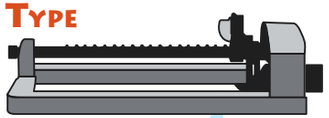
It is Essential to Test the System for Spray Pattern and Coverage in Advance; it is Often a Trial and Error Procedure.

It will depend on the number of sprinkler heads used, along with pressure and volume capacities of the water supply system.

Oscillating Type



Come in many different styles can usually operate at lower pressure (10-35 p.s.i.) Coverage is usually a smaller square or rectangle

Rotating Types

Generally operate at high pressure (30-80 p.s.i.)and cover large areas (30-50' radius). Rotary sprinklers can be mounted on permanent risers. This type is preferred.

This one can be mounted flush to the ground surface and will pop-up when water pressure is applied.

(Models shown are made by Rain Bird.)

The addition of a riser (an attached 2-3'-length of pipe) on the rotating sprinkler head enables it to be used in many ways. It may be used on the roof by securing it to elevated elements or by nailing it to the end of the gables. Ground sprinklers should wet the outside walls from the height of the eave to the ground. They should be used to wet down possible ignition sources to the structure. It is good to have extra gated Y valves, sprinklers, hose end caps, adapters and hose available. Lengths of 10' to 25'(available from WSPS) make it easier, with less friction loss.

The Canadians who have considerable experience using such systems recommend running the system from 4 to 24 hours prior to the fire arriving; however this may not be possible. . You may want to run the system to wet down fuels when fire conditions warrant it. (When Fire Danger is Very High or above.)

Be aware that small portable pumps may run for only one hour depending on its fuel tank size and how the throttle is set. 100% spray coverage is best. Place sprinklers on the roof and ground with overlapping coverage. **(Take into consideration the wind direction and speed. Allow for drift. The priority will be on the side of the structure facing the wind and or an approaching fire.)** Any wetting action will be beneficial; even a few sprinklers spraying an area will help. Elevate the sprinkler or adjust the spray pattern so it covers the whole wall from eaves to the ground. Make sure to securely anchor all sprinkler heads because strong winds can be expected.

Problems with Exterior Sprinkler Systems

- Non-residents who wouldn't be on site to activate it.
- Cold weather related - you must make sure the system is properly drained to prevent freezing.
- Power outages and operating time for gas powered pumps.

There is No System that is Guaranteed to Provide Protection 100% of the Time.

This document is intended solely as guidance and does not include any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin of the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any manner addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

WISCONSIN DEPT. OF NATURAL RESOURCES

LP

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Protect Your Home From Wildfire

Can Your Home Survive A Wildfire?

Cabin and homeowners do you live in an area of Wisconsin surrounded with pine or northern pin oak on sandy soils?

You Can Help Save Your Property with a Rake and Lawn Sprinkler!

What you need to know

Historically large forest fires have burned thousands of acres and destroyed many homes in Wisconsin, they will continue to occur in the future. Wild fire begins as a surface fire but can quickly race into the crowns with long range spotting occurring at times a mile or more ahead of the main fire. Firebrands (small pieces of flaming wood) are blown ahead of the main fire and fall from the sky like a blizzard of fire. It is unsafe and very dangerous for anyone including firefighters to be immediately in front of a "firestorm".

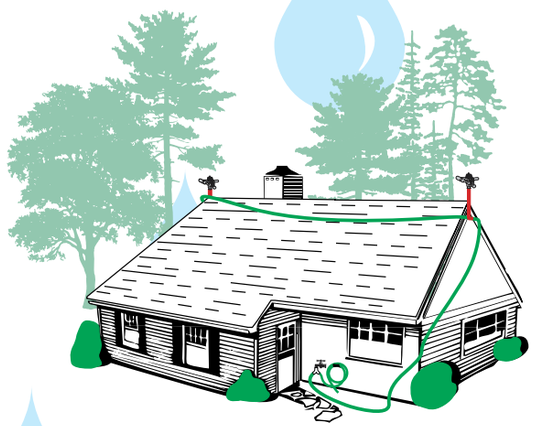
It is the homeowner's actions that will determine the likelihood of their home surviving even a small forest fire. Consider the response time for the nearest fire department. Can a fire truck get in and out safely? There are more structures than firefighters and fire trucks available to protect them all safely.

Is there defensible space? (A separation between the structure and surrounding forest fuels.) Pine needles, leaves, branches and other debris within 30' of the structure need to raked. A firebrand can easily ignite these accumulations and then rapidly spread to the structure.

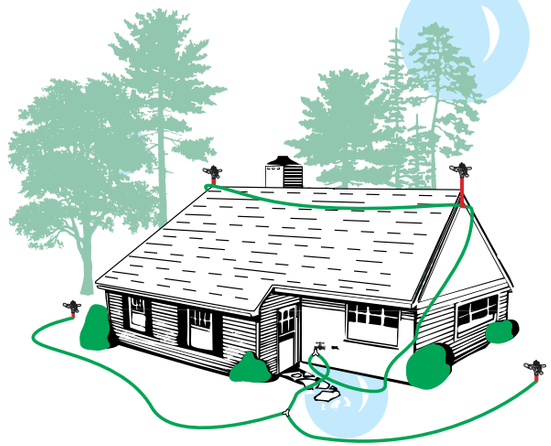
Sprinkler systems using ordinary lawn sprinklers and garden hose are a simple and effective way to increase the survivability of your home or cabin. Any system will help; the ideal system has sprinklers on the roof and all sides of the house. It is important to wet down areas that could be ignited by a firebrand. Firebrands are airborne, and will land anywhere blowing leaves and needles do.

Check rain gutters, roof valleys, areas on top and below wood decks and steps. Are hazards like LP gas tanks, wood or brush piles located too near to your structures?

One of the best ways to help protect a structure from wildfire is to have a sprinkler system wetting down surrounding fuels prior to the fire arrival and creating a humid microclimate. Set up overlapping sprinkler heads to wet down the structure, surrounding forest fuel, firewood piles, LP tanks or other fire hazards. A gas powered portable pump should be used in the event of power interruptions or loss. It may also allow for larger diameter hose to be used with less friction loss and greater pressure; it should be set up in a fire safe area. Make sure that the sprinklers used can withstand the higher pressure produced by a pump. Systems may be purchased from companies like WSPS * (Wildfire Sprinkle Protection System) from George Carlson at 218-388-9969. It is helpful to determine how much pressure and the gallons per minute your water supply system provides. You could use a system like the Original Soak-A-Lawn Sprinklers.[1] This one provides 700 square feet of coverage. It could be used to presoak fuels; however the coverage area is limited and the fine mist will not provide coverage in high winds.



This method creates a micro-climate of humid air. It provides better coverage and less sprinklers are needed when placed on the roof.

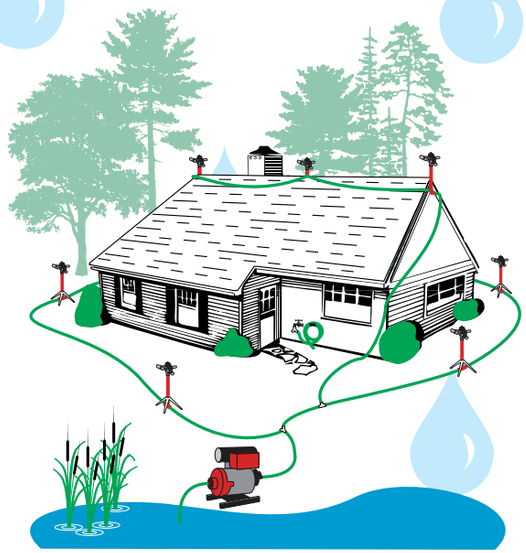


The system can be split. It is likely that only 2 to 3 sprinklers at one time can be operating, depending on water pressure and g.p.m. flow.

***On the ground prioritize and concentrate on the hazards.** Accumulations of pine needles, leaves, branches and wood piles, LP gas tanks in close proximity to the structure.*

Additions and modifications can be made by firefighters by adding a pump.

You could build your own. With some 1" PVC pipe, several 1" x ¾" threaded Tees and 90's based on length and design, along and a few sprinklers you can have a roof system. It will need to be secured to the roof, and a union or two for break down and storage would be helpful. You want to make sure it will drain in cold weather.) Your chimney should be capped to prevent water damage.



*Allows for higher pressure and the use of more sprinklers with less friction loss. **Properly anchor sprinklers. Make sure the pump is in deep enough water for large wave action. Elevating sprinkler allows the walls to be wet from eaves to ground.** Does not depend on a local electric power source. Should have large enough fuel tank to run 4 hours. (Another alternative is an electric pump with a back up generator.)*

[2] *Disclaimer: the use of trade, firm, or corporation names in this publication is for the information and convenience of the reader. Such use does not constitute an official endorsement of any product or service by the WI Department of Natural Resources.*