



# BIGHORN BASIN FIRESMART



BIGHORN BASIN FIREWISE COMMUNITIES

## ISSUE #35 — SUMMER 2020

### RED FLAG WARNINGS

With the safety of residents and firefighters foremost, one of the products that the [National Weather Service, \(NWS\)](#) provides to improve firefighter safety is the **Red Flag Warning**. But just what is a Red Flag Warning?

Red Flag Warnings begin as a **Fire Weather Watch**, which means that weather conditions are predicted to occur that will support rapid wildfire growth and rates of spread 24 to 72 hours from when the watch is issued. *When the conditions are predicted to occur within 24 hours, or are already happening, a **Red Flag Warning** is issued.*

The conditions that trigger Red Flag Warnings include predicted weather conditions of high temperatures, sustained high surface winds, and low relative humidity (dry air), plus predicted and observed low fuel moistures (dry vegetation – live and dead), and anticipated lightning activity. It is usually not any one condition, but the combination of these factors, that cause **Red Flag Warnings** to be issued.

While the primary purpose of **Red Flag Warnings** is firefighter safety, fire agencies and land management agencies also use them for pre-planning, staffing level changes, and if necessary, to restrict some public activities such as campfires and agricultural and forestry prescribed burns.

So, how are Red Flag Warnings communicated to the public?

- ⇒ Included as part of local radio and television weather broadcasts.
- ⇒ Broadcast on the Weather Alert radio network.
- ⇒ [https://www.weather.gov/media/lmk/pdf/what\\_is\\_a\\_red\\_flag\\_warning.pdf](https://www.weather.gov/media/lmk/pdf/what_is_a_red_flag_warning.pdf).
- ⇒ Some Western U.S. locations display red flags near public buildings. Here are examples of **Red Flag Warning** flags used.



The WY Forestry Division page for current wildfires in Wyoming is: <https://wsfd.wyo.gov/fire-management/fire-information-updates/current-fires>

Firesmart information and all newsletter issues are available at: [www.bighornbasinfiresmart.com](http://www.bighornbasinfiresmart.com)

<u><i>In this issue</i></u>	<u><i>Page</i></u>	<u><i>Special points of interest</i></u>
Red Flag Warnings	1	* What a <b>Red Flag Warning</b> means
Firewise/Firesmart Coordinators	2	* Firewise Communities.
Mulch and Firesmart	3	* The good and bad mulches
Grassland wildfire threats	4-5	* From <u><a href="#">Barnyards &amp; Backyards</a></u>
August to Sept. wildfire prediction.	6	* Firesmart tree pruning & powerlines
Emergency Supply Kit	7	* With checklist
Little Things that Matter	8	* Around your home & cabin



## MULCH AND BEING FIRESMART

Mulch is defined as any material applied to the surface of soil for a decorative landscaping or as moisture-retention cover. It is commonly used instead of grass, around the outside walls of homes. Some mulches are **GOOD** Firewise—others are **BAD**. Examples of mulches currently promoted for around your home, or as landscaping:

### PRODUCT

### FIREWISE APPLICATION NOTES

Gravel, Sand, or Cinders	Good if kept clear of vegetation, leaves, and conifer needles
Round River Rock	Good if kept clear of vegetation, leaves, and conifer needles
Tree Bark	Ignitable by flying embers. Should not be used near homes or outbuildings
Wood Chips	Ignitable by flying embers. Should not be used near homes or outbuildings
Shredded Tires	Ignitable by flying embers. Should not be used near homes or outbuildings
“Pine Straw”	Ignitable by flying embers. Should not be used near homes or outbuildings
Other Organic Material	Ignitable when dry. Should not be used near homes or outbuildings

Even when impregnated with fire-retardant chemicals, all but gravel, rocks, or cinders can be ignited when dry, and will carry fire when ignited. They should never be used near structures.

As part of the application of suitable mulch near structures, or around propane tanks, soil sterilant or landscape cloth underlayment should be done before applying the mulch. This will minimize the growth of unwanted vegetation in the mulch. Neither treatment will completely eliminate the need for periodic weeding and removal of the usual leaves and tree needles.

If mulched borders are around window wells, the wells should be tightly covered, and cleaned at least annually to remove blown-in leaves.

Some examples of good Firesmart mulching:



**Coarse gravel pad under a deck**



**Gravel and sand under & around storage shed**



**Clean cinder mulch**



**Fine gravel around foundation**



While we typically think of wildfires in timber being our biggest concern from a Firesmart perspective, grassland wildfire is probably a more likely occurrence near communities in the Bighorn Basin . These two pages are reprinted, with permission, from the Fall 2018 issue of Barnyards & Backyards, the quarterly magazine produced by the University of Wyoming.



Scott Cotton

**W**ildfire is a reality in the western United States and can happen almost any time of year if conditions are in place. Brush and grass fires account for more than 78% of wildfires.

Most grass fires occur at least partially on private ground, and landowners often address the wildfire personally until local fire units can respond. Fires on ground overseen by federal agencies trigger responses by large, well-trained fire-fighting systems.

#### **Don't Underestimate Wildfire Risks**

In cases where landowners and others try to control grass wildfires, the risk of injury and death is over 300 percent higher than trained fire teams for a number of reasons, including knowledge of fire behavior, access to proper fire-fighting equipment, water, clothing and other gear.

People often underestimate grass fire risks. Being aware of some factors related to wildfire can help you better judge these risks.

Going after a wildfire can place you at great risk if you have the

wrong equipment or clothing. All clothing made of nylon, polyester, Gore-Tex and other plastic derivatives will either catch fire, melt onto skin, or both. Wearing fire-resistant clothing such as treated canvas or "nomex" can reduce the chance of clothing-related injury. Cotton clothing will burn but do not usually cling onto skin. Quality leather footwear with hard rubber soles and leather gloves are best if professional fire clothing isn't available. Jewelry, cell phones, and other conveniences should be left off the fire line.

#### **If around a fire make sure vehicles have sufficient ground clearance and no fuel/oil residue or leaks!**

Wildfires can move up to 30 miles per hour. Getting around a fire may not be easy, depending on the movement, speed, and width of the fire. Fires move with the wind but can alter their own speed with certain geographic features. Fires tend to create a draft in front of the active burn line that preheats and pre-dries the next fuel they will hit. These factors can trap individuals in a ring of

fire with no escape route.

Since fires require oxygen, heat, and fuel, a wildfire moving through heavy grass and brush fuel can generate a flame wall height up to 20-50 foot. Smoke from the wildfire will precede the front. Most fire-associated deaths on grass wildfires are related to smoke inhalation and heat stress. **STAY OUT OF THE SMOKE!** Wildfires will also send embers and chunks of burning debris high into the air and start additional "hot spots" as far as ¼ to 2 miles downwind. These hotspots can grow and develop into a second fire front, trapping unsuspecting firefighters.

#### **Fighting from the Burned Side**

Firefighters strive to fight fire from the burned side of the front (often referred to as "the black"). The burned area is usually upwind, although this can change. This area already has a reduced fuel availability so that if a fire turns, the flames will be greatly reduced. Bear in mind driving or traveling on "the black" can be challenging since the vegetation that stabilized the soil has been



removed. Anyone driving in these areas should have help available to pull their vehicles back if needed. Anyone traveling in “the black” should also be aware of and on the lookout for hot spots that can burn through clothing or footwear.

Firefighters address the ends of the fire first unless critical structures are threatened. Firefighters look up every few minutes to see what all segments of the fire are doing. It’s best to have one or more spotters working from a vantage point at a distance. All those working on a fire should stay in contact with them. Uninformed is at risk!

Fires will change intensity and speed with varying fuel, wind, and slope. The pre-draft factor makes fires move faster upslope in many cases. The spotters should be in areas that have already burned (the black) also.

### Final Thoughts

Don’t take chances. Fire is impersonal and unforgiving. If authorities indicate you should evacuate – take it very seriously! If you have a high risk of wildfires in your area and are far from fire teams, I suggest you visit with them and possibly attend a Basic Wildfire 130-230 class to learn important fire-related skills. Your local fire marshal can help mitigate fire risks on your property. Contact your local county fire department or check <http://bit.ly/wyowildfiretraining> for training opportunities

This article is not a guide to fighting wildfire. Its intent is to point out some grassland wildfire safety risks and some ways firefighters approach them.



## Create defensible zones around property

Wyoming’s wildfire season usually ranges from March-November. In 2017, there were 71,499 wildfires in the nation with 599 of them in Wyoming. Acreage loss during the year included 10 million acres nationally and 90,115 acres in Wyoming.

Creating defensible zones on a property is one of the best ways a landowner can mitigate loss due to wildfire. (Barnyardsandbackyards.com under “Wildfire” has a number of materials that can help make a home and landscape more resistant to wildfire.) Emergency or wildfire personnel in communities across Wyoming also have access to other information and resources to help landowners plan for wildfire.

Have an evacuation plan in place for your property and ensure everyone is familiar with the plan. Have a water source nearby and remove as many ignition sources as possible. If far from professional wildfire fighting assistance, having wildfire equipment on site and taking some wildfire fighting training can be useful.

Understanding the fuel growth cycle is helpful in understanding wildfire occurrence. In years that we have early precipitation and corresponding grass growth followed by dry heat periods, the vegetation becomes “flash fuel” and ignites easily and burns hot and fast. This can be compounded by windy days and periodic thunderstorms. The National Weather Service documented 2,803 lightning-triggered wildfires within the Great Plains and Northern Plains/Rockies during 2017 that burned 816,000 acres. Once again, 78 percent of these were grass fires. Watch the weather!

If you see or smell smoke – safely check it out. Call authorities for help if you have a wildfire. Tell them the location of the fire, how fast it is moving and in which direction, if possible. If local fire departments are not on the scene yet and you intend to “defend in place,” get assistance from neighbors and make everyone’s personal safety priority No. 1.

**Scott Cotton** is a University of Wyoming Extension educator based in Natrona County and also serving Converse and Niobrara counties. He has a 27-year history in firefighting and a 14-year history in rural law enforcement. He can be reached at (307) 235-9400 or at [secotton@natronacounty-wy.gov](mailto:secotton@natronacounty-wy.gov).



The National Interagency Fire Center prediction as of early July



In June, Wyoming was predicted to have about the “normal” wildfire activity. The above map is the early July revision that tells everybody to *PAY ATTENTION*.

### FIRESMART OFFERS HIZ TREE PRUNING WITHIN WASHAKIE COUNTY

Home- and cabin-owners in Washakie County with approved Wildfire Mitigation Plans (WMP) can get some assistance in doing the tree pruning included in their WMP. Weather permitting, Washakie Firesmart will prune the trees in your Home Ignition Zone (HIZ) *within 30 feet* of your home/cabin, as recommended in your WMP. All you need to do is submit a request to Washakie County Firesmart at [firesmart@wytfs.com](mailto:firesmart@wytfs.com), 6628 W. Riverside Dr. Casper, Wyoming 82604, or (307) 333-1098 (office), (307) 272-9533 (mobile). Your request should include your name and the location/physical address of your home or cabin.

Removing the cut limbs will be the responsibility of the cabin- or home-owner.

### POWERLINES AND BEING FIRESMART—A REMINDER

ELECTRIC POWERLINES SHOULD HAVE ALL TREES AND FOLIAGE REMOVED WITHIN FOUR (4) FEET OF THE LINE (IN ALL DIRECTIONS) TO BE FIRESMART. THE PRIMARY REASON IS TO PREVENT ARCING (A RELATIVELY RARE OCCURANCE) AND TREE PARTS RUBBING ON THE LINE AND EXPOSING THE “HOT” WIRE TO FLAMMABLE FOLIAGE.

A SECONDARY CONSIDERATION IS REMOVAL OF ALL DEAD AND LARGE LIVE LIMBS THAT COULD FALL ON THE LINE DURING WINTER SNOW OR WIND EVENTS. WHILE THIS IS NOT NECESSARILY A FIRESMART EVENT, IT CAN BREAK THE LINES, OR CAUSE OTHER DAMAGE THAT IS BOTH DANGEROUS TO PEOPLE, AND EXPENSIVE TO REPAIR. POWERLINE REPAIRS AFTER THE FALL 2013 WET SNOW IN CASPER COST HOMEOWNERS THOUSANDS OF DOLLARS!

## ASSEMBLE AN EMERGENCY SUPPLY KIT

Put together your **emergency supply kit** long before a wildfire or other disaster occurs, and keep it easily accessible so you can take it with you when you have to evacuate. Plan to be away from your home for an extended period of time. Each person should have a readily accessible emergency supply kit. Backpacks work great for storing these items (except food and water) and are quick to grab. Storing food and water in a tub or chest on wheels will make it easier to transport. *Keep it light enough to be able to lift it into your car.*



### EMERGENCY SUPPLY KIT CHECKLIST

- ◆ Three-day supply of non-perishable food and three gallons of water per person.
- ◆ Copies of your emergency evacuation plan (**Firesmart #27**) for all family members, with a map marked with at least two evacuation routes
- ◆ Prescriptions or special medications
- ◆ Change of clothing
- ◆ Extra eyeglasses or contact lenses
- ◆ An extra set of car keys, credit cards, cash or traveler's checks
- ◆ First aid kit
- ◆ Flashlight and extra batteries
- ◆ Battery-powered radio and extra batteries
- ◆ Sanitation supplies
- ◆ Copies of important documents (birth certificates, passports, etc.)
- ◆ **Don't forget food and water for your pets!**

#### Items kept handy to grab on your way out the door:

- ◆ Coats/jackets for cooler weather
- ◆ Cell phones of all family members who have one

#### Items to take if time allows:

- ◆ Easily carried valuables you have identified **prior to evacuation**
- ◆ Family photos and other irreplaceable items
- ◆ Laptop computer, or personal computer information on storage drives and disks
- ◆ Chargers for cell phones, laptops, etc.

**Always keep a sturdy pair of shoes and a working flashlight near your bed and handy in case of a sudden evacuation at night.**

For more information on emergency supplies, visit <http://www.ready.gov/>



### LITTLE THINGS THAT MATTER

A few “Little Things” that relate to Firesmart and fences.



A fence overgrown with vegetation. Would increase the chance of the fence igniting. Keep shrubbery trimmed to three feet from the fence.



Wire fencing filled with flammable vines. Fire would travel along this metal fence. Removed vines from fence and below it.



Wooden fence with ember-trapping tinder base.



Wooden fence on a concrete pad.



These two have nothing to do with fences

This broom would collect embers, and should be stowed inside a Firesmart structure during fire season.



Dry leaves in contact with flammable gardening items.