CALIFORNIA FOREST STEWARDSHIP PROGRAM WINTER 2010

FORESTLAND STEWARD

WORKING TOGETHER FOR HEALTHY FORESTS

Tools of the Trade

Photo courtesy Forestry Suppliers, Inc. 580031

Photo courtesy Bailey's

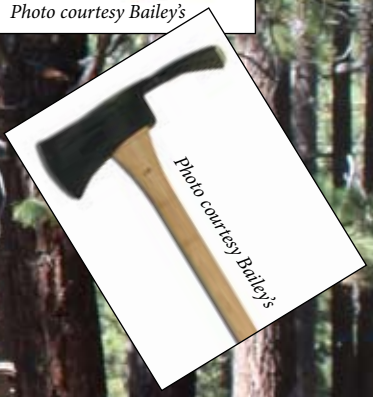


Photo courtesy Bailey's

Photo © Danielle Banchio

Inside

You need to be a jack-of-all-trades to manage a forest: forester, fire fighter, laborer, biologist, bookkeeper, logger, engineer, hydrologist… And each of these trades has its own set of tools and equipment.

There are tools for planting, tools for trimming, tools for measuring and quantifying, fire tools, weed tools, mechanical tools, hand tools, big tools, little tools…and, of course, your computer and the internet.

Just as forest management runs the gamut from simple to complex, so the tools include a myriad of forms and functions.

You want to use the best tool for the job, with the best quality and at the best price. Where to start?

No, we're not going to cover all the tools of the forestry trade in this issue, but we will show you some intriguing ones and discuss others. And, of course, give you links to information on as many tools as you can wish for. In addition to the tools, we also remind you that following good safety and maintenance practices will keep your tools functioning better and help prevent injury.

Note that nothing in this issue is an endorsement of any specific product.

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.

California Forest Stewardship Program
P.O. Box 944246
Sacramento, CA 94244
(916) 653-8286
Fax (916) 653-8957
ceres.ca.gov/foreststeward

Editorial Committee
Jeff Calvert, CAL FIRE
Rich Gresham, Placer RCD-
Jane La Boa, SAF
Yana Valachovic, UC

Editor
Laurie Litman, InfoWright

Governor
Arnold Schwarzenegger

Secretary for Resources
Natural Resources Agency
Mike Chrisman

CAL FIRE Director
Del Walters

This newsletter was produced under a grant from USDA Forest Service

Lots of widgets, gadgets, and machines for forest management

Checklists are always fun. Which of these tools do you use? Which are on your wish list? If you don't recognize some of these, go to the Washington State University Extension Basic Hand & Power Forestry Tools website at **http://ext.nrs.wsu.edu/handtools/objectives/index.htm**. There you'll find information on most of the equipment below, as well as approximate price range and vendor information.

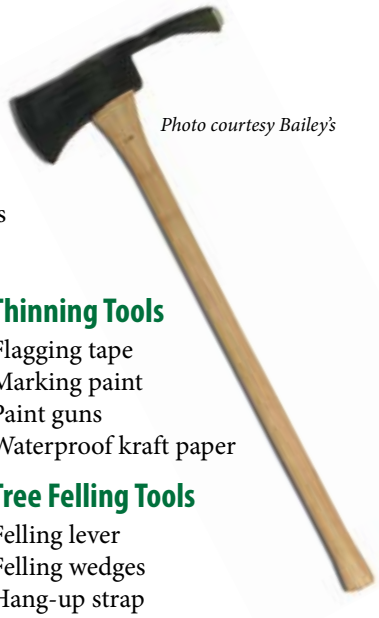


Photo courtesy Bailey's

Multi-purpose Tools
Axe
Chainsaw
Hand lens

Safety Tools
Fire extinguisher
First aid kit
Protective clothing
Boots
Ear protection
Eye protection
Gloves
Hard hat
Saw chaps

Measuring Tools
Angle gauge
Calipers
Clinometer
Compass
Cruiser vest
Cruising prism
Densiometer
Increment borer
Jacob (Jake) staff
Hand level
Measuring tapes: D-tape,
  Logger's tape, Reel tape
Woodland, Biltmore, or
  Cruiser stick

Photo courtesy Forestry Suppliers, Inc. 580031

Location Tools
GPS/GIS
Google Earth

Log Movers
ATV arch
Cable
Cable tongs
Cant hook
Chokers
Hand arch
Hand tongs
Hookeroon
Log jack
Mini-skidder
Peavey
Skid cone
Snatch block
Timber carrier
Tractor-mounted winch
Tractor-mounted processor

Planting Tools
Broadcast seeder: Hand, ATV,
  Tractor
Dibble
Hoedad
Planting bag
Planting bar
Power auger
Protection tube
Protective mulch
Shovel
Wire flag

Pruning Tools
Hand pruner
Hand saw
Ladder
Lopper
Pole saw
Telescoping power pruner
Two-hand saw

Thinning Tools
Flagging tape
Marking paint
Paint guns
Waterproof kraft paper

Tree Felling Tools
Felling lever
Felling wedges
Hang-up strap
Wedge pouch

Fire Tools
Back pack fire pump
Drip torch
Fire flap
McLeod rake
Pulaski axe

Weed Management Tools
Brush axe
Hypo hatchet
Machete
Sprayers
  ATV
  Back pack
Tree injector
Weed wrench

Big Machines
Masticator
Harvester
Forwarder

Photo courtesy Tom Ness, Weed Wrench

Old classics and other tools

While fancy hi-tech equipment is increasingly available, many of the forest measurements you need to do can be accomplished with simple inexpensive tools. The following are some of the basic tools of the trade, many of which are old classics. Some are simple to use, others require training. This collection stretches the definition of "tools" to include tables, maps, and even pacing—all of which are important to forest management activities.

See page 10 for a table showing ease of use and precision of many of these tools.

Abney Hand Level—this level measures vertical angles. You can use it to find ground slope, road grade, and tree height.

Angle Gauge—there are several types of gauges used to select trees during variable plot sampling. The most common angle gauge is a wedge prism, a precisely ground glass wedge calibrated in basal area factors (BAF). You need different BAF prisms for different diameter classes of timber. Special training is needed for this device.

Biltmore, or Cruiser, Stick—this ingenious tool was developed on the Biltmore Estate in the late 1800s. It can give simple (but crude) estimates of tree diameter, total tree height, and merchantable tree height. While there are more accurate tools to choose from, like clinometers or diameter tape, the Biltmore stick is a good way to get a quick estimate of tree size. And you can make it yourself. Other related sticks that serve the same purposes include the tree scale stick and woodland stick.

Clinometer—this rugged hand-held instrument is used for measuring vertical angles such as ground slope, road grade, and tree height. There are various models, the most useful is one with degree and percent scales. When using the degree scale at a distance of 100 feet from the tree, heights can be measured directly and slope is an easy calculation.

Compass—this instrument measures angles from north. It is used to find points on a map, identify locations, and give directions to or from a location. It is also used to establish plots for timber measurements or cruise estimates, and to determine boundary or property lines. Place the compass on a solid, nonmetal surface for precise readings. Note that metal items, such as those in your field vest or on the ground, can interfere with your compass reading.

Diameter Tape—this is a steel or cloth tape used to measure tree circumference at 4.5 feet (diameter at breast height, or DBH) from the ground.

Hip chain—an alternative to pacing for measuring long distances, the hip chain consists of a small box with a spool of fine, strong thread wound around a wheel. The thread is tied to a beginning point and as you walk the wheel turns a distance-recording dial.

Increment Borer/Increment Hammer—the increment borer is a hand drill with a hollow bit used to extract a wood core from the tree stem. This core can be used to determine tree growth, age, and general health. An increment hammer has a hollow bit that extracts a short core sample. It is used to measure tree age or growth during a certain period such as the last 10 years.

Log Volume/Tree Volume Table—volume tables provide log or tree volumes for specific log lengths, tree heights, etc. Tables are available in board-foot and cubic-foot measurements.

Logger's Tape—this is a retractable steel tape used to measure linear distance. It is available with a diameter tape on the reverse side.

Pacing—a method commonly substituted for tools to get a rough estimate of distance. One pace equals two steps. The best way to determine your pace is to count your steps as you walk an accurately measured distance, and you need to practice to develop a consistent pace. A pedometer can help keep count of your paces.

Topographic Map—these maps use contour lines to show elevation and terrain features such as ridges, draws, and flat areas. Widely spaced contour lines indicate flat or gentle ground, closely spaced lines indicate steep ground.

Tarif Access Tables—these tables list the tarif number for individual tree species based on total tree height and diameter at breast height.

—most of this information is from Tools for Measuring your Forest **http://extension.oregonstate.edu/catalog/pdf/ec/ec1129.pdf** *and Measuring your Forests* **http://extension.umd.edu/publications/PDFs/FS629.pdf**

Photo © D. Steele

Global Positioning System (GPS)—this sophisticated technology involves satellite broadcasts that are picked up by hand-held receivers like the one shown above to determine location. GPS units plot points and help with calculations that can be used for mapping, and to locate property boundaries, acreages, roads, elevations, structures, etc. Make sure you get the right features for your needs. Some important points to consider are discussed at **http://forestry.about.com/od/mappinggis/p/GPS_essentials.htm**.

Cut-to-length logging systems: A case study

New methods lessen environmental impact

When compared to full tree harvesting, the cut-to-length system has a lighter footprint and requires less wood handling.

Christy Daugherty, CAL FIRE Forester

The Lake Tahoe Region provides a classic illustration of wildland urban interface (WUI; the area where human development and wildlands meet) issues as they relate to fuel reduction projects.

As with much of the state, the fire hazard in the Tahoe Region is exceptional due to tree mortality from insects and disease, the lack of low intensity fires, and overstocked stand conditions. Near the lake, the area is heavily developed with thousands of residential homes built in subdivisions consisting of urban lots averaging approximately 1/3 acre in size. These subdivisions/communities are within, adjacent to, and at times surround wild forest stands. In some areas, as many as 80 percent of the homes are second homes whose owners generally reside in urbanized areas of California.

Photo © Danielle Banchio

The harvester is a highly maneuverable, low ground pressure machine with a boom and head that grabs the tree, cuts it at the base, limbs it, and cuts it into the desired length. These machines are generally limited to 40–50% slopes.

Prior to the Angora Fire, which burned 3,100 acres and destroyed 254 homes, much of the fuel reduction work was accomplished using hand crews. There existed a general wariness and lack of understanding of modern logging methods by the public and government agency personnel. This lack of understanding and trust also manifested itself within the strict regulatory system governing the Tahoe Region.

Several years prior to the Angora Fire, the U.S. Forest Service Lake Tahoe Basin Management Unit (LTBMU) introduced a logging system on Federal lands that allowed them to conduct fuel reduction work within the context of this highly regulated, and still quite skeptical, atmosphere. This system is the cut-to-length system, which uses low-impact equipment to harvest timber and biomass.

The cut-to-length method uses harvesters and forwarders. The harvester is a highly maneuverable, low ground pressure machine. It has a boom with a head that grabs the tree, cuts it at the base, limbs it, and cuts it into the desired length. The cutting head can be attached to different types of harvesters, including both tracked and rubber-tired models.

The log sections are piled in the forest, ready for transport. Limbs are left behind and can be treated by means such as mastication, chipping, piling and burning, or lopping and scattering. When working in sensitive areas, the slash can be used to create a mat in front of the equipment, further reducing potential soil impacts.

The forwarder is also a highly maneuverable, low ground pressure machine with a boom and a grapple that enables it to move through the forest and load the logs left by the harvester.

The forwarder can transport the logs relatively long distances with minimal soil impacts and then load the logs directly onto the log truck. These attributes reduce the need for haul roads and large landings. When compared to full tree harvesting, the cut-to-length system has a lighter footprint and requires less wood handling.

This past summer, this method was used on State-owned California Tahoe Conservancy property adjacent to a residential subdivision in the South Lake Tahoe Area. The property consists of approximately 80 gently sloping acres of Jeffrey pine dominated mixed conifer forest. The northern project boundary was immediately adjacent to homes and residential roads. The eastern portion of the project was bisected by a major road artery. There were no usable roads or previous landing sites within the project area. There were also some historic cultural resource and recreational considerations.

A rubber-tired harvester and forwarder followed by a masticator were used. Only one

landing was needed, eliminating the need to build landings in the "backyards" of residential homes. The operator was able to forward logs across the major road to the landing, eliminating the need for a landing on the east side of the project. Due to the ability of the forwarder to transport logs long distances over the ground, no new haul roads were needed. The operator was able to harvest even small diameter trees, which reduced the amount of masticated material on the ground.

Immediately upon completion, the final product had a clean, "almost as if nothing had happened" appearance. Because there was no need to build or reconstruct roads, the project was able to proceed under a CAL FIRE Notice of Exemption (Forest Fires Prevention) rather than an expensive and time-consuming timber harvesting plan.

The cut-to-length equipment requires a substantial capital investment, so it is important for those considering such a purchase to feel confident that they will receive enough work to make it worth their while. Tahoe has been fortunate to have received adequate funding to attract these types of operators, especially when there are no sawtimber or reliable biomass markets in the area.

Photo © Danielle Banchio

Trees down to approximately 2 inches in diameter were cut and removed.

The cut-to-length logging method has gained wide acceptance in the Tahoe Region. It is a clean, environmentally friendly, and very efficient logging method that works superbly in high profile wildland urban interface situations or areas of high environmental sensitivity. In some cases, it is the only mechanical alternative to hand crew use in the Tahoe area.

Immediately upon completion, the final product had a clean, "almost as if nothing had happened" appearance.

The northern project boundary was immediately adjacent to homes.

The final product after treatment.

Photos © L. Litman

One RPF's Opinion on Portable Sawmills

Jeff Calvert, Registered Professional Forester

Top photo: first cut into a small Douglas fir log. Below: house that the author built with his portable sawmill.

In 1987 I needed to build a house. I had lots of trees but not much money. I couldn't get a construction loan but I could get a "trailer" loan so I bought a new LT30 (Wood-mizer™). I

Photos © Karen Calvert

selected a bandsaw because of the type of material I wanted to produce, portability (only weighs 1800#), and cost. It was so easy to operate even a forester could do it! We have used it to build three homes, some garages, and numerous out-buildings on the ranch. I made the payments by doing custom milling jobs.

Search "Portable Sawmills" in Google and you'll bring up about 150,000 results. A site I recommend is http://forestry.about.com/cs/portamills/a/port_mill_buy.htm

Considerations when choosing a sawmill

- **What will you cut?**
  Know the log size and final product you want to cut.
- **What size is your operation?**
  Total mill production should be a major factor in your choice of sawmill.
- **Do you need hydraulics?**
  Hydraulics may speed up sawing but can add thousands of dollars to the price.
- **What accessories are necessary?**
  Accessories can add greatly to the cost so get only what you need.

Today's portable sawmills vary from those that can be carried on a mule or in the back of a pickup to large diesel-powered contraptions that need a heavy duty truck to move. Different types of sawmills vary greatly in their production capabilities, the product finish, and the logs to which they are best suited.

Chainsaw mills (aka "Alaskan mills") use a chainsaw to rip logs into slabs. The chainsaw rides along a guide via an attachment as it makes each cut the length of the log. As a rule, this requires powerful saw-heads, long bars (at least longer than the log is wide), and special ripping chains (for best results). *Advantages:* very portable, can produce very wide slabs (only limited to bar length), relatively inexpensive. *Disadvantages:* rough finish on product, large kerf equals more waste, slowest production, requires the most skill, may need an additional person to help cut.

Circular mills have a frame with power head with one or more circular blades. The log is placed on the frame (or the frame is placed over the log). As the power head travels along the log it cuts a board. *Advantages:* many different sizes and styles available, produces a board with each cut, log size only limited by capacity of frame, can be of moderate cost, one-person operation. *Disadvantages:* rough finish on product, size of board limited to size of blade radius, larger kerf, some styles can be very heavy.

Bandsaw mills have a frame on which rides a power head with band blade. The log is placed on the frame (or the frame is placed over the log). As the power head travels along the log the band-blade cuts a slab. In order to get a board the slabs must be turned 90°. *Advantages:* generally smoother finish, can produce wider slabs than the circular mill, smallest kerf, one-person operation. *Disadvantages:* lower production per pass, size of log limited to the size of the throat on the band, relatively expensive.

I have friends who have circular saws and they are very happy with them. One who does a lot of custom milling has all three types because each has its advantages.

I urge readers to engage in some extensive research before buying a portable sawmill or hiring someone to mill your trees. One of the websites I recommend is **http://forestry.about.com/cs/portamills/a/port_mill_buy.htm**.

Chainsaws: indispensable but dangerous

If you place your hands on a chain saw, you must keep in mind that it is like grabbing a hand grenade without a pin in it. It is very likely to go off in your face. From the moment that you take it out of storage to the time that it goes back to the same place, you can be hurt by either it, or by whatever you will be cutting.

—Carl Smith, chainsaw safety expert

Chainsaws are the most basic piece of equipment used in forest management. They are also the most dangerous. Tens of thousands of accidents occur each year, most of which are preventable.

Treat your chainsaw with respect and learn to use it properly. There are numerous ways to get training. Look for classes on chainsaw use and safety, and also books and videos (including online videos). One of the very best ways to learn is to train under an experienced chainsaw user.

Do your homework before purchasing a chainsaw. A good dealer will be able to give you advice suited to your needs. The size you choose should be based on the work you are planning to do. Be sure to mention if you are left-handed.

Take safety precautions seriously. Wearing proper protective clothing is one of the best ways to reduce the possibility of serious injury. Always wear a hard hat, protective leg chaps, gloves, eye protection, hearing protection, and "above the ankle" leather boots.

You should also carry the following tools and supplies: wedges, ax, large hatchet or maul, properly mixed fuel, bar oil, bar wrench, chain file with protective handle, small screwdriver with magnetic head, minor maintenance tools, and a first aid kit.

Proper maintenance is critical. Keep the chain sharp at all times and avoid dirt, rocks, etc. After every third hand filing, sharpen the chain on a grinder. Store your chainsaw properly to extend its life. Drain the gas mixture from the tank and protect the chain with a chain and bar cover or guard.

Photo © L. Litman

Your chainsaw should last many years if you take care of it.

—Much of the information here comes from articles at **http://forestry.about.com**. *See also Safety First on page 8.*

The following articles are a good place to learn about chainsaw use and safety

Chain Saw Safety—Advice from an Expert **http://forestry.about.com/cs/chainsaws/a/carl_smith_saw1.htm**

How to Fell a Tree **http://forestry.about.com/od/chainsaws/ss/fell_tree.htm**

Work Safely with a Chainsaw—Manage Your Backyard Forest **http://forestry.about.com/od/forestryhelp/ss/byw_saw.htm**

Beginner Chainsaw eCourse **http://forestry.about.com/c/ec/9.htm**

Work Safely with a Chainsaw, USFS **http://www.arborday.org/graphics/backyard-woods/guide/chapter2.pdf**

The most important safety rules:

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

A short quiz

a. What percentage of all woods accidents are typically the result of a chainsaw cut?
b. How fast does a chainsaw blade move at full throttle?
c. Which age group is at the greatest risk for injury?
d. How many chainsaw accidents could be prevented?

a. 30%; b. 45 mph; c. younger operators; d. almost all of them

Safety First!

The solutions to many of these problems are obvious: good safety practices, training, and common sense.

Did you know that chainsaws can produce a level of noise that can affect your ears after only 15 minutes? Other common forestry equipment, such as power brush-cutters, sawmills, and skidders and loaders can also cause severe hearing damage.

Forestry is not for the faint-of-heart. Many forestry activities routinely expose you to health and safety risks. These include natural risks (e.g., steep and broken terrain, exposure to the elements and climate extremes of both hot and cold, wildlife and insects, poison oak, hazard trees) as well as occupational hazards (e.g., accidents from equipment and falling trees; long-term damage to hearing; neck, shoulder, and back strain; vibration and other physical stress; and repetitive stress injury).

The solutions to many of these dangers are obvious: good safety practices, training, and common sense.

Good Safety Practices

According to the Occupational Safety and Health Administration (OSHA), more people are killed while felling trees than during any other logging activity. One of the first steps to protect yourself is to use safety equipment at all times.

These include:

- protective shoes—sturdy boots with non-slip soles, steel toes, and high tops.
- safety helmet/hard hat—an approved safety hard hat that is properly fitted.
- gloves—based on the work, suitable gloves should consider the need for protection from chainsaw cuts, thorny material, and cold/wet conditions. They should be sturdy and non-slip.
- safety chaps/trousers—chaps made for chainsaw use can help prevent injury
- ear protectors—ear muffs or ear plugs to protect your hearing
- safety glasses—non-fogging, vented face screen or safety goggles to prevent injury from flying chips or a chain
- visors

In addition, wear snug-fitting clothing that allows for freedom of movement. Avoid any loose material such as sleeve cuffs, cuffed pants, scarves, loose long hair, jewelry, or a skirt.

Training

You need to develop the skills to use equipment, such as chainsaws, safely. That takes time and commitment. You can:

- take a professional training course
- work with someone who is highly experienced
- read books or watch videos to learn the basics
- practice on easy jobs until your skills improve

Common Sense

In the common sense category, you should first of all be aware of your physical and mental state, and know your limitations. Are you clear-headed and alert, have you eaten well, and are you well-hydrated? Your physical/mental condition can make the difference between quick wits to avoid an accident and an unnecessary injury. You need to be prepared and able to react correctly in the case of an emergency or unexpected occurrence.

In addition, be aware of your surroundings, including weather conditions (especially wind), terrain, wildlife, buildings, vehicles, power lines, livestock, and other people.

Never work alone when felling trees. In case of an accident you need someone to help or who can summon help.

Know your limitations. If the job is too much for your abilities, hire a professional.

A few more safety tips for chainsaw users

- Make sure that 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 and 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.

Meet the Specialists

An interview with Jill Butler, FAS extraordinaire

After more than 16 years with the Department of Forestry and Fire Protection (CAL FIRE), Jill Butler has what she believes is "the best job in the department." She is one of a handful of Forestry Assistant Specialists (FAS; plural pronounced "fazzez"), and her job is to help small forest landowners.

Jill Butler is friendly and lively, and extremely knowledgeable. She will expand any preconceived ideas you might have of what a forester does. "We are a source of local information. We know the local species, where to get trees, who to hire, and can give general guidance on work to do."

Want information on funding for forest projects? Ask Jill. "When I started there was a lot of State funding for projects, now it's mostly Federal funds." CAL FIRE focuses mainly on firesafe projects, but other projects can be funded through Fish and Game grants, Resource Conservation Districts, and Federal programs. The Forest Service is another huge partner.

Just about every county in California has a FAS or Forest Advisor. While cost-share funding is sparse these days, technical support from FASs is still available. However, even they are stretched thin. Jill Butler's area of responsibility includes 16 counties: Alameda, Colusa, Contra Costa, Lake, Marin, Mendocino, Napa, San Francisco, San Joaquin (West), San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, Stanislaus (West), and Yolo.

Most people initiate contact with their local FAS by a phone call or email; some just drop by. Most are looking for answers to specific questions, for example, "I think I have Sudden Oak Death on my property. What should I do?" Jill has a library of fact sheets and other valuable information for common questions. Sometimes she does site visits.

When asked what she looks for on a property visit, Jill replies without hesitation, "I look at what they want to show me. The priority is to help the landowner identify their objectives."

Landowner objectives are the key to successful forest management. When a landowner defines his or her personal goals and objectives for their property, the FAS can offer guidance to achieve those goals.

Jill Butler (far left) was one of the Forest Practice Award recipients in 2001.

Jill's work in the field is limited to one day a week ("my basic job is a boring desk job") but that is the day she loves best. "The magical thing is what landowners do on their property and I'm privileged to get a glimpse of it."

In addition to her time with landowners, Jill is enthusiastic about all of the other resources available to forest landowners, the "excellent package of technical support that landowners should know about."

That package includes the *Forestland Steward* newsletter you are reading and the Forest Steward website (**http://ceres.ca.gov/foreststeward**). On the website there are *Tree Notes* (**http://ceres.ca.gov/foreststeward/html/treenotes.html**), which include dozens of fact sheets on forestry issues to help landowners with their management activities. There is also the California Stewardship Helpline (1-800-738-TREE; ncsaf@mcn.org) staffed by Jane LaBoa, a forester with a statewide perspective and expertise from a long career with the Forest Service.

What does the future hold for small forest landowners? Jill predicts, "I see small landowners as an increasingly important source of timber. Sustainably managed forestland is where wood will come from."

Find the Forestry Assistant Specialist/Forest Advisor for your county at **http://www.fire.ca.gov/resource_mgt/downloads/ForestAdvisorList.pdf**. In addition, see page 10 for a list of specialists from several agencies that are available to assist you.

"The magical thing is what landowners do on their property and I'm privileged to get a glimpse of it."

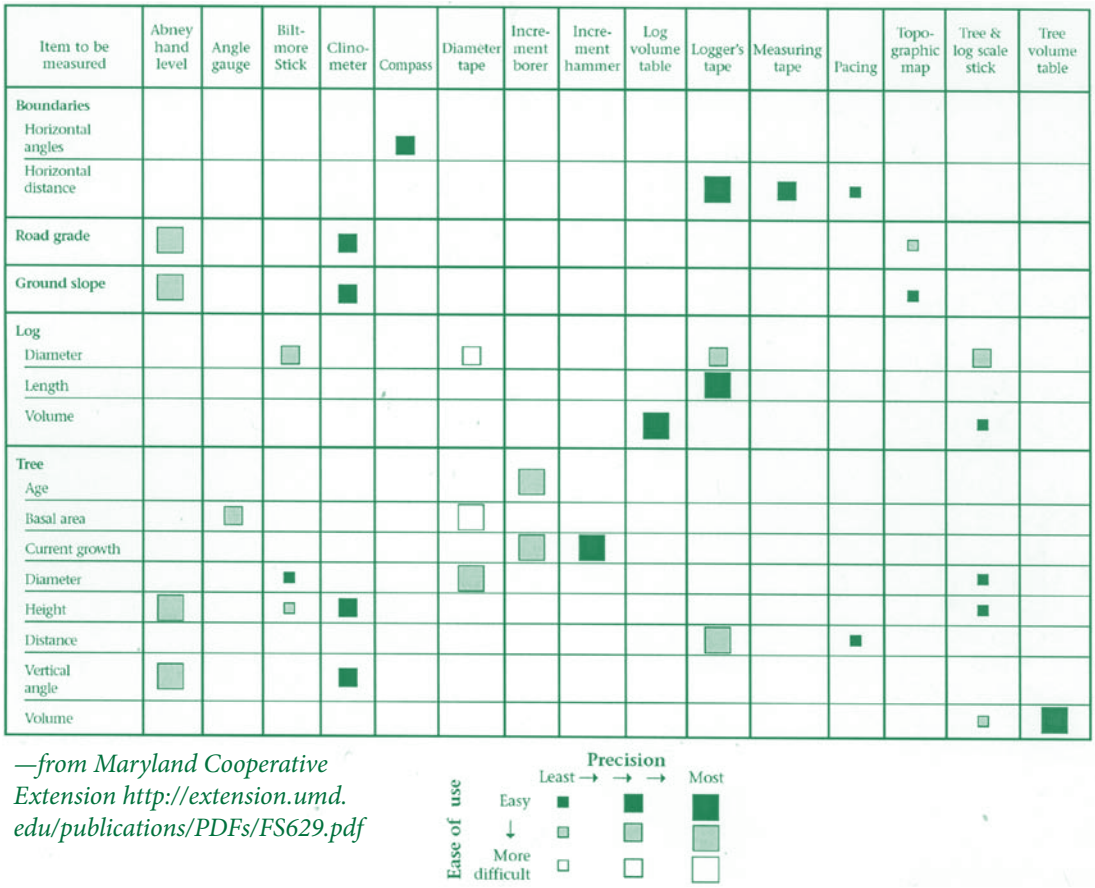
Resources

Convenience and precision of measuring tools

Basic Hand and Power Forestry Tools from Washington State University Extension **http://ext.nrs.wsu.edu/handtools/objectives/index.htm**

Tools for Measuring your Forest from Oregon State University Extension Service.**http://extension.oregonstate.edu/catalog/pdf/ec/ec1129.pdf**

Measuring your Forests from Maryland Cooperative Extension **http://extension.umd.edu/publications/PDFs/FS629.pdf**



—from Maryland Cooperative Extension http://extension.umd.edu/publications/PDFs/FS629.pdf

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 (Redding) 530-528-5108
Jill Butler (Santa Rosa) 707-576-2935
Ed Crans (Placer/Yuba/Nevada) 530-889-0111 x128
Brook Darley (Tehama/Glenn) 530-528-5199
Mary Huggins (S. Lake Tahoe) 530-541-1989
Patrick McDaniel (El Dorado) 530-647-5288
Dale Meese (Plumas) 530-283-1792
Jonathan Pangburn (San Benito/Monterey) 909-881-6900
Alan Peters (San Luis Obispo) 805-543-4244
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
Tina Bartlett
916-653-9834; tbartlett@dfg.ca.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

Susie Kocher,
530-542-2571; skocher@nature.berkeley.edu

Gary Nakamura, Natural Resources Advisor
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
Vickie Stoll
707-562-9167; vstoll@fs.fed.us

Calendar

January 29–30, 2010
NorCal SAF winter meeting: Communicating the Need for Sustainable Forest Management
Location: Sacramento
Contact: Jane LaBoa, 800-738-TREE, ncsaf@mcn.org
Website: http://norcalsaf.org/temparticles/winter2010_flyer.pdf

February 2-3
California Board of Forestry meeting
Location: TBD
Contact: 916 653-8007
Website: http://www.bof.fire.ca.gov/

February 9–11, 2010
Pre- and Post-Wildfire Forest Management for Ecological Restoration and Fire Resiliency
See article on this page for more information.

February 27, 2010; 10:00 to noon
Mill Creek Watershed planning meeting
Location: Old Felta School, Healdsburg
Mill Creek Watershed planning meeting
Contact: Sierra Cantor, 569-1448 x107; scantor@sotoyomercd.org
Website: http://www.sotoyomercd.org
Notes: See page 12 for discussion.

March 2-3
California Board of Forestry meeting
Location: Resources Building, Sacramento
Contact: 916 653-8007
Website: http://www.bof.fire.ca.gov/

March 25, 2010
Woody Biomass Utilization workshop
Location: UC Cooperative Extension office, Eureka
Sponsors: UCCE, USFS
Contacts: Gareth Mayhead, gmayhead@berkeley.edu, or Yana Valachovic, yvala@ucdavis.edu
Notes: This workshop will look at various woody biomass to energy conversion technologies to help understand opportunities for the North Coast. There will be an afternoon field tour to area facilities and an optional session on Densified Wood Fuels.
Website: Details to be posted at http://groups.ucanr.org/WoodyBiomass/Workshops/

The e-version of this newsletter goes out about a month before the printed copy. Get an early peek at *Forestland Steward* (with live links). Simply send a note to llitman@pacbell.net and specify whether you want to receive the e-version instead of or in addition to the hardcopy version.

Conference: Pre- and Post-Wildfire Forest Management for Ecological Restoration and Fire Resiliency

Dates: February 9-11, 2010
Location: McClellan Park Lecture Theater, Sacramento, California
Sponsors: USDA Forest Service and the University of California
Cost: $100 after January 11, 2010
Information: http://ucanr.org/wildfire2010/

This conference will bring scientists, forest managers, environmental organizations and interested members of the general public together to present and discuss information relevant to the management of forested land before and after wildfire.

The focus will be on the conifer forest types common to the Sierra Nevada and Trinity-Klamath Region of California, but the information presented will have application to similar forest types in other regions.

For the complete agenda and on-line registration, please go to the conference website: **http://ucanr.org/wildfire2010/**.

Feel free to contact us if you have any questions. Program: Richard Harris, rrharris@berkeley.edu, UC Cooperative Extension, 707-678-3504; Mike Chapel, mchapel@fs.fed.us, USDA Forest Service, 916-498-5323; Logistics: Sherry Cooper, slcooper@berkeley.edu, UC Cooperative Extension, 530-224-4902

How can Forestland Steward newsletter serve you?

I'd like to see more information on _____

_____

My suggestions are _____

_____

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

Name_____

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.

Fill out this box and send it to CAL FIRE, Forestry Assistance, P.O. Box 944246, Sacramento, CA 94244-2460. Fax: (916) 653-8957; email: jeff.calvert@fire.ca.gov
For address changes, please send this box or contact Jeff Calvert via e-mail, standard mail, or fax…be sure to reference Forestland Steward newsletter.

CAL FIRE & Placer County RCD
Forest Stewardship Program
c/o P.O. Box 162644
Sacramento, CA 95816

ADDRESS SERVICE REQUESTED

Partnership to work with landowners in the Russian River area

Sierra Cantor, Sotoyome Resource Conservation District

Coho salmon populations have declined precipitously in the Russian River watershed.

In response, the Russian River Coho Water Resources Partnership (Partnership) is working to improve streamflow and water supply reliability in five Russian River tributaries critical to the recovery of endangered coho salmon. The project is funded by the National Fish and Wildlife Foundation.

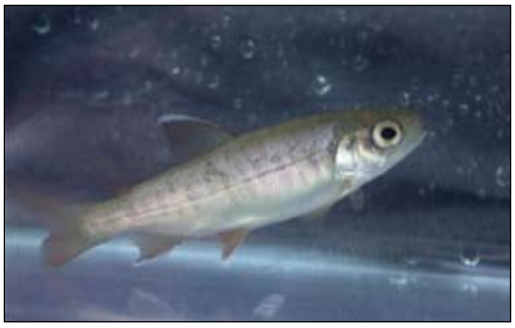


Photo courtesy Brock Dolman

"Over 95 percent of the target watersheds are held in private ownership," said Kara Heckert, Executive Director of the Sotoyome Resource Conservation District (RCD). "The guiding principal of this project is that water for both human uses and coho salmon can be secured through careful planning and water supply management."

Initial efforts will focus in five top-priority streams: Dutch Bill, Grape, Green Valley, Mark West, and Mill creeks. To meet the needs of the landowners, the regulatory agencies, and the resources, the Partnership will work with landowners to identify the areas with the greatest potential for using alternative water management strategies, and to identify, study, permit, and finance solutions to improve conditions for coho salmon.

The first year of the program will focus on collecting information to lay a scientific foundation to develop streamflow and water use management plans for each watershed, and work with landowners and water users to identify tools and solutions to improve water reliability and flows. Projects identified for implementation in future years will include water storage (e.g., residential roof catchment systems), agricultural reservoirs, and agricultural conservation practices, such as alternatives to frost protection and summer irrigation (e.g., micro-sprinklers and fans).

Just as the Mediterranean climate of the Russian River watershed can place pressures on waterways during the dry season, it can provide opportunities to ameliorate those pressures during the rainy winter. Using a suite of tools ranging from innovative conservation strategies to increased storage opportunities during critical flow periods, the Partnership's multi-disciplinary team is committed to address complex issues related to salmonid recovery and provide well-developed solutions for communities and the environment.

The long-term goals of the Partnership are to 1) restore a more natural flow regime for spring, summer, and fall; 2) increase viability, and ultimately numbers, of coho salmon in the Russian River watershed; 3) increase water reliability for water users in each watershed; 4) develop governance mechanisms to carry out these efforts; and 5) develop a template for others to follow.

The Partnership includes the Center for Ecosystem Management and Restoration, Gold Ridge RCD, Occidental Arts and Ecology Center WATER Institute, Sotoyome RCD, Trout Unlimited, University of California (UC) Research and Extension Center Hopland GIS Lab, and UC Cooperative Extension.

For more information, please visit www.cohopartnership.org or contact your local RCD. For Dutch Bill and Green Valley creeks contact John Green, 874-2097, john@goldridgercd.org and for Mark West, Mill, and Grape creeks contact Sierra Cantor, 569-1448 x107, scantor@sotoyomercd.org.

The Sotoyome RCD will be holding a Mill Creek Watershed planning meeting to highlight the Partnership's efforts on Saturday, February 27, 2010 from 10:00 to noon at the Old Felta School in Healdsburg. Please visit www.sotoyomercd.org or contact Sierra Cantor for more information.