a distrust of larger government—and Trust is not earned until you take action that shows you weighed and considered what people had to say. (agency manager—U.S.)

implemented fuel reduction programs that make sense in these communities (Toman et al. 2011).

## **Characteristics of Trustworthiness**

People look for trustworthy qualities in individuals they need to count on to make good decisions. It is also important that stakeholders recognize characteristics and actions which make an agency worthy of trust. Researchers have identified three general qualities that foster trust in natural resource management settings (Sharp et al. 2012, Pidgeon et al. 2003).

**Ability**: Perceptions of the knowledge, skill and competence of the agency and its personnel. Characteristics that demonstrate this component include professional expertise, leadership and decision-making skills, and open communication about risks and benefits.

**Goodwill:** The extent to which an individual believes the agency and its personnel will act in one's best interest. Characteristics demonstrating this component include sincerity, inclusiveness (giving others a say), responsiveness, and empathy for negative impacts a wildfire may have on individuals.

*Integrity*: Belief that the agency and its personnel are seen as acting in accord with a set of values and norms shared by the community. This component includes fairness, transparent decisions, reliability, and promise keeping.

While these attributes are common in most settings, our research in fire affected communities suggests a



dynamic nature exists among these trustworthy qualities. In other words, their relative importance can change with the circumstances. For example, *ability* and *integrity* are essential qualities before a fire, particularly in planning and implementing fuel reduction activities. Although these two qualities are still important, the focus during and after a fire may shift to the *goodwill* exhibited by agencies and personnel. We noted this shift with the 2009 Black Saturday fires in Victoria (Sharp et al. 2012) as well with large fires in Oregon (Olsen and Shindler 2010). In both cases how management agencies demonstrated goodwill (e.g., care, compassion, responsiveness) was essential in post-fire relationships.

# The Art of Trust Building

The fact that the wildfire problem is too big for any one agency to handle alone highlights the need to actively (perhaps strategically) build trustworthy relationships for reaching agreement and taking action that has widespread support. It is important to note, however, that skepticism rather than trust—usually is the starting point in most agencystakeholder interactions. Simply put, agency personnel and stakeholders must often interact with individuals they do not know or have little experience with. Each participant will calculate the risks of their involvement and proceed accordingly.

In these situations, a lack of trust can be beneficial when it involves healthy skepticism—or critical thinking. For example, potential participants will consider the level of expertise among managers, if local concerns will be given adequate attention, or whether a person or agency will act responsibly. The parties will need to trust each other enough to allow them to first work together—then examine the options and eventually agree on decisions. From a practical standpoint, people need time and experience before they come to trust others. In this way, healthy skepticism is important in fostering respectful discussion and deliberation (Parkins 2010).

Skepticism is born of historical baggage and an unwillingness to step back from your ego and acknowledge there may be other answers, not just one. (NGO member—U.S.)

In some communities, building relationships and trust is already an ongoing process. For others, having an understanding of the process—and a set of tools for getting there—can help willing participants achieve such outcomes. It is useful to think about trust building as a circular process, represented here in the *Trust Building Loop* (adapted from Huxham and Vangen, 2005). As depicted, two elements are important to begin. First, when participants interact they form expectations about the intended outcome and how others will contribute to achieving it. This is often based on reputation and past behaviors. The second involves risk taking. Initially, sufficient trust must exist for the parties to risk entering into a cooperative effort. The loop suggests that each time an outcome meets expectations, trust is reinforced. The outcome becomes part of the relationship, increasing the likelihood of further positive interaction. Increased trust reduces the sense of risk among parties and provides the basis for more ambitious efforts.

I don't think trust comes accidentally. You have to plan to develop trust... there's a process involved. (agency representative—Canada)

# **Central Factors in Trust Building**

Central factors in building trust-and sustaining the trust-building loop-most always involve skillful communication and attention to group dynamics that help foster meaningful give-and-take. These more informal interactions are perhaps the most productive form of relationship building. Thus, coming to trust one another is about building relationships. Certainly this means attention to open, interactive approaches as a way to include multiple parties who have a stake in the outcomes. This will involve giving people a chance to air their concerns or ideas, understand one another's views, and creating an atmosphere in which individuals can find common values among many positions (Shindler et al 2011). Stakeholders will see a more collaborative approach as recognition that their opinions are valued and utilized. This working style builds both community and agency capacity for reaching good decisions.

Another feature of the trust-building loop is the importance of procedural elements. These are the formal mechanisms that help assure equity and achieve balance in deliberations. These include identifying each participant's role, how decisions will be made, and who will make them. Essentially, these are guidelines for how people will work together.

### Acknowledge the Current Situation

For agency personnel, examining current conditions usually means evaluating a problem and determining management options. From the standpoint of trustbuilding, this involves assessing social conditions that surround the on the ground issue and what degree of interaction with other landowners or stakeholders is required. As an initial step, we suggest considering the scope and scale of projects.

# **Trust Building Loop**

Actions reinforce trusting attitudes

Build foundation for more ambitious plans & projects

Aim for realistic (initially modest) but successful outcomes

Form expectations about the future of the relationship based on reputation or past behaviors

Have sufficient trust to take a risk and initiate a cooperative effort

### **Trust Building Loop**

We recognize the trust building loop, though appealing, does not fully account for the complexity and ambiguity associated with many of today's natural resource problems. In short, the loop conveys trust building as a process of positive outcomes. Yet, in real life many factors can influence interactions within a community; the dynamic nature of relationships means the game is always changing. However, these ideas indicate trust can be built gradually by starting with modest but realistic plans (Vangen and Huxham 2003).

In order to build trust, the emphasis from the beginning should be for agency managers to listen first, then address specific concerns. Often, all people need is to be heard and to have their fears and concerns addressed. (agency practitioner—Canada)

### Small local projects

In many communities informal interactions regularly occur in which trust is built through mutual experience and successful implementation of low-risk activities. For example, managers assisting property owners to effectively create defensible space or field personnel notifying residents to expect smoky conditions during an upcoming prescribed burn. As described in the trust-building loop, trust evolves over time as participants interact and work toward modest local outcomes. Occasional setbacks do occur, but small wins continue to incrementally build trust among participants.

These positive interactions and local successes lay the groundwork for broader (mid-range) programs. These activities include specific fuel treatment projects, organizing community protection plans, or restoring forest lands after a fire event. As the scope of the projects grow, so does the number and type of stakeholders who are affected. Such projects also tend to be more visible within the community. These activities require a certain level of acceptance among parties for the planning process and its outcomes. Trust among players is an essential component for reaching agreement in these situations.

### Large scale projects

Recently, major planning efforts have emerged—often involving multiple government agencies, local or regional organizations, and citizens. These ambitious and more formal attempts usually stem from the need to address a major (often landscape scale) problem rapidly or to meet the requirements of a larger government initiative. Examples include restoring forest health, large-scale fuels reduction, and programs to address climate change. These efforts typically involve pronouncements of the formation of a "collaboration" or "partnership." In these situations, the stakes are high and conditions are complex. By their very nature they require coordination and sustained, deliberate action to maintain trust. Challenges to building trust are numerous as emotions, agendas, or positions can get in the way. Continuous attention to procedural considerations, as well as personal interactions, is required. Success is more achievable when

I have this hunch that scaling up from small projects to bigger ones—people will be watching to see if the process was legitimate. Eventually they will develop enough trust that even a 'no' down the line could be okay, but earlier in the process the 'no' could be disastrous.

(NGO member—U.S.)

participants acknowledge the set of conditions and expectations that exist in these comprehensive projects.

Taken together, these examples outline the range of the decision-making spectrum and also represent the very real co-dependent nature of building trust and successfully managing landscapes.

## **Management Challenges**

We must also recognize the many challenges involved in both undertaking and sustaining cooperative efforts with stakeholders. For example, capacity within agencies to commit to and reinforce these ideas (collaboration, trust building, outreach activities) may be an issue in some places. These capacities must be supported from the highest levels to ensure success. Staff turnover is also an ongoing problem—trust-building usually requires that people stay in one place long enough to build genuine relationships. In the fragile world of trust-building, longerterm relationships can help withstand missteps.

In addition, a loss of agency presence in communities has recently occurred (particularly in Canada and the U.S.) as some local offices are being consolidated, largely due to budget constraints. Thus, familiar faces are further from local issues. Another budgetary factor—the great expense of fire suppression associated with the number and size of fires today—means limited funds for other fire management programs. These include pre-fire mitigation and post-fire restoration where engagement and trustbuilding would normally occur.

Since the centralization of government, we've lost our connection with communities. Everyone used to trust the local ranger; we don't have that as much anymore. (agency practitioner—Canada)

Another challenge for management agencies involves the idea that building trust is an adaptive process, not a linear one. For example, a common factor in communities these days is *change*; simply, there now is more frequent movement into and out of rural areas. New individuals move in and bring their values and experience (or lack of it) with them. It is likely that communities will have different levels of knowledge and expertise. Different types of engagement may be required to identify concerns, build understanding, and lay the groundwork for agreement. These conditions highlight the value of trust being embedded as a key principle in the culture of fire organizations. As our workshop participants acknowledged, agencies and personnel must make a deliberate decision that collaboration is part of how they will conduct business. **In Brief:** Wildfire management is a complex arena with multiple players who have different roles and responsibilities that contribute to agency-stakeholder interactions. This section describes actions management agencies and individual practitioners can take to help build and maintain trust. Trust-building, however, should not be viewed as a predictable outcome arising from a prescribed set of actions. The contributory actions and desired outcomes depicted in this section are from research in communities that are achieving successful collaboration and building trust among stakeholders. Other local settings will also have unique attributes that influence trust. We encourage management agencies and personnel to assess their own situation (See Assessment Tools in this guide).

# Actions for achieving outcomes that build trust

A useful approach to trust-building is to first recognize the essential participants and their roles in contributing to productive relationships. This section describes actions that can be undertaken by an *agency* as well as the individual *practitioner*. This distinction is important in that the two have diverse roles. Agencies are government organizations with decision-making authority. Practitioners are on-the-ground personnel who implement programs. As described earlier in our discussion of organizational and interpersonal trust, stakeholders can have different perceptions about agencies and practitioners which ultimately influence the trustworthiness of each.

We have to make a deliberate decision to think of working collaboratively as a way of doing business... and trust-building is essential. I've never been to a workshop in the Forest Service about building trust. (agency manager—U.S.)

# **Management Agencies**

Management agencies operate within a set of policy parameters established by federal, state/provincial or local governments. While it is important to have trustworthy staff on the ground, research suggests it is unlikely that agencies can rely solely on staff working in the regions to build trust in the agency amongst local stakeholders. This emphasizes the importance of communicating agency "culture" to stakeholders in a way that demonstrates the agency—through its policies, strategies, and actions—is knowledgeable, shares community values and acts in the community's best interest. Agencies should initiate stakeholder engagement activities that enable personnel to demonstrate that organizational motives are consistent with public expectations (Ter Mors et al. 2010), and the agency shares the values of its staff who are in direct contact with stakeholders (Earle 2010, McCaffrey 2006).

I see many of these tools being used by field managers who are committed to collaboration and working together. I would like to see senior staff gathering around and going through it as well. (agency manager—U.S.)

Ultimately, how these ideas are interpreted and implemented influence trust across the region and in local settings. From a stakeholder standpoint, this includes the agency's reputation for carrying out its management objectives—in other words, the public's perception of pre-fire practices (e.g., fuel reduction), fire activities (e.g., fire suppression and evacuations), and post-fire restoration programs. This also includes public confidence in decisionmaking strategies that are transparent, open, and accessible. When stakeholders feel there is a legitimate planning process that also allows them to have a role, this helps legitimize the resulting plan.

### **Practitioners at the Field Level**

Practitioners are tasked with carrying out the actions of the management agency. Individuals on the front lines must know that team work and outreach activities are a priority within their organization. Stakeholders look to them to make good decisions and effectively implement practices. In the context of fire management, trust-building usually involves relationships between stakeholders and individual personnel. The manner in which these individuals carry out their jobs and interact with stakeholders influences how trust evolves. Essential skills most always involve genuine communication and attention to local concerns and places that are valued within communities. Often, these informal interactions between practitioners and stakeholders serve as the starting point for relationship building.



When stakeholders do not participate this should not be viewed as disinterest. Just providing opportunities helps build trust. Continue to reach out... be careful to take nothing for granted. (community member—Canada)



Trust is often unintentional... sometimes we do things that aren't designed to build trust, but they do build trust. Trust is money in the bank that is built up in 'peacetime' and pays dividends in the response and recovery phases.

(agency practitioner—Australia)

# Contributory Actions and Desired Outcomes

The intent with the following figures is to demonstrate how trust is built—with specific actions that contribute to desired outcomes. One figure addresses agency level actions while the other focuses on individual practitioners. We have organized them around our trustworthy quality themes: *ability*, *goodwill*, and *integrity*. The actions depicted here are from research in management settings where successful outcomes have been achieved. We recognize that not every action is a universal fit for all situations. However, they can be used to examine local experiences that lead to building trust. These examples are provided as an internal agency benchmarking and evaluation tool as well as a method for gaining feedback from local stakeholders. Collectively, these actions influence the ability of all stakeholders to work cooperatively toward desired outcomes. Thus, these ideas are at the heart of the trust-building process.

# TRUST-BUILDING BY AGENCIES

# **Contributory Actions**

# Desired Outcomes

TRUSTWORTHY QUALITY: **Ability** Stakeholder perceptions of the knowledge, skills, and competencies of the agency

- Support personnel to carry out multiple objectives—accomplishing projects on the ground and engaging stakeholders
- · Identify effective leaders with good decision-making and communication skills
- Allocate sufficient resources (including time) to solve problems
- Coordinate projects and resources across boundaries
- Appoint practitioners best suited for outreach roles
- Support the use of multiple methods (such as social media) to share information
- Promote information exchange with stakeholders (e.g. field tours, demonstration sites, town hall meeting formats)

Provide Leadership & Empower Practitioners

Effective Outreach

### TRUSTWORTHY QUALITY: **Goodwill** The extent to which stakeholders believe the agency will act in their best interest

- Organize wildfire strategies around local concerns and familiar places
- Develop consistent methods for engaging stakeholders about planned fuel reduction activities
- Develop internal capacities to respond to public concerns
- Have a system that provides specific, locally relevant, and timely information during a fire event

Sincere Engagement with Stakeholders

# TRUSTWORTHY QUALITY: Integrity

The extent to which the agency is acting in accord with acceptable values and norms of stakeholders

- Develop collaborative processes for meaningful public input and discussion
- Identify how decisions will be made and who has authority to make them
- Explain agency rules/laws that guide what is and what is not possible
- Demonstrate that organizational motives are consistent with public values
- Foster a culture of openness, describe uncertainties and trade-offs
- Publicly commit to multi-party relationships with other agencies and stakeholders
- · Identify relevant stakeholders and how each can best contribute
- · Discuss and agree on organizational constraints
- Support public initiatives that create a sense of ownership (e.g. FireWise, FireSmart, FireSafe)
- Follow through on commitments and keep promises

# Transparent & Open Decisionmaking

### Cooperation Among Stakeholders

# TRUST-BUILDING BY PRACTITIONERS/FIELD MANAGERS

# **Contributory Actions**

# TRUSTWORTHY QUALITY: Ability

Stakeholder perceptions of the knowledge, skills, and competencies of the practitioner

- Use on-the-ground projects as learning experiences—demonstrate fuel reduction and restoration treatments
- Describe the trade-offs of management alternatives
- Provide frequent progress reports to stakeholders; incorporate stakeholder suggestions and feedback
- · Make good and follow through on the job that you said you would do
- · Use windows of opportunity for timely messages
- Determine best tools for communication-tailored to the target audience

Effective Communication & Follow-through

Desired

**Outcomes** 

# TRUSTWORTHY QUALITY: Goodwill

The extent to which stakeholders believe the practitioner will act in their best interest

- Recognize local problems, add the agency voice to existing efforts to reach solutions
- · Incorporate local conditions and values into risk assessments
- Recognize the value of informal interactions with community members
- Encourage local initiatives such as neighbourhood fuels reduction, include stakeholders in problem identification and solutions
- Legitimize different kinds of knowledge (e.g., scientific, local experience)
- Establish common language among stakeholders for discussing projects
- Plan ahead to provide assistance/support during and after a fire

# TRUSTWORTHY QUALITY: Integrity

The extent to which the practitioner is acting in accord with acceptable values and norms of stakeholders

- Engage stakeholders in identifying risks and management alternatives
- Properly acknowledge when value differences exist—then identify shared values that can be a starting point for solutions
- Acknowledge good ideas that come from outside of the agency
- Partner with community groups for communication and outreach
- Describe steps in the planning process and how decisions are made
- · Provide consistent leadership and face-to-face communicaiton
- Be open and honest about uncertainties—saying, "I'm not sure" or "I don't know," is okay
- Be upfront about when you cannot be flexible or have other constraints (e.g. must follow agency rules, have funding limitations)

Inclusion of Local Concerns

Build Community Capacity

Shared Responsibility

# Transparent Decision-making

**In Brief:** During the workshops in each country, participants recommended we add examples of trust and wildfire management to the planning guide. We agreed, and provide them here to illustrate how trust plays out on the ground in Australia, Canada and the United States. These examples span the range of fire management activities including wildfire response, fuels treatment on public land, fire mitigation in communities, collaborative planning, and interagency partnerships.

# Fire Management and Trust-building Examples

# Wildfire Response

# THE HARRIETVILLE FIRE OF 2013, VICTORIA, AUSTRALIA

In Australia, the Harrietville fire started on January 21, 2013 in the Alpine National Park from a lightning strike in remote, rugged land in North East Victoria. Because the fire started on public land, the Department of Sustainability and Environment (DSE) was the responsible authority. The fire was finally contained on February 27 after 37,000 ha (92,500 acres) were burned. Two DSE fire fighters were killed when a burnt tree fell on their vehicle. There were substantial social and economic impacts as a result of evacuations because of the fire threat, road closures to a major tourism destination during a peak holiday period and the impact of smoke on visibility and comfort.

Within days of the fire starting there were media reports of disgruntled locals. They complained that DSE had failed to commit sufficient resources to contain the fire when it first started, including maintaining a crew to patrol the fire front overnight.

Business operators became increasingly frustrated as the fire continued to burn, smoke filled the sky, roads were closed and tourists abandoned planned trips. The concerns of local people were supported by the local federal Member of Parliament who wanted an inquiry. State Ministers, including the Deputy Premier of Victoria visited the area to assess the situation and reassure local people that everything possible was being done and to outline steps they were taking to speed post-fire recovery. In time, the Victorian Government announced an inquiry that would examine the "facts about how the initial response was managed by DSE and the CFA." The inquiry established that the fire became problematic when it escaped containment lines into remote, steep, densely vegetated and inaccessible areas and that allocating additional resources to fight the fire would not have prevented that from happening.

We should never assume that trustworthy relations is the starting place—that a community will trust us just because we have shown up. (agency practitioner—Australia)

### How was trust an issue?

From the outset it was evident many local people did not trust DSE and this lack of trust was shaping local interpretations of the Department's response to the Harrietville fire. Subsequent inquiry highlighted the poor relationships between DSE and the local community and that local people did not see DSE as trustworthy. This view is based, at least in part, on longheld perceptions that DSE is not a "good neighbour" because it does not actively manage the forests it controls, including properly suppressing pest plants and animals or carrying out sufficient planned burns ahead of the forest season (lack of demonstration of ability). Additionally, some believe that the DSE places biodiversity values ahead of other values such as



Trust has to be built before the fire arrives... proven through the fire event with actions that are consistent, responsible, and in the community's best interest... and reinforced after the fire by assistance and support to communities. (agency manager—Australia)

agriculture, tourism and motorised recreation which are important to many local people (lack of demonstration of goodwill and integrity).

This example illustrates that when trust is eroded stakeholders may misinterpret the actions of management agencies. In this case, the ability of agencies to get on with their work was negatively impacted. There was additional unnecessary anxiety for the community, stress for management staff, and further erosion of trust in DSE. Key recommendations of the inquiry included a community-led planning process at Harrietville and for closer ties between DSE and the trusted, locally-based and largely volunteer-staffed Country Fire Authority which is responsible for fires on privately owned land. Unless there is a deliberate attempt to expose and resolve the ongoing issues undermining community trust in DSE, including those related to perceptions that DSE is not a "good neighbour"—it is unlikely the level of trust will be improved ahead of the next fire season or next large fire.

One suggestion is that a community liaison officer be appointed to work with DSE, the CFA, and other local people to establish processes that enable issues to be aired and addressed. That important trust issues remain in Victoria's fire adapted communities—despite considerable focus by DSE on community engagement since the 2009 'Black Saturday' fires—illustrates the challenges faced by agencies in such contentious arenas. Some of the examples that follow also provide useful illustrations of how DSE might approach trust building in the future.



# Fuels treatment on public land

# FIRESMART-FORESTWISE, JASPER NATIONAL PARK, ALBERTA CANADA

The FireSmart-ForestWise (FSFW) program is aimed at restoring ecological conditions and reducing the threat of wildfires around highly developed areas (such as the town of Jasper) in Jasper National Park. The FSFW is a cooperative effort between several stakeholders, the Jasper Interface Steering Team (JIST), and Parks Canada. FSFW program engaged local residents and cottage owners in reducing the risk to their properties and garnered support for thinning and prescribed burning in the park. This is a good example of building personal trust through one-on-one relationships between agency staff and property owners, and of building public trust in the larger Parks Canada Agency. Improved relations have been attributed largely to the interpersonal trust developed during the FSFW program.

# Why was trust important in this situation?

Without the support of local residents and cottage owners the goal of treating 300 ha (750 acres) around the Jasper town site and restoring fire to park ecosystems was not possible. The Parks Canada Agency was clear that the fire management plan would not proceed without public support.

For so long government has not been transparent, but we are dealing with an increasingly educated population and they are starting to demand transparency. (agency practitioner—Canada)

# How was trust built?

The park's fire managers focused on gaining support for fuel modifications through small, neighbourhood initiatives. Parks Canada Agency supported staff in the approach of building trust and support one resident at a time. Assigning knowledgeable personnel (e.g., fire managers with many years of experience) with good communication skills was critical to developing confidence in the park's expertise. The JIST (a coalition of concerned residents and business people) was initiated by Parks Canada to ensure local concerns were considered. Small demonstration sites were established and residents worked with Parks Canada staff to gather and pile branches for burning or chipping. Fire managers also offered one-on-one risk assessments of residents' homes or cottages at no cost. Staff provided project updates showing what had been accomplished, outlined what remained to be done and gave credit to residents for their efforts. In addition, they participated in community events, developed interpretive activities, and had a section in a local newspaper dedicated to park issues.

# What fostered trust in this situation?

**<u>Ability:</u>** During neighbourhood work bees knowledgeable agency staff worked alongside residents and provided information and answered questions. They reinforced why fuels were being removed and this helped develop a sense of camaraderie—working together for a common goal. Residents developed confidence in fire manager's expertise and leadership.

**Goodwill:** Operating in the best interests of the community was evident through the formation of the JIST. This team provided an opportunity to include local ideas and address concerns. Nothing was done until residents on the committee were comfortable. The project started by addressing local concerns. The one-on-one risk assessments also provided opportunities for individuals to express concerns and have questions answered.

**Integrity:** The JIST helped ensure that the agency was acting in accord with norms and values of stakeholders. Stakeholders were engaged in problem identification and methods to reduce the risk, and decisions were made in collaboration with the team. As community residents, fire managers had a presence beyond official park duties and were viewed as understanding values that were important to all. Staff followed through on commitments by keeping appointments and providing updates on progress.



# Fire mitigation in communities PEAVINE MÉTIS SETTLEMENT, ALBERTA, CANADA

Peavine Métis Settlement is an Aboriginal community located in Northwestern Alberta. The settlement covers 213,117 acres (85,247 ha) of land consisting of boreal forest and grassland and is home to 1000 residents. The community is named after the pea vine, an early succession boreal forest plant that flourishes after a fire. The last major fire in 1952 burned over half the forest on the settlement, however no structures were lost. The community currently has about six wild-fires reported a year, although most have been small.

The settlement council is responsible for wildfire mitigation. In 2004, the Peavine forestry coordinator began Peavine FireSmart Projects, which includes wildfire mitigation activities conducted by settlement members on both residential properties and public land. The projects focus on vegetation management and include both year-round mitigation activities and short-term community projects. All aspects of the Peavine FireSmart Projects, funded primarily by the council, assist members by providing employment opportunities or by reimbursing individuals for mitigation carried out on their property.

# Why was trust important in this situation?

As in most Aboriginal communities in Canada, land and buildings on the settlement are not privately owned. Instead, residents at Peavine can hold title to a home and piece of land. Therefore, many members felt that reducing wildfire risk on both 'private' and 'public' lands at Peavine was the responsibility of the settlement. However, residents still wanted a say in what was done around their homes and in community recreation areas. Hence, it was important for residents to trust that the settlement was incorporating their values into activities proposed with Peavine FireSmart Projects.

When you make conversation occur on the ground, it changes the tone of the conversation... it becomes about the place, not the product. (community leader—U.S.)

# How was trust built?

The settlement employed its members, including the forestry coordinator and vegetation management crews to reduce wildfire risk across the community. Labour was provided at no cost to residents. For example, crews cleaned vegetation, built fire shelters, and provided free fire wood in recreation areas. They also provided free labour to Elders to reduce the wildfire risk on their properties. A complete description of all activities in Peavine FireSmart Projects can be found in Christianson et al. (2012).



# What fostered trust in this situation?

**Ability:** The forestry coordinator was a long term resident of Peavine and known for his firefighting ability and experience with the (former) Alberta Forest Service. He trained crew leaders and crews in effective techniques to reduce wildfire risk.

**Goodwill:** Labor was provided at no cost and work undertaken on private as well as public land, including for Elders. The forestry coordinator or his crew leaders personally approached residents to discuss the work that would take place on their properties and to receive their input.

**Integrity:** Peavine FireSmart Projects was developed specifically with the plan to incorporate local values. Residents felt the forestry coordinator shared local concerns and values, and was primarily interested in reducing wildfire risk on the settlement to protect the community.

# **Collaborative planning**

# DESCHUTES COLLABORATIVE FOREST LANDSCAPE RESTORATION PROJECT, OREGON, UNITED STATES

The Deschutes National Forest in central Oregon is the lead agency and primary organizer of the Deschutes Collaborative Forest Landscape Restoration Project (CFLRP). The program brings together five distinct collaborative efforts as well as federal, state, and local government organizations into one cross-cutting "super collaborative":

- · Central Oregon Partnership for Wildfire Risk Reduction
- Deschutes Fire Learning Network
- · Project Wildfire—representing community Wildfire Protection Plans
- Deschutes Provincial Advisory Committee-a joint effort of the Forest Service and Bureau of Land Management
- Upper Deschutes Watershed Council

The collaborative covers 150,000 acres (60,000 ha) of public and private lands. It creates multiple ways for agencies, NGOs, and property owners to come together on strategies that lead to fire-safe communities and restoration of forest landscapes. As intended, it is also building trust along the way.

# Why was trust important in this situation?

Fires in the area have significant social impacts as the area is highly desired for its amenity and recreation uses and new homes continue to be built in fire prone interface zones. Over a dozen major fires in the last decade have required numerous evacuations and recovery efforts as well as the need to focus on preventing future events. Previously, many residents balked at thinning practices or other management activities that altered the aesthetic quality of the landscape. Environmental organizations regularly challenged Forest Service management plans.

# How has trust been built?

After a contentious past, trust-building efforts began through a *small wins* approach. For example, several key personnel on the Deschutes National Forest committed themselves to staying in one place and worked continuously for 15 years or more on the same management unit. As managers and community residents they engaged citizens and built alliances with local groups. One of these was a local friends group that partnered with the agency to create a demonstration forest to help educate property owners and other publics about treatment options. A defining trust-building event was a bus tour for local residents just after a 90,000 acre fire in 2003. While on site, Forest Service field managers described post-fire conditions and led discussions with participants. These onthe-ground conversations improved understanding of potential actions and had a resounding effect on relations.

Small trust-building activities have continued to accrue as the Forest Service hosted annual town hall meetings, met with homeowner associations, listened to the concerns of local residents and organized additional on-site tours of fire affected zones as well as areas in need of treatment. Fire is no longer viewed as the domain of just one or two resource agencies, but a problem that everyone must own. Over time, most have now come to see fire mitigation measures as a requirement for a healthy forest.

A multi-stakeholder approach has contributed to trustbuilding as county, state, and federal agencies work together as partners. In particular, the State Department of Forestry works with homeowners to certify their property is fire-safe in some cases even providing small grants to neighborhood associations. Also NGOs, including The Nature Conservancy and Project Wildfire, have significant credible roles.

# What fostered trust in this situation?

**Ability and Goodwill**: Over the past dozen years, agency personnel have continued to build a reputation for competence by addressing risks and following through on plans for active management. Thinning projects have resulted in the public seeing an environment that is more fire-free, but also one that promotes habitat for highly valued, large "yellow belly" ponderosa pine. The Forest Service's leadership in the super-collaborative has demonstrated a willingness to share responsibility with other groups, resulting in greater trust among them. The collaborative also is viewed as a creative form of building an alliance among numerous smaller efforts.

**Integrity:** The Forest Service's commitment to support its own personnel and to put skilled individuals in outreach roles speaks loudly these days. Open planning processes and greater transparency in decision-making have created a more respectful relationship with stakeholders. In these local settings, agency personnel are seen as both resource professionals and community members. Field managers have frequent conversations with residents outside the usual agency "meeting-space" and show they share the same values about places that are important to local citizens. Most stakeholders can see an access point to join in a discussion or a place to air their concerns.

# **Interagency partnerships** TETON INTERAGENCY FIRE PARTNERSHIP, WYOMING, UNITED STATES

The Teton Interagency Fire Partnership is an example of how trust can be built both among agencies and with stakeholders. In the vicinity of Grand Teton National Park agencies at all levels work together across boundaries to protect and manage nearly five million acres. The partnership includes the National Park Service, the Bridger-Teton National Forest, the U.S. Fish & Wildlife Service's National Elk Refuge, and the local Jackson Hole Fire Department EMS. Publics vary considerably—from short-term park visitors, to repeat long-term visitors, absentee homeowners, and longterm community members.

The partnership enables these organizations to pool their resources and leverage the strength of each agency. For example, the National Elk Refuge has a small staff with little fire-fighting capability; however they do have personnel in information and outreach roles. The local fire department has a credible long-term presence within the community and finds it easier to interact with individual property owners than more remote large federal agencies.

All members of the partnership see the benefit to their organizations in "speaking with one voice" on fire matters, ensuring that the public's trust is not lost because of conflicting messages from different sources. They recognize that visitors, in particular, do not differentiate between land ownerships. It is better to have a single, unified fire message.

Trust is like respect in that it is actually earned. Never say something unless you can do it. (agency practitioner—Australia) The partnership also enables the group to develop integrated training opportunities and even share staff positions between the agencies. Frequent contact has brought the agencies much closer to trusting one another. The inclusive nature of this cooperative relationship has become their way of conducting business. As one member noted, "We wouldn't even think about not including our partners in a project. They may not have a role, but we don't decide that. We let them decide."

It is also clear the three federal agencies have put their best people on the front lines in outreach roles. These individuals are being supported in this effort, and been given time to start with small projects that build relationships. These commitments have been an important component of the partnership's success. The partners visibly demonstrate their organizational skills, professional cooperation, and collective efforts. As a result, they have achieved projects on the ground and effectively built trust and confidence with visitors, property owners, and community groups.



In Brief: This section provides a questioning process for local participants to examine the context in which they work, monitor their progress, and address factors that contribute to productive relationships. It may be used solely within management agencies or shared amongst partners and stakeholders. More open, interactive assessments are likely to improve public engagement. These are sample questions and are meant to encourage a more thorough discussion process. We recognize these monitoring and evaluation activities take time; however, trust-building is a central long-term goal of managing for healthy forests and communities.

# Assessment Tools

# Key questions for examining the current situation and management challenges

These sample questions are typically used for start-up efforts but are also useful in more well established settings.

- What is the history of agency-stakeholder relationships in the local area?
- How does this translate to trust today in my management unit? How are "we" doing?
- What is the scale of the current project and how does this influence the way we should respond to other organizations and key stakeholders?
- Is healthy skepticism present? Or just suspicion about motives?
- What additional discussion points could help improve trust-building within our community?

Recognize the importance of mutual learning. Make conversations occur on the ground with examples and demonstrations. Take action that shows interests have been addressed, or at least considered during implementation. The planning stage might help build trust but implementation is what keeps trust —do what you said you would do. (agency practitioner—Australia)

# Key questions for assessing progress

These questions align with the actions and desired outcomes discussed in Section 2 and the examples described in Section 3. Using these sections together can lead to highly productive conversations... and to the points that are most important to stakeholders. By acknowledging these questions and the discussions they induce, this will help to gauge the group's status, work or shortcomings, and will build on strengths.

### <u>Ability</u>

- Is trust-building a legitimate priority for our management unit?
- How is trust currently built among colleagues and superiors, and stakeholders?
- Which other agencies/organizations should be at the table having this conversation with us?
- · Are we completing projects we said we would?
- Are we providing leadership to build capacities in local communities?
- What past or recent factors have slowed progress or contributed to trust-building?
- Do we have a strategy for replacing key personnel (and their knowledge) when they move on?

### <u>Goodwill</u>

- Who are our stakeholders? Which ones are relevant to this project? How can we engage them?
- Do we have a common terminology for discussing projects? Have we adequately framed the project/ planning process for stakeholders? How so?
- Who is the decision-maker for this project? Is this clear to all involved?
- Have we adequately outlined agency regulations that guide what we can do?
- What type of commitment can our agency make to stakeholders about the role they can play?

### Integrity

- Thus far, what is the quality of our interactions?
- Are we viewed as fair and genuine in our relationships with stakeholders?
- Which practices give people concern? How so?
- What questions do stakeholders have about existing practices?
- How could we make better use of our community's resources?

# Assessments... an ongoing endeavor

Just as with ecological projects, monitoring and evaluating collaborative processes are important to their success. These assessment questions provide groups with ideas about how to monitor their progress and continue to build trust. At the start of any project, it is easy for positions and the usual arguments to get in the way; but the contributory actions and desired outcomes provided in this document offer ways for key players to learn about one another and discover mutual goals. The same is true with ongoing assessments of stakeholder interactions. Each step helps the group get past the residue of an us-versus-them mentality. We recognize that assessments are often one of the most difficult parts of the job-largely because they require continuous effort and a long-term commitment in places where participants come and go. Thus, responsibility for monitoring and evaluation of collaborative processes must fall to management agencies and their personnel.

Some of these key questions are going to be critical to ascertaining what stakeholders think about the agency or a particular program. We run into quagmires when we think everyone is on the same page, and we go ahead with things where we would have been better off going slower. (community leader—Canada)



Assessment questions are good self-evaluation tools for the agency. We need to talk to one another up and down the line, and then go out to talk with people about specific sites and management choices. How do we build trust? A lot of times it's about "show me"... demonstrating trust out on the ground.

(agency manager—U.S.)



# **Research Process**

A primary objective of this project was to identify factors that foster trusting relationships between public land managers and stakeholders in fire affected communities and to organize these in a useful format. The methods utilized were unique in that we were able to integrate research previously conducted by members of the research team (and others) with on-the-ground experiences of agency management personnel and key stakeholders.

To begin, our team summarized research on trust and trust-building into a draft document intended for use by resource practitioners and managers. We then identified regions in each country where agency personnel had been interacting with stakeholders on pre-fire fuel reduction activities and post-fire restoration programs. In Australia, northeast Victoria was selected because of its history of bushfires in extensive areas of native forests, including the Black Saturday fires in 2009. The Canadian counterpart included lands adjacent to Banff National Park in Alberta where substantial fuel reduction measures are underway. The U.S. site was a tri-county area of central Oregon where 13 separate fires had burned over 500,000 acres in the last ten years.

The research team worked with experienced agency personnel in Oregon (U.S. Forest Service and Bureau of Land Management), Alberta (Department of Environmental and Sustainable Resource Development), and Victoria (Department of Sustainability and Environment and the Country Fire Authority) to identify key individuals from local government, NGO's, and community groups. Together these agency and community leaders served as expert panels of 12-15 members at workshops held in their local settings-in Bend, Oregon, Kananaskis, Alberta and Wangaratta, Victoria. To stimulate thinking about the trust topic prior to the workshops, an early draft of this document was sent to participants. In each location a field day was also conducted at local wildfire sites to discuss current conditions and treatment alternatives.

The workshops were conducted as facilitated focus groups by the science team leader. Participants were asked to utilize their understanding of local conditions and experience of interactions with stakeholders to describe how trusting relationships are built. Participants also reflected on a set of desired outcomes that could result from building trust among parties and then agreed on specific actions that contribute to achieving these outcomes. Researchers were largely observers and note takers; however, at the end of each workshop time was spent in reviewing "here's what we heard" and making revisions based on participant feedback. Researchers de-briefed among themselves as well.

Subsequently, the research team reviewed our workshop notes, categorized thematic discussion points, highlighted quotes, and shared these findings with all participants. In each case, the participants judged the workshops to be universally successful. Overall, they supported the way in which their ideas had been represented. The discussion, quotations, and figures that make up this Planning Guide represent the primary outcome of these deliberations.



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### Resources

See the following examples for additional resources about case studies on building and maintaining trust:

- Christianson, A., McGee, T.K., L'Hirondelle, L. (2012) Community Support for Wildfire Mitigation at Peavine Métis Settlement, Alberta, Canada. *Environmental Hazards: Human and Policy Dimensions.* 11(3):177-193.
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# Australia

Department of Sustainability and Environment Country Fire Authority Victoria State Emergency Services Hume Region Integrated Fire Management and Planning Wangaratta City Council Parks Victoria Regional Development Victoria—Fire Recovery Unit

# Canada

Alberta Environment and Sustainable Resource Development Kananaskis Improvement District Alberta Tourism Parks & Recreation Kananaskis Emergency Services Kananaskis Delta Lodge

# **United States**

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