

POINT of ORIGIN

Spring 2015

Surviving wildfire by adapting to it

Planning for wildfire is a community effort

by Amy Luebke, WUI Specialist for West Central Wisconsin

What is a CWPPP?

A Community Wildfire Protection Plan (CWPPP) is a document developed in high risk fire communities by a core team which includes representation from local government, fire department, DNR forestry staff, and other community members. CWPPPs address issues such as wildfire response, hazard mitigation, community preparedness and structure protection. They are created and implemented by the local community.

The Benefits of Having a CWPPP

- Helps community clarify and refine priorities
- Priority consideration for federal grants
- Develops good working relationships with fire department, emergency management, and DNR
- Increased knowledge about and access to resources, materials and expertise
- Better prepared to face emergencies
- Good stewardship of town resources

What is a Firewise Community?

Firewise Community/USA provides a framework for America's fire-prone communities to work together with local fire and land management officials to develop and implement a wildfire mitigation plan and recognizes them for their efforts. There are over 1,000 recognized Firewise Communities in the United States and 9 in Wisconsin with 2 in process. [Learn more at firewise.org](http://firewise.org).

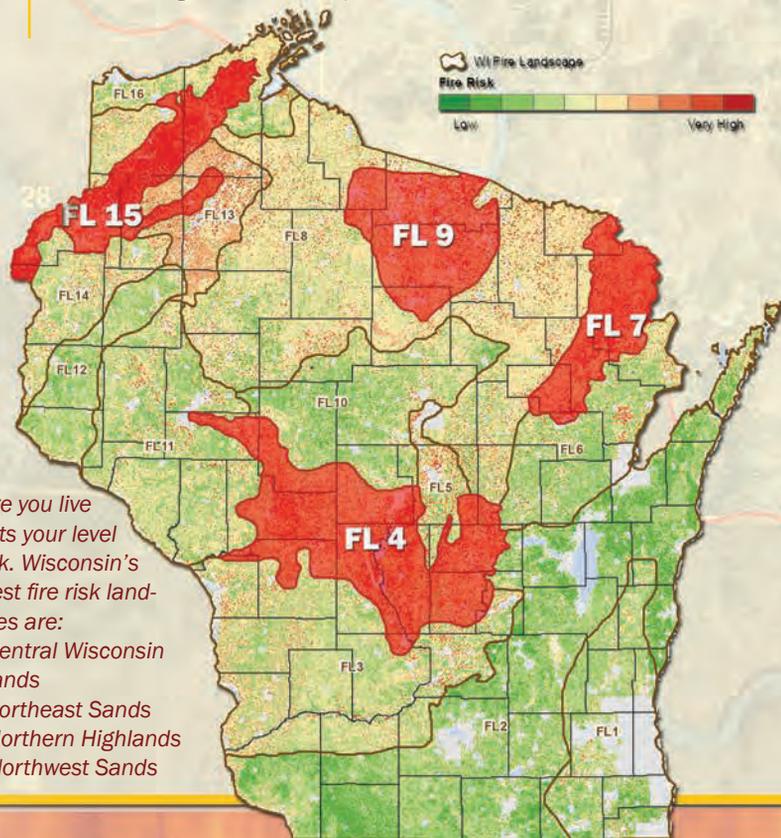
The Benefits of Being a Recognized Firewise Community

- Creates defensible space which prevents fires from advancing and endangering buildings and lives
- Wildfires are suppressed faster and remain smaller because firefighters are able to concentrate their efforts on fighting wildfires rather than devoting often limited resources to protecting buildings
- Improves relations with local fire staff and other stakeholders
- Offers peace of mind, knowing that your neighborhood is doing what it can to protect itself

Interested in developing a CWPPP for your town or becoming a recognized Firewise Community?

If your town is in one of the fire landscapes listed (see map) and you're interested in developing a CWPPP or becoming a Firewise Community, contact your local DNR forestry staff (see below). They will walk you through the steps in the process. The process for developing a CWPPP includes gathering stakeholders, identifying risks, and planning projects. The Firewise Community process includes a site visit, forming a Firewise Committee, conducting a community assessment and developing your Firewise Program Plan. Contact:

- **Amy Luebke**, WUI Specialist for West Central Wisconsin (715) 421-7875
- **Ben Garrett**, WUI Specialist for Northwest Wisconsin (715) 635-4088
- **Diane Anderson**, WUI Specialist for Northeast Wisconsin (715) 356-5211 ext: 237
- **Jolene Ackerman**, Statewide WUI Coordinator (608) 267-7677



Where you live affects your level of risk. Wisconsin's highest fire risk landscapes are:

- 4: Central Wisconsin Sands
- 7: Northeast Sands
- 9: Northern Highlands
- 15: Northwest Sands

Lessons Learned from the Germann Road Fire Why Some Homes Survive

by Jolene Ackerman, Statewide WUI Coordinator

On May 14-15, 2013, the Germann Road Fire burned 7,500 acres in northwest Wisconsin. After the fire, a team of DNR fire control staff conducted research on 96 of the 100 properties within the fire perimeter. The purpose was to analyze the features of the buildings and the area around them out to 100 feet. This information would be used to determine the type of fire that burned on each property and building features that allowed it to survive the wildfire or be damaged or destroyed by it.

Property Characteristics

We counted 270 structures within the perimeter of the fire. Property sizes ranged from small lake lots to parcels 39 acres in size. Most of the properties (72 percent) could be considered seasonal use and were not the owner's primary residence.

Driveways

There was a huge range in driveway lengths from short driveways to a quarter mile in length or longer. There did not appear to be a connection between driveway length and whether the home survived. For example, six homes burned on properties with driveways shorter than 150 feet in length.

The average driveway width was 17 feet. Thirteen driveways did not meet the minimum standard width of 12 feet (6 of those homes were destroyed). No homes were lost on properties with a driveway wider than 20 feet. Locked gates were found on 15 driveways with a larger percentage of homes burned on these properties than on ones without a gate.

Assessed Value

The properties assessed had an average value of \$80,000. They ranged from a \$3,500 seasonal mobile home to a \$313,000 year-round residence (both destroyed). There did not appear to be any correlation between assessed value and whether the home survived.

Distance to Vegetation

As expected, the greater the distance between the home and the nearest vegetation that could be considered unmanaged, the greater the survival rate of the home.

The average distance to vegetation on properties where the home survived was 27 feet versus 19 feet where the home was destroyed. Seasonal properties tended to have less maintenance of the vegetation around them and a higher percentage of them burned compared to year-round homes. The

National Fire Protection Association (NFPA) recommends a "fuel modification area," or defensible space, extending at least 30 feet from structures.

Some quality of fuel break was recorded on at least 67% of the properties. Features such as rock or cement landscaping materials, exposed soil from recent construction, lawns, driveways and lakes all counted as fuel breaks.

Creating fuel breaks and doing things like keeping grass mowed and leaves raked gives the home a better chance of surviving a wildfire because these actions remove fuel, decreasing a fire's intensity.

Fire Type

All types of fire were documented: crown fire, surface fire, flying embers and structure fires. Many properties had more than one type of fire identified on them. The most common type was surface fire and was thought to have contributed to the destruction of nearly half of the homes. Of the 8 properties that had crown fires, 5 had homes that were destroyed. Firebrands (flying embers) are thought to have caused the destruction of 2 homes.

Outbuildings

On 19 properties, an outbuilding burned within 30 feet of the home. In 12 cases, the home was destroyed; on 3 the home was damaged and the remaining 4 either survived or were saved with fire suppression assistance. Buildings are considered to be 'long term heat sources,' with a tendency to burn much longer than vegetation. The structure-to-structure loss on this fire is significant and may be cause for renewed emphasis on keeping buildings more than 30 feet apart.

Of the 174 outbuildings counted, 81 were destroyed, 22 were damaged and 62 were saved or survived. It was easy to see why such a high percentage of outbuildings burned. The average distance between a destroyed outbuilding and unmanaged vegetation was 6 feet versus 17 feet for outbuildings that were saved or survived.



This cabin had a very short driveway, and yet it was completely destroyed



The damage to the remaining building was caused by a nearby structure fire

Conclusions

Wildfire is inevitable and large scale wildfires like the Germann Road Fire are going to continue to occur in Wisconsin. Lessons learned from both small and large fires can be used to make recommendations to property owners about how to prepare for wildfires.

Encouraging people to make their homes and outbuildings "Firewise" and improving access for emergency vehicles will go a long way to keeping people and property safe when a wildfire moves through an area.

DNR filmmakers used video footage of the fire damage and an interview with one of the property owners to create a 4-minute video called "Be Ember Aware." The video and highlights of this research can be viewed at dnr.wi.gov (keyword 'ember').

For more information on the post-fire research, contact Jolene Ackerman, DNR Wildland Urban Interface Coordinator at 608-267-7677 or Jolene.ackerman@wisconsin.gov.



Long driveways with gates impede emergency response

Flight detection reaches its 100-year milestone

2015 marks the 100th anniversary of the first fire detection flight. Ever. Anywhere. So what's the big deal? It's the fact that it happened in a small Vilas County town nestled in the Northwoods of Wisconsin! Aviation pioneer Jack Vilas, cousin of senator William Vilas, got the idea to use his plane to assist rangers at the Wisconsin Department of Forestry spot fires from the air and catch them before they got too large. It was a great fit because Jack kept his seaplane at Trout Lake where the forestry division was based.

On June 22, 1915, with the assistance of state forester E. M. Griffith, the two made the initial flight to 1600 feet where they spotted smoke



about 6 miles in the distance. Upon landing, the "crew" immediately reported the smoke's direction and location to the rangers.

Throughout the summer of 1915, Jack flew many flights, accepting no money and flying only "for the thanks." By January 1916, flight detection was catching on across the continent and by 1917 the United States Forest Service implemented what they called "the Wisconsin Plan" for fire detection. This plan soon became a vital tool in fighting wildfires in many forested countries and 100 years later, aircraft continue to be used to detect wildfires in Wisconsin.

Fire and its Benefits

by Diane Anderson, WUI Specialist for Northeast Wisconsin

Wildfires have always been a natural part of our environment and have shaped many of today's ecosystems in Wisconsin. Fire was once used by Native Americans as a tool to clear land for agriculture, improve forage for game and direct their migration, and clear brush for ease of travel and improved visibility.

As early settlers began arriving and creating more plowed fields, forest clearings and new roads, the frequency and extent of wildfires began to decrease. As a result, the prairie and savanna regions of the state quickly became covered with brush and forests. Policies were instated to insure that all wildfires be suppressed immediately, causing over accumulation of leaves, branches, dead trees and other fuel sources. Not only did we lose most of the plants and animals native to the prairie, all of this vegetation created ideal conditions for catastrophic wildfires.

A very effective vegetation management tool used today is prescribed burning, a method that reduces the potential for wildfires in an area by burning that area in a controlled environment under a specific set of conditions. These managed burns are usually set in the spring and fall and mimic the fire that plant communities used to experience naturally. Specialists write burn plans that "prescribe" the best conditions to achieve the objectives safely. Burn plans consider temperature, humidity, wind, vegetation, adjacent properties and equipment and personnel necessary to manage the burn.

Prescribed burns have many benefits:

- **Reduces** hazardous fuels, protecting communities from extreme wildfires
- **Minimizes** the spread of pest insects and disease
- **Removes** unwanted species that threaten those native to an ecosystem
- **Provides** forage for game animals
- **Improves** habitat for threatened and endangered species
- **Recycles** nutrients back to the soil
- **Promotes** the growth of trees, wildflowers and other plants

Using natural fire breaks such as rivers and lakes or man-made breaks such as roads, mowed paths or plowed fire lines, prescribed burns are usually conducted on smaller portions of land though the plan may include burning a larger area over time. Prescribed fire specialists compare conditions on the ground to those outlined in burn plans before deciding whether to burn on a given day. If the conditions are not ideal, the burn is rescheduled.

While state and federal agencies conduct most of the managed fires, private conservation organizations and many nature centers have prescribed burn programs as well.

Managing Insect & Disease Issues After Blowdowns

Paul Cigan & Linda Williams,
DNR Forest Health Specialists,
Northern WI

Blowdowns (the uprooting or breakage of trees as a result of wind storms, straight-line winds and tornadoes) may cause significant tree damage and economic losses and result in large amounts of woody material on the ground. While the fire hazard associated with downed wood may peak several years after the blowdown, the hazard posed by insects and fungi occurs almost immediately. They frequently attack stressed and injured trees and use the downed “green” wood as breeding material.

Suggestions to reduce pest damage following blowdowns:

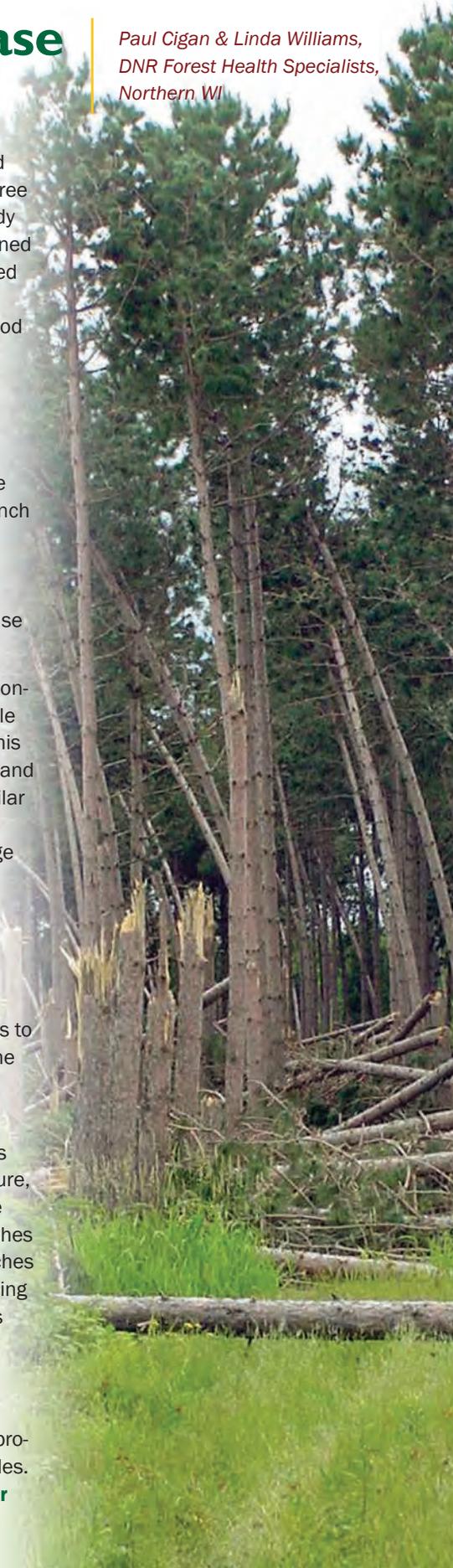
White Pine - Timely harvests minimize value losses caused by wood-discoloring, blue stain fungi. It also reduces the impact by insects to stressed trees or nearby unaffected stands. Ideally, pine logs (and, if time permits, tree tops and branches greater than 2-inch diameter) should be removed from the site within 3 weeks of the blowdown or before mid-April of the next year if the storm occurs after November. This wood can be utilized for lumber or firewood, burned, buried, chipped or debarked to minimize insect and disease problems.

Oak - Salvage should be done with care and followed by annual monitoring of remaining trees. Wind-damaged oaks are most vulnerable to oak wilt from April through July and salvage harvesting during this time must be performed with special care to minimize infestation and spread. The two-lined chestnut borer (TLCB) is a native insect similar to the emerald ash borer and can infest and kill stressed residual oaks in 1-3 years. If TLCB infestations are found, additional salvage harvests may be necessary to reduce further economic impact.

Careful monitoring after a blowdown will help landowners detect issues early thus reducing potential damage and leaving more management options available. Before scheduling salvage activities, consult the WI-DNR Oak Wilt Guide (<http://dnr.wi.gov/topic/ForestHealth/OakWiltGuide.html>). To reduce spread of forest pests to unaffected stands, store and burn salvaged firewood on or near the harvest site.

If you are considering a harvest be sure to maximize the value by harvesting hardwoods that will stain quickly. The first priority: trees that are broken on the main stem exposing wood to air and moisture, trees with more than two large (>50 square inches) wounds in the lower 16' of the tree, and trees with more than 50% of their branches destroyed. Second priority: trees with less than 50% of their branches broken or destroyed, trees that have uprooted relatively intact pulling the whole root plate with them, and trees with a few small wounds (<50 inches square).

Safety should be a top priority. Cracked, leaning or compromised trees should be dealt with by professionals trained in hazard tree removal. Take the time to consider all your options and consult a professional forester for advice regarding any questions on timber sales. Not sure what to do? **Go to the DNR website dnr.wi.gov and enter “forestry” in the keyword search box.**



Think Your Cabin is Safe from Wildfire?

Catherine Koele, DNR Wildfire Prevention Specialist

Having a cabin nestled in the woods is something many of us can only dream about. But if this dream is your reality, it can quickly turn into a nightmare if a wildfire strikes and you aren't prepared. The good news is that homes can survive on their own if you take the time to do some simple maintenance throughout the year.

During a wildfire, tiny embers are carried by the wind and can rain down on your home like an ember blizzard. They may seem harmless but embers are a real threat to your home. The 'home ignition zone' is your home and its surroundings out to 100-200 feet. How you manage your property around your home plays a big part in the likelihood of it surviving a wildfire.

Taking deliberate steps to make a home or cabin 'firewise' is the key. Create defensible space around all the buildings on your property and limit the amount of flammable vegetation, debris and man-made objects that can become 'fuel' for a wildfire. A simple way to approach the work is by prioritizing by season and focusing on the things that any homeowner can do in a given weekend.

Spring

- Remove all dead vegetation surrounding the structure
- Clean debris from roof, gutters and under decks
- Rake the lawn
- Avoid burning outdoors during spring wildfire season

Summer

- Keep the grass green and mowed
- Organize a community debris disposal day
- If planning to do any renovations, consider purchasing fire-resistant building materials

Fall

- Rake and compost yard and garden debris
- Consider composting leaf piles instead of burning
- Replace wood mulch with decorative rocks

Winter

- After your firewood runs out, move future piles at least 30 feet from any structure
- Wait until the ground is completely snow-covered to burn leaf and debris piles
- Thin and prune conifer trees

The Wisconsin DNR in partnership with the Great Lakes Forest Fire Compact is targeting their fire prevention outreach to seasonal homeowners and home and lake associations located in fire prone areas throughout the Great Lakes area. The campaign encourages the public to take the necessary steps to improve their cabin's chances of survival in the event of a wildfire, even without firefighter intervention.

If you are interested in promoting the "Think your cabin is safe from wildfire?" campaign in your community, contact a local DNR Ranger Station or email the Point of Origin at: DNRFRPointofOrigin@wisconsin.gov. **You can also take the homeowner self assessment on the DNR homepage at dnr.wi.gov (keyword "ember") to find out if your home would survive a wildfire.**

From the Editors...

Our purpose is to provide you with information about the services, products and direction of the Wisconsin DNR and the various partners in protection, referring specifically to wildfire prevention, suppression and outreach. Building partnerships is the key to success!

If you are interested in having an electronic copy of any of the articles for use in your own newsletter, website or other outreach tool, contact:

(715) 356-5211 EXT. 237

DNRFRPointofOrigin@wisconsin.gov



Raking leaves removes flammable debris from areas around your cabin.



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Big Storms Can Increase Wildfire Risk

Ben Garrett, WUI Specialist for Northwest Wisconsin

Wisconsin is no stranger to severe weather and wind events. During the summer of 2014, many areas were affected by tornadoes, straight-line winds and hail. In heavily wooded areas, these events can lead to forest health issues as well as an increase of downed and dead woody materials that becomes fuel for wildfires. It is important to recognize these wildfire risks and act quickly to mitigate the potential hazards that arise in the aftermath of a storm.

In the short term, many immediate hazards are present and include damage to property, roads and public utilities, degradation of scenic views and loss of valuable resources. There are many avenues to help take care of these issues. If you act quickly after the storm, some cleanup costs may be able to be offset through the sale of the downed materials. If too much time passes however, Mother Nature begins to break down this wood,

greatly reducing its value. Other avenues may need to be pursued if the amount of wood generated by a storm is too much for the market to absorb. If you are not sure where to start, contact your local DNR forester dnr.wi.gov (keyword "forest landowner"). They can help you find experienced and trusted contractors, formulate a plan to dispose of the downed debris, and may be able to assist with finding funding sources for your efforts.



Within just a couple of years after the storm has passed, the fire danger grows rapidly in unmitigated areas so it is important to be vigilant and careful with fire. Consider composting yard debris or hauling it to a brush collection site rather than burning. Many towns affected by storms secure funding to open these types of collection facilities at little or no cost to the public. The material that is collected is usually chipped and can sometimes be marketed to biomass energy producers.

Neighborhoods should consider working together to share the costs of hiring a contractor to chip debris. Working collectively can reduce the overall cost of getting this done, as most contractors charge a one-time cost for the mobilization of their equipment if they can work on many sites in the same vicinity.

Be sure to exercise caution and safety when around downed debris



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