



FORESTLAND STEWARDS

WORKING TOGETHER FOR HEALTHY FORESTS

SPECIAL REPORT

CDF Fire Academy: Training for any emergency

Tucked up above the sleepy town of Ione is the CDF Fire Academy, a 40-acre campus where firefighters go to develop the skills of their trade. The curriculum is extremely diverse, but just scratches the surface of what a firefighter needs to know. The rest of their education comes from a lifetime of experience and continuous training.

By the time they get to the Academy, most of the students have been working on fires seasonally for at least 4–5 years. A place at the Academy means they have been offered a permanent firefighting position...contingent on passing the rigors of the course.

Students come to the Academy with various experience and skills. The career ladder generally starts with seasonal work as a Fire Fighter I for several years. Those who want to go on take college courses during the off season. This assists them to get on the list for Fire Fighter II and Fire Apparatus Engineer positions, both limited term and permanent. From there they can move up the chain of command.

More than wildland fires

CDF used to be primarily in the wildland fire business, but about 20 years ago the agency began to expand and is now the largest multi-task fire department in the world. In some counties, CDF contracts out to provide city and



Wildland fires are only one aspect of CDF's mission.

county fire services—this is known as Schedule A. Schedule B—wildland fires—remains the backbone of the department and the work for which CDF is most recognized.

The CDF mission is all-encompassing: to respond to any type of emergency—fire, medical, earthquakes, train wrecks, floods, hazardous material spills. Personnel have even been sent to remove diseased chickens. While the department responds to over 6,300 wildland fires each year, the vast majority—over 300,000 calls—are for other types of emergencies. In some areas over 85% of all calls are medical.

The difference between Schedule A and

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Inside

- 6 Triage
- 8 Tree Planting Guide
- 11 Calendar
- 12 Chainsaw Safety



FORESTLAND STEWARD

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Fire Academy *(continued from page 1)*

Schedule B firefighting is more than semantics, it is important on the ground. Schedule A deals with structures—firefighters go inside to check for people, connect hoses to the water supply, and put out the fire. Schedule B firefighters are trained to assess the landscape, to identify fuel types, the lay of the land, and fire behavior. Techniques and equipment may be different, but both approaches have to come together in the urban-wildland interface, or I-zone, where urban development meets the wildlands.

Basic Fire Control

The Basic Fire Control course at the Academy is 10 weeks comprising 4 modules: 1 week of administrative, 3 weeks of structure fire and rescue, 3 weeks of driver operator skills, and 3 weeks of wildland fire. Students live on the grounds where they ostensibly work in the classroom and field from 8–5; however the workday is usually longer than that. Many start as early as 5:30 am with engine cleanup and checkup, and there are night classes twice a week until 9 or 10 pm. Practice and study is on their own time in the evenings and weekends.

The instructors keep the pressure on throughout the course—firefighting is a high-pressure job so students have to be able to operate well under those conditions. To pass the Academy, they have to achieve a cumulative test score of 70%. There are also a number of skill tests that must be passed. Failure means leaving the Academy.

There’s much more to the study of firefighting than meets the eye. For example, pumping water from point A to point B would seem to be a no-brainer. Not so. It is actually a highly

technical subject—hydraulics—involving pump theory, water properties, pressure calculations, and much



The Baby Jessica well is 19" deep and filled with 8" of water. This prop gives students practice in various emergencies.



Firefighters accomplish the successful rescue of a mannequin from a burning building.

more. Setting up hydrants, when available, or getting water from other sources requires training and skill. Students spend time in the classroom, then go out to the field to put the book learning into practice.

Creativity, communication, teamwork

How does the Academy prepare firefighters for the endless variety of situations they might encounter? It’s not possible to teach for every possibility. Instead, the Academy emphasizes basic skills and tries to motivate students to continue with advanced training on their own. Creativity is expected.

Students are constantly reminded “The best tool you can bring to an incident is your brain.”

Firefighters are always learning. Captain Mack, an Academy instructor, explained, “After



Firefighter down. Here, a victim is carried safely from a two-story building.

continued next page

any call, even a cut finger, we get together for a critique. What did we do right, what did we do wrong, how can we do it better next time. There's always room to improve. It's all about sharing information."

The Academy is strong on communication and teamwork since everything firefighters do depends on these. To accomplish their difficult and dangerous job, firefighters must work together and watch out for one another.

Learn by doing

Academy staff have worked hard to create the numerous props that teach hands-on skills. At one time the Academy was much more classroom oriented. But over the years the curriculum has changed toward field work because, as Chief Nancy Koerperich puts it, "that's how people learn best—by muscle memory."

There is a collapsed building maze that students must get through in 20 minutes. Filled with smoke, the collapsed building includes all kinds of bewildering obstacles to increase the tension such as plexiglass on the stairs, webbing, spooky masks, a blaring television, and the tape of a 2-year old having a temper tantrum.

Other props include long pipes to crawl through, confined spaces, collapsed freeway pieces for heavy rescue, silos and tankers for inside rescue, a roof prop to practice cutting holes, and more. Pride of place goes to the Baby Jessica well, named after that famous rescue.

In fact, many of the techniques are designed in response to real-life dramas. The Denver drill was named after a tragedy in Denver where a firefighter was down and couldn't be pulled out

of a small, tight area. Because of that, firefighters have worked to come up with solutions—the Academy teaches a 4-person and a 2-person way to get a down person out of a tight space.

Search and rescue

One of the props simulates a house fire. Smoke is pumped into the building and students go in teams of 2–3 to search and rescue anyone found within. It's not an easy job. Smoke lingers down to the floor and visibility is zero. As in a real-life situation, there are obstacles to climb around and over. The breathing apparatus only allows 20 minutes of air to accomplish the job. Team members must stay in direct contact for safety but communication is difficult—it's very noisy with fans at the door and chainsaws on the roof.

There are several strategies for searching a room quickly. One is to have one person in contact with the wall at all times while partners are attached by rope and swing out to search the room. It also helps to know where to look. In nine times out of 10, the victim is near a door or window. However, children often respond to danger by hiding in closets or under beds.

Knowing this can help families plan and discuss escape routes in case of a house fire.

Driving skills

What is a firefighter without a big red engine? Students spend a lot of time learning driving skills and engine maintenance. Defensive driving and safety are important to survival.

There are 19 engines at the Academy, real work horses that not only get a workout from the students, but are sent out to fight fires during the fire season.

continued next page



Setting the water pressure.

Practicing for the tests.



A timed hydrant exercise requires skill and teamwork.



Fire Academy *(continued from page 3)*



A concerned “homeowner” greets the firefighter assigned to protect his home in this role-playing exercise.

Students learn to do their own service including inspections, brake adjustment, and oil changes. They learn pumping skills with various types of engines. There is a whole day of cross-country driving and off-road driving practice. And students have to pass the DMV test drive.

One especially difficult day, known as Bad Wednesday, is a full day of field tests. These are make or break tests—only one retake is allowed. The long dog leg teaches confidence; students have to back up around cones in 50–75 seconds using mirrors alone. There is a quick lane change that teaches defensive driving. The I-zone turnaround has students backing up and making u-turns in a small area. There are also pumping exercises: mobile pump and roll, pump from the hydrant, and pump from a pond or pool.

Fun and games

While jumping out of burning buildings, rescuing mannequins, and passing grueling tests are tough work, some aspects of the curriculum are simply fun.

The skid course—for learning to handle a car in difficult conditions—is like a Disneyland ride as students slide and skid safely around the course in a car with bald back tires.

The sand table is even better. A simulated wildland fire incident in sawdust is every little boy’s dream. Saltpeter in the sawdust burns in various ways; hidden

surprises may be found too, just like in a real fire. Students are assigned various tasks—the air resources people fly toy airplanes around the table while toy helicopters drop water on the fire from their little buckets. Bulldozers and fire crews (paintbrushes) move the fuel around. This exercise gives students a chance to see the big picture—to work on their command skills, organization, communication, tactics and strategy, and other important decisionmaking skills. However, an objective observer would be excused for thinking this is just plain fun.

Auto extrication

Vehicular accidents make up a large number of the calls answered by CDF crews. A junkyard testifies to the training given at the Academy—there’s not much left of the cars that have been worked on.

In auto extrication training, students use jaws and a variety of other tools to take a car apart around the victim. They learn to cut off roofs, doors, roll up the dash, and literally spread the car apart to get the victim out. It is necessary to learn how various cars are made to best get in quickly to save a victim.

Out in the streets

One of the most important jobs of CDF wildland firefighters is to protect homes threatened by wildfire. A day of role-playing provides practice in these skills. Adjunct staff get their scripts, for example, the borderline combative homeowner who awaits the firefighters.

The basic drill is set but quick thinking and creativity are required in every aspect of the exercise, just as when a real fire threatens. The



The sand table requires teamwork, imagination, and a sense of humor.



Triage—firefighters must quickly assess a property to decide if it can be saved.

engine is backed down the drive so it can leave quickly if necessary. The crew get a quick safety briefing from the engineer and agree on a retreat signal, then hoses are deployed. A garden hose is placed in the tank to help refill it while the house ladder is put up to allow quick access to the roof. At the same time, other members of the crew go around the property, with the owner if present, to assess the situation. Where is the propane tank, water, powerlines, woodpile, any hazardous material, and other concerns? The goal is to identify any hazards and mitigate them.

It's teamwork and creative problem solving at its most intense. With a fire coming the stakes are high. Firefighters have to use all the tools at their disposal—knowledge, experience, skills, and critical thinking.

The homeowner has a right to stay and protect his or her property; the firefighters will stay as long as they can. How can a homeowner help? Go around the house and close all windows and doors, remove lightweight draperies to keep radiant heat from igniting the inside, and follow directions from the firefighters.

Triage

Since resources are always limited, during a wildfire firefighters have to make quick decisions about where to put their efforts. To determine if a structure is saveable, students take part in a triage exercise to assess a property and decide if it is:

1. Not in danger at this time
2. Saveable
3. Too dangerous to protect

Using a checklist they make up themselves (it needs to be in their head), firefighters look at the

contours of the land to decide how a fire would move through the area, see what fuels are there to ignite, and look at other factors at the property—occupancy, water sources, hazardous situations, and other considerations. Within five minutes they must decide whether there is a reasonable chance of saving the structure.



Learning how to take vehicles apart around the victim.

Live firing operations

Sometimes it is necessary to fight fire with fire. If conditions are favorable, controlled fire can be used to consume fuel in the path of a wildfire. The desired burned out area, called the depth of char, is at least twice the flame length; four times the flame length is preferred.

Live firing operations are carried out in the field above the Academy to practice this technique. The assignment is to burn out an area on the map without going outside the lines. After a test burn to find out how much fire to put on the ground, the fire is started with drip torches and fuses. If all goes as planned there is a perfectly burned out area under complete control.

The bottom line

Students at the Academy are motivated, their friendships bonded forever. Despite the hardships, the stress, and the demands of the Academy, one hears from the students again and again, "I love it. There's nothing I'd rather be doing."

Fighting fire with fire.



Triage: can this house be saved?

Knowing what firefighters are looking for and preparing appropriately can give you an edge for a "saveable" house.

Homes located in natural chimneys, such as narrow canyons and saddles, are especially fire-prone because winds funneled into these canyons create eddies. Homes located where a canyon meets a ridge are more likely to burn than other ridge-top structures.

Because of limited resources, firefighters sometimes have to make hard decisions about where to put their efforts. This decisionmaking process is called triage, which literally means to divide into three parts. The three triage categories are:

1. Needs little or no attention right now
2. Needs protection but is saveable
3. Too dangerous to protect

Firefighters are trained to rapidly size up the situation and decide whether a structure can be saved or not. They look at a number of factors including fire behavior, structure characteristics, fuels around the structure, resources, and safety.

While some of these factors, such as fire behavior, topography, and resources, are out of a homeowner's control others are dependent on construction choices or good maintenance. Understanding what firefighters are looking for can give you that edge for a "saveable" house.

The following checklist is very comprehensive and may seem a little overwhelming. But you don't have to figure this out on your own. CDF will do inspections and give suggestions to homeowners; call your local unit for information.

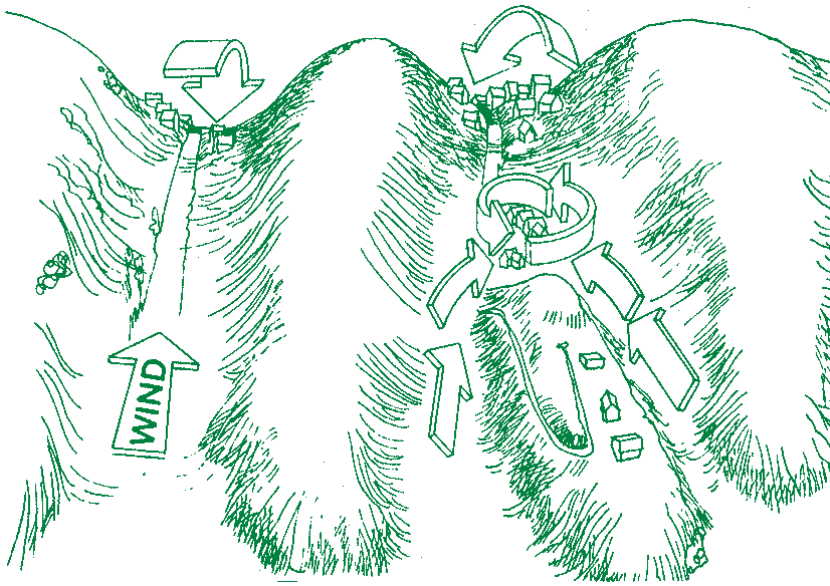
A triage checklist

Road access

- Surface, width, steep curves and grades, undercarriage problems** (4x4 access only).
- Vegetation clearance**—road should be cleared of debris and low-hanging branches. Minimum clearance should be 20' wide x 15' high.
- Turnouts, turnarounds**—necessary if road or driveway is not large enough for 2-way traffic.
- Bridges**—must be able to support 50,000 lb.
- Stream crossings**
- Terrain**—slope, location (near chimneys, saddles, canyon bottom).

The structure

- Type**—single, multi, outbuilding.
- Roof**—composition of the roof is the foremost predictor of structure survivability. The roof is the most vulnerable part of the house as embers will land on it ahead of the fire. State of repair is also important because exposed portions are vulnerable even if the roof itself is made of noncombustible material.
- Exterior wall type**—stucco will survive fire better than wood siding.
- Gutters**—leaf litter and other material can ignite. Keep gutters clear of debris.
- Vents/eaves**—openings can allow fire into a structure. Vents should be screened with 1/8" mesh to keep out embers.
- Windows**—Size, thickness, and type of windows determine the protection they provide in a fire. Large, unprotected windows facing the heat source are a problem. Single pane glass will transmit heat almost as if nothing was there.
- Decks**—can trap heat and ignite. It is best to box decks in with noncombustible materials.
- Carports and sheds**—as with decks, can trap heat flowing uphill. Cover with noncombustible materials.



From the Homeowner's Guide to Fire and Watershed Safety at the Chaparral/Urban Interface.

Wood fencing—can ignite. Also, fences can limit firefighters access.

Size & shape of house

Fuel loading/clearance

The type, amount, and arrangement of fuels around the structure is the second-most predictor of structure survivability. Commonly known as defensible space, the goal is to make sure that whatever is in that space cannot support flames long enough to either directly reach the structure or to generate heat hot enough to ignite the structure.

Size, arrangement and flammability of material in the defensible space. More clearance is needed with denser or larger fuels.

Fuels adjacent to structure—trees, fuel ladders, shrubs, fences, decks, or any flammable material that can lead the fire to the structure.

Proximity of fuel tanks, firewood, wood patio cover, furniture, and other combustible material. Look for any fuel sources, even propane BBQ.

Powerlines/transformers

Hazardous materials—chemicals, pesticides, herbicides, petroleum products, paint products.

Fire behavior

Topography—There is an increased fire hazard when the slope of the adjoining terrain is greater than 20%; 40% is considered an extreme slope. Structures located in saddles, on top of steep slopes, on ridges, and at the top of ravines are in greater danger. If your home is at the top or mid-slope, pay attention to defensible space on the downside of the property—minimum 100'; the steeper the slope, the more clearance needed. Heat rises and fire follows it; fire moves more quickly uphill than down.

Weather—especially wind speed since high or gust winds blow embers ahead of the fire.

Flame length, rate and direction of spread

Spot fires

Too dangerous to protect

If a structure is considered unsalvageable, no attempt will be made to save it. The following are some of the factors will make firefighters abandon attempts to save a structure:

- The roof is more than 1/4 involved, in windy conditions.
- Interior rooms are involved and windows are broken, in windy conditions.
- The structure is within 1–2 flame lengths of standing live fuels on fire.
- Spot fires around or on the roof of the structure are growing faster than can be extinguished.
- Water supply is low.
- No place to park the engine safely.
- No safety zone.
- Cannot safely remain; escape route could become blocked.

Resources

Equipment and personnel

How quickly can resources arrive.

Water sources—hydrant, storage tank, swimming pool, hot tub, fish pond, irrigation ditch.

Water, foam, and retardant

Speed at which onboard tanks can be refilled

Firefighter safety

Roads—egress and ingress, grade and surface, width. Escape routes and safety zones necessary.

Fuel canopy—clear hazardous branches overhanging the road.

Visibility

Powerlines

Hazardous materials

The four main considerations in structure survivability

(in order of importance):

1. Ease of access to firefighters
2. Roof construction
3. Defensible space
4. Slope of land surrounding structure

Seasonal Stewardship

It's that time of year: plan to plant

This is one of the better times of year for planting—the cool, moist days of fall. If you are planning to plant trees this year, get ready. But even if you are not planting until next year, now is the time to start getting organized and order seedlings. A little bit of forethought will go a long way toward making your planting efforts a success.

Timing

The best time to plant varies with the type of planting stock, soil conditions, climate, and your location in the state.

Before planting the soil moisture should be saturated to a depth of at least 12". This requires from 2" to 4" of rain in most areas. Many land-owners report best survival when seedlings are planted during a light rain or drizzle. Avoid planting during extended warm and dry periods, or when frost or extreme winds are likely.

At higher elevations, plant when the snow is gone and the chance of frost is minimal. In the Sierra Nevada, northern California, and the eastern side of the Coast Range, planting conditions are usually optimal in late winter to early spring. On the warmer west side of the Coast Range, planting can begin as early as late fall once the rains have saturated the soil, and can continue through to late winter.

Seeds or seedlings?

Seeds are inexpensive and easy to sow. However, the success rate is low in California due to animals, disease, and weather and soil conditions. If you decide to go ahead and plant seeds, it is imperative to prepare the site carefully and keep animals out.

In California most people choose to plant seedlings. Seedlings have a head start over seeds but they, too, have a lot to overcome. Seedlings can be eaten or trampled by animals, heaved from the soil by frost, burned, drowned, shaded, and starved. To survive, seedlings need all the help you can give them.

Bareroot or container?

There are two types of seedling stock to choose from—bareroot and containerized.

Bareroot seedlings are grown in a nursery bed, then carefully removed. The roots are exposed so they must be planted while dormant to avoid damage. Stock should be evaluated

when you receive it. The buds must be firm with no evidence of new growth. White root tips should be less than 1/4 inch. There should be no mold or sour odor. Strip back the bark from the stem and roots on a couple of trees—the inner bark should be moist and glistening white. If it is yellow, brown, or has brown spots, the stock is badly damaged and probably won't survive.

Care for your seedlings. Keep them moist and cool; plant as soon as possible. If you have to store the seedlings for more than three days, plant them temporarily in a trench in a cool, shaded area.

Containerized stock has been grown in a container with special soil, often in a greenhouse where climate is controlled. Containerized seedlings are usually more expensive but they can be grown in a shorter length of time and can be planted during the growing season because of the soil around their roots. They may be more successful than bareroot in rocky soils.

Site preparation

Good site preparation is essential for seedling success. Studies have shown that neglecting site preparation in California can lead to seedling losses ranging from 40 percent to nearly 100 percent.

Depending on the site, you might want to use mechanical means, such as a bulldozer or tractor, to clear the area. Controlled fire is another method, with obvious pros and cons. To reduce competition from other plants, you can use physical removal or herbicides.

Consider every potential threat to your new seedlings and try to minimize it. Posting the area, fencing out livestock, and removing brush piles that harbor rabbits and rodents can all help seedlings survive.

The greatest challenge, however, is making sure your seedlings get their full share of soil moisture and nutrients. This is especially critical in California with its Mediterranean climate characterized by long, rain-free summers where soil moisture is severely limited.

Spacing

The number of seedlings you need will depend on your planting objectives. Timber is usually grown at spacings from 8 x 8 feet (680 trees per acre, or tpa) to 12 x 12 feet (300 tpa), closer

Fall is one of the better times of year to plant, but even if you are not planning to plant until next year, now is the time to get organized and order seedlings.



spacing if poor survival is expected. Christmas trees are commonly planted at 5 x 5 feet (1240 tpa) or 6 x 6 feet (1210 tpa). Eucalyptus for firewood is planted at 6 x 6 feet (1210 tpa) to 7 x 7 feet (890 tpa).

Planting

There are a variety of hand and power tools you can use for planting. Planting bars, hoe-dads (also called a western planting tool), and mattocks are used with easily worked soil. The hoe-dad is generally the most effective in rough terrain with rocky soils. Power-driven augers can dig holes in compacted soils or soils with a hardpan. Planting machines are limited to fairly level sites with careful site preparation. These are cost effective only when planting large areas.

Care of seedlings is vital no matter which planting technique is used. Roots should always be kept moist, with no more than 3 hours worth of stock in the planting bag at one time.

Seedlings should be planted erect at the depth they were planted at the nursery. Roots should be properly placed pointing downward in the planting hole; kinked or J-shaped roots will eventually strangle themselves. Eliminate air pockets by firming the soil around the roots.

Followup

Planting should be followed by regular regeneration surveys to check seedling survival and plan for any replacement trees.

Planting represents a large investment that is carried over the life of a stand. It is in your best interest to:

1. Plan regeneration operations carefully.
2. Prepare your planting site.
3. Take proper care of your planting stock.
4. Closely supervise the planting crew.
5. Follow through with regeneration surveys.

The success of your planting effort depends on each of these steps.

Insert shovel vertically with blade reversed, push handle forward, then pull soil back and out of hole. The hole should be large enough so the entire root plug easily fits into it.

Straighten back of hole and insert seedling at proper depth. The top of the root plug should be at least 1/2 to 1 inch below the soil line as long as the foliage will not be buried.

Hold the seedling in place and fill the hole half way with moist soil.

Fill the hole with moist soil, pack with your hand and cover surface with a mulch of loose, dry soil.

This properly planted seedling had its original plug buried 1/2 to 1 inch below the soil line. None of its foliage is buried.

Avoid the "Death Stomp." Packing the soil with your foot or planting tool severely compacts the soil and decreases seedling growth.

—from *Raising Forest Tree Seedlings at Home: Simple Methods for Growing Conifers of the Pacific Northwest From Seeds*, by R.K. Dumroese, T.D. Landis, and D.L. Wenny. Published in 1998 by the Idaho Forest, Wildlife, and Range Experiment Station; Contribution #860. Find the entire publication at: <http://www.uidaho.edu/seedlings/howtogrow/manual.htm>.

Resources

Website mines the internet for forestry resources and information

Go to <http://forestry.about.com> for a wealth of information on forestry-related topics.

Looking up information on the web has become so common that “to google” is now a verb understood by almost everyone.

If you google “forestry” you will find <http://forestry.about.com>, a website that draws information from all over the web on forestry-related topics.

Articles and discussion

You can learn about planting, tree diseases, forestry jobs, and lots of other topics. Perhaps the most valuable part of the website is the forum—go there to ask questions, get in on discussions, and meet others. Foresters monitor the forum and will chime in with advice. Discussions can get quite lively.

More on chainsaws

One of the best sections at the website is the one on chainsaws (*see page 12*). Follow the links:

Safety With Chainsaws. An excellent article from the Virginia Cooperative Extension <http://www.ext.vt.edu/pubs/safety/chainsaw/chainsaw.html>

Using a Chainsaw Safely. Another excellent article, by John LeBlanc at University of California Cooperative Extension. <http://www.cnr.berkeley.edu/departments/espm/extension/CHAINSAW.HTM>

Chain Saw Safety—Advice from an Expert. An interview with a chainsaw safety expert. http://forestry.about.com/cs/chainsaws/a/carl_smith_saw1.htm

How to Fell a Tree. An Oregon logger demonstrates how to cut down a tree safely. <http://forestry.about.com/library/weekly/aa040200a.htm>

A Collection of Chainsaw Videos. Not the Texas massacre kind. <http://forestry.about.com/library/weekly/aa030402.htm>

Here's How to Buy the Right Chainsaw. An article from the Society of American Foresters. <http://www.safnet.org/archive/chainsaw401.cfm>

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

Forestry Assistance Specialists
Jill Butler (Santa Rosa)
(707) 576-2935; jill.butler@fire.ca.gov
Jim Robbins (Fortuna)
(707) 726-1258; james.robbs@fire.ca.gov
Adam Wyman (Red Bluff)
(530) 528-5116; adam.wyman@fire.ca.gov

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

California Dept of Fish & Game
Marty Berbach
(916) 327-8839; mberbach@dfg.ca.gov

California Resources Agency:
California Environmental Resources Evaluation System (CERES)
Deanne DiPietro
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USDA Forest Service
Sandra Stone
(707) 562-8918; ssstone01@fs.fed.us

Calendar

November 2–4, 2004

Board of Forestry

Location: Sacramento, CA (Resources Bldg.)
 Sponsor: Board of Forestry
 Contact: Donna Stadler 916-653-8007
 Notes: www.fire.ca.gov

November 5, 2004

CLFA Oak Management Workshop

Location: Redding, CA
 Sponsor: California Licensed Foresters Assn.
 Contact: Hazel Jackson 209-293-7323,
clfa@volcano.net
 Cost: \$150-\$200
 Notes: <http://www.clfa.org/>

November 9–10, 2004

California Forest Pest Council

Location: Woodland, CA
 Sponsor: CFPC
 Cost: \$85/\$55 students and retirees
 Notes: <http://www.caforestpestcouncil.org>,
 Heidrick Ag History Center

November 13, 2004

Milling and drying hardwood lumber: Evaluate quality and avoid costly mistakes

Location: Fort Bragg, CA
 Sponsors: UC Cooperative Extension & USDA FS
 State and Private Forestry
 Contact: Dan 707-964-9328 or John Shelly
john.shelly@nature.berkeley.edu
 Cost: \$60 limited space

November 14–15, 2004

Remembrance and Recognition of the 2003 Firestorms—Awards Dinner, Golf Outing, and Community Wildfire Protection Planning Workshop

Location: Barona Valley Ranch Resort, Lakeside
 Sponsor: California Fire Safe Council
 Contact: 626-335-7426; www.firesafecouncil.org/

November 15, 2004

WMC: Watershed Management on the Edge: Scarcity, Quality and Distribution

Location: San Diego, CA
 Sponsor: Watershed Management Council
 Contact: 208-364-9911 shelat@uidaho.edu
 Cost: \$285-\$320; \$50 late fee after 10/1/04
www.watershed.org

November 17, 2004

Sudden Oak Death & Forestry Workshop

Location: Eugene, OR
 Sponsor: Oregon State University, USDA Forest
 Service, Oregon Department of Forestry
 Contact: Conference Assistant 541-737-2329

forestry.outreach.education@oregonstate.edu
 Audience: Foresters, Christmas tree growers, and
 nursery operators
 Cost: \$30
 Notes: <http://outreach.cof.orst.edu/oakdeath/>

December 7–9, 2004

Board of Forestry

Location: Sacramento, CA (744 P St., tentative)
 Sponsor: Board of Forestry
 Contact: Donna Stadler 916-653-8007
 Notes: www.fire.ca.gov

December 2, 2004

Conservation planning for California's oak woodlands

Location: Riverside, CA
 Sponsors: UC Integrated Hardwoods Range
 Mgmt. Program, Division of Ag & Natural
 Resources, CNR, Berkeley
 Contact: Sherry Cooper 530-224-4902
slcooper@nature.berkeley.edu
 Cost: \$50; add \$10 after November 26
 Notes: <http://nature.berkeley.edu/forestry/conservation>

January 10–12, 2005

Annual Meeting—Weed Management: Economic and Environmental Savings

Location: Monterey, CA
 Sponsor: California Weed Science Society
 Contact: Judy Letterman 831-442-0883
manager@cwss.org
 Cost: TBA
 Notes: www.cwss.org

January 18–21, 2005

Sudden Oak Death Science Symposium II

Location: Monterey, CA
 Sponsors: USDA Forest Service, PSW Research
 Station & UC Int. Hardwood Range Mgmt.
 Program & Center for Forestry
 Contact: Joni Rippee 510-642-0095
ripee@nature.berkeley.edu
 Cost: TBA
 Notes: <http://nature.berkeley.edu/forestry/sodsymposium>

January 18, 2005 to January 20, 2005

FVMC—From the Ground Up: A Reforestation Boot Camp

Location: Redding, CA
 Sponsor: Forest Vegetation Management
 Conference
 Contact: Program: Danielle Lindler 530-938-3459
lindler@inreach.com; Reg.: Sherry Cooper 530-
 224-4902 shcooper@ucdavis.edu
 Cost: TBA



For more information
 on these events call
 the number provided
 or the Forest
 Stewardship
 Helpline, 1-800-738-
 TREE.

To submit an event,
 contact Sherry
 Cooper, 530-224-
 4902;
shcooper@ucdavis.edu.

Find a more
 comprehensive
 calendar at the
 Forest Stewardship
 website [http://
ceres.ca.gov/
foreststeward](http://ceres.ca.gov/foreststeward)

Safety First

Chainsaw commonsense

What percentage of all woods accidents are typically the result of a chainsaw cut? *30%*

How fast does a chain saw blade move at full throttle? *45 mph*

Which age group is at the greatest risk for injury? *younger operators*

How many chainsaw accidents could be prevented? *almost all of them*

Proper protective clothing can help prevent injury.



The good news is that most chainsaw accidents are preventable. While most of the following safety tips are common sense, it's easy to become lazy or complacent and take shortcuts.

Fatigue is the greatest danger to safety. If you don't have your wits about you for any reason, take a break or let it go for the day. The goal is to go home with all the parts you came with.

What should you wear?

Wearing the proper clothing is one of the best ways to reduce the possibility of serious injury. You

should have the following:

- Sturdy, snug-fitting clothing that gives complete freedom of movement. Do not wear anything that could catch in the chain (sleeve cuffs, scarves, loose long hair, jewelry, a skirt).
- Heavy duty, non-slip gloves.
- Sturdy boots with non-slip soles, protective toes, and high top boots.
- A non-fogging, vented face screen or safety goggles.
- An approved safety hard hat, properly fitted.
- Ear muffs or ear plugs to protect your hearing.
- Chaps made especially for chainsaw use.



Firefighters at the CDF Fire Academy get a demonstration on chainsaw safety, then practice by clearing brush.

The most important safety factors

- Know your saw and how to operate it before you use it.
- Take time to prepare for the job.
- Practice!
- Never work alone!!

Other safety rules

- Make sure the chain is not in contact with anything before starting the engine.
- Do not let the saw rest on your leg or knee while you start the engine.
- Do not drop start the chainsaw.
- Always maintain control by standing securely, holding the saw firmly, and taking your hand off the trigger between cuts.
- Keep the handles dry and clean.
- Be sure your body is clear of the natural path the saw will follow when the cut goes through.
- Never straddle a log to make a cut.
- Always shut off the engine before setting the chain down; even when retreating from a falling tree.
- Make sure the saw is off and the chain stopped before making any adjustments or repairs.
- Do not run the saw indoors.

Chainsaw safety is a large subject, there are too many safety tips to cover in this space. See page 10 for some great resources on chainsaws and chainsaw safety.

How can the *Forestland Steward* newsletter serve you?

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