Montana Fire Prevention and Public Libraries

GLOSSARY:

Defensible space -- Defensible space, coupled with home hardening, is essential to improve your home’s chance of surviving a wildfire. Defensible space is the buffer you create between a building on your property and the grass, trees, shrubs, or any wildland area that surround it.

Fire danger index – A relative number indicating the severity of wildland fire danger as determined from burning conditions and other variable factors of fire danger.

Fire Insurance -- A form of property insurance that covers damage and losses caused by fire. Most policies come with some form of fire protection, but homeowners may be able to purchase additional coverage in case their property is lost or damaged because of fire.

Fire management – Activities required for the protection of burnable wildland values from fire and the use of prescribed fire to meet land management objectives.

Fire prevention – Activities, including education, engineering, enforcement and administration, that are directed at reducing the number of wildfires, the costs of suppression, and fire-caused damage to resources and property.

Fire proofing – Removing or treating fuel with fire retardant to reduce the danger of fires igniting or spreading (fire-proofing roadsides, campsites, structural timber). Protection is relative, not absolute.

Fire protection – The actions taken to limit the adverse environmental, social, political, and economic effects of fire.

Fire regime – Time frame and pattern of naturally-occurring fires in a particular area or vegetative type, described in terms of frequency, biological severity and area extent. For example, frequent, low-intensity surface fires with one to 25-year return intervals occur in the southern pine forests of the Southeastern United States, the saw grass everglades of Florida, the mixed conifer forests of the western Sierras of California, and so forth.

Fire-resistant rating – The time that the material or construction will withstand fire exposure as determined by a fire test made in conformity with the standard methods of fire tests of building, construction and materials.

Escape route – A pre-planned and clearly identified route of travel that firefighting personnel or evacuees are to take to access safety zones or other low risk areas.

Evacuation Bag. A pre-prepared kit containing relevant emergency information and equipment could save valuable time and resources in the event of a relocation or evacuation.

Hardscape – Concrete patio or cement pad in proximity to a structure that creates a fuel break; recommended for a firewise home.

Home Ignition Zone The concept of the home ignition zone was developed by retired USDA Forest Service fire scientist Jack Cohen in the late 1990s, following some breakthrough experimental research into how homes ignite due to the effects of radiant heat. The HIZ is divided into three zones. Immediate zone: The home and the area 0-5’ from the furthest attached exterior point of the home; defined as a non-combustible area.

Fire Adapted Community. The National Wildfire Coordinating Group defines a fire adapted community as “A human community consisting of informed and prepared citizens collaboratively planning and taking action to safely coexist with wildland fire.” More fully, fire adapted communities are knowledgeable, engaged communities where actions of residents...
and agencies in relation to infrastructure, buildings, landscaping and the surrounding ecosystem lessen the need for extensive protection actions and enable the communities to safely accept fire as part of the surrounding landscape. Because every community is unique, the steps and strategies they take to improve their wildfire resilience will vary from place to place.

**Preparedness** – (1) Condition or degree of being ready to cope with a potential fire situation. (2) Mental readiness to recognize changes in fire danger and act promptly when action is appropriate.

**Pre-Evacuation** -- Evacuation Checklists. Prepare yourself and your home for the possibility of having to evacuate, drive out of a fire, and have a plan for all members of the family to communicate and have rehearsed multiple avenues of escape.

**Wildland Urban Interface** -- The wildland-urban interface (WUI) is the area where structures and other human development meet or intermingle with undeveloped wildland, and it is where wildfires have their greatest impacts on people. Hence the WUI is important for wildfire management.

**Wildfires and Public Libraries**—Kellian Clink --Montana Library Association

Montana Public Radio’s Podcast *Fireline* (https://www.mtpr.org/montana-news/2021-03-09/fireline-episode-01-suppressed) ignited my interest in the topic. Well worth a listen and thanks! Guiding sentiment: “Findings indicate that residents who have experienced a wildfire event, who are familiar with their county’s Community Wildfire Protection Plan, and who perceive wildfire risk to their community were significantly more likely to engage in Firewise behaviors than those residents without these experiences, orientations or household locations” (Wolters et al, 2017). Montana is one of the most dangerous states for wildfires based on the number of housing units at high to extreme risk of wildfire damage, according to Verisk Wildfire Analytics.

Number of housing units at risk: 482,800
Number of properties at risk: 137,800
Percentage of housing units at risk: 29%

And while fire is a natural part of Montana, three out of four wildfires in Montana are ignited by humans. Lawn and farm equipment, loose parts hitting a rock and producing sparks cause fires most often. (Larson, 2022). Montana is in a difficult situation, relying on lots of volunteer firefighters with increasing demands on them. About half of firefighters in a recent study had considered suicide (Gross, 2022) and a recent dissertation studied various health, mental health, and suicide behaviors of firefighters there are definitely consequences of being a firefighter (O’Brien, 2019). Some agencies do planned, or prescribed burns, to reduce hazardous fuel loads near developed areas, manage landscapes, restore natural woodlands, and for research purposes, A fire management plan and a prescribed burn plan is made all the conditions identified in a go/no-go checklist before
ignition. Recently the Hermits Peak fire started as a prescribed burn got out of hand and burned more than 340,000 acres in three counties in New Mexico. These relatively rare occurrences make it more important than ever for fire officials to build trust with the public, one article pointing factors that include officials’ trustworthiness based on shared norms and values, willingness to listen openly to stakeholders, and past performance of doing what was communicated would be done to increase trust based on a survey of people living near the Bitterroot National Forest. (Lijeblad et al., 2009). No matter how they start, the consequences of fires are great-- loss of life, loss of homes, and loss of tax revenues when people leave after a fire, which a lot do if they don’t have adequate insurance to rebuild. The environment is damaged, air quality suffers, and carbon is released. People lose their sense of place if they need to relocate. The community loses as well as individuals and families.

"In 2017, the Caribou Fire near the tiny community of West Kootenai, not far from the Canadian border, destroyed forty structures, including ten homes. In 2018, a number of historic and privately-owned cabins were taken out by the Howe Ridge Fire on the shores of Lake McDonald in Glacier National Park. And now fires have destroyed primary residences near the shores of Flathead Lake two summers in a row. The Elmo Fire started just two days short of the first anniversary of the start of the Boulder 2700 Fire, directly across Flathead Lake, which destroyed fourteen homes in 2021” (Franz, 2022).

Several resources speak to native’s use of controlled fires and/or acceptance of naturally occurring fires as part of land management. (Allen et al, 2010, Larson et al., 2020) One elder described this as "bringing back the forest using the Creator's process of burning” (Miller, 2010, 2): “The Creator has a match, and that match is the Thunderbird. He brings that match to the land when the forest gets too old and can't grow anymore. So, the Thunderbird comes to earth. After the rest is burnt new growth stirs” (Miller, p. 76). Anishinaabe used fires in the Boundary Waters for resin production, increasing the number of blueberries, reducing the number of insects, and creating a better ventilated forest, according to a fire ring study (Larson et al., 2021). The combination of the Boundary Waters becoming a designated Wilderness area and intolerance for wildfires [For
example: In the 1920s and 1930s, the U.S. Forest Service established a policy of controlling all fires at 10 acres or less by 10 AM the next day] taken together produced a more homogenous, densely forested landscape that is both more susceptible to catastrophic fires and less resilient to droughts” (Larson et al., 2021, p. 17). The FireLine podcast speaks to the complicated history of thinking about wildfires through Montana’s history: “In 1910, a wildfire the size of Connecticut engulfed parts of Montana, Idaho and Washington. Ed Pulaski and his crew were among the many people trapped by the enormous blaze. The Big Burn, as it came to be known, helped propel a culture of fire suppression that still persists in many forms” (Fireline, Episode 2) While fires “are getting bigger, hotter and more devastating” according to the podcast, the strong wind, the random spark, can lead to the wildfire that wreaks havoc, but when it’s under control, when clean-up is completed, new life springs up and feeds elk, lynx, and woodpeckers. The issue, then, is when fires and people’s homes are side by side, the phenomenon called the wilderness urban interface, or WUI. The fire isn’t the issue, it’s the “home ignition problem” (Fireline, Episode 6.2). A recent study from the National Forest Service found that “WUI grew rapidly from 1990 to 2020 in the U.S., expanding from 30.1 to 44.1 million homes (a 47% increase), covering from 580,000 to 760,000 km² (31% growth), with particularly rapid growth in the 1990s and 2000s” (Mockrin, 2022).

An increasing amount of research is devoted to understanding the reasons individuals and communities participate in ignition resistance activities, such as removing brush, using fire retardant materials, and making plans in the event of a fire. One article called “Trying Not to Get Burned” synthesized previous studies that seemed, in mixed findings, to be important factors: income, retirement status, residential or second home, place attachment and community attachment. Understanding the threat, having undergone previous wildfires, and perceptions of the risks are factors. If people understand the risk, they’re more likely to take actions that will keep them safe (Brenkert-Smith, 2012). One Colorado study of Boulder and Latimer counties, utilizing surveys and focus groups, found that wealthier, better educated folk had put a visible house number (to make it easier for firefighters), and removed branches and brush around the home. Fewer had installed fire-resistant siding or installed screening over roof vents. Very targeted communication, using “existing parcel-level wildfire
risk assessment data, which provide a quick snapshot of the conditions of individual residential properties pertinent to wildfire risk,” was found in Colorado to be more effective than community wide “nudges” to help people move towards preventative measures (Meldrum et al.,2021). One study focused on relationships. As Fire Adapted Montana writes in its website: “The loss of homes to wildfire is as much a social problem as it is an ecological problem” (Fire Adapted Montana). Montanans in Musselshell County, near Roundup, were the subject of a study (Carroll & Paveglio, 2019, p. 108) where ten interviewers talked to 51 residents, local elected leaders and fire officials involved with the Dahl Fire. One of the firefighters said, “They pick their houses and their view and then they figure out how they’re going to get water to it, … they don’t drill a well and find water and shelter first … They pick the spot where it’s going to be and it’s always on top of a hill” (Carroll & Paveglio, 2019, p. 8) Both residents and professionals operating in the areas affected by the fire indicated that participation or interest in pursuing these programs was low and piecemeal among residents in the Bull Mountains. As one interviewee described: “We called these people. We had a meeting at Bull Mountain Fire Hall with them, we discussed fuel mitigations and things they could do. Not only … with the county participation, but all the programs that were available; never had one person take us up on it—no public lands, no regulations. To be alone made them vulnerable” (Carroll, 2019, p. 109). Conversely those in Roundup proper had experienced a flood in the previous year and were immediately in action, providing meals, places to stay, bottled water, help with everything anyone needed.

Clearly, many homeowners are at risk for fire in Montana. They know that, the insurance companies know that, and there are multiple agencies that know that, and are willing to help people think about how to mitigate the risks, prepare for fire, rehearse for fire, and recover from fires. There are a multitude of agencies: Firesafe Montana, the Montana Department of Natural Resources and Conservation, the Montana Fish, Wildlife and Parks, Montana Fire Chief’s Association, the Northern Rockies Coordination Group, National Sheriffs and Peace Officers, National Park Service, the Bureau of Indian Affairs, the National Forest Service, and the Northern Rockies Fire Science Network, and the Montana Department of Emergency Services. In short, expertise abounds. How to get all the great resources these people produce into the hands of the people
who need it? The brochures, the videos, the Smokey Bear stuff for kids. That is where the public library can come in.

**Public Libraries**

We know the value of libraries to our patrons. A 2018 Knight Foundation poll and a 2018 Gallup poll shows that the public trusts librarians more than the news media [78% to 33%]”(Stricker, 2019). They come to find books, to use computers, to attend great programming, and so much more. Libraries are, in many cases, the center of the community, the hub where people come to have a social outlet, to greet their neighbors, and to be known. It’s one of the few places people can go without having to spend a nickel. According to Gallup, “Despite the proliferation of digital-based activities over the past two decades—including digital books, podcasts, streaming entertainment services, and advanced gaming—libraries have endured as a place Americans visit nearly monthly on average. Whether because they offer services like free Wi-Fi, movie rentals, or activities for children, libraries are most utilized by young adults, women, and residents of low-income households” (McCarthy, 2020). They also help people with computers, with filling out forms for government services, they lend tools and seeds. Billings’ library has a community closet for those in need, does art exhibits and recently had programming around the Holocaust. Librarians often have the pulse of a community, understand the parents, the elderly, the kids being homeschooled, the overall needs of the young students and the older ones. They can help the community, young and old, be aware of resources to help them prepare for the event of a disaster such as a fire.

There are so many agencies, it can be overwhelming. A librarian or committee (director, programming, community liaison) could review resources and choose the best resources for the very particular place, whether it be a concentrated traditional town or a community with both a hub and lot of outlying families. Videos, brochures, posters, and other ways of communicating the information are abundant. There are so many variables, from the lay of the land to the weather condition that determine the path of a fire. The more your community knows, the more ready they will be. If you only save one family, it’s an effort well worth making.
Starting with educating your library’s workers is a great way to start conversations around your community.

Consider traditional resources and extraordinary ones, such as the introduction of goats (Lovreglio, 2014).

Some of the options:

Living With Fire https://firesafemt.org/img/LivingwFireFSM20091.pdf


Sometimes communities have the best resources for that specific community, aimed at a variety of populations, young and old. Missoula has many (https://www.ci.missoula.mt.us/2290/Public-Education-Programs-Resources-for-) including Smokey Bear and Firefighter Frank puppet show. Some of the elements in the FireSafe Montana brochure called Living with Fire include descriptions of the different ecosystems in Montana; survivable spaces; home ignition zones; managed wildland zones; landscaping; and thinking through a plan for evacuation. The Montana Department of Natural Resources & Conservation has links for preparing your home, Some of the elements libraries might consider include thinking about how they can assist in terms of anticipation (raising awareness, programming for adults and children (ideally with your local fire prevention officials)), while a fire is happening (community communication, emergency center) and in the aftermath (helping amplify the voices of the municipal leaders about recovery, clean-up, etc).

Let’s adapt some of those directives for public libraries:

1. Create an institutional communication plan. Who is going to be in communication with which agencies and how is the library going to act as a communication hub or broadcaster in the event of a disaster? Phone/social media/Etc. Who in your community is connected by which means of communication? How are you going to reach them? Which staff will be in a better position to direct activities depending on the location of a fire? Are they designated? Do you have a phone tree?
2. Adopt an out-of-area library to be in touch with when you need a communication connection OUT of the possible disaster zone.
3. Consider being an emergency meeting location, what do you need to make that happen, how would you signal that in advance and in the moment?
4. Consider pets and large animals when considering being an emergency location. Is it doable? Pets can be a factor in people’s (and especially perhaps children’s) emergency location needs.
5. Familiarize yourself and your staff with the location and use of your gas, electric, and water main shut-off controls.
6. Update insurance. If you’re an emergency meeting location, do your insurance needs change? Can you change it in the moment?
Some of the best (based on your geographic realities) programming might be available through a local fire agency (Billings, for example, says “The Billings Fire Prevention Bureau provides public education to local schools and businesses. To schedule a station tour or an infield visit, and for additional information call Deputy Fire Marshal Tyrone Morgan at (406) 657-8426.”) Some cities link through to national fire prevention resources, such as Helena, which links through to Smokey Bear, among others.

One study looked at library tweets of multiple libraries during a hurricane in the Carolinas. Most of the tweets were about preparation, then recovery, but others included weather updates, emergency responses, and library service changes. (Seungwon, et al., 2021). Programming in the aftermath of a fire might include having insurance and FEMA people in the library with public terminals available for those who need to apply for aid. An article by Patin (2020) defines concepts related to community recovery, including social capital, and reported that, in her study of library directors, “First, every library director mentioned that their staff helped community members fill out FEMA forms. Though not explicitly mentioned in the data, the potential result of filling out these forms is both disaster assistance funds and access to temporary food stamps. Second, most of the library directors mentioned the community using computers and internet access to fill out and submit insurance claims. Third, three libraries said hosting Small Business Association (SBA) workshops and training for how to fill out forms to receive help from the government to get local businesses operational again.” (Patin, 2020)

In addition, information regarding waste removal in town, shelters, hot meals, and volunteer agencies that can help in the aftermath of a fire can be provided space to alert the community to available resources. In addition, library directors said, to make the library open as just a place of calm in the midst of the chaos: “Multiple library directors mentioned that in addition to using the space to rebuild a sense of community, people also used it because it was considered safe. “Some of our buildings acted as shelters, and other buildings were repurposed as an assistance center.” Agreeing with this, another reported, being a “safe place to shelter for people to get local information or just seek a little refuge. After disasters, libraries played an essential role in helping communities rebuild their sense of community by providing a place for the community. “I think that
just that general community center connection was massive, that people had a place to come together and see each other, and just step out of everything else for a little while” (Patin, p. 8).

The circle below shows some of the interlocking pieces of fire preparedness.

Libraries should be all over this, but especially perhaps, part of the community partnerships. Some of the elements that various resources speak to is having library personnel naturally in frequent contact with town leaders, thinking through who their patrons are and how they get information, making sure to include all the elements of the community and having the diverse voices inform choices about preparedness, dealing with an emergency, and shaping the rebuilding of a community in the aftermath. Stricker, author of “Ports in a storm” writes about our role in a disaster. She reminds us to “Ask if the library director or designated staff can have a
seat at the table in planning meetings, planning scenarios, briefings, and updates. Realize that this partnership must be sustained—that training, outreach, communication is an ongoing process” (Stricker, 2019). Libraries might well be one of the important community centers to spread the word about what mental and medical health resources are open and operative. Libraries might amplify the voices of power companies as they try to get grids up and running after an event. The library might be the locale for forums where local officials communicate out critical news. Librarians can have well organized bulletin boards so that people can check up on their neighbors and see what business are still open. In short, libraries can, if they are willing to organize, be the hub or at least a strong spoke of the wheel of the fire adapted community.

References


Fire Adapted Montana. Resources. https://www.fireadaptedmontana.org/resources-1


[https://digitalcommons.du.edu/cgi/viewcontent.cgi?article=1406&context=collaborativelibrarianship](https://digitalcommons.du.edu/cgi/viewcontent.cgi?article=1406&context=collaborativelibrarianship)


[https://doi.org/10.1016/j.soscij.2016.12.004](https://doi.org/10.1016/j.soscij.2016.12.004)

BOOKS!!!!!!!!!!!!!!!!!!!!!!!! (Children’s, Adult, Nonfiction)


Marino, G. (2020). We will live in this forest again (First). Holiday House.


PROGRAMMING

https://www.usfa.fema.gov/prevention/outreach/


https://nfsc.org/materials


Resources


Fireline Resources: https://www.firelinepodcast.org/resources/

Fireworks Educational Program: https://www.frames.gov/fireworks/home (Approximately 30 Fireworks trunks are available for loan)

Incident Information System: https://inciweb.nwcg.gov/accessible-view/

Minnesota Firewise in the Classroom: https://www.dnr.state.mn.us/education/wildfire/firewise_communityproject.html

National Fire Protection Association: https://www.nfpa.org/

National Interagency Fire Center: https://www.nifc.gov/fire-information/fire-prevention-education-mitigation

Ready: https://www.ready.gov/wildfires

Rocky Mountain Research Station: https://www.fs.usda.gov/rmrs/groups/wire-wildfire-research

Fireworks Educational Program: https://www.frames.gov/fireworks/home (Approximately 30 FireWorks trunks are available for loan)

Fireline Resources: https://www.firelinepodcast.org/resources/