



## ***DON'T DROP YOUR GUARD!***

This issue of Bighorn Basin Firesmart is the fourth for this new program to encourage homeowners in the basin to take charge of protecting their homes and other properties from wildfire. Some recipients of Issues #1 through #3 have already adopted defensible space principles, and are ready to start maintaining their homes and landscapes with fire safety in mind, and are working diligently to establish appropriate defensible space; something that may take several seasons to achieve conditions necessary to insulate a home from wildfires. Other readers may find the issue of protecting homes in the wildland urban interface to be a new one.

Wherever you fit in this picture, we hope to continue to provide you information that will enhance your knowledge, and encourage you to:

- (a.) Be aware of your exposure to wildfire hazards.
- (b.) Understand what you can do to protect your property.
- (c.) Seek information and assistance in evaluating and developing your protection.
- (d.) Maintain what protection you have developed (i.e., don't drop your guard).

Wildfire is a natural phenomenon throughout the nation, particularly in the west, and fire has played an important role in the natural environment of northern Wyoming. Early settlers had to learn to live with natural threats such as fire, and we are no different. Fire is still a common element in forest and plains environments, and as residents we must learn to live with it. Even though large significant fires do not occur every year in every part of the west, virtually every part of the west has seen years of significant and often devastating wildfire activity.

There have been significant fires in the basin in the past, and there **will** undoubtedly be more. The goal for fire managers is to “Attain a condition that assures all homes in the county can survive wildland fire without the intervention of the fire service.”

**Our goal will never be attained without homeowner participation and commitment.**

=====  
 If you have topics you would like included in future newsletters, please submit your suggestions and comments to [firewise@wytfs.com](mailto:firewise@wytfs.com) , or to the Big Horn County Firewise coordinator at the mail or telephone listings on Page 2.

Funding for this newsletter is provided by the Wyoming State Forestry Division, the Big Horn County Fire Warden, the U.S. Forest Service, and the Bureau of Land Management.

<u>In this issue:</u>	<u>Page</u>	<u>Special points of interest:</u>
County Firewise Coordinator Information,	<b>2</b>	<i>A message for Big Horn County landowners</i>
Changes to the Mountain Cabin Owner's Summer Cabin Protection Picnics		<i>Dates and locations of cabin owner picnics</i>
<b>A completed Big Horn County fuels project</b>	<b>3-</b>	<b>With before and after photographs</b>
2011 Wildfire Forecast & Fire Training	<b>4</b>	<b>Plus new information on beetle-killed pine</b>
Tips for effective hand piling of woody debris	<b>5</b>	<b>How to handpile for the best results</b>
<b>Be Ember Aware</b>	<b>6</b>	<b>Where flying embers start structures on fire.</b>
<b>Messages for cabin and home owners</b>	<b>7</b>	<b>Map to the Powder River District picnic site</b>
Firewise at work photograph	<b>8</b>	<b>Wildfire results with and without thinning</b>

**THE BIG HORN BASIN FIREWISE COORDINATORS ARE:**

**Big Horn County:** The County Fire Warden is Brent Godfrey (307) 568-2324. The Firewise Coordinator is Chris Weydeveld, [cweydeveld@wytfs.com](mailto:cweydeveld@wytfs.com), Technical Forestry Services, LLC, 6628 W. Riverside Dr. Casper, Wyoming 82604, or (307) 333-1098 (office), (307) 272-9533 (mobile).

**Washakie County:** Chris Kocher, Fire Warden, [ckocher@worlandfire.org](mailto:ckocher@worlandfire.org), P.O. Box 504, Worland, Wyoming 82401, or (307) 347-6379.

**Hot Springs County:** No Firewise Coordinator has yet been selected. Contact Jay Duvall, County Fire Warden, at (307) 921-1485, or [hscdwarden@gmail.com](mailto:hscdwarden@gmail.com)

**Park County :** Russ Wenke, Fire Warden, [rwenke@parkcounty.us](mailto:rwenke@parkcounty.us) 1131 11th Street, Cody, Wyoming 82414, or (307) 527-8551.

**AVAILABLE ASSISTANCE FOR BIG HORN COUNTY**

Big Horn County Fire Districts continue to receive grant funds to assist homeowners to identify and mitigate the risks of wildland fire to their property. Many home cabin owners throughout the County are adopting good Firewise principals and have greatly improved the survivability of their homes.

The Big Horn County Firewise program provides free property evaluations for everybody, and cost-share grant support for fuels reduction on private lands. To get your home and property included, contact the Big Horn Firewise Coordinator at the contact points listed above. See the next page for a completed project.



**ATTENTION ATTENTION ATTENTION**

**MOUNTAIN CABIN OWNERS ON THE MEDICINE WHEEL/PAINTROCK DISTRICT OF THE BIGHORN NATIONAL FOREST**

**Deep snow has forced postponement of the cabin-owners picnic originally planned for July 16. You will be notified of the new date and location.**

**POWDER RIVER DISTRICT CABIN OWNERS IN BIG HORN COUNTY: The Cabin Protection Field Trip and picnic is still Sunday July 17, 10 a.m. to 1 p.m. **The new location** is the Sitting Bull Campground (Page 7 map).**

**THE BIG HORN COUNTY FIREWISE COORDINATOR INVITES YOU TO ATTEND TO LEARN ABOUT LOWERING THE CHANCE OF YOUR BIG HORN COUNTY MOUNTAIN CABIN BEING DESTROYED OR DAMAGED BY WILDFIRE.**

**LUNCH WILL BE PROVIDED—You only need to bring your appetite**

*Please RSVP the Big Horn County Firewise Coordinator if you plan to attend, at , 6628 W. Riverside Dr., Casper, Wyo. 82604, [firewise@wytfs.com](mailto:firewise@wytfs.com), or (307) 333-1098.*

## ***A SUCCESSFUL BIG HORN COUNTY FIREWISE PROJECT***

After completion of an evaluation by the Big Horn County Firewise Coordinator, a plan and funding request were prepared for a home and woodlot in the Shell Creek drainage. The property owner did all the work himself, and the approximately 8 acres were approved for 65% cost-share payments in the late spring. Below are example before and after photographs.

The project in a hardwood creek bottom consisted of:

- Removing dead and downed woody fuels
- Cutting small trees and shrubs under the canopy of large trees
- Piling all the cut trees, dead wood, and cut shrubbery for later burning



Thinning and fuel treatment concentrated within the home ignition zone near the home and out-buildings, and continued outside this zone with less intense treatment. The landowner was very satisfied with the results.



←November 2010

The landowner was so satisfied with the results, that he is considering irrigating parts of the former woodlot to increase forage for his livestock.

Below is the same general area at the end of May 2011.

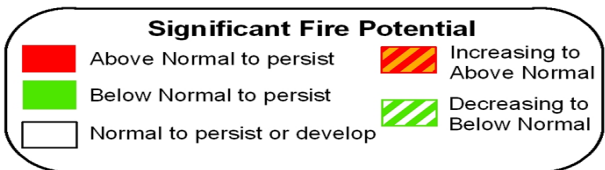
**Funding is available for more Big Horn County cost-share projects like this one. Contact the Big Horn County Firewise Coordinator if you would like to participate.**



# National Wildland Significant Fire Potential Outlook

## National Interagency Fire Center Predictive Services Issued: June 1, 2011

### Wildland Fire Outlook – July through September 2011



**Northern Rockies:** Soil moisture will remain well above normal as near record snowpack slowly melts.

Significant fire potential will be below normal in July, gradually returning to normal by August and September. The Northern Rockies will be warm and dry for the summer; however, soil moistures are incredibly high and should stay that way well into early July. It will take a few

months of relatively warm, dry weather in order to melt the snow, dry the soils, grow and cure the fine fuels. Fire season will likely be delayed at least a month for the valley bottom, grasslands and mid elevations. Significant fire potential at higher elevations may remain below normal for the entire season unless unusual warmth occurs.



### UPCOMING FIRE TRAINING:

**HOME IGNITION ZONE WORKSHOP— July 13, 1:00 PM to 6:00 PM, at the Burlington Fire Hall in Burlington. The target group is firefighters working within the wildland/urban interface, and individuals actively working to create and maintain Firewise conditions around and within Bighorn Mountain cabin areas. An RSVP is requested by the Big Horn County Firewise Coordinator. Page 2 has contact information.**

Most wildfire training has been completed for 2011. The fall newsletter will list appropriate training available starting in early 2012.



### NEW STUDY ON MOUNTAIN PINE BEETLE ACTIVITY IN LODGEPOLE PINE

New research into the effects of beetle-killed lodgepole pine on high elevation runoff, indicates that snowmelt runoff and ground-water recharge is higher where a portion of the pine trees have been killed by mountain pine beetles, and the needles have been cast. This effect is also present after thinning done by humans. There are other factors, but the primary theorized cause is that more of the snowfall reaches the ground than in dense live lodgepole stands; where approximately 40% of the snow moisture is captured by tree crowns, and evaporates rather than contributing to the surface snowpack. The study is also gathering the same data on adjacent areas without trees.

The study is ongoing at the University of Colorado, Boulder, and it is known as “The Impact of Pine Beetle Infestation on Snow Accumulation and Melt.” The author is Evan Pugh, a Ph. D. candidate in Geological Sciences.

This information should not be construed as advocacy for doing nothing about the present mountain pine beetle activity in the Bighorns and other locations in the west. It is just a mention of another facet beyond the red and gray lodgepole pine hillsides you see when crossing the Bighorns.

## Tips for Effective Hand Piling

A simple and cost effective method of disposing of woody debris in rural areas is piling and burning. A key to efficient burning lies in how well the slash is piled. Following are some suggestions on how to pile slash for assuring a good hot fire that makes burning easy. They also apply to piling with tractors.

### Location

- Provide plenty of space between piles and structures and/or trees that you do not want damaged. Radiant heat from burning piles can damage or even ignite improvements and scorch trees. Rising heat can scorch overhanging branches.
- Consider reusing good pile locations year after year. Burning piles may sterilize the soil, and encourage growth of noxious weeds. By reusing the same pile locations year to year the effect on the soil will be confined to fewer locations.
- The best time to burn piles is during winter when there is a snow cover that is highly likely to stay on the ground for an extended period. So locate piles so they can be found easily in the snow.

### Construction

Proper pile construction is essential for efficient burning. If piles are not properly constructed they can be very difficult to light and may require a lot of handwork to restack and nurse along to get all materials to burn. Well constructed piles that burn hot and efficiently will also produce significantly less smoke than piles that burn slow. Placement of cardboard sheets within the pile can keep that corner drier to aid in ignition. Assure a good burn by following these suggestions:

- **Make your piles compact:** Compactness is the single, most important factor affecting ignitability and flammability. Dense fuel concentrations contribute to easier and more robust fire growth. Compact piles shed moisture and provide the ability for heat to build up to assure the whole pile is likely to be consumed.

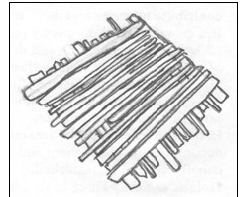
Loosely stacked piles allow snow and moisture to penetrate the pile, and will not hold sufficient heat for ignition and sustained fuel consumption.

- **Stack piles high.** Three to five feet is a good height for hand piles. Three feet is a minimum. It is better to combine piles to make them five to six feet in diameter, and four to five feet high, rather than to have a lot of small 2 to 3' piles.
- **Trim long stems and limbs** that protrude from the pile, adding the material to the top of the pile - **Remember—compact!**
- **In open areas** piles can be constructed to much larger dimensions where trees or structures will not be threatened.

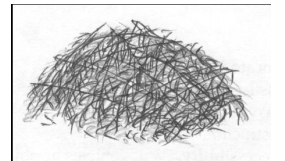
Compactness remains the key characteristic for effectiveness.

## Some Effective Methods for Hand Piling

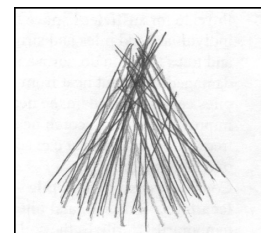
**1) Cross Hatching**—Provides an increasingly tight cap and a dry base with each successive layer. Best built with straighter material. Flammability can be enhanced by adding layers of finer material such as pine boughs.



**2) Haystack**—Piles like this are a natural result with brushy, limby material including shrubs and conifer bows. Limbs from deciduous trees may be difficult to pile tightly unless they are cut into small pieces that will make a compact pile. Large amounts of conifer limbs/needles provide a good cap to shed snow and rain.



**3) Tepee Piles**—These are easy to build and burn well once a fire is established. However, they are not inherently compact and can be difficult to ignite. This technique would be best used where a good compact center/base is built first using the haystack or cross hatch method then adding uniform stems to finish off the tepee.



- ♦ **Always heed any current open burning restrictions. These are typically in effect during dry times from late spring to fall.**
- ♦ **Always inform your County Fire Dispatch office when you are planning to burn your piles.**

## **BE EMBER AWARE! . . . . A FIREWISE FOCUS**

During a wildfire, thousands of embers can rain down on your roof, and pelt the side of your home like hail during a storm. If these embers become lodged in something easily ignited on or near your house, it will be in jeopardy of burning.

**Embers coming in contact with flammable material is the major reason homes are destroyed during a wildfire.**

Common materials that become embers during a wildfire include pine cones, branches, tree bark, and wooden shingles.

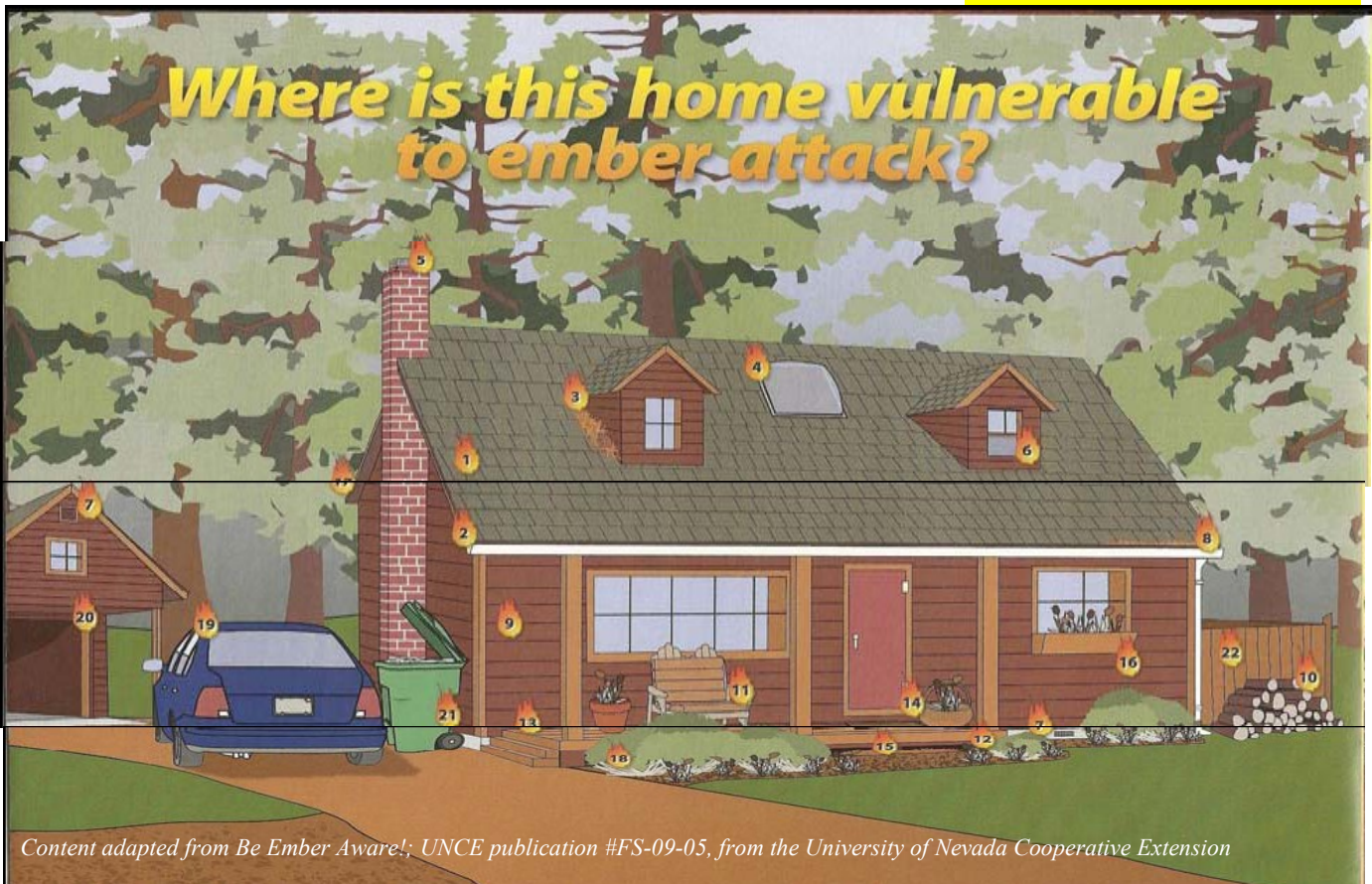
Depending on fire intensity, wind speed, and the size of materials that are burning, **embers can be carried more than a mile ahead of the fire**. Consequently, even homes located blocks or miles away from the actual flame front are vulnerable to ignition and complete destruction.

By being aware and taking action ahead of time, a homeowner can substantially reduce the ember threat.

**Your home CAN survive when the embers arrive.**

### **Awareness Checklist:**

1. Wood Roof?
2. Roof Openings?
3. Roof Debris- Leaves, Branches?
4. Skylights Open?
5. Spark arrestor screen in place?
6. Windows broken or open?
7. Vents screened?
8. Rain gutters clean?
9. Siding intact?
10. Woodpiles 30' from bldg?
11. Patio Furniture combustible?
12. Deck Boards sound and intact?
13. Deck debris - ignitables on deck?
14. Porch and accessories - combustibles?
15. Under deck enclosed? woody debris?
16. Flower boxes- dried plant material?
17. Eaves- accumulated leaves, needles?
18. Flowerbeds- combustible mulch?
19. Vehicles- windows closed?
20. Garage door- Closed?
21. Garbage cans covered?



Here is the map for the Powder River District's Big Horn County cabin-owners Cabin Protection Field Trip—>



### WHAT'S COMING IN THE NEXT FEW ISSUES OF BIGHORN BASIN FIRESMART:

More reports on successful Big Horn County Firewise projects.

Tree pruning for effective reduction of fuel ladders

Firewise comparison of different siding applications.

How to safely cut a tree.

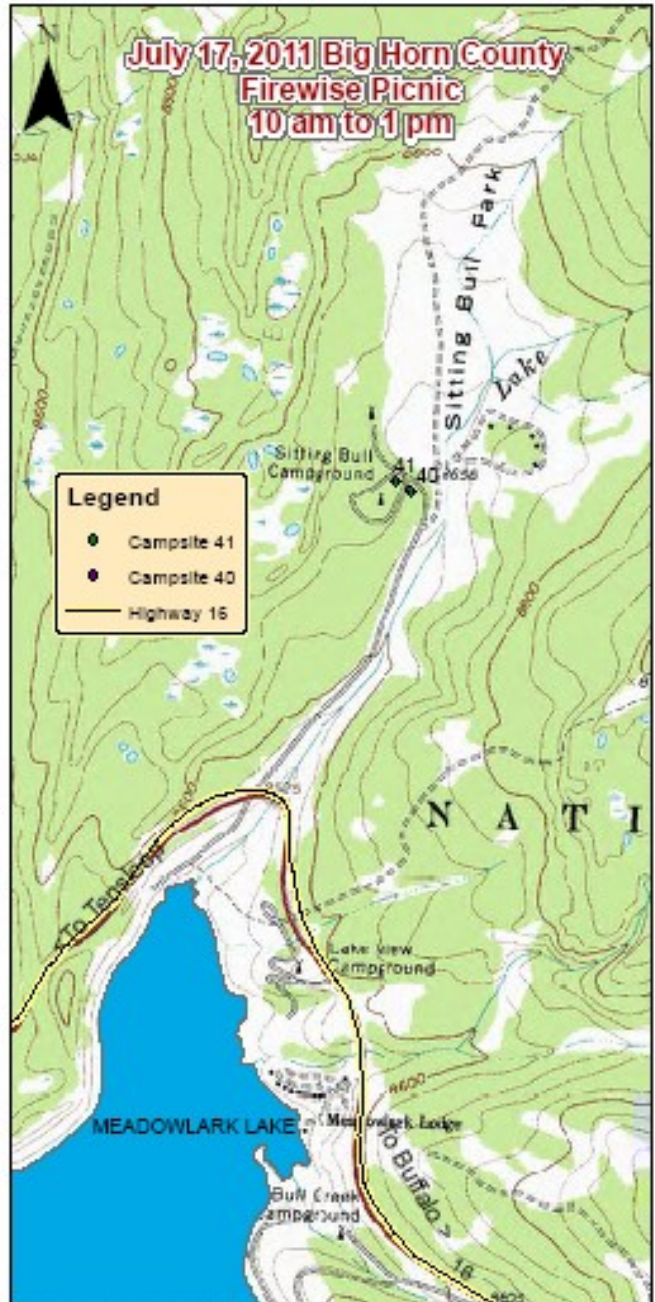


### Expand Your Network & Knowledge—

Check out the following websites for more information about the wildland urban interface issue nationwide, and to gain more mitigation ideas for your home and community.

[www.livingwithfire.com](http://www.livingwithfire.com)— An excellent site developed by University of Nevada Coop. Extension office. It includes information equally applicable to Wyoming, and it's easy to use.

[www.firewise.org](http://www.firewise.org)— Program developed by the State Foresters, Forest Service, Department of Interior agencies, and National Fire Protection Association. Excellent educational materials for a nationwide wildfire mitigation campaign.



For information and literature specific to Wyoming, The best website sources is

[www.firewisewyoming.com](http://www.firewisewyoming.com)



AFTER A WILDFIRE, THE FOREST AROUND YOUR HOME OR CABIN CAN  
BE **THIS** OR **THIS**



**BEFORE THE FIRE, TREES WERE THINNED,  
AND CUT TREES WERE PILED AND BURNED.  
ALMOST ALL THE TREES SURVIVED THE FIRE.**

**NO THINNING OR SLASH TREATMENT  
WAS DONE BEFORE THE FIRE. ALL THE  
TREES WERE KILLED.**



*Big Horn County Firewise  
6628 W. Riverside Drive  
Casper, Wyoming 82604*

