CALIFORNIA FOREST STEWARDSHIP PROGRAM SUMMER 2008

FORESTLAND STEWARD

WORKING TOGETHER FOR HEALTHY FORESTS

It's up to you

After decades of urging the public to prevent forest fires, California fire professionals have a new approach: Live with it.

Living with fire does not mean passive acceptance. It means making well-informed, thoughtful decisions when building, landscaping, maintaining your property, and also making good choices when fire threatens, as it inevitably will. Living in the wildlands requires that you accept the reality of fire and take responsibility for your own protection and safety.

What can you do to make your home and property more resistant to fire? Plenty. In this issue we will touch on many of these critical topics. You will be amazed at how much you can do to improve your fire safety and survival, both individually and as a community.

As usual, due to our limited space, many of the details are found in the links and references. Follow these to an immense wealth of information. Note that the electronic version of this newsletter has live links…simply click to go directly to more resources. Contact us if you would like to receive the e-version in addition to, or instead of, the hard copy.

Photo: Jason Halley/Chico Enterprise-Record

Inside

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FORESTLAND STEWARD

Forestland Steward is a joint project of the CA Dept of Forestry and Fire Protection (CAL FIRE), Placer County Resource Conservation District, UC Cooperative Extension, and USDA Forest Service to provide information on the stewardship of private forestlands in California.

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Planning for wildfire survival

"It's a hot day in early October. It's 2:30 and the afternoon wind has just kicked up. There's been no rain since May, and everything is tinder dry.…Nearly half our county's fire engines are near L.A.…
A wildfire breaks out in Mendocino County."
–Living With Wildfire in Mendocino County

This nightmare scenario goes on to describe, in hair-raising detail, the terror and confusion that can ensue in a wildfire. The story ends with "All these dilemmas…could be solved by one thing: ***Local preparation–by you and me.***"

Julie Rogers, Executive Director and sole full-time employee of the Mendocino County Fire Safe Council, created this hypothetical–but all too possible–drama. Her job is to imagine the worst and work with the community to find ways to mitigate the dangers.

"We strive to help our county's residents prepare for wildland fires. The fires are sure to come; nearly all scientists who study the history and behavior of wildfires report that fires are increasing in size and severity, that "fire season" is lasting longer and longer, and that areas once spared will be spared no more."

Ms. Rogers, along with a dedicated Board of Directors and a committed community, has identified a number of fire safety concerns in the county. With financial support from grants for on-the-ground projects, the Council is working to educate the community on the very real dangers of the wildfires that are sure to come.

The Mendocino County Fire Safe Council has been extremely successful in their less than five years of existence. Since 2004, they have received $441,000 in federal grants, $85,000 in local grants, and have already been awarded $207,000 for 2009.

These funds have been carefully spent on a number of projects to accomplish their mission to "help save lives, property, and resources from devastation by wildland fires."

One major concern is the many narrow, winding roads that lead into small communities in Mendocino County. In a fire emergency these one-lane roads would be quickly overwhelmed by people trying to evacuate and fire engines trying to enter. On closer inspection, some of these roads actually have a road base wide enough for two lanes, but much of the road is overgrown with brush.

A couple of recent grants from the Bureau of Land Management (BLM) address this and other issues.

The Fire Safe Council received over $70,000 in 2006 to assist the Brooktrails Township with clearing brush and tree branches back from a dozen miles of roads. This work was largely accomplished by a tree service, a fuels reduction contractor who, thanks to his efficiency and attention to the aesthetics of his results, won over many landowners who were reluctant to have their properties worked on.

After treatment, one fire chief declared, "Now I would feel confident bringing my engines in here. But I wouldn't have before this work was done."

In addition to road clearing, funds from this grant were used to identify and clear several evacuation routes through private lands, create a Brooktrails Township Community Wildfire Protection Plan, print the Brooktrails Wildland Fire and Emergency Evacuation Plan, install reflective intersection signs on private roads, and fund the mailing of a checklist for evacuating with animals.

The Mendocino County Fire Safe Council has an article on large animal rescue written by Michelle Staples at http://firesafemendocino.org/horseall.pdf.
Photo: Bill Husa/Chico Enterprise-Record

Another grant in 2007 provided about $60,000 for the Pine Mountain area near Willits. This allowed the community to clear 7.5 miles of roadside (some of it previously so overgrown that two cars could not pass), fabricate and install street signs on private roads, and hire a GIS consultant to create a professional map in two versions: one for fire fighters and another for the general public.

A major accomplishment of the Council has been its ability to build trust in the community by working with local groups, listening to and honoring concerns, and demonstrating aesthetically pleasing results. They have seen significant improvements in community willingness to participate in fire-safety projects.

A side benefit has been increased enthusiasm and partnership in the community, with people working together in new ways.

In 2009 the Council will take on two huge projects: removal of gorse, a highly flammable invasive plant that has invaded the Caspar area on the coast, and a county-wide chipping program to provide free chipping services for those who clear to create defensible space around their homes, roads, and driveways.

There is plenty to do. To more effectively accomplish their goals of educating residents about the danger of wildfire, mapping and planning, and obtaining grants, the Council encourages other groups–road associations, homeowner groups, subdivisions, and towns–to create their own Fire Safe Councils, which the county council can assist with education, guidance, and possible grant funding.

Find or start your own local Fire Safe Council. Go to http://www.firesafecouncil.org.

Many of the articles in this issue of Forestland Steward are adapted from the highly informative and easy-to-read "Living With Wildfire in Mendocino County: Protecting Ourselves, Our Property, and Our Natural Resources" created by the Mendocino County Fire Safe Council. You can view it at http://www.firesafemendocino.org/livewithfire.pdf (9.36 MB). Contact the Council at firesafe@pacific.net or call 707-462-3662.

Photos from Blue Lake Road in Spring Creek, an area served by private roads, immediately adjacent to Brooktrails Township. The work was done by residents and a contracted tree service in 2007, and funded by a National Fire Plan grant from the BLM. The difference between "before" and "after" is dramatic. Road sections are now cleared 15 feet high above the road surface, and cleared and thinned from below 15 feet out on each side of the road. Photos: Daniel Mitchell

NOTE: Much of this newsletter was prepared before the June 21–22 lightning event that ignited close to 1,800 wildland fires, mostly in Northern California. As of July 14, over 250 of these fires were still burning. Because of the massive scale of this event, some fires went without any suppression resources at all for a week or more, despite a huge infusion of firefighters and equipment from throughout the U.S. and beyond. This fire storm of 2008 only reinforces the overall message of this newsletter: It's up to every homeowner and community in California's wildlands to do everything they can to prepare for fire.

Take the Homeowner Wildfire Assessment

Take the Homeowner Wildfire Assessment at **http://firecenter.berkeley.edu/homeassessment/#**

For more information—as well as possible problems and potential solutions—go to the Homeowner's Wildfire Mitigation Guide at **http://groups.ucanr.org/HWMG/index.cfm**

And while we're extolling the joys of technology, check out this Defensible Space Zone Song (600K MP3) courtesy of Mark Crisp © at **http://www.fire.ca.gov/communications/downloads/100_foot_song_80kbps.mp3**

Here is a quick and informative quiz to help you identify problem areas on your property. Go to **http://firecenter.berkeley.edu/homeassessment/#** for this online quiz. If you want more information, hold your mouse over each question for explanations and photos. After submitting your answers, you will immediately receive a summary that groups your answers into high, moderate, and low categories, and gives possible solutions for each. Isn't technology fun?

Roofing

1. Is your roof combustible? ..... yes no n/a
2. Does your roof have any unstopped or unscreened open roof tiles? ..... yes no n/a
3. Is your roof, or a portion of your roof, in poor condition? ..... yes no n/a
4. Is there debris in your roof valleys? ..... yes no n/a
5. Do you have a flat roof or a complex roof that may allow debris to collect? ..... yes no n/a
6. Do you have any unscreened chimney openings? ..... yes no n/a
7. Is there debris in your roof gutters? ..... yes no n/a
8. Is there any combustible vegetation, vegetative debris, or other combustible material on or touching the roof and/or are there tree limbs within six feet of the roof? ..... yes no n/a

Vents

1. Do you have any vents on the outside of your home that are unscreened and/or screened with a mesh size that is less than 1/8-inch? ..... yes no n/a
2. Do you have any gaps around your exterior doors? ..... yes no n/a
3. Do you have any gaps around your garage doors? ..... yes no n/a
4. Do you have any man-made fuels located alongside vents and/or gaps in your home? yes no n/a
5. Do you have any combustible vegetation, vegetative debris, or other combustible materials located alongside vents and/or gaps in your home? ..... yes no n/a

Siding

1. Is your siding combustible? ..... yes no n/a
2. Is the siding, or a portion of the siding, on your home in poor condition? ..... yes no n/a
3. Are there any man-made fuels located within 30 feet of your siding? ..... yes no n/a
4. Is there any combustible vegetation, vegetative debris, or other combustible material located alongside your siding? ..... yes no n/a
5. Is there a combustible fence or gate located within 12 feet of your siding? ..... yes no n/a

Eaves

1. Does your home have combustible eaves or overhangs? ..... yes no n/a
2. Are your eaves in poor condition? ..... yes no n/a

Decking

1. Does your home contain a deck, balcony, open entry-way, and/or open porch? ..... yes no n/a
2. Are the exposed boards (fascia) along the roofline, eaves or combustible decking in poor condition? ..... yes no n/a

Windows

1. Does your home have any single pane windows? ..... yes no n/a
2. Are there any man-made fuels alongside your windows? ..... yes no n/a
3. Is there any combustible vegetation or vegetative debris within six feet of your windows? ..... yes no n/a

– Developed by the Center for Fire Research and Outreach in the College of Natural Resources at the University of California, Berkeley

Will a fire engine come to your house?

In the midst of a raging wildfire, resources are often scarce and firefighters must make difficult choices about where to put their time and efforts. They may have to triage, which means ignoring those homes that are difficult or impossible to defend and concentrating on those considered "savable."

It follows that you want to do whatever you can to make sure your house is savable.

Identify Your Home

Don't take it for granted that fire fighters can find your home.

- Make sure every intersection leading to your home has road name signs. Signs should be of metal and have reflective letters at least 4" tall. If necessary, use arrows to indicate which road goes where.
- Mark dead-end roads.
- Your house number sign must be visible from the road from 100' in both directions in a fire engine's headlights. It should be metal and have reflective contrasting numbers at least 3" tall. If there are several driveways off your road, use arrows to make it obvious which one is yours.

Access

Fire engines are big machines; they can weigh 40,000 pounds. A fire bulldozer on a lowboy transport is 10' wide and up to 60' long. Make sure all roads, bridges, and access areas can accommodate these vehicles.

- Remove tree branches up to 15' above the road surface. Wherever possible, remove brush and branches 10' from both sides of all roads.
- Make sure your bridge or culvert can support the weight of a fire engine. If not, you may need to strengthen or replace it. Consult a civil engineer and placard your bridge with its weight allowance.
- All roads and driveways must be at least 10' wide (18' in most situations). The grade should be less than 16 percent. The radius of turns must be at least 50' so fire equipment can navigate them.
- All driveways and dead-end roads must have places where large fire vehicles can turn around. These can be cul-de-sacs with at least a 40-foot radius, or places for a 3-point turn. Fire chiefs will not send their engines in to places where they cannot turn around.

Photo: Bill Husa/Chico Enterprise-Record

- During a wildfire, fire equipment will be entering your area while you may be trying to leave. Build frequent turnouts along any roads less than 20' wide so vehicles can pass each other and get to safety.

Water Supply

Fire engines carry a limited amount of water. Take the steps necessary to ensure that your water supply is also available for fighting fires (*see page 6*).

Defensible Space

We write a lot about PRC 4291, the California law that requires everyone in wildland areas to modify the vegetation within 100' of their homes and other structures. This defensible space is designed to reduce the flames and heat coming toward your home. Remember, the law doesn't require bare earth for 100'. Use your creativity and knowledge of fire behavior to create a safe ***and*** attractive landscape.

Clear everything flammable in the area right next to your house. The zone out to 30' (or the property line) should have most of the flammable vegetation removed. The final area out to 100' (or the property line) is a buffer zone. Remove flammable vegetation by 30 percent or so. For more information on this law, go to **http://www.fire.ca.gov/communications/communications_firesafety_100feet.php**.

In the midst of a raging wildfire firefighters may have to triage, which involves ignoring those homes that are difficult or impossible to defend and concentrating on those considered "savable."

Water, water everywhere…

NOTE: This article gives general information only. Consult with your local fire department to make sure you are meeting their standards.

Water is one of the limiting factors in fighting fires. Having a water tank, swimming pool, or pond nearby is not enough; the water must be accessible to firefighters. It must have a Fire Department Connection (FDC)–a male National Hose pipe thread fitting either 1½" or 2½" in diameter controlled by a valve–or it must be located so a fire engine can safely park directly next to it.

There are two basic types of water systems: 1) draft-only systems, which provide water without pressure; and 2) pressurized systems, with pressure provided by a pump or gravity.

Draft Systems

A draft system consists of a water tank with a Fire Department Connection. It requires a suction hose from the fire engine to the FDC so the engine can draft, or suck, the water into its pump, where it is pressurized for firefighting. Because a fire engine's suction hose is very short, a fire engine must be able to park within 7' of the FDC. Both the parking location and the approach to it must be a hard surface capable of holding a 14-foot-tall, 40,000-pound vehicle. If this is not possible, some form of hydrant must be installed at an accessible, suitable location, generally next to the driveway or parking area.

Hydrants for draft systems can be either "wet" or "dry"–primed with water or not. Dry hydrants are extremely problematic and should be avoided. A hydrant can be made "wet" by simply locating it slightly lower than the water source so water fills the hydrant.

Draft systems have numerous limitations. The better choice is a pressurized system.

Pressurized Systems

There are two ways to provide pressure: with gravity or with a pump.

Gravity systems are generally the most desirable for fire protection, as they won't fail when the power goes out.

In a gravity system, water is collected in or pumped to an elevated tank before it is needed. This tank is kept full and water is brought down to the home or hydrant through a large diameter pipe (3" or more). Gravity systems can easily combine both domestic and fire protection water.

An elevated tank provides one pound of water pressure for every 2.3' in elevation. For example, a tank placed 230' uphill provides 100 pounds of pressure. A tank 80' uphill provides 35 pounds of pressure–the minimum needed to protect a home from fire. The typical desired home water pressure is 40 to 60 pounds.

A gravity system intended only for supplying a fire engine could have less pressure and still be effective, if 1) the water line is at least 2½" in diameter and 2) the line is short with no humps or rises that can trap air.

Portable water pumps can be used with tanks, pools, ponds, streams, or any other water source. Pumps should be pre-fitted with 1½" or 2½" male National Hose pipe thread fittings on their discharge sides, and must have suction hoses long enough to reach the water. With a strong enough pump and a long enough suction hose, water sources even a few hundred feet away can be used. The farther the water must be moved, and the higher it must be lifted, the stronger the pump must be. Compare the distances with a pump's specs before choosing one.

If water will be drawn from a source where dirt or other materials might be sucked in, the intake (pickup) end of the suction hose should be equipped with a strainer. The best strainers have a built-in "foot valve" that prevents water from flowing backwards out of the hose. This helps greatly with establishing and maintaining flow through the pump.

Persons planning to defend their homes should use a 1½" diameter fitting and 1½" hose. The 2½" hoses firefighters use, when filled with pressurized water, are too awkward and heavy for most people to handle.

Water Tanks

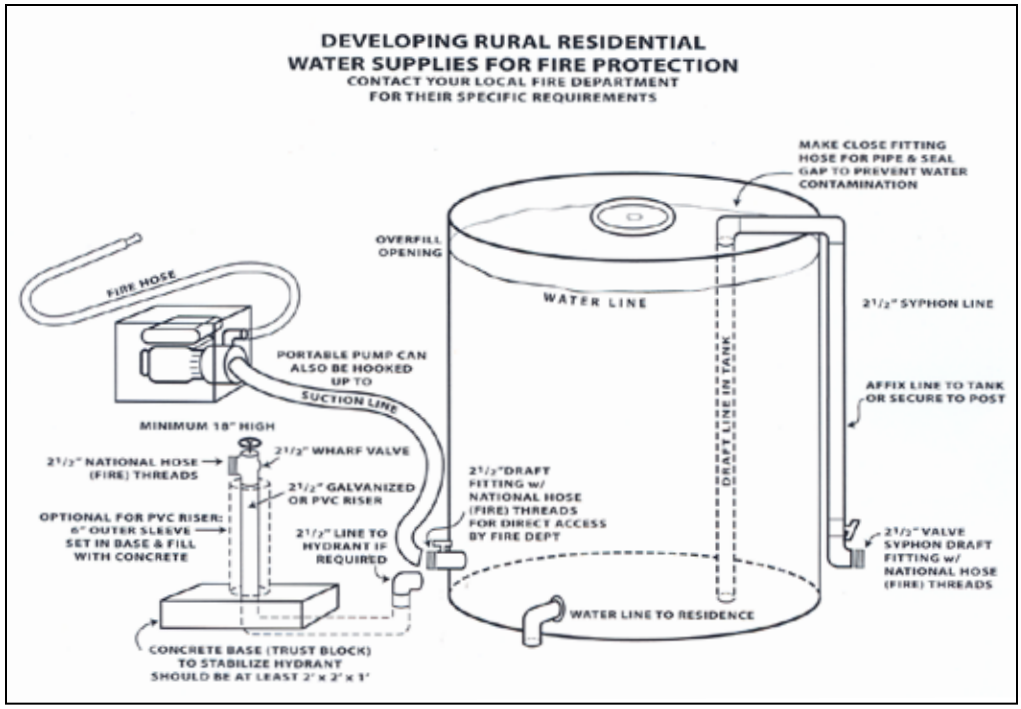
The water tank(s) you select will depend on your intended use, your budget, and where it will be installed. Green plastic free-standing tanks are common for both domestic and fire protection uses; such 3,000-gallon tanks about 8' wide and 8' tall are often the most economical. Most come with a standard (non-fire) 2" discharge fitting, which must be adapted for fire purposes. Two or more tanks can be plumbed together and merged into a larger diameter pipe if needed.

New homes may be required by law to provide water for fire protection, generally 2,500 gallons. You may be allowed to use the same tank for both domestic and firefighting purposes if you place the domestic discharge high enough on the tank that the water below it meets the fire requirement. For example, a 5,000-gallon tank could have the domestic water discharge halfway up the tank, with the fire discharge (FDC) at the bottom so it can utilize all 5,000 gallons.

To be accessible to firefighters, the water must have a Fire Department Connection (FDC)—a male National Hose pipe thread fitting either 1½"or 2½"in diameter controlled by a valve—or it must be located so a fire engine can safely park directly next to it.

If more than one tank is used, the tops of all tanks must be at the same elevation; otherwise, the high tank will overfill the low one. When tanks are plumbed together, each should have its own shutoff valve so if one tank develops a leak it can be isolated. A single FDC can utilize all the tanks. If installed at the same elevation, all tanks will draw down equally as water is used.

Plastic tanks should be protected from fire by clearing all burnable materials within 30'. Even full plastic tanks will melt when exposed to enough heat.



Hydrants

Hydrants (also called standpipes or risers) must be very sturdy to withstand heavy weights and pressures. If PVC pipe, or even galvanized steel, is used for the riser, it may be fortified as follows: Put a sleeve of 6" PVC over the riser and set it into the hydrant's concrete base as an outer shell. Fill the space between the riser and shell with concrete. When set, the 6" barrel of concrete becomes one unit with the base. Be sure to check for leaks before pouring the concrete!

Hydrants should be located about 50' away from the house. At this distance, if the house is on fire the hydrant can probably still be reached. The ideal location allows firefighters to park near the hydrant and reach a fire anywhere inside the home with their 150-foot-long hose. Hydrants should be 18–24" high, and placed 4–12' from any road. Keep grass and brush cleared at least 8' away so hydrants can be easily found and accessed. Consult your local fire department for their requirements.

Multiple 1½" hydrants may be required to protect both home and outbuildings. Each hydrant should have a 1½" hose and nozzle, kept next to the hydrant in an elevated cabinet to protect them from the elements. Synthetic hoses are best, as cotton rots quickly. Nozzles should be pre-connected to the hoses, and cabinets clearly marked and easy to access.

If hydrants could be hit by vehicles, protect them with barriers such as concrete posts. Discharges should be covered with screwed-on metal caps that prevent objects or creatures from getting into the pipes.

There are two main types of valves for controlling the water flow. A "wharf valve" or "fire valve" has an inlet fitting of standard pipe thread, either male or female, and a discharge/outlet of 1½" or 2½" male National Hose thread. A round wheel on the top controls the valve. Wharf valves are somewhat expensive but are high quality and relatively trouble free. PVC ball valves also work well, but are more easily damaged with a shorter working life, particularly when exposed to sunlight. Be careful to select a valve with the correct fittings on each end!

Modifying an Existing Water System

If your current water system can deliver at least 40 gallons per minute, it can be adapted for firefighting by simply providing a 2½" male National Hose pipe thread fitting (FDC) where a fire engine can access it, as described above.

The most common problem with adapting existing systems is the size of the pipe. A minimum 2" diameter pipe is needed for systems supplying 1½" FDCs, and a 3" pipe is needed for 2½" FDCs. Systems with multiple discharges may require larger pipes if more than one discharge might be used simultaneously.

If your tank doesn't have a large enough discharge port and it isn't practical to install one, consider building a siphon using 3" PVC pipe and elbows, as shown in the large diagram. The outside siphon pipe should be secured to the tank

(continued next page)

1) Install round blue reflectors and the word "Fire" or "FDC" on your address post and wherever necessary to direct firefighters to your water. Do not use blue reflectors for any other purpose.

2) Paint or placard the word "Fire" or "FDC" in large letters directly on your water supply.

3) Paint all fire valves and fittings red, and place arrow(s) pointing to them if necessary.

Create a Safety Zone…Just in Case

If you cannot safely evacuate, you have two choices:

1) stay at home and "shelter in place," which requires excellent fire safe preparation

2) go to a pre-designated and pre-prepared "safety zone."

In a wildfire, you may not be able to evacuate due to road or fire conditions. For example, the road in and out of your area may be overloaded with traffic trying to evacuate. Or a single stalled vehicle or accident could block all cars behind it. Or fire may rage on both sides of the road…

In these and many other situations, you may find you have only two choices: 1) stay at home and "shelter in place," which requires excellent fire safe preparation, or 2) go to a pre-designated, pre-prepared "safety zone."

Safety zones are wide, cleared, open areas where you can go to survive a wildfire.

Some neighborhoods may have pre-existing safety zones, such as large parking lots or dirt horse arenas. However, many people in rural areas will need to create safety zones.

Fire needs three components: heat, oxygen, and fuel. Fuel is anything that burns. In rural areas this includes grass, brush, trees, slash, homes, fences, cars, and machinery. Take away this fuel and the fire will not be able to burn!

In safety zones the fuel has been removed so a fire will burn around, but not through, it. The people in the middle of a good safety zone will feel the fire's heat, but should not be burned.

The location of the safety zone is critical. It should be a flat location, for example, a large grazed field with no trees and brush, or a wide, flat river bed with little vegetation nearby. A running creek or river can be a safe refuge ***if*** it's not in a canyon with vegetation on the banks.

The larger your safety zone, the more protected you will be. How big depends on the height of the nearest vegetation. If your safety zone is a field surrounded by trees 50' tall, it should be at least 450' in diameter. Trees put off a tremendous amount of radiant heat, which can catch a home on fire 100' away! And human skin and lungs are much more delicate than home sidings. Burning grass, on the other hand, puts off much less heat, and could require a safety zone only 60' in diameter.

You can increase your safety by cutting back and thinning surrounding trees and brush.

In order for a safety zone to be truly safe, it needs to have all or nearly all flammable materials removed from it in advance. Brush should be cut and removed, grass weed-whacked, and the area cleared as close to soil as possible. But green grass is a good thing!

Consider storing water and firefighting tools in your safety zone.

Create your safety zone in late spring and monitor it every week during fire season to ensure it remains free of flammable materials.

–adapted from Suggestions For Creating A "Safety Zone" For Use In A Wildfire Emergency *by the Mendocino County Fire Safe Council at http://www.firesafemendocino.org/safetyzone.pdf*

Water Storage (*continued from previous page*)

–this article was adapted and abridged from Developing Water Supplies for Fire Protection *by Colin Wilson, Chief of the Anderson Valley Fire Department and President of the Mendocino County Fire Safe Council. The complete pamphlet, with photos, is available from MCFSC at (707) 462-3662.*

Background Photo: Jason Halley/Chico Enterprise-Record

if possible. If not, set a 4"x4" or larger post next to the tank and secure the pipe to it, being careful not to obstruct the valve or the discharge.

The siphon is established by pumping water into the tank through the fire fitting, then closing the valve. Once established, the siphon should take care of itself; it can be easily re-established if necessary.

Labeling Water for Fire Protection

It is critical that water supplies and fittings be plainly labeled to provide firefighters with quick identification and access.

1) Install round blue reflectors and the word "Fire" or "FDC" on your address post and wherever necessary to direct firefighters to your water. To a firefighter, a blue reflector means water. Do not use blue reflectors for any other purpose–this could lead to confusion and lost time during a fire.

2) Paint or placard the word "Fire" or "FDC" in large letters directly on your water supply. It's helpful to include the number of gallons and the size of the fitting. Make sure to keep the tank full!

3) Paint all fire valves and fittings red, and place arrow(s) pointing to them if necessary.

Maintaining Your System

All water systems must be maintained. Even a simple tank and draft fitting needs to be "exercised" a few times a year. Valves left idle become sticky and hard to use. Pumps need to be used periodically to ensure they start and run properly–and that you remember how to work them. Hoses must be inspected often to make sure they haven't rotted or been chewed. A good way to make sure your system works is to use it to wash your home in late spring. This way everything is inspected and exercised, and memories refreshed.

Stay or Leave? Evacuation Checklist

If a fire is heading your way, plan to leave promptly unless you have prepared yourselves and your house to deal with the heat, flames, wind, and noise a wildfire can bring.

Be aware that evacuating may be extremely difficult if your only road is barely wide enough for fire engines to enter, with no turnouts for vehicles trying to leave. If you live in such a place, you should prepare ahead to "shelter in place" in your home while the fire passes, or go to a pre-designated safety zone (*see page 8*). Both of these involve risks.

Early On

- ❑ Evacuate children, elderly, or disabled persons. Having them safe will make decisions easier.
- ❑ Relay your plans–to leave or stay, a meeting place, who will go where–to a contact person outside the area. Be sure all family members can reach that person.
- ❑ Keep your vehicle fuel tank full during the fire season.

Getting Ready to Leave

- ❑ Decide on only ONE evacuation vehicle. All roads will be dangerously crowded.
- ❑ Tune to a local radio station for news.
- ❑ Wear only cotton or wool clothes (jeans, long-sleeved shirt) and sturdy shoes. Do not wear any synthetic clothing (polyester, nylon, etc)–it can melt onto your skin and cause horrible burns.
- ❑ Prepare to evacuate pets and large animals. Put pets, in carriers, in your vehicle. Pack their food and water for several days.
- ❑ Put your evacuation vehicle in your garage or driveway facing out, ready to go, with keys in the ignition.
- ❑ Disconnect any electric door openers so the door can be operated manually.
- ❑ Carry gloves, goggles, and a handkerchief to cover nose and mouth.

What to Take (Put in Vehicle)

- ❑ Flashlight and battery-operated radio
- ❑ Insurance policies, birth certificates, passports; medical, tax, and bank records
- ❑ Inventory of your home's contents, for insurance purposes
- ❑ Bank/credit cards, drivers' licenses, cash
- ❑ Medications and eyeglasses
- ❑ Family photos, videos, heirlooms
- ❑ Computer or computer backup files
- ❑ Phone numbers
- ❑ Clothing and toiletries for a week
- ❑ Nonperishable food, drinking water

Preparing—Indoors

- ❑ Take down lightweight curtains. These could catch fire due to radiant heat.
- ❑ Move stuffed furniture away from windows for the same reason.
- ❑ Close heavy drapes, shutters, and blinds–these will help keep the heat out.
- ❑ Fill bathtubs and sinks with water.
- ❑ Close all windows and exterior doors to prevent sparks from blowing inside.
- ❑ Close doors between rooms. If a fire starts in one room, this will slow it down.
- ❑ Leave a light on in each room and porch so firefighters can see your home.

Preparing—Outdoors

- ❑ Put patio furniture, planter boxes, wood piles–everything flammable–either indoors or at least 30 feet from the house.
- ❑ Shut off propane at the tank, and natural gas at the meter. Leave electricity on.
- ❑ Close exterior vents to keep out embers.
- ❑ Prop a tall ladder against your house to give firefighters access to the roof.
- ❑ Connect all garden hoses to faucets with nozzles set to spray.
- ❑ Fill trash cans and buckets with water and place them around your house.
- ❑ If you have water with a fire department connector, post a large sign at your driveway pointing to it.
- ❑ If you can, cover windows, attic openings, and vents with heavy plywood.
- ❑ If time permits, clean off your roof.
- ❑ Leave all exterior doors unlocked so firefighters can enter if necessary.
- ❑ Close your garage door behind you.

–adapted by the Mendocino County Fire Safe Council from Living with Fire: A Guide for the Homeowner *by Ed Smith at University of Nevada Cooperative Extension.*

Planning to stay?

If you plan to stay and fight a fire, you MUST prepare very carefully.

1. Have a plan in case something goes wrong. Find a place that 1) you're sure you can reach, 2) will not burn, and 3) is so far away from anything flammable that you can survive there without injury (*see page 8*). The heat from a fire can burn human skin from 100' away—don't take chances.

2. Be in good physical shape. If you have any condition that impairs your ability to do hard physical work in stressful conditions, plan to evacuate.

3. Make a "risk versus gain" decision based on how well your home is prepared, the tools you have, and fire conditions. Hot dry weather, low humidity, high winds, and dry vegetation can make even the best prepared home a death trap. If you don't have an area where you can shelter safely, plan to evacuate.

Most people who have died in wildland fires waited too long to evacuate…

–from the Mendocino Co. Fire Safe Council

Resources

Fire Information Engine Toolkit

The mission of the Center for Fire Research and Outreach is to "develop and disseminate science-based solutions to wildfire-related challenges." Visit their website at **http://firecenter.berkeley.edu.**

Another excellent fire information site is **http://yubanet.com/fire.php**

Looking for information? The Fire Information Engine Toolkit is your one-stop spot for all things wildfire-related. This is a portal to tools for homeowners, community leaders, and researchers. Go to **http://firecenter.berkeley.edu/toolkit/homeowners.html**.

Assess your danger.

Use the Homeowner Wildfire Assessment (*see page 4*) to find the areas of your home with highest risk. The "search-by-address" fire maps will show the Fire Hazard Severity Zone of your property. The new wildland building standards, which are also linked here, are tied to the Fire Hazard Severity Zone maps.

Take steps to mitigate your danger.

The Homeowner's Wildfire Mitigation Guide will describe steps you can take to reduce the risks to your home and property.

Keep abreast of the news.

The California Active Fire Mapper shows the locations of active fires, while up-to-the-minute Wildfire News gives you news on the top 10 fire stories around the globe.

After-fire Resources.

Information and links to other resources can help you recover after a wildfire (*see also page 12*).

- During the first 24 hours after a fire: learn how to secure yourself and your family, who to contact, and how to deal with the emotional toll of a wildfire.
- Re-entering the home/site. What do you need to do? (E.g., conduct an inventory, do not throw anything away, locate valuable documents and records, replace lost documents, save all receipts, notify your mortgage company, check with the IRS about tax-related benefits...)
- Revegetating the site.

Community Wildfire Hazard Assessment and Ranking

Discussion of the purpose of a community wildfire hazard assessment, why a community would want to do one, and forms, a field guide, and other resources to help complete an effective community wildfire hazard assessment. There are samples from one California community that has undertaken the project.

Technical Assistance

Many agencies are available to provide technical assistance, referrals, information, education, land management plan assistance, and advice.

California Stewardship Helpline
1-800-738-TREE; ncsaf@mcn.org

California Dept of Forestry & Fire Protection
Forest Landowner Assistance Programs
Jeffrey Calvert
916-653-8286; jeff.calvert@fire.ca.gov

Forestry Assistance Specialists
Guy Anderson (Mariposa/Madera/Merced)
209-966-3622 x218
Jan Bray (Amador) 530-647-5212
Herb Bunt (Red Bluff) 530-528-5108
Jill Butler (Santa Rosa) 707-576-2935
Ed Crans (Placer/Yuba/Nevada)
530-889-0111 x128
Brook Darley (Tehama/Glenn) 530-538-5199
Mary Huggins (S. Lake Tahoe) 530-541-1989
Patrick McDaniel (El Dorado) 530-647-5288
Dale Meese (Plumas) 530-283-1792
Alan Peters (Calav/Tuol) 209-754-2709
Jim Robbins (Fortuna) 707-726-1258
Tom Sandelin (Fresno/King) 559-243-4136

California Association of RCDs
916-447-7237; staff@carcd.org

California Dept of Fish & Game
Scott A. Flint
916-653-9719; sflint@dfg.ca.gov

Natural Resources Conservation Service
Jerry Reioux
530-792-5655; jerry.reioux@ca.usda.gov

U.C. Cooperative Extension Advisors/Specialists
Mike DeLasaux, Plumas-Sierra counties
530-283-6125; mjdelasaux@ucdavis.edu
Greg Giusti, Mendocino-Lake counties
707-463-4495; gagiusti@ucdavis.edu
Gary Nakamura
530-224-4902; nakamura@nature.berkeley.edu
Bill Stewart
510-643-3130, stewart@nature.berkeley.edu
Yana Valachovic, Humboldt-Del Norte counties
707-445-7351; yvala@ucdavis.edu

USDA Forest Service
Jim Geiger
530-752-6834; jgeiger@fs.fed.us

Calendar

August 20–October 22, 200
Lecture Series–Recognizing and Managing Healthy Forest Ecosystems
To be held weekly, 6:30-8:30 p.m.
Location: Shasta College, Redding, CA
Cost: $5/session. Pre-registration required.
Info: You may attend only one or any combination of the planned sessions. For a complete list of sessions, go to http://groups.ucanr.org/Forest/

August 5–7, 2008
California Board of Forestry Meeting
Location: Sacramento, CA
Contact: 916 653-8007
Info: http://www.bof.fire.ca.gov/board/board_current_docs.aspx

August 26, 2008
Oak Woodland Stewardship in Monterey County To Protect and Conserve
8 am–3 pm
Location: 1432 Abbott Street, Salinas, CA
Audience: general public, ranchers, farmers, land managers, conservation organizations, and agencies.
Cost: $10; $5 late fee 3 days before workshop.
Contact: Jim Zingo, 805-781-5938, jzingo@co.slo.ca.us, or Bill Tietje, 805-781-5938, wdtietje@nature.berkeley.edu
Info: Registration on-line at http://danr.ucop.edu/ihrmp/ by early August. Space is limited.

September 9–11, 2008
California Board of Forestry Meeting
Location: Sacramento, CA
Contact: 916 653-8007
Info: http://www.bof.fire.ca.gov/board/board_current_docs.aspx

October 1-4, 2008
California Forestry Challenge
Location: Sly Park Env. Ed. Center, Pollock Pines
Contact: Diane Dealey Neill, dianedealeyneill@sbcglobal.net
Audience: High School students, teachers, resource professionals, general interest

October 1–4, 2008
California Invasive Plant Council Symposium
Location: Chico, CA
Sponsor: California-IPC
Info: http://www.cal-ipc.org/symposia/index.php#registration

October 2–4, 2008 (tentative dates)
Community Forestry Workshop
Location: Humboldt County, CA
Contact: Sherry Cooper, 530-224-4902, slcooper@nature.berkeley.edu

One-Day Forest Stewardship and Roads Workshops

These workshops are intended for present and future owners/managers of forest properties. The emphasis is on managing your property to enhance forest health and reduce risks with practical advice on dealing with problems. Includes lectures, resource materials, and field trips. Active participation and discussion is encouraged. This is an opportunity to learn about your property, ask questions, and learn from other landowners.

August 1–Paradise-Magalia, Butte County Paradise Pines
Forest ecosystems and creating defensible landscapes

August 16–Shingletown, Shasta County Stewarts Property
Forest ecosystems and creating defensible landscapes

September 5–McArthur, Shasta County RCD
Forest ecosystem stewardship

September 13–Weaverville, Trinity Co. Weaverville Fire Hall
Forest road risk assessment and management

October 4–Cazadero, Sonoma County
Forest ecosystem stewardship

October 11–Fountain Fire Area, Shasta County
Forest restoration after wildfire

October 18–Healdsburg, Sonoma County
Economics of managing for a healthy forest

TBD–Shasta County
Actions to be taken after 2008 wildfires

Workshops are usually held 8 am to 4 pm, but times may vary slightly. Pre-registration required. Cost is $15; $20 if not received 7 days prior to workshop. Fee includes materials, lunch, snacks. Space is limited to 30-40 people for each, so register early. Contact Sherry Cooper 530-224-4902, slcooper@nature.berkeley.edu or go to http://groups.ucanr.org/Forest/

October 7–9, 2008
California Board of Forestry Meeting
Location: Sacramento, CA
Contact: 916 653-8007
Info: http://www.bof.fire.ca.gov/board/board_current_docs.aspx

October 8-9, 2008
California Biodiversity Council
Topic: Children and Nature
Location: Oakland, CA
Contact: Sherry Cooper, slcooper@nature.berkeley.edu, (530) 224-4902
Info: http://biodiversity.ca.gov/

October 16, 2008
Forest Carbon Credits Workshop
Location: Santa Cruz, CA.
Contact: Sherry Cooper, slcooper@nature.berkeley.edu, 530-224-4902
Info: http://groups.ucanr.org/Forest/

For more information on these events call the number provided or the Forest Stewardship Helpline, 1-800-738-TREE. or check http://groups.ucanr.org/Forest/

Wildfire Recovery

Recovering From Wildfire, A Guide for California's Landowners by Susie Kocher, Richard Harris, and Gary Nakamura. This 14-page booklet is available through UC Cooperative Extension for $5 (http://anrcatalog.ucdavis.edu or call 1-800-994-8849).

No matter how diligent you are about making your home fire resistant, you may nevertheless find yourself affected by wildfire. In a difficult time of emotional trauma and loss there are many practical considerations that need to be accomplished immediately. To help protect your land from further damage, and possibly recoup some of your losses, UC Cooperative Extension has prepared an excellent booklet, *Recovering from Wildfire: A Guide for California's Forest Landowners.*

Assess the Damage

Future actions depend on the amount of damage caused by the wildfire. Map out the burn intensity and other damage (fire suppression activities, etc.) on your land. This will help in erosion control and forest rehabilitation planning.

Erosion Control

Erosion can rob the land of its soil and ability to grow vigorous trees. This is especially true if the forest litter layer or canopy has burned away, the fire was of high intensity, there are steep slopes or highly erodible soil, or the land is directly downslope from other burned areas.

A number of erosion control measures can help protect the land's productivity and water quality. Initially, you should cover the soil and erect barriers to slow and disperse water runoff.

Photo: Bill Husa/Chico Enterprise-Record

Road Protection

Work with professionals to protect the road system and downstream water quality. You may need to armor culvert inlets or bridge abutments, clean out clogged ditches and culverts during heavy rains, construct cross-drains or waterbars, or remove berms to allow water dispersal.

Tree Damage

Long-term rehabilitation of the site starts with identifying tree damage. It may be necessary to remove hazardous trees. Whether to salvage-harvest trees is a personal decision that involves a number of benefits and risks. The decision needs to be made fairly quickly after the fire is out.

Reforestation

Replanting can speed the development of a mature forest on a burned site. Your personal objectives for the property will shape your reforestation decisions. Cost-share and assistance programs may help.

Tax Implications

Forest stand loss can be claimed on your federal income tax statement as a casualty loss. You will have to pay a yield tax if you decide to salvage-harvest some of the trees. There is a tax credit for reforestation expenses. Get advice from a tax professional.

Professional Help

A registered professional forester can offer a wide variety of services to landowners attempting to recover from wildfire. You should get several estimates and develop a written contract that spells out services and fees.

–highly abridged from *Recovering From Wildfire, A Guide for California's Landowners.*

How can Forestland Steward newsletter serve you?

I'd like to see more information on _____

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My suggestions are _____

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❑ Add me to the mailing list / ❑ Change my address:

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Organization_____

Address_____

City, Zip_____ Phone_____

e-mail _____

❑ To save on printing costs and paper, we encourage you to get the internet version of Forestland Steward. Check here for an email copy of each issue instead of a hard copy.

Send to CAL FIRE, Forestry Assistance, P.O. Box 944246, Sacramento, CA 94244-2460.
Phone: (916) 653-8286; Fax: (916) 653-8957; email: jeff.calvert@fire.ca.gov