

## *Prepare before wildfire strikes*

### **In Your Backyard Woods**

Every year many families lose their homes and possessions to the ravages of wildfire; however, losses can be minimized. As a backyard woods owner, you play a key role in wildfire protection. How you maintain your woods can reduce the occurrence, size, and intensity of a wildfire.

### **Understanding wildfire**

#### ***Fire requirements***

Fire needs oxygen, fuel, and heat to burn. To prevent fire, you need to eliminate or reduce the availability of these ingredients. Since oxygen is always present in the air, the focus of fire prevention is on fuel and heat sources.



Fuel can be living or dead material that will ignite, carry fire, and burn. In your backyard woods, fuel includes standing and fallen trees, shrubs, and ground cover. Your home and outbuildings are also fuel. Fuels on the ground allow fire to spread more easily along the ground. Fuels above the ground allow fire to spread upwards and even climb into the crowns (tops) of trees, where it can spread rapidly from tree to tree.

Heat can be generated naturally by lightning or by people through sources such as chimneys, barbecue grills, and incinerators. Heat from a fire radiates in all directions, particularly upward. Sparks and embers can be carried aloft by air currents and deposited up to 1 mile away from a fire.

#### ***Fire behavior***

When the essential ingredients for fire are present, weather and topography affect how fire will behave. Weather is the more important factor because it affects the moisture content of fuels. High temperatures dry and preheat fuels. Low relative humidity and wind also dry fuels out. Dry preheated fuels require less added heat to start a fire. Wind also affects how large a fire will become, by affecting the direction and speed at which the fire will move.

Topography or slope of the land also affects how fast a fire will spread. Fires tend to spread much faster uphill. In general, fire can spread 1½ to 2 times faster up a 45 percent slope than it does over flat terrain. Fires spread fastest on hillsides facing west or south because they are exposed to more direct sunlight, which causes the fuels to be drier.

#### **Protecting your home and property**

An untreated wood shake roof is the number one cause of home loss from wildfires. Wind blown sparks easily ignite these roofs, and roof sprinklers do not provide adequate protection. Consider class-A asphalt shingles, slate or clay tile, metal, concrete products, or terra-cotta tiles when constructing or replacing the roof on your home.

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One of the most important things that a backyard woods owner can do to protect their home and other structures from wildfire is to create a safety zone or area of defensible space around them. This zone should be at least 30 feet wide on level or gently sloping ground and 100 feet or more on slope grades 30 percent or greater downhill from any structures.

A well-maintained (green) lawn makes a good safety zone, as long as it is kept clear of all leaves, twigs, and other debris that could catch fire. Trees within the 30-foot safety zone should have all bottom branches removed to a height of 6 to 10 feet, and should be spaced so that the crowns are at least 10 to 16 feet apart. Outside the 30-foot safety zone, one should prune branches away from power lines and outbuildings; and remove low hanging limbs, dead branches, undesirable small shrubs, and dead trees.



Your landscape doesn't have to be barren to be safe. Many common plants naturally resist fire.

### **Fire-resistant plants**

Many common plants naturally resist fire and can help keep fire from spreading. Generally, well-watered green plants will burn slowly. Certain types of plants have low oil and resin content or produce less litter and will burn slowly.

Examples of fire-resistant ground covers are these:

- Bugleweed (Ajuga)
- Lilly of the valley (Convallaria)
- Japanese spurge (Pachysandra)
- Spotted lungwort (Pulmonaria)
- Stonecrop (Sedum)

Examples of fire resistant shrubbery are these:

- Native bearberry (Arctostaphylos)
- Bearberry (Cotoneaster)
- Lilac (Syringa)

For more information on Firewise landscaping, visit the National Fire Protection Association Firewise Web site: <http://www.firewise.org>.

### **Storing materials safely**

Items that can easily catch fire should be stored at least 30 feet away from any structure, including wooden fences and outbuildings. Some items to consider are these:

- Fuel (leaves, twigs, dry grass, garden waste)
- Firewood
- Oil and or propane tanks
- Brush and slash (tree limbs, branches)
- Gasoline
- Paints and solvents

Brush and limbs should be hauled to local refuse recycle centers or dispersed outside your safety zone.

### **Providing emergency access to your property**

Despite your efforts to minimize the likelihood of fire in your backyard woods, fire is always a possibility. In the event of a fire firefighters need to be able to find and access your property quickly, and you can help make it easy for them.

At the entrance to your property, be sure to display your house number or street address so it can be read from the main road. It is best to use large, easy-to-read lettering and numbers.

Narrow, winding driveways increase privacy, but can hamper access of larger fire engines. Be sure your access road is wide enough to accommodate them.

Bridges may prove to be a barrier. If you have any bridges in your driveway, make sure that they are strong enough and wide enough to allow large fire engines to cross.

Turnarounds may be required at the end of your drive or road, in order for fire engines to be able to be positioned properly and to allow for quick exit if necessary.

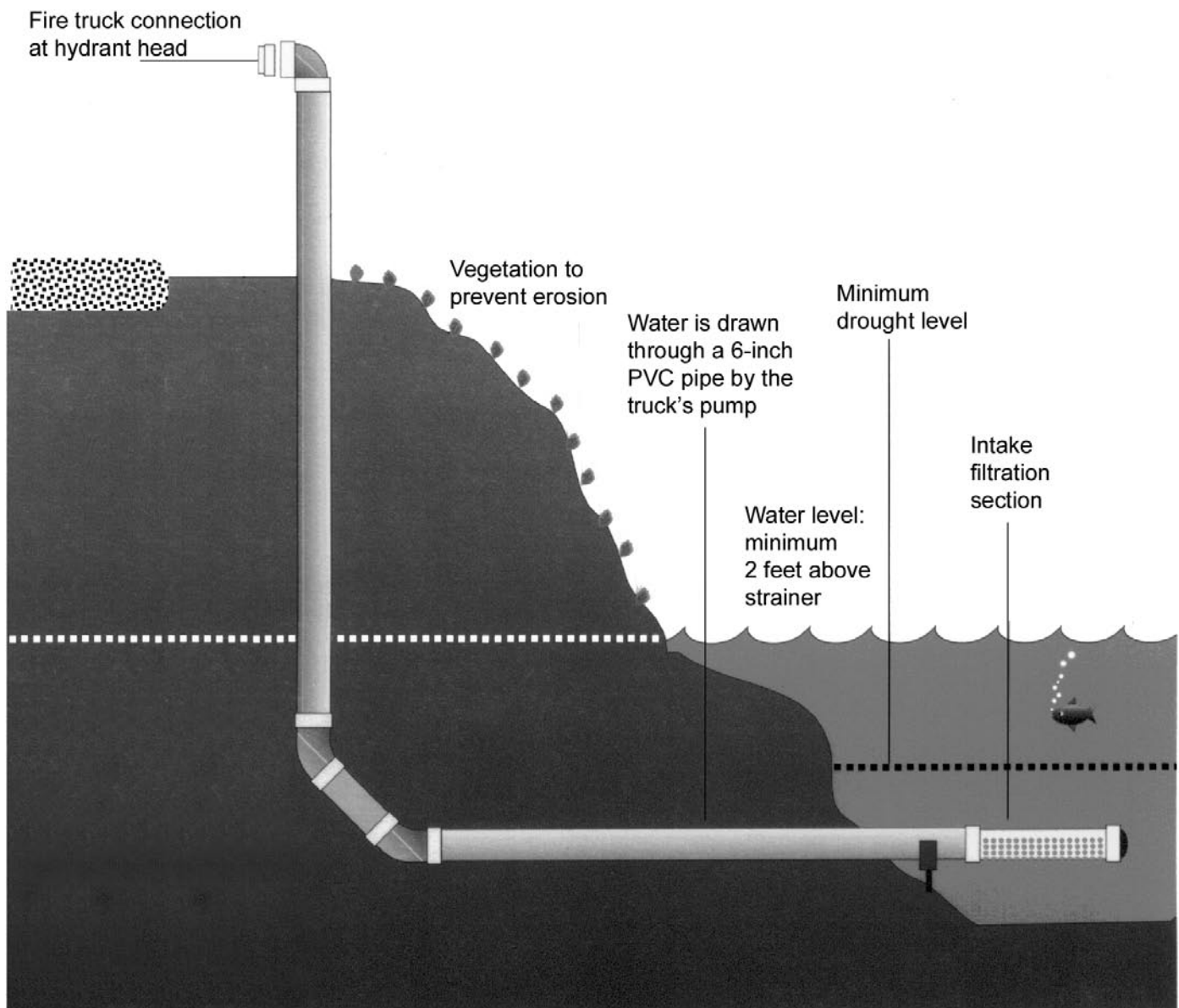
Contact your local fire department for specific information on easy to read lettering, and on access roads, bridges, and turnarounds.

### Ensuring a water supply: dry fire hydrants

When a fire department responds to a fire in a rural area, access to domestic water supplies may not be readily available. This situation can impair a fire department's ability to protect life and property. You can minimize the distance fire trucks must travel to municipal water supplies or draft sites, by installing a dry hydrant on your property. Ponds, lakes, streams, canals, and irrigation wells can become sources of water for firefighting.

A dry fire hydrant is a nonpressurized pipe system permanently installed in an existing water source to provide easy access to water from the main road. The dry hydrant can be made of any hard, permanent material (steel, iron); however, PVC (polyvinyl chloride) is most commonly used due to price, accessibility, and low friction-loss performance. The other elements of the system include an intake filtration section, and a hydrant head with suction screen and cap. Besides improved fire protection, benefits of having a dry fire hydrant include lower property insurance rates.

For more information on dry hydrants, contact the Soil and Water Conservation District to find your local Resource Conservation and Develop Council, the State Forestry agency or local fire department.



A dry fire hydrant is simple in design, but provides improved fire protection and lower insurance rates to you and your neighbors. It must be installed on a road that provides easy fire truck access.

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## Are you prepared?

Proper maintenance of your home, outbuildings, and backyard woods will help you and the local emergency responders considerably in protecting your property from wildfire.

Reduce your risk of loss to a wildfire by applying these guidelines now. Meet with your family to decide what to do and where to go if a wildfire threatens your property. Here are some additional things that you can and should do:

- Contact your local fire department, health department, or forestry office for information on fire laws.
- Be aware of hazardous weather and fuel conditions that could cause a wildfire.
- Teach your children about fire safety.
- Post fire emergency telephone numbers.
- Plan several escape routes from your home and property.
- Talk with your neighbors about wildfire safety.

## In the Forest

The heart and soul of firefighting on most forest fires in the United States are provided by the 26,000 volunteer rural fire departments across the country. Through partnership with the USDA Forest Service and the States, these local fire departments receive necessary training, fire equipment, and personal safety items, and new fire departments are organized in unprotected communities. One program that provides assistance to States and local volunteer fire departments is the Federal Excess Personal Property Program. Excess personal property is acquired from various Federal agencies by the Forest Service and loaned to State forestry agencies and rural fire departments for use in providing forest and rural community fire protection.

### Suggested Reading

FIREWISE: [www.firewise.org](http://www.firewise.org). This Web site contains educational information for people who live or vacation in fire-prone areas of the United States.

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