Engaging Communities in Prescribed Fire and Smoke

Best Management Practices Guide







Prepared for:
Washington Field Office of The Nature Conservancy
Washington Resource Conservation and Development Council

Prepared by:



Report Information:

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Prescribed Fire and Smoke Messaging Guide

The Prescribed Fire and Smoke Messaging Guide is designed with the local community practitioner in mind. This guide provides information on effective communication strategies compiled from seven case studies in the western United States. Each case study highlights a variety of outreach tools to implement **before**, **during**, **and after** a prescribed fire event.

While each case study provides unique ideas for community outreach tools, several themes are summarized to provide general guidance to practitioners, including:

Collaborate and dedicate
 resources. Designing and
 implementing a successful prescribed
 fire and smoke management program
 requires a coordinated multi-stakeholder
 approach and dedicated staff to
 administer the program.



Research from seven case studies was gathered to provide best management practices for practitioners seeking to implement prescribed fire and smoke management outreach.

- Make early investments they will pay off. Building trust is a fundamental requirement for community outreach efforts. Successful programs include meaningful and strategic opportunities to discuss information with residents and address their concerns well in advance of a prescribed fire. While upfront work can be more time and/or resource intensive, this approach pays dividends later.
- Develop a robust toolkit. Preparing materials, information and resources to have before, during and after a prescribed fire helps target different audiences and their concerns or questions. In addition, forming messages for various levels of prescribed fire education will allow for a progression of knowledge on the subject.
- **Get people in the field!** Creating opportunities for residents, media, elected officials and other community members to witness prescribed fire and its effects is an exciting and effective way to communicate its ecological benefits. It also generates participant enthusiasm for the process.
- Keep the messages going. Integrating prescribed fire messaging into ongoing, yearround activities – such as other wildfire outreach events or community meetings – promotes a higher level of community awareness and a greater degree of acceptance.



Community Case Studies

Seven in-depth case studies were conducted throughout the western United States to showcase a variety of tools and approaches used for prescribed fire and smoke management programs. Each case study was conducted by a phone interview with a primary program contact having firsthand knowledge and direct involvement in their prescribed fire and smoke management activities. Case study research identified:

- Unique local strategies and messages;
- Resources needed to perform specific outreach tasks (if information was available);
- A delineation of activities based on their occurrence before, during, or after a prescribed fire event, and any ongoing activities.

The Community Tools Matrix (below) captures specific tools discussed during research interviews, which are highlighted in each case study within this report. *Note: this matrix is not necessarily representative of all tools implemented by each community. Tool names also reflect those used by interviewees to capture accuracy of each conversation.*

Community Tools Matrix

	Ashland, Oregon	Deshutes County, Oregon	Flagstaff, Arizona	Leavenworth, Washington	North Lake Tahoe, Nevada	Winthrop, Washington	Woodland Park, Colorado
Agency Coordination	Х	Х	Х	Х	Х	Х	Х
Classroom Presentations			X		X		
Commercials		x					
Community Events			X	X	X	X	X
Community Needs Assessment				X			
Complaint Tracking				X		X	X
Door to Door Outreach			X	X			
Emergency Radio Station	X						
Field Tour	Х	X	х	X			X
Highway Notification	X						X
Information Hotline						X	
Informational Flyers		X	X	X	X	x	X
Informational Video	Х						
Interpretive Kiosks	X		x				
Interviews-Media Event						x	X
Posters		X				X	
Pre-Burn Announcements		X					
Prescribed Fire Map				X	X		
Press Release			х	X	X	X	X
Professional Marketing Plan		x					
Public Information Officers	Х						
Public Meetings		X		X		X	
Public Service Announcements		X					
Reverse 911 System	X						
Smoke Monitoring Station	X						
Smoke Sensitive List Notification/Direct Notification	x		x	x	x	x	
Social Media	Х	Х		Х	Х	Х	Х
Web Banners	٨	X		^	Α	^	^
	х	X	V	Х	Х		Х
Webpage	Х	X	X	X	Х		۸



Case Study 1: Ashland, Oregon

Ashland Forest Resiliency Stewardship Project

Name of Contact Chris Chambers

Forest Division Chief

Ashland Forest Resiliency Stewardship Project

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Overview

The Ashland Forest Resiliency Stewardship Project provides an example of a well-rounded forest resiliency plan that successfully incorporates prescribed fire activities. The City is situated in a valley prone to smoke inversions – with a population of 20,000 but a significant seasonal influx of tourists during the summer months, the timing of prescribed fire activity can be tricky. However, the Stewardship Project has been able to find creative and consistent ways to educate local residents and visitors on the role of prescribed fire and potential smoke effects.

Initial implementation steps focused on thinning vegetation in overgrown forests and communicating the need for prescribed fire. The Stewardship Project distributed information on proper forestry techniques throughout the community. When forests were ready for pile and broadcast burning, operations were kept small, allowing the community to assimilate to controlled fire and smoke. A grant from the PERFACT program (a cooperative agreement between The Nature Conservancy, USDA Forest Service and agencies of the Department of the Interior) provides funding for some of the following outreach activities.

Table 1.1: Community Outreach Activities in Ashland, OR

Implementation Timeframe: Before the Burn			
Activity	Target Audience	Purpose and Description	
Ensure Agency Coordination	Local Residents	 A meeting facilitated by the Ashland Forest Resiliency Stewardship Project was conducted with the major community stakeholders (hospitals, tourism board, Chamber of Commerce, etc.) to develop messages for Ashland residents and analyze the most effective communication tactics. Stakeholders meet every week to analyze media and outreach topics. 	



Build Interpretive Kiosks	General Public	 To increase public awareness on fire's natural role prior to prescribed fire within the community, stakeholders: Built and placed interpretive signs on a popular local hiking trail – seven years later this trail was within the first prescribed burn area. Signs highlighted fire's historical and natural role, and why prescribed fire is needed to restore the forest to its natural state.
Maintain Smoke Sensitive List Notification	Smoke Sensitive Individuals	 Two days before ignitions, emails are sent to a smoke sensitive list, which identifies information on: The prescribed burn location and planned events. How to mitigate the impacts of smoke. The ability of controlled burns to lower wildfire risk in the summer time.
Implementation	Timeframe: Du	ring the Burn
Activity	Target Audience	Purpose and Description
Utilize the Fire Department Radio Station	General Public	The Stewardship Project's partnership with the City's Fire Department enables use of the emergency radio station during prescribed burns. This reduces calls to dispatch and is at no additional cost to the Stewardship Project activities.
Post Highway Notifications	Affected Residents/ General Public	 To inform anyone who could be impacted by smoke: Signs are posted on highways and local roads during the burn. Messages provide the phone number for the emergency radio station.
Stage Public Information Officers	General Public	Public Information Officers (PIOs) are staged in town and near the burn site to have conversations on the use of prescribed fire and the current operation.
Utilize Reverse 911 System	Affected Residents	If a major smoke incident occurs, the Reverse 911 system is capable of pinpointing areas where smoke may affect residents.



Provide Field Tours	Elected Officials, Media, Interested Parties	During a recent successful burn, a group of city council members, weather service members, and a photographer were taken through a burn site to show: • Fire effects. • Operations that take place on the fire line.
Implementation	Timeframe: Af	ter the Burn/ Ongoing Activities
Activity	Target Audience	Purpose and Description
Utilize Smoke Monitoring Station	General Public	A permanent smoke monitoring station within city limits is primarily for wildfire use, but is checked during a prescribed fire for timely and accurate information about potential smoke hazards in the area.
Create and Manage Social Media Sites	General Public	 A Facebook page allows stakeholders to message prescribed fire updates quickly and efficiently: Messages include location and size of prescribed burns. Posts also highlight prescribed fire benefits, such as a healthy watershed and clean drinking water. One to two hours a week are dedicated to maintaining posts and tracking outreach through site analytics. Funds are designated for Facebook sponsorship of certain posts. "A really good Facebook post might get a couple thousand views, a professionally done post can reach 30,000 people." (Chris Chambers, Ashland Forest Resiliency Stewardship Project).
Provide Informational Videos	General Public	 The Ashland Forest Resiliency Stewardship Project website provides professionally made informational videos on the use of prescribed fire in the community, highlighting: Descriptions of all operations conducted and evaluations of the forest restoration work. A cohesive message from the Mayor, Fire Chief, and the Chamber of Commerce communicating the benefits of prescribed fire. The video cost was substantial, requiring "a couple hundred hours of staff time and \$1,000 a minute to produce" (Chris Chambers, Ashland Forest Resiliency Stewardship Project).



Case Study 2: Deschutes County, Oregon

Project Wildfire

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Project Wildfire

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Overview

Project Wildfire is the coordinating entity for prescribed fire communication within Deschutes County, OR. This organization has put an emphasis on both community outreach to its rapidly growing 157,000 residents and coalition building with stakeholders. With a grant from the Fire Adapted Communities (FAC) Learning Network, Project Wildfire hired a professional marketing campaign to assist in community outreach activities focused on prescribed fire. The campaign created a unified message of prescribed fire benefits, increased public awareness on prescribed fire and smoke impacts, and enhanced relationships with local media.

Table 1.2: Community Outreach Activities in Deschutes County, OR

Implementation Timeframe: Before the Burn				
Activity	Target Audience	Purpose and Description		
Conduct Professional Marketing Plan	General Public	 A professional marketing company funded through the FAC Learning Network utilized: Handouts in downtown areas. Public service announcements. Web banners with a landing page describing the benefits of prescribed fire. A 30 second Prescription to Burn commercial. Project wildfire received discounted rates from media outlets as a non-profit organization. The creation of the commercial cost \$250. The commercial aired 32 times for \$1,000. The web banners cost \$850 for 100,000 impressions. 		
Utilize Posters	Affected Residents	Directly before a prescribed burn, communities predicted to be affected will be notified via posters around the burn area.		



Distribute General Public service announcements through news outlets in Press Release Public the community are posted prior to ignitions. Information includes: Location of the burn. Expected duration of the burn. Ecological, defensible space, and smoke control benefits of prescribed fire. Implementation Timeframe: During the Burn **Purpose and Description Activity Target** Audience **Conduct Field** General Recently, tours were given by The Nature Conservancy **Tours** Public / during an active prescribed fire on a a 400-acre tree farm Interested slated for development: **Parties** • The prescribed fire was close to development and drew a significant amount of public attention. Enough resources were committed to the fire enabled several experienced fire personnel to explain the operations to concerned citizens. Implementation Timeframe: After the Burn/ Ongoing Activities **Activity Target Purpose and Description** Audience Facilitate Public General Meetings take place only when something goes wrong Meetings Public/ such as a smoke inversion or an escaped burn. Interested Project wildfire and the management agency in **Parties** charge will conduct the meeting. This tactic was used during an escaped prescribed burn in 2009. Manage Social General Social Media sites are heavily used by Project Wildfire. Media Public Messages are used for: Plans to initiate a burn. Location and activity of the fire. Pictures and videos of fire activity and smoke to keep the community updated on the fire's progression. Notification of completion. Site analytics are used to track the numbers and



segments of population reached.

Other government agencies, such as the local tourism board, will repost these messages. This is the most economical avenue for practitioners to reach the public. "Spending a small amount of money (\$50) for the social media outlet to sponsor a post can reach a much larger population." (Alison Green, Project Wildfire) Manage General Project wildfire's main webpage has a complete section Webpage **Public** on the importance of using prescribed fire to mitigate "mega fires" and the uncontrollable smoke that comes with it. **Conduct Field** General Post fire burn tours have also been implemented to **Tours** Public / educate the public: Interested Five tours were conducted with approximately 20 **Parties** attendees each. Interpretive resources were available through other local organizations, resulting in 10-15 hours of planning to make the first tour successful. Alison Green, program manager for Project Wildfire, shared, "After the first tour was complete, the following tours were much easier to implement."



Project Communication Examples





The prescribed burn last Thursday was a shining example of partnerships making the difference. The burn would not have been as successful without key participation from the Sisters Ranger District, Prineville BLM, Central Oregon Rappellers, Prineville Hotshots, Redmond Hotshots, Oregon Department of Forestry, Sisters Camp Sherman Fire, Black Butte Ranch Fire, Warm Springs BIA, and GFP.

Implementing a prescribed burn with all these partners illustrates how productive these relationships are in providing valuable training opportunities, as well as allowing us to further our mission in managing the landscape.



Project Wildfire Facebook post highlighting the local partnerships during a burn. Source: Project Wildfire



Case Study 3: Flagstaff, Arizona

Flagstaff Fire Department

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Overview

Flagstaff, Arizona has a population of 65,000 permanent residents and a substantial Northern Arizona University student population. A prescribed fire program was initiated in 1996, and many subsequent fire mitigation efforts, including the implementation of their Wildland Urban Interface Code and the Flagstaff Watershed Protection Project, are linked to the roots of this program.

The Flagstaff Fire Department attributes much of its ongoing prescribed fire program success to being the most trusted government agency in the area, conducting short duration burns close to homes, and utilizing university research to complement prescribed fire and smoke messaging. The following outreach strategies were developed by the Flagstaff Fire Department with contributions from the Greater Flagstaff Forest Partnership.

Table 1.3: Community Outreach Activities in Flagstaff, AZ

Implementation Timeframe: Before the Burn			
Activity	Target Audience	Purpose and Description	
Facilitate Agency Coordination	General Public	 Prescribed fire communications are largely isolated to individual jurisdictions: The Flagstaff Fire Department will send a mass email to all 650 city employees notifying them of prescribed burning in other jurisdictions. This distributes information quickly, supplementing outreach done by the burning agency. This strategy is the most economical outreach practice before a burn. 	
Perform Classroom Presentations	Flagstaff Students	Several class rooms in the Flagstaff Area have begun to teach fire ecology and the Fire Department presents to those classes when invited.	



Community Events Coordination	General Public	While planning for a prescribed fire, the department will check to see if there are major events being held outside to ensure the burn is not scheduled during that time.
Distribute Press Releases	General Public	Prior to a burn, the fire department will generate a <u>press</u> <u>release</u> for newspaper, radio and social media sites. This information includes:
		 Where the burn is located. When it is planned. What fire and smoke effects to expect. A message enforcing why they are burning.
Distribute Informational Flyers	General Public	Flyers with contact information and tips on avoiding smoke are distributed throughout the community.
Maintain Smoke Sensitive List Notification	Smoke Sensitive Individuals	Major community institutions, such as schools and hospitals, as well as individuals on the smoke sensitivity list will be directly notified by phone to allow them time to take precautions.
Implementation	Timeframe: Du	uring the Burn
Activity	Target	Purpose and Description

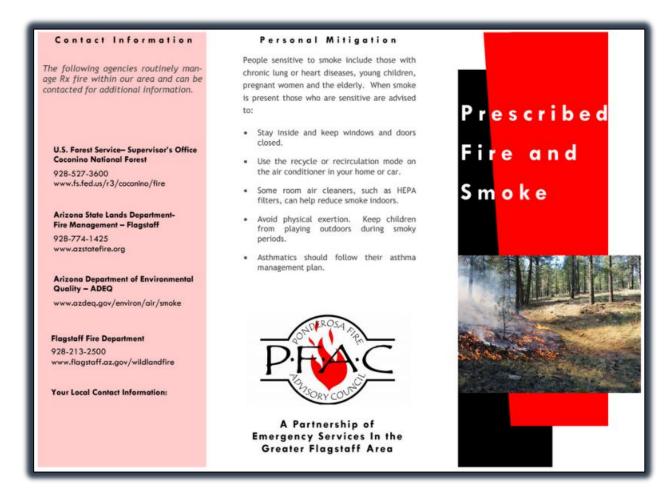
Implementation Timeframe: During the Burn			
Activity	Target Audience	Purpose and Description	
Conduct Door- to-Door Outreach	Affected Residents	 The Fire Department has conducted burns immediately adjacent to homes. Before ignitions: Three firefighters dedicate a half-day going door to door during and after the burn to explain the conditions and actions taken. While resource-intensive, it is the most effective outreach. "This can be viewed as an investment into the relationship with the community, mending any backlash from the community that is affected negatively would cost much more money and time. During a [recently] scheduled burn, a homeowner was sensitive to smoke and could not leave the premises due to recent surgery. Burning operations were suspended until the individual could take proper precautions. This action has paid dividends in the community and that individual has become a champion of the prescribed fire program". (Paul Summerfelt, Flagstaff Fire Department) 	



Adjust Duration of Fires	General Public	Prescribed fires are designed to be of short duration (two days). Smaller burns and a shorter duration of smoke is more tolerable within the community.
Field Tour/ Public Familiarity	General Public	Most of the prescribed burns done are within municipal boundaries, allowing the community to see the effect of prescribed burning first hand and on a regular basis.
Implementation	Timeframe: Af	ter the Burn/ Ongoing Activities
Activity	Target Audience	Purpose and Description
Coordinate Messaging	General Public	 Key messages focus on defensible space and protection of the community while providing for the best practices of fire ecology: Smoke aversion and the controlled timing of smoke in the community is a message used within the community, but is not the main message used by the Fire Department.
Build Interpretive Kiosks	General Public	 In conjunction with the Greater Flagstaff Forest Partnership: Two interpretive kiosks have been built in County parks where prescribed fires have taken place. One sign includes a covered area and places to sit and the other is a smaller sign. The larger Kiosk was \$15,000 to build and the smaller \$3,000.
Maintain Webpage	General Public	 The Flagstaff Fire Department's Wildfire Management Page contains several prescribed fire documents: The document titled "It Works," highlights wildfires that were successfully suppressed due to previously implemented prescribed fires. Post event economic reports of detrimental fires, such as the Shultz fire promote the need for a prescribed fire program. The Flagstaff Interface Treatment Prescription and Fighting Fire with Fire document describe the burning process. The Greater Flagstaff Forest Partnership also communicates within the community and provides educational information on their website http://gffp.org/.



Project Communication Examples



Personal Smoke Mitigation Flyer used by the Flagstaff Fire Department. Source: Flagstaff Fire Department



Case Study 4: Leavenworth, Washington

Chumstick Wildfire Stewardship Coalition

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Chumstick Wildfire Stewardship Coalition

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Overview

With a population of 1,965, the City of Leavenworth is highly dependent on its natural amenities to support its substantial tourism industry. A mountainous landscape limits cell phone and internet coverage, requiring local wildfire practitioners to rely on mailers and community events to communicate prescribed fire activities. In 2016, a total of 800 acres was treated through prescribed burns (large scale burns have not been conducted in the last ten years on the National Forest in the Leavenworth area). The Chumstick Wildfire Stewardship Coalition (CWSC) performed the following actions in a 6-week window on three-quarters of their allocated outreach budget. Expanded community outreach for prescribed burns was conducted in the Leavenworth area from funding made available by Washington House Bill 2928.

Table 1.4: Community Outreach Activities in Leavenworth, WA

Implementation Timeframe: Before the Burn			
Activity	Target Audience	Purpose and Description	
Perform Community Needs Assessment	Community Stakeholders	 As a first step, the Coalition contacted local stakeholders who frequently communicate with the public (Chamber of Commerce, Hospital, Department of Transportation, Emergency Management Office, Firewise Communities). A 12-question survey inquired about local outreach strategies and their procedures to process questions of smoke in the community. A community stakeholder meeting was held with land management agencies to identify outreach objectives and establish a smoke sensitive population list. An outreach working group was formed to develop a complaint and inquiry tracking process and strategies for an outreach campaign. The focus was on benefits of prescribed fire to wildlife, aesthetics and health in outreach campaign messaging. 	



Conduct General Community events were recently used to message Community Public prescribed fire to the public: **Events** The local Salmon Fest, a natural resource educational event, informed 2,000 students and 1,000 adult attendees of the ecological benefits of prescribed fire and included a photo series of Washington burn sites in various stages. A local Lion's Club meeting was utilized to discuss health concerns of smoke and the actions to mitigate them. After the meeting, the club shared information at highway "coffee breaks" to inform travelers of prescribed fire operations, significantly reducing calls to local dispatch. Coordinate General A complaint tracking system was devised for all major Complaint **Public** stakeholders identified to receive inquiries regarding **Tracking** smoke (hospital, chamber of commerce, etc.). Per the information recorded, the call volume was 20% of previous years. Affected Perform Door When burn areas were adjacent to development, the to Door Residents local fire department went home to home to inform the Outreach residents of the operations. **Conduct Field** Interested Fifty residents attended a pre-burn field tour, visiting burn Tours **Public** areas in various phases of prescribed fire introduction (ten year, five year, two year, and six months) and the units planned to be burned in the fall: "The tour allowed the public to see firsthand that prescribed fire is used as a maintenance tool and needs to be introduced on a regular basis." (Hilary Lundgren, CWSC) A post fire field tour was planned for residents to view the after effects of the prescribed fires. however due to early winter weather conditions, the tour was cancelled.



General Public

A <u>Planned Prescribed Fire Activities</u> map was generated by the Forest Service showing the planned burn units, completed burn units, and potential high smoke concentration zones during burn operations. A QR code was included on all mailers, allowing interested residents to quickly view the map information.



Generate Press Releases	General Public	In coordination with the outreach working group the local Forest Service Public Information Officer (POI) generated two press releases for the local newspaper. At the same time the Chumstick Coalition developed additional press releases discussing the benefits of prescribed burning.
Implementation	Timeframe: Du	uring the Burn
Activity	Target Audience	Purpose and Description
Conduct Public Meetings	Interested Public	During a prescribed burn, the town of Leavenworth hosted the " <u>Era of mega Fires</u> " presentation with a panel of prescribed fire experts to field questions. Pictures of the burn in progress were sent from Forest Service personnel to be displayed at the meeting to highlight local actions.
Maintain Smoke Sensitive List Notification	Smoke Sensitive Individuals	 The county emergency management office has an existing alert system sending texts and emails to inform residents of emergency situations: Alerts were sent out every week to update residents on the progress of prescribed burns in the area. 2,000 people are registered for the service.
Maintain Social Media	General Public	The Forest Service PIO utilized their <u>Facebook</u> and Twitter accounts to provide daily updates to the public. Partnering organizations reposted this information by 9am in the morning.
Implementation	Timeframe: Af	ter the Burn/ Ongoing Activities
Activity	Target Audience	Purpose and Description
Maintain Webpage	General Public	The Chumstick Coalition Website includes the planned prescribed fires map and links to all Chumstick Coalition social media sites.
Distribute Informational Flyers	General Public	Due to demographics and geographical challenges in the area, many residents do not use electronic modes of communication. Outreach tactics were focused on a series of direct mailers correlated to community events and actions before, during and after the fire.



The three mailers reached a total of 5,200 residents in the Leavenworth area:

- Before the Fire, Mailer 1: focused on prescribed fire definitions and processes while inviting residents to the community meeting and prescribed fire field tour.
- During the Fire, Mailer 2: included information on best practices to avoid smoke for sensitive populations.
- Post Fire, Mailer 3: informed the public on the location of burns and re- addressed health and safety messages.



Project Communication Examples



Prescribed Fire Mailer describing the burning process in a controlled setting. Source: Chumstick Wildfire Stewardship Coalition





Prescribed Fire Mailer describing the burning process and the benefit of controlling smoke. Source: Chumstick Wildfire Stewardship Coalition



Prescribed Fire Mailer highlighting the burn approval process. The QR code links directly to the prescribed fire map. Source: Chumstick Wildfire Stewardship Coalition



Case Study 5: Lake Tahoe, Nevada

North Lake Tahoe Fire District

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North Lake Tahoe Fire District

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Overview

The Lake Tahoe Basin has 15 land management agencies within four counties in a 200,000-acre area. The local population is 55,000 full time residents, and 75% of homes within the Basin are vacant or are second homes. Many prescribed fires occur close to, or in, developed areas. Coordination of communications for prescribed fire, therefore, is a necessity.

The Tahoe Fire and Fuels Team has a representative from each land management agency in the Basin and some additional partners. The Team is tasked with providing a coordinated message of prescribed fire and smoke to the community. Because of the strong coordination efforts, residents are well informed and highly engaged. Ongoing education and outreach on additional wildfire safety topics such as defensible space, keep community fire issues at the forefront.

Lisa Heron, the Public Affairs Specialist for the Lake Tahoe Basin Management Unit of the Forest Service, is tasked with implementing the established outreach actions of the Fire and Fuels Team. When multiple prescribed fires are conducted at one time in the basin, four hours a week are designated to complete the following tasks.

Table 1.5: Community Outreach Activities in Lake Tahoe, NV

Implementation Timeframe: Before the Burn			
Activity	Target Audience	Purpose and Description	
Maintain Agency Coordination	General Public	 All prescribed fire and smoke activities are coordinated through the Fire and Fuels Public Information Team: The team consists of Public information officers from seven fire districts, the regional planning agency, CAL Fire, California State Parks, and others. The team meets once a month for two hours to ensure consistent outreach and messaging to the Lake Tahoe community. 	



Distribute Informational Flyers	General Public	Informational flyers are available on the website and are passed out at community events.		
Generate Press Release	General Public	The Tahoe Fire and Fuels team develops and distributes a weekly press release including listing all fires planned for the coming week. This information includes: • The name of the burn. • Agency responsible for the burn. • Descriptive location. • Type of burn. • Total acreage. • Date of planned ignition. • Duration of ignition. • Estimated smoke direction.		
Implementation Timeframe: During the Burn				
Activity	Target Audience	Purpose and Description		
Maintain Prescribed Fire Map	Interested Public	 A map of all current prescribed burns allows the public to easily locate the burn areas: The location and duration of the burns are coordinated with the responsible agency and posted to the website. This map also connects residents to the information that is provided in the press releases with the addition of the Burn Manager's phone number. 		
Maintain Smoke Sensitive List Notification	Smoke Sensitive Individuals	Smoke sensitive individuals such as the elderly or asthmatics, can sign up for a notification list available through the website. Individuals on this list are notified the day before the burn through an email or text message, allowing them to take precautions during burning operations.		
Maintain Social Media Updates	General Public	Each agency conducting burns maintains a social media presence to post information about the burns and will post pictures of the fire along with before and after		



photos:

Partner agencies will re-post messages of prescribed fire to multiply the outreach effort.

		 Facebook and Twitter analytics are used to effectively provide messaging of prescribed fire and smoke. 		
Implementation	n Timeframe: A	fter the Burn/ Ongoing Activities		
Activity	Target Audience	Purpose and Description		
Conduct Classroom Presentations	Tahoe Students	Fire districts also partner with local sixth grade classrooms to conduct a <u>Prescribed Fire Open House</u> . Certain classrooms have been identified because of an unexpected inversion during a prescribed burn.		
Facilitate Community Events	General Public	 Fire district representatives attend community gatherings such as the region's summer concert series: The Tahoe Fire and Fuels team also holds monthly or bi-monthly events such as BBQ's, open houses, and wildfire safety expo's. These events promote discussion of wildfire, including the need for prescribed fire. 		
Maintain Webpage	General Public	 The Tahoe Fire and Fuels Team maintains a website during prescribed fire season that contains a prescribed fire and information section, the group's mission statement, a fire ecology section specific to the Tahoe area, and the fire map: The website describes the steps of implementing a burn plan and previous prescribed fire announcements. Messaging in this section focuses on the creation of defensible space in the community. Google analytics are used to effectively craft and update their messaging efforts. 		



Project Communication Examples

LEARN ABOUT THE BURN

PRESCRIBED FIRE OPEN HOUSE

When:

February 24, 2016 5:30 — 7:00 pm

Where:

North Tahoe Hebrew Congregation 7000 Latone Ave Tahoe Vista, CA

Who:

All Tahoe residents and visitors welcome!



ckyard by joining Lake Tahoe Basin land

Learn about the burn in your backyard by joining Lake Tahoe Basin land managers, fire agencies, and the Tahoe Expedition Academy's 6th Grade Pyramid Peak Crew at this community open house.

This event was made possible through support provided by the United States Forest Service and the Nature Conservancy to the Watershed Research and Training Center.



Prescribed Fire Open House Mailer. Source: Tahoe Fire and Fuels Team



Tahoe Expedition

Introduction

Local fire departments, in cooperation with state and federal forestry agencies have developed the community wildfire protection plan (CWPP). The CWPP describes how the wildfire threat can be reduced for Tahce's communities. An important part of Tahce's wildfire threat reduction plan is the intentional use of fire.

There is a large accumulation of vegetation or "fuel" present in many areas of Tahoe's forests. This fuel is capable of supporting high intensity, uncontrollable wildfires. Friequent, low intensity fires can effectively and safely reduce fuel amounts. The result will be a substantial reduction in the wildfire threat to human life, property, and Lake Tahoe's water quality.

The underlying goal is to manage the forest in a manner consistent with restoring it to pre-1870 conditions. While full restoration may take hundreds of years to accomplish, the steps taken in that direction will provide the benefits of improved forest health and wildfire hazard reduction in the near future.

Setting The Stage

Since fire has been absent for so long, there has been a considerable buildup of fuels. Under these conditions, prescribed burning cannot be safely performed. Work crews and homeowners can remove dead tress, thin live tress, and remove brush. This work creates the conditions necessary to safely reintroduce fire. Typically, there are two types of prescribed burning: understory and pile.

How Understory Burning is Done

The prescribed fire project is a well-planned, carefully orchestrated program involving the disciplines of fire ecology, fire suppression, forestry, and public safety. The important parts of the program are described below.

Training: Personnel have received extensive training and have been certified in prescribed burning.

Preburn Activities: Each winter a multidisciplinary team develops the "Burn Plan" for the upcoming fall burn season. During the summer months work crews start preparing the burn sites by creating firebreaks, clearing around high value trees, thinning dense pockets of brush, etc...

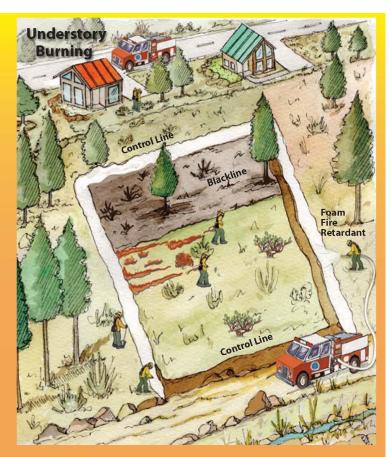
Burn Day: Unfortunately, the specific date of a proposed burn cannot be determined very far in advance. A"Go/No-Go Checklist" is used to decide if an understory burn can be safely and effectively conducted. If the necessary conditions are not optimal, the burn will be postponed until conditions "come into prescription." The illustration presented at right posteries a therical understory burn.

Tending the Burn: Burns are attended to minimize smoke production and maximize fuel consumption. Personnel closely monitor the site until the burn project is completed.

How Pile Burning is Done

Forestry work crews create burn piles when working in forested areas that do not allow efficient removal of the cut limbs and other tree and brush debris generated by these activities. This cut material, or slash, can serve as a fire hazard and a breeding ground for insect pest species. Consequently, it is important that this material be disposed of in a manner that does not cause harm to the forest or excessive cost and effort. When no roads or access ways are available, this material is usually burned on site. Burning slash is the most cost effective and efficient means for disposal of this hazardous material.

Pile Burning: When work crews thin a forest stand, they will stack the material into piles approximately 6 feet wide and 4 feet tail. These piles will be located away from other flammable material and will be spaced so as to create defensible zones between piles. In some areas there may be numerous piles. These piles are then left for several months to allow for sufficient drying of the material. When safe conditions exist, usually late fall through early spring, the





piles will be ignited and burned in place. Areas where piles have been burned will appear charred and will include partially burned wood chunks.

Pile Burning Safety: Burning activities are conducted by experienced crews. Areas around the piles are cleared of ground fuels to prevent fire from spreading into the wildland. Training, preburn activities, burn day procedures and tending the burn are all held to the same high standards as listed above for understory burning.

■ What Can a Homeowner Expect?

Although there are important benefits from burning, there may be some undesirable side effects. These include:

Smoke: Personnel go to great lengths to ensure that prescribed fire smoke will not significantly inconvenience homeowners or contribute to respiratory problems. Smoke, however, is a natural product of fire and some amounts are unavoidable.



Smell: A"campfire smell" will be present in your neighborhood for several days after the burn.

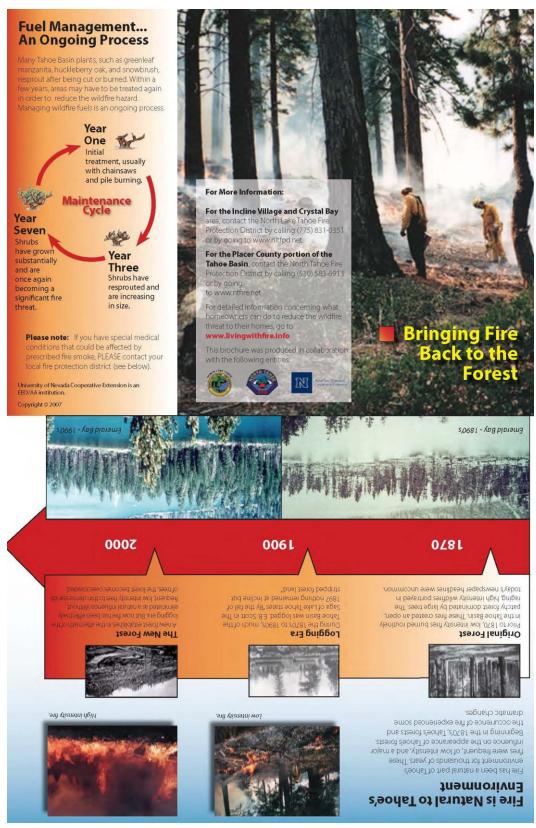


Scorching: Some scorching of lower tree branches is to be expected. After the fire, some needles will turn orange and eventually drop from the tree.



story burns, the treated site may appear charred and lifeless. This is a temporary condition. The following spring many shrubs will resprout and wildflowers may appear.





Informational Flyers explaining the maintenance cycle and the tactics used in prescribed fire. Source: Tahoe Fire and Fuels Team



Case Study 6: Winthrop, Washington

Methow Valley Ranger District

Name of Contact Meg Trebon

Former Assistant Fire Management Officer

Okanogan-Wenatchee NF Methow Valley Ranger District

Contact Information 509-996-4032

mtrebon@fs.fed.us

Methow Valley Ranger District Web Page

Overview

The Methow Valley's 4,000 residents have experienced a significant amount of fire in recent years, including the Okanagan and Carlton Complex fires. Fire and smoke has therefore become a sensitive subject despite a history of prescribed fire in the area. To effectively guide communications to residents, The Methow Valley Ranger District has continued to use their Prescribed Fire Public Information Action Plan. The goals of this plan are to "inform and when possible, educate people about prescribed fire use and impacts and provide channels to receive and respond to public comments and concerns." Many of its activities are highlighted below.

Table 1.6: Community Outreach Activities in Winthrop, WA

Implementation Timeframe: Before the Burn				
Activity	Target Audience	Purpose and Description		
Maintain Agency Coordination	Regional Agencies	Phone calls are made to other emergency and land management agencies to notify them of burn operations.		
Generate Informational Flyer	Methow Valley Residents	 Each spring a burn plan brochure is sent to valley residents with a registered mailing address: The brochure outlines the planned burning zones for the coming year. Additional notifications are sent to homes and businesses who may be directly affected by specific burn operations a week before ignition. 		
Develop Posters	General Public/ Hunters	Campgrounds and trailheads near or in the burn area receive posters with burn plan information three days before ignition.		



- Hunters in the area are targeted using these posters at known dispersed campsites.
- Information on these posters are targeted towards hunter safety when burning in the area. Specific messages include:
 - Heavy equipment and personnel traveling on roads.
 - Fire weakened trees in the burn area.
 - Low lying smoke in the morning.

Facilitate Public General Meeting

Public

During the NEPA analysis for proposed burn, public input is encouraged to help with the design of the burn project. This opportunity is also used to ask residents which outreach avenues are best to relay prescribed fire and smoke messages.

Maintain Smoke Smoke Sensitive List/Direct Contact

Sensitive Individuals

Three days before a prescribed burn, an email is sent to a registered list informing them of the plans to burn:

"This effort to inform the community before ignition operations has been appreciated by residents, and eventually lessened the outreach needed the day of the burn". (Meg Trebon, Methow Valley Ranger District)

Implementation Timeframe: During the Burn

Activity	Target Audience	Purpose and Description		
Conduct Complaint Tracking	Affected Residents	Calls will be returned within a 12-hour window.		
Manage Information Hotline	General Public	A Burn Information phone line utilizes a recorded message relaying burn activities for the week.		
Maintain Smoke Sensitive List/Direct Contact	Smoke Sensitive Individuals/ General Public	While prescribed burning is taking place, a daily or weekly email is sent, containing: The location and duration of burns. Pictures of operations taking place. Predictions of smoke in the area and the actions that will be taken to minimize the impacts.		



		 Invitations to the burn sites to witness ongoing operations.
		In the event of smoke impacting the community, an email is sent explaining the events of the day in detail and the actions that are being taken to correct the issue.
Manage Social Media	General Public	Information on the location of the burn is posted on the Forest Service social media sites and webpage.
Implementation	Timeframe: Af	ter the Burn/ Ongoing Activities
Activity	Target Audience	Purpose and Description
Conduct Interviews- Media Event	General Public	Local radio interviews disseminate information about burn plans and accomplishments. Successful burn information is communicated using pictures and articles in the National Fire Plan and local media sites, particularly any burning near development.
Distribute Press Release	General Public	A follow up press release is conducted with information on the success of past burns, and more detailed information on burning activities planned for the year.
Attend Community Events	General Public/ Hunters	Continued education and outreach towards hunters is performed using multiple local and state hunting outlets. This message contains the benefits and reasoning for the timing of prescribed burns, as well as information on fire prevention.



Project Communication Examples



Prescribed fire article describing the benefits of the burning process. Source: Methow Valley News



Case Study 7: Woodland Park, Colorado

Coalition for the Upper South Platte

Name of Contact Jonathon Bruno

Operations Director

Coalition for the Upper South Platte

Contact Information 719.748.0033; 719.433.6775

jonathan@uppersouthplatte.org

www.cusp.ws

Overview

Teller County and adjacent El Paso County have endured several destructive wildfires in the last fifteen years, including the Hayman Fire (2002), Waldo Canyon Fire (2012), and Black Forest Fire (2013). These events have made the 23,000 Woodland Park residents (Teller County) sensitive to fire and smoke in the area and elevated prescribed fire communications to a high priority for the Coalition for the Upper South Platte (CUSP). Thanks to enormous communication and outreach efforts, such as fielding all citizen inquiries and developing a cohesive message for land management agencies, use of local prescribed fire is possible.

A total of ten hours of outreach work is dedicated to each burn. One and a half hours are allocated to perform outreach the day before and morning of the burn. CUSP has recently been able to scale back its intensive outreach methods due to the success of their messaging efforts in prior years. They continue to experience a limited number of complaints and calls.

Table 1.6: Community Outreach Activities in Woodland Park, CO

Implementation Timeframe: Before the Burn			
Activity	Target Audience	Purpose and Description	
Maintain Agency Coordination	General Public	It is the responsibility of the burning entity to ensure information can be provided to the public by any agency in the area: • Information is sent to all coordinating agencies before ignition. • Providing the public with coordinated messages shows unity and communication between agencies.	



Conduct Interviews- Media Event	General Public	Forty-eight hours before a specific burn, the media is invited to the burn site to explain the goals and operations of the burn plan.		
Generate Press Release	General Public	At the start of the prescribed fire season, a blanket press release with anticipated burn site information is posted to social media accounts and sent to local news sources containing: The location of the prescribed burns. The goals of the prescribed burns. Organizations participating.		
Distribute Informational Flyer	General Public	A "Suppression Team Handout" was generated to quickly communicate CUSP's mission to Woodland Park residents. Depending on the complexity of the burn, post cards can also be utilized to notify residents and provide		

contact information for further questions.

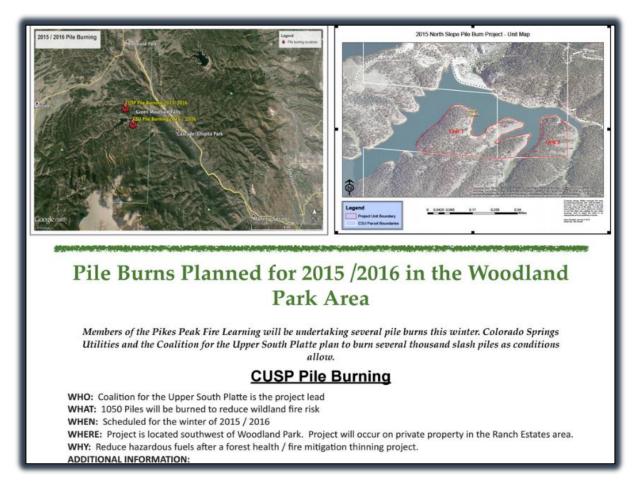
Implementation Timeframe: During the Burn				
Activity	Target Audience	Purpose and Description		
Post Highway Notification	General Public	Roadside signage and electronic sign boards are utilized to notify the public of burning operations while providing contact information.		
Maintain Social Media	General Public	Social media sites are used heavily with specific identifiers for each individual burn. Videos and pictures are posted to inform the public on smoke impacts, fire effects and post fire monitoring information.		
Maintain Complaint Tracking	Concerned Citizens	If contacted with smoke or fire concerns, Jon Bruno (Operations Director, CUSP) personally goes and visits with the specific community members. • He discusses specific concerns such as flare ups, fire effects, and smoke. • Jon also brings a portable air quality monitoring machine to alleviate individual's concerns on the health effects of smoke in the area.		



Implementation Timeframe: After the Burn/ Ongoing Activities				
Activity	Target Audience	Purpose and Description		
Conduct Field Tour	Affected Residents	If burn operations are near development, site visits will be scheduled to discuss post fire conditions and the success of the burn.		
Facilitate Community Events	Interested Public	 Every two years, a "Be Aware, Prepare" wildfire event is held in Woodland Park: Land management agencies and citizens meet to discuss local forestry practices, and guest speakers discuss all aspects of fire. While prescribed fire is a focus, a broader picture of how communities can live with fire is the emphasis of the meeting. Periodic presentations to the Chamber of Commerce and local business groups also promote the use of prescribed fire in the community. 		
Maintain Webpage	General Public	The Coalition's <u>website</u> is updated every week with new information about living with fire.		

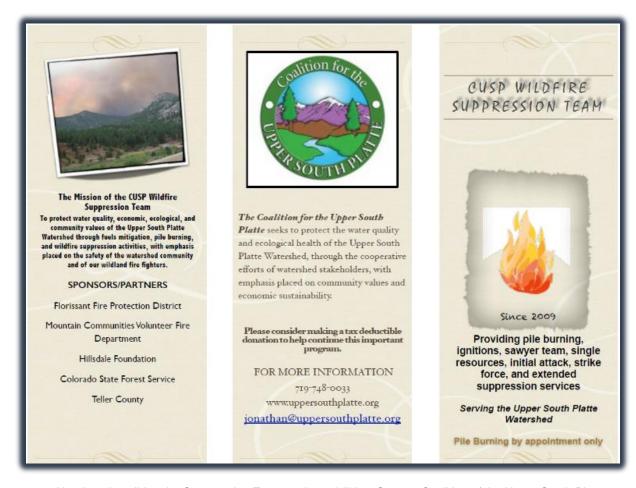


Project Communication Examples



Press release for a pile burn event. Source: Coalition of the Upper South Platte





Handout describing the Suppression Team and capabilities. Source: Coalition of the Upper South Platte



Additional Resources

National Communication Guides

A 2016 guide produced by the U.S. Environmental Protection Agency, U.S. Forest Service, U.S. Centers for Disease Control and Prevention, California Air Resources Board.

Wildfire Smoke: A guide for Public Health Officials

A 2010 Smoke Messaging Guide generated by the California Air Resources Board.

Public Relations: Communicating about Smoke

The NWCG Smoke Committee provides a forum for resource managers to address "technical, regulatory and policy issues related to planned and unplanned fire emissions, and air quality impacts on firefighter and public safety and health."

NWCG Smoke Committee

Numerous Forest and Fire Publications by the Florida Department of Agriculture and Consumer Services, including the 2013-2020 Prescribed Fire in Florida Strategic Plan.

 Florida Department of Agriculture and Consumer Services: Forests and Wildfire Publications

National Communication Research

A 2012 USDA Forest Service Publication discussing the "public's understanding of fire's role in the ecosystem".

 Research Perspectives on the Public and Fire Management: A Synthesis of Current Social Science on Eight Essential Questions

2016 USDA Forest Service research on the use of Social media to track smoke impacts in a community.

• Social media approaches to modeling wildfire smoke dispersion: spatiotemporal and social scientific investigations

A 2016 Collaborative article by the USDA Forest Service and multiple universities studying homeowner's attitudes towards various management practices.

Changing Beliefs and Building Trust at the Wildland/Urban Interface

A 1995 National Fire Academy study on the marketing strategy for fuel reduction in Palm Coast, Florida.

A Marketing Strategy for Wildland Fuel Reduction in Palm Coast, Florida

Southern Group of State Foresters Website

The Southern Group of State Foresters have created a regional campaign to encourage residents to "take a forest break" to enjoy the environment, promote conservation, and support prescribed fire practices.

- Visit My Forest
- GoodFIRES Website



Case Study Contacts

The following table provides a list of all interviewees who participated in this report's case study research. (Note: additional contacts were initiated, but only those who responded to interview requests are included below.)

Interviewees				
Name	Position	Position/Organization	Contact Information	
Forest Shafer	Forester	North Lake Tahoe Fire District	775-690- 7506	fschafer@nltfpd.net
Paul Summerfelt	Fire Management Officer	Flagstaff Fire Department	928-213- 2509	Psummerfelt@flagstaf faz.gov
Meg Trebon	Former Fire Management Officer	Okanogan-Wenatchee NF Methow Valley Ranger District	509-996- 4032	mtrebon@fs.fed.us
Jonathan Bruno	Operations Director	Coalition for the Upper South Platte	719-748- 0033	jonathan@uppersouth platte.org
Alison Green	Program Manager	Project Wildfire	541-322- 7129	Projectwildfire.pw@g mail.com
Chris Chambers	Forest Division Chief	Ashland Forest Resiliency Stewardship Project	541-552- 2066	Chris.chambers@ashl and.or.us
Hilary Lundgren	Director	Chumstick Wildfire Stewardship Coalition	360-464- 7501	Hilary@chumstickcoali tion.org
Lisa Herron	Public Information Officer	Lake Tahoe Basin Management unit, USFS	530-543- 2815	laherron@fs.fed.us

