



FORESTLAND STEWARDS

Hardwoods coming into their own

Until recently, hardwoods in California played second fiddle to the more economically valuable softwood species. Considered by many to be “weed” species taking up space and other resources from the conifers, hardwoods have been disparaged, burned, poisoned, and otherwise removed from the landscape.

But this view is fortunately changing. In the last decade there has been a growing appreciation of the value of hardwoods both for ecological and economic reasons.

Hardwoods play an essential role in numerous forest functions including erosion control, air and water quality, nutrient cycling, etc. In addition, they contribute color, beauty, recreational opportunities, and other amenities so important to human beings.

Hardwood forests provide some of the richest wildlife habitat in the state. Over 300 species of vertebrates depend on oak woodlands for their survival and those animals contribute their part to the ecosystem in complex interrelationships that are necessary, though often not well understood.

There is not just one, but rather a

large number of unique hardwood ecosystems. Oak woodlands are found in the foothills as well as at lower elevations. These lands are dominated by oak species and have historically been managed primarily for grazing. Over 50 distinct oak habitat types have been described.

Hardwoods are also an integral component of the higher elevation mixed coniferous forests. There they can be found in various assemblages, although seldom as pure stands of one species.

Riparian zones are another hardwood domain. Riparian species help stabilize banks and reduce erosion in addition to providing some of the most important habitat for wildlife.

Economically, the California hardwood industry has lagged far behind its successful eastern counterpart. The lack of interest in hardwoods has been due in large part to the fact that high-quality softwood timber could be logged easily and in large volumes. Now, with much of the old growth gone and increasing limitations on timber harvest, there is renewed interest in encouraging a sustainable hardwood industry as a way to bring economic stability to rural

areas. New techniques and a greater understanding of hardwood ecology have contributed to the current optimism surrounding hardwood utilization.

Along with the increased appreciation of hardwoods has come a growing concern for the future of these habitats. Since 1945, over one million acres of hardwood rangeland has been lost. California’s population, which is expected to grow by an average of 630,000 persons per year for the next 20 years, is pushing into the foothills and oak woodlands, fragmenting habitat for wildlife and destroying the integrity of the ecosystem. The increased development value of the lands has been disastrous for many families of landowners as high estate taxes force the sale of family lands, resulting in development or conversion.

As is true for other forest types, good stewardship of hardwood rangeland involves appreciation, knowledge, and careful decision-making. Resources provided in this newsletter can help you find the information and technical assistance you need to achieve your management objectives with the least disturbance to the resources. ▲

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Pest Alert

Tanoak dieback affecting coast live oaks too

Something is killing tanoaks (*Lithocarpus densiflorus*) in localized areas from Santa Rosa to Big Sur. It strikes healthy, mature trees which can develop symptoms and die within 4 to 6 weeks! The reason for this unprecedented dieback has yet to be discovered.

Mysterious tanoak deaths

The first instances of the tanoak sudden death were observed in Mill Valley, Marin County in 1995. Affected trees have now been found in Sonoma, Santa Cruz, Santa Clara and Monterey counties as well.

The first symptoms occur when a mature tree develops very pale green shoots which then droop or wilt. Old foliage changes from dark to light green, then suddenly the whole crown turns brown. The trees lose their leaves during the following growing season.

Beetles enter the picture

While the pathogen that causes the dieback has not yet been identified, western oak bark beetles (*Pseudopityophthorus pubipennis*) and oak ambrosia beetles (*Monarthrum spp.*) are invariably associated with the diseased trees. These beetles, which are not usually able to invade healthy trees, find the dead and dying trees extremely attractive. They have been reproducing wildly within the stricken trees.

California live oaks attacked

With beetles at epidemic proportions, a new threat has arisen: the beetles have begun attacking coast live oak (*Quercus agrifolia*). Tens of thousands of trees have died—even seemingly healthy trees. This is very unusual since these beetles are considered secondary pests, that is, they only attack

already weakened trees. Some think that environmental stress may increase the risk to individual trees. Good maintenance of oak trees to prevent tree stress is currently considered the best way to avoid beetle attack. (Information on the correct care of oaks can be found on the California Oak Foundation website: <http://www.californiaoaks.org>.)

Identify diseased trees

Oak bark beetles and ambrosia beetles are very small insects (1.7 to 4 mm long) so it is easiest to find them by indirect signs. Beetle attack can be identified by the following symptoms:

- The first signs of western oak bark beetle infestation of live oaks are dark brown-to-black colored granules and stained bark surface below entrance holes. Reddish-brown boring dust appears on the lower bark surface near the tree base.
- Oak ambrosia beetles can be identified through the fine white sawdust that appears on the tree trunk.

These massive diebacks in tanoaks and live oaks have never been seen before. There is concern not only for the loss of the trees but also the serious fire hazard that may result from the build-up of dry fuel from the dead trees.

Many questions remain to be answered. Emergency funds have recently been granted to try to learn the cause of the disease. Scientists don't know whether the coast live oak are succumbing to the same pathogen as the tanoaks or whether the live oak deaths are simply a result of the increase in beetles. Identification of the disease will help to determine the best approach to the problem.

What to do

Currently, experts recommend that landowners remove dead trees as soon as possible, chipping smaller branches and splitting the wood for firewood. The logs should then be cut and covered with clear plastic sheeting for six months to prevent beetle emergence and infestation of nearby oaks.

For more information, contact your local UC Extension advisor. Ask for Pest Alert #3B, *Protecting Live Oaks Against Bark Beetles and Ambrosia Beetles*.

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Forestland Steward is a publication of the California Forest Stewardship Program
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Seasonal Stewardship

Protect your seedlings after planting

Your seedlings are safely in the ground after great effort and cost. Now, what can you do to help ensure they survive to become trees?

Even healthy young trees face a number of threats, one of which is their tastiness to various animals—deer, rabbits, rodents, insects and others. There are a number of options available for protecting seedlings: physical barriers, repellents, habitat modification, hunting, etc. Your decision will be based on what animals are after your trees, the characteristics of your site, and, last but not least, cost. As with anything else, each method has advantages and limitations.

■ **Fencing.** Fencing works well to keep out deer and animals that don't climb or burrow (if it's high enough). However, fencing is costly and excludes everything—humans and other nontarget wildlife. Fences can be electrified for greater deterrence.

■ **Vexar tubes.** Perhaps the most common protective barrier used for conifer seedlings is vexar tubing, usually put in place at the time of planting. These diamond-shaped rigid mesh tubes are available in various sizes and can protect against a number of herbivores. The material biodegrades in sunlight but can be purchased with UV inhibitors that increase the life of the tube (this is unnecessary if the protection is needed for only one season. Note that biodegradation is variable and tubes may need to be removed by hand.) Tubes should be set up with two stakes to hold them upright and prevent seedling damage in strong winds. For protection from rabbits they need to be at least 2' high; 3' for deer.



■ **Vexar leader tubes.** These are similar to vexar tubes but protect only the seedling terminal bud. It may be necessary to support smaller terminals to prevent bending.

■ **Below-ground deterrents.** To protect against burrowing animals such as gophers, various types of cages can be constructed. One relatively easy design uses aluminum screen placed around large yogurt or cottage cheese containers that are open at both ends and slit at the sides. The container is buried in the soil so that the top is at the soil surface. The cage prevents stem damage while the container keeps out burrowing animals that can damage roots.

■ **Netting.** Plastic mesh can be easily slipped up over seedlings and may be pulled up over the elongating terminal during the growing season. While the netting is effective in preventing browsing, it can cause bent leaders. To prevent this, bamboo stakes can be used to hold the netting away from the seedling.

■ **Bud caps.** Paper bud caps are rectangular pieces of weatherproof paper folded lengthwise and stapled around the terminal leader and bud. These are not as effective as vexar tubes for protection. Polyester bud caps are also available.

■ **Sleeves.** Porous, polyester sleeves are sewn into tubes and secured by staples around the seedling. Sleeves can cause heat injury to seedlings on hot, dry sites which can be minimized by using larger diameter sleeves and lighter-weight material.

■ **Tree shelters.** These protective devices are used for hardwoods such as oaks; not for conifers. Tree shelters are tall plastic tubes that not only protect seedlings from animals but also create a small greenhouse effect around each individual plant. As with a greenhouse,

the plastic tube creates a microclimate that traps carbon dioxide and moisture and moderates the temperature, while allowing light to pass through for photosynthesis. Tree shelters are common in England but are still relatively new to the US. The shelters appear to improve seedling survival especially on difficult sites where the soil is poor, the climate extreme, or competition strong. Concerns include biodegradability and stem abrasion due to wind.

■ **Repellents.** There is a great variety of repellents in use including moth balls, hot pepper sauce, human hair, bone tar, and a number of commercial formulations. Repellents can be costly with extremely variable results, therefore are not generally considered for large areas. Some repellents need to be reapplied after rainfall. Those formulations that repel by taste are most effective when applied to dormant trees since new growth that develops after treatment will be unprotected. Other repellents act by smell such as putrescent egg solids or putrefied meat scraps. Effectiveness varies for many reasons including the weather, animal hunger level, alternative food availability, and conditioning. A chili-garlic repellent that appeared to be successful in northern California was tested in the southern part of the state. There the rabbits preferentially sought out those plants with the chili-garlic. ▲

Hot off the presses!

The newly-revised *Nursery Sources for California Natives* by M.A. Showers is available for \$10.00 from the Division of Mines and Geology. Contact the Publications and Information Office, 801 K Street, MS 14-33, Sacramento, CA 95814-3532. (916) 445-5716.



California Hardwoods

Utilization opportunities and challenges

John R. Shelly, PhD

There is a sizable hardwood component to California's forests (see Table 1). Despite this, the native hardwoods never played an important role in the products produced from the forest. Today the major uses of hardwoods in California are for fuel chips, pulp chips, and firewood, all products that return little value to the landowner. Traditionally, hardwoods have also been a source of food (nuts and acorns), wildlife habitat, timber for local farm and home use, and firewood...but of little commercial value for value-added products.

As we move into the 21st century, an increasing understanding of the science of ecology and societal pressures are causing a reevaluation of our natural resources with an emphasis on sustainable production and improving rural economies. In certain situations, hardwoods may be a viable resource for local needs, specialty products, or perhaps even for a larger commodity market. The high-density hardwoods such as tan-oak, madrone, California black oak, and the white oaks may have economic potential. Local products made by artisans, woodworkers and hobbyists prove that high value products can be made from many of these native hardwood species. The high cost of production will likely be a major limiting factor.

Opportunities

Resource—Hardwoods represent an underutilized resource. Hardwood species in California are about 16% of the inventory of standing timber (growing stock volume) and 6% of the sawtimber volume (greater than 11-inch diameter, dbh). Sixty percent of the hardwood inventory is located in the timberland forests and the remaining 40% is found in the rangelands and valley regions.

About one-third of the timberland hardwood growing stock is sawlog quality. Harvesting volumes of native hardwoods are not available, but it is likely that sustainable harvesting levels could be increased dramatically.

Demand—California is one of the nation's major consumer markets for hardwood flooring, furniture, cabinets, and other wood products. Manufacturing these products near the markets can offer distinct economic advantages in low transportation costs. These two factors have created a furniture-manufacturing sector in California that uses more than one million board feet of hardwood lumber per year. However, less than 5% of the total comes from the western U.S. species, and nearly all of that is red alder. Most (about 80%) is shipped from the eastern half of the US and about 10% is imported from tropical regions. Clearly, there is an opportunity for western hardwood lumber if consistent quality can be offered at a competitive price. California furniture manufacturers have a high demand for wood components and sub-assemblies—intermediate products that are well suited to the native hardwood resource.

Economic Development—The growth of an industry to produce wood products from an underutilized resource has the potential to create many jobs in rural communities with a timber resource base. These jobs may offset some of the employment losses resulting from reductions in softwood harvesting and the modernization and closing of sawmills.

Marketing—California hardwoods present unique marketing opportunities, especially in niche markets. There is often a distinct advantage to products that are locally grown and produced. In many cases, the sustainable harvest of

Table 1: Estimated Growing Stock Volume of Hardwoods Typically Found in the Timberland and Woodland Regions of Calif.

Common Name	Scientific Name	Total Volume (million ft ³)
Timberland Species		
California black oak	<i>Quercus kelloggii</i>	2420
Tanoak	<i>Lithocarpus densiflora</i>	2167
Pacific madrone	<i>Arbutus menziesii</i>	1272
California bay laurel	<i>Umbellularia californica</i>	270
Alder	<i>Alnus spp.</i>	267
Oregon white oak	<i>Quercus garryana</i>	245
Bigleaf maple	<i>Acer macrophyllum</i>	165
California white oak	<i>Quercus lobata</i>	49
Giant chinquapin	<i>Castanopsis chrysophylla</i>	45
Poplar/cottonwood	<i>Populus spp.</i>	14
Oregon ash	<i>Fraxinus latifolia</i>	7
Woodland Species		
Canyon live oak	<i>Quercus chrysolepis</i>	1379
Coast live oak	<i>Quercus agrifolia</i>	140
Interior live oak	<i>Quercus wislizeni</i>	70
Quaking aspen	<i>Populus tremuloides</i>	24
Eucalyptus	<i>Eucalyptus spp.</i>	19
Blue Oak	<i>Quercus douglasii</i>	11
Walnut	<i>Juglans hindsii</i>	1
Sycamore	<i>Platanus racemosa</i>	<1

California hardwoods may qualify for ecological certification by third party monitors. This certification has the potential to increase the value of a product to customers who place a premium on environmentally sound manufacturing. Even without an additional economic value, it may give a marketing edge over a product that is not certified.

Raw Material Properties—Many of California's hardwood species compare favorably with the benchmark species of the furniture industry. With the exception of the lower density hardwoods such as poplar, cottonwood, buckeye, and willow, most of the California hardwoods will perform very well in conventional hardwood products. The high-



density California hardwoods (specific density > 0.50) have very good machining and finishing properties, and some of the finer textured woods such as madrone and red alder are exceptional. Many of the high-density hardwoods also have unique and interesting grain patterns that add to the appearance value of the wood. All of the moderate to high-density hardwoods also have very good strength properties. A few, such as tanoak, madrone, Oregon white oak, valley oak, and eucalyptus, exhibit very high hardness values making them an exceptional choice for hardwood flooring. A summary of properties for some California hardwoods are listed in Table 2, along with the comparable values for northern red oak, a benchmark species.

Challenges

Manufacturing—There are numerous challenges to manufacturing products from California hardwoods. In some cases, the high density and unique wood properties that may create marketing opportunities often create difficult manufacturing situations. For example, California hardwoods have a reputation for being hard to dry. Extra care during drying is required with the dense woods that have a tangential shrinkage (tangent to the growth rings) greater than 10% and a warp index greater than 2.0 (Table 2). These woods are expected to have a

high frequency of drying defects if they are dried improperly. Tanoak, madrone, and the white oak species are three species with a high tendency to warp and collapse during drying. However, good results can be obtained by drying slowly with good control of the drying conditions. A kiln capable of reaching a temperature of 150°F (the temperature required to sterilize insect-infested wood) that has a method to reintroduce moisture at the end of drying to relieve stresses can successfully dry any of these hardwoods to the desired final moisture content of 8%.

Marketing—Manufacturers and consumers are largely unaware of California hardwoods. The California Hardwood Initiative, a statewide effort supported by the California Trade and Commerce Agency, California Department of Forestry and Fire Protection, USDA Forest Service and the University of California, has successfully raised the level of awareness but more needs to be done. The commodity lumber markets demand large volumes of lumber, readily available at a competitive price and manufactured to existing industry standards. In contrast, the niche market is more flexible because a specific product or customer is targeted and the product is tailored to the customer's needs. Availability and quality concerns make it difficult for a new product to

enter the commodity market; however, based on the properties and characteristics of the California hardwoods successful niche markets are quite possible.

State of the Industry

A recent survey of hardwood sawmill manufacturers in California revealed 34 sawmills and 60 secondary manufacturers that are currently working with or interested in working with native California hardwoods. The sawmills are exclusively mini-mills, often with portable equipment, with annual productions less than 500 thousand board feet (MBF). Many of these mills produce less than 50 MBF per year. The estimated total production of all the mills in 1999 was only about 4 million board feet. At the time this survey was completed there were two large production softwood sawmills considering limited tanoak productions. These two mills have the potential to dramatically increase the availability of California hardwoods.

Based on the physical and mechanical properties, any of the common hardwood consumer goods could be manufactured from California hardwoods. Some woods are better suited for particular products than other woods and factors such as resource availability, cost of production, and quality of the end product will determine the long-term viability of a California hardwood business venture. These hardwoods present some manufacturing challenges, but the technology exists to address these challenges. With an understanding of some of the fundamental wood properties and basic manufacturing principles, many of these hardwoods can be manufactured into high value products.

For more information and references, go to our website at <http://ceres.ca.gov/foreststeward/hardwood>.

John R. Shelly is a Cooperative Extension Advisor in Forest Products and Biomass, University of California Forest Products Laboratory, Richmond, CA.

Table 2. Properties of Common California Hardwoods Compared with Northern Red Oak

	Specific Density	Machining Quality	Finishing Quality	Hardness (lb)	Tangential Shrinkage (%)	Warp Index
Bigleaf maple	0.44	good	good	850	7.1	1.9
Blue gum eucalyptus	0.63	good	good	1650	15.3	2.0
California bay laurel	0.54	good	very good	1270	8.1	2.9
California black oak	0.50	good	good	1080	7.8	2.1
California white oak	0.60	good	very good	1570	9.8	2.4
Chinquapin	0.44	fair	good	780	7.4	1.6
Madrone	0.61	excellent	very good	1530	13.7	2.4
Oregon ash	0.50	good	very good	1160	8.1	2.0
Oregon white oak	0.66	good	very good	1780	9.0	2.1
Red alder	0.39	very good	very good	620	7.3	1.7
Tanoak	0.59	good	good	1450	12.0	1.9
Northern red oak	0.56	very good	very good	1290	8.6	2.1



Estate Planning

Consider the future of your forestland

A recent survey of California landowners found that 1) most landowners are concerned that estate taxes will prevent them from transferring their land to their children; and 2) most landowners have not done adequate estate planning to ensure that estate taxes will not force their children to sell the family land to pay the taxes.*

Are you one of the concerned-but-unprepared majority?

Granted, estate planning is not one of the easiest topics to think about. Or to talk about. And estate planning can be expensive and time consuming. But putting off this important task can mean the tragic loss of your forestlands from the family and may even lead to the development of your property in ways that you never intended.

The problem

Estate taxes can be astronomical. Forestland in California is extremely valuable and many tracts of undeveloped land are valued even higher based on their development value. Landowners may find themselves land-rich but cash poor. Your heirs will be responsible for an estate tax bill based on your total assets that could require selling the land in order to satisfy the bill.

Loss of family forestland and farmland to estate taxes has become a huge concern to landowners, but it also affects the public as environmental amenities such as open space, aesthetics, water quality, etc. are lost when large tracts of land are subdivided and developed.

Don't despair

However, there are steps that can be

* From "Preserving Family Lands in California: An Online Guide to Planning Your Estate" by the California Oak Foundation (see Resources, next page)

taken to minimize this danger. The options are complex and take a great deal of planning and decisionmaking. Estate planning should be done early, while there is still plenty of time to make careful decisions.

How to begin

First of all, be aware that estate planning is not a do-it-yourself job. The laws are too complex, the options too individual, and the stakes too high. Instead, plan to approach this as a team project. You will need a number of experts to do this effectively—a lawyer with forestland estate experience, an accountant who specializes in estate planning, a forester, and possibly others. If possible, involve your heirs in the discussions.

One of your first jobs will be to find out the value of your land. A complete appraisal includes physical inspection, research of deeds and local land use regulations, a complete investigation of market conditions, and a determination of value. Be sure that the appraiser has experience with forestland and has no conflict of interest, such as an interest in selling the property to developers.

Here are five steps from the California Oak Foundation that can help you begin to organize your estate.

1. Clearly determine your goals, your spouse's goals, and goals you may have set for your land, business or other family members. Your secure retirement will undoubtedly be your first goal.
2. Estate taxes are based on the value of your estate at the time of your death. It is important to determine the value of your current estate and the projected value of your estate to your life expectancy.
3. Consider all readily available tax

deductions.

4. Investigate strategies that will reduce the value of your estate in order to reduce your future tax liability.
5. Develop a "liquidity plan" to ensure that there will be cash available to pay any foreseen estate taxes, which are generally due within nine months from date of death.

Estate planning strategies

The tax planning tools available to a landowner are many. They are also complex. You will need to determine the best combination for your unique situation and goals. Here are some of the strategies you may want to consider:

Living Trust. This ensures that probate is avoided and protects a certain amount of the estate from being taxed.

Gifting. You can give away up to \$10,000 each year (\$20,000 if spouse gives too) to each of an unlimited number of recipients without being taxed on the gift. Each spouse may transfer property up to \$625,000 during his or her lifetime. A number of new provisions in the Taxpayer Relief Act of 1997 will increase the exemption amounts over time.

Valuation Discounts and Family

Partnerships. There are various ways to discount the value of an estate. Check with your lawyer.

Life Insurance and Life Insurance

Trust. Life insurance can be used to pay estate taxes or provide cash to your heirs. Determine the best insurance structure for your needs.

Charitable Remainder Trust. A CRT puts your assets in a trust that allows you to use them during your lifetime and then transfers the remaining assets to a charity of your choice after your death. This may provide a substantial tax



deduction and reduce capital gains tax liability.

Charitable Gifts. Gifts of land made to nonprofit organizations may reduce your income taxes during your lifetime, reduce your estate tax liability, and preserve your land in its natural state.

Conservation Easements. This very important tool can allow you to pass your land on to family members, continue to use the land as you wish, and reduce the value of your land and tax liability. A conservation easement is a legal agreement between the landowner and an appropriate governmental or nonprofit organization that restricts certain activities (such as development) on the land. Because the land use is restricted, its value may be lowered, which can lead to significant estate tax reductions. Each conservation easement agreement is unique, depending on the wishes of the landowner. The restrictions in a conservation easement stay with the land in perpetuity and are binding to future owners.

Resources

Preserving Family Lands in California: An Online Guide to Planning Your Estate is a 12-page publication available from the Oak Foundation at <http://www.californiaoaks.org/assets/images/presbrosec.pdf>

Estate Planning for Forest Landowners: What Will Become of Your Timberland? by Harry L. Haney, Jr., and William C. Siegel. 1993. USDA Forest Service, New Orleans, Louisiana. General Technical Report SO-97. This 186-page report is somewhat dated, so use with caution.

Preserving Family Lands II, More Planning Strategies for the Future by Stephen J. Small. At this site there is also a landowners quiz to give you an idea of the estate taxes that would be due on your estate. In addition there is a good discussion on the Taxpayer Relief Act of 1997. <http://www.stevesmall.com/>. ▲

Questions to ask when choosing an estate planning lawyer

Estate planning for forest landowners is unique. Your lawyer must be knowledgeable in this specialized field. The following questions are designed to help you assess the candidate's knowledge of estate planning as it relates to forestland.

Q. How is form "T," Forest Industries Schedules, used to formulate adjusted basis and depletion of timber lands?

A. Schedule "F" of Form "T" provides a series of questions that establishes depletion or adjusted basis (basis is essentially a calculation of "book value" for the land.)

Q. What is "Special Use Valuation" and how does it apply to forest ownership?

A Special Use Valuation is a special provision within the Federal Tax Code that allows an estate to be evaluated by its present use rather than the highest and best use, which is normally used. Under certain circumstances, forest estates can be appraised for timber growing rather than for potential development use, thus reducing the value of the estate and estate tax liability.

Q. Who is the consulting forester you have worked with in other estate planning endeavors?

A. Although the answer may include several foresters, you should expect the lawyer to have a working relationship with a capable and trustworthy forester.

Q. What is a "Conservation Easement?"

A. It is an agreement between a landowner and a conservation organization or public agency that restricts the use of the property in perpetuity, to keep the land in forest use.

Q. When a conservation easement is passed to a legal recipient, how many years does one have to use up (carry forward) the value in tax deduction?

A. Five years.

Q. What is a "Remainder Interest?"

A. The act of making a gift now to take effect at the time of death.

Q. At what estate value must one begin being concerned about federal estate taxes?

A. In 1997, estates of \$600,000 or more were subject to federal estate taxes. Under the Taxpayer Relief Act of 1997, that figure will rise to \$1 million over the next 10 years.

Q. Under the "General Rule," how much may a taxpayer who makes a charitable contribution of property deduct from his/her income?

A. 30 percent

Q. Under the "Special Rule," what provisions apply?

A. Under this rule, a taxpayer who makes a charitable gift of appreciated property can choose to reduce the amount of the deduction to the cost/basis of the property.

Q. Who is Stephen J. Small?

A. He is the author of *Preserving Family Lands*, a book on estate planning, and the original author of the Federal Tax Law that provides special tax treatment for donated conservation easements.

Other important questions:

Q. How many estate plans have you prepared for nonindustrial private forestland owners?

Q. What is your fee schedule?

Q. How will you determine what my interests and objectives are? (It is important that you choose a lawyer who has your interests and objectives in mind.)

Q. Can you provide three nonindustrial private forestland owner references who have received estate planning services from you? (You should contact the references for recommendations.)

—questions by Lloyd Casey, US Forest Service, originally published in Forest Stewardship Bulletin Volume 13, a publication of the Pennsylvania Forest Stewardship Program.



Tax Time

Tax tips for forest landowners

*Larry M. Bishop,
Forest Management/Taxation Specialist*

Here is some information to keep in mind when you prepare your 1999 federal income tax return. This discussion is necessarily brief—you should consult other sources for a more comprehensive treatment of the issues.

Basis and Tax Records

Part of the price you receive from a timber sale is taxable income, but part is also your investment (i.e., basis) in the timber sold. Allocate your total costs of acquiring purchased forestland—or the value of inherited forestland—among land, timber, and other capital accounts as soon as possible. Adjust this basis up for new purchases or investments and down for sales or other disposals. When you sell your timber, you can take a depletion deduction equal to $((\text{Adjusted basis} / \text{Total timber volume just before the sale}) \times (\text{Timber volume sold}))$. Good records include a written management plan and a map of your forestland. Keep records that support current deductions 6 years beyond the date the return is due. Keep records that support your basis 6 years beyond your period of ownership. Report basis and timber depletion on Form T (Timber), Schedule B.

Passive Loss Rules

The passive loss rules continue to be a real puzzle for forest landowners. This subject is too complex to cover in detail here; what follows is a very brief summary. Under the passive loss rules, you can be classified in one of three categories: (1) investor, (2) passive participant in a trade or business, or (3) active participant (materially participating) in a trade or business.

The law's intent is that you are "materially participating" if your involvement is regular, continuous, and

substantial; however, a low level of activity is adequate if that level is all that is required to sustain the trade or business. This means that record keeping is very important! To show material participation, landowners will need to keep records of all business transactions related to managing their timber stands. Likewise, it would be a good idea to keep records of other business-related activities such as landowner meetings attended, odometer readings to and from meetings, cancelled checks for registration fees, and copies of meeting agendas. Generally, you will get the best tax advantage if you are "materially participating" in a timber business because all management expenses, property taxes, and interest on indebtedness is fully deductible against income from any source. However, if you are "materially participating," you must dispose of your timber under the provisions of Section 631 to qualify for capital gains. (This means that you must sell your timber on a "pay-as-cut" or "cut and convert" basis, rather than lump sum.) On the other hand, if you have considerable passive income (such as Conservation Reserve Program annual rental payments), it may be to your advantage to be considered "passive." Most of the discussion that follows applies to forest landowners who are "materially participating."

Reforestation Tax Credit and Amortization

The reforestation tax credit and 7-year amortization is one of the best tax advantages for forest landowners. If you reforested during 1999, you can claim a 10-percent investment tax credit for the first \$10,000 you spent for reforestation during the tax year. In addition, you can amortize (deduct) all of your 1999 reforestation costs (up to \$10,000), minus half the tax credit taken, over the next 7 years

(actually 8 tax years). The election to amortize must be made on a timely tax return for the year in which the reforestation expenses were incurred. Elect to amortize reforestation expenses on Form 4562. (Passive owners may or may not be eligible for the amortization and credit).

Here's how it works. Assume you spent \$4,000 to reforest a cutover tract in 1999. You claim a \$400 tax credit (10 percent of \$4,000) for 1999. You can also deduct 95 percent of these reforestation costs over the next 8 tax years. Due to a half-year convention you can only claim one-half of the annual amortizable portion for 1999. This means that on your 1999 tax return you can deduct one-half of $(0.95 \times \$4,000 / 7)$ or \$271. For the next 6 tax years you can deduct $(0.95 \times \$4,000 / 7)$ or \$543, and the remaining \$271 can be deducted the 8th tax year.

The annual reforestation amortization is claimed on Form 1040 on the line for adjustments rather than being claimed on Schedule A under miscellaneous deductions. (If you use Schedule A for this purpose, you can claim only aggregated miscellaneous deductions that exceed 2 percent of adjusted gross income). Use Form 3468 to claim the investment tax credit.

Any reforestation costs exceeding the \$10,000 annual limit must be capitalized (entered into your timber account). You can recover (deduct) these costs when you sell your timber.

A final word of caution: the tax credit and 7-year amortization deductions are subject to recapture if you dispose of your trees—within 5 years of planting for the credit and within 10 years of planting for the amortization.

Capital Gains and Self-Employment Taxes

If you report your timber sale income as ordinary income, you could pay signifi-



cantly more in taxes than you would if you report it as a capital gain. Also, capital gains are not subject to the self-employment tax, as is ordinary income. The net self-employment tax rate for 1999 is 15.3 percent for self-employment income of \$400 or more. The rate consists of a 12.4 percent component for old age, survivors, and disability insurance (OASDI) and a 2.9 percent component for hospital insurance (Medicare). The maximum income subject to the OASDI component of the tax rate is \$72,600, while the Medicare component is unlimited. However, if wages subject to Social Security or Railroad Retirement tax are received during the tax year, the maximum is reduced by the amount of wages on which these taxes were paid. To qualify for long-term capital gains treatment, timber sold after December 31, 1997 must have been held longer than 12 months. The maximum long-term capital gains rate for 1999 is 20%. (For taxpayers in the lowest income bracket, the maximum rate is 10%).

Cost-share Payments

If you received cost-share assistance under one or more of the Federal or State cost-share programs during 1999, you may have to report some or all of it as ordinary income. You have several options. You have the option to include it as income and then recover the part that you pay plus the cost-share payment through the amortization and reforestation tax credit already described. You also have the option to exclude the "excludable portion" from income if certain conditions are met. These conditions are (1) the cost-share program has to be approved for exclusion by the IRS and (2) the maximum amount excludable per acre is the greater of: (a) the present value of \$2.50 per acre or (b) the present value of 10 percent of the average income per acre for the past 3 tax years. This second requirement gets rather complicated because you have to determine an appropriate interest rate to compute the present values. Programs approved for exclusion by the IRS include the Forestry

Incentives Program (FIP), the Forest Stewardship Incentive Program (SIP), the Wetlands Reserve Program (WRP), the Environmental Quality Incentives Program (EQIP), and Wildlife Habitat Incentive Program (WHIP), plus several State programs [including CFIP].

Generally, if you harvested the tract within the last 3 years, probably all of the cost-shares received can be excluded from income. In some cases, taxpayers may be better off to exclude cost-share payments. Other taxpayers may be better off not to exclude cost-share payments. Instead, they may be better off to claim the cost-share payments as part of the reforestation tax credit/7-year amortization. The important point here is: **You must report cost-share payments.** If you decide to exclude, attach a statement to your return that states specifically what cost-share payments you received, that you choose to exclude some or all of them, and how you determined the excludable amount.

Casualty Losses

A casualty loss must result from some event that is 1) identifiable, 2) damaging to property, and 3) sudden and unexpected or unusual in nature. Examples include wildfire and storms. Generally, your claim for casualty losses can be no more than the adjusted basis minus any insurance or other compensation.

The IRS has issued position statements on southern pine beetle losses in timber stands and drought losses of planted seedlings. In both cases, the IRS stated that, generally, neither circumstance qualified for casualty-loss deductions because they failed to meet the suddenness standard. It may be possible, however, to take a business- or investment-loss deduction for both types of damage.

Management and Maintenance

Generally, your annual expenses for the management and maintenance of an existing stand of timber can be expensed or capitalized. In most cases, you are better off to expense those costs during the tax year they are incurred, rather

than capitalizing them. If it is not to your advantage to itemize deductions for 1999, you should capitalize these expenses. If you choose to itemize deductions, you can deduct these expenses, but the passive loss rules apply.

Conclusion

Remember these points when you file your 1999 Federal income taxes:

1. Decide if you are going to be an active or passive participant or an investor. Generally you will get the best tax advantage if you are active.
2. Establish your basis as soon as possible and keep good records! Records include a management plan and map, receipts for business transactions, diaries, and landowner meeting agendas.
3. If you had reforestation (timber stand establishment) costs, be sure to consider the 10-percent reforestation tax credit / 7-year amortization.
4. If you sold timber during 1999, you may be able to benefit from the long-term capital gains provisions because you do not have to pay self-employment tax on capital gains.
5. If you had cost-share assistance during 1999, you must report it to the IRS. You may choose to exclude some or all of it, if certain qualifications are met, but you still must report it.
6. If you participated in the CRP, your annual payments must be reported as ordinary income. Likewise, if you received CRP cost-share assistance funds, you must report them as ordinary income.
7. Proper tax planning is just as important as the management techniques to grow a profitable timber crop. For help, contact a professional tax advisor.

—abridged from "Tax Tips for Forest Landowners for the 1999 Tax Year," provided by the USDA Forest Service. Available at <http://www.r8web.com/taxtips>. See also: National Timber Tax Website at www.fnr.purdue.edu/ttax/newintro.htm. ▲



Resources

Guidelines provides a thoughtful discussion of hardwood management

Need some background to help make those important decisions regarding your oak woodland? *Guidelines for Managing California's Hardwood Rangelands* is certainly a great place to start.

This 180-page booklet/manual is easy to read and use. It presents various management options available to rangeland owners, along with detailed information to assist in decisionmaking.

There are worksheets to help you assess your property and goals, discussions of ecological and economic considerations, tables of essential

information, and basic management recommendations.

Topics include general hardwood rangeland values, wildlife ecology and habitat relationships, livestock and grazing, developing recreational sources of income, alternative forest products, sustainable management and regeneration, fire, and erosion control. Sources of technical assistance are also provided.

To order, send \$15 (payable to UC Regents) to Joni Rippee, IHRMP, 163 Mulford Hall, UC Berkeley, CA 94720. (510) 643-5429; fax: (510) 643-5438; rippee@nature.berkeley.edu. ▲

Want more information on hardwoods?

The **Integrated Hardwood Range Management Program (IHRMP)** is a research and education program of the University of California which focuses on oak woodlands. Their website includes articles, publications, and much more. There are descriptions of the various oak habitats in California and their associated wildlife species along with the habitat requirements of vertebrates. <http://danr.ucop.edu/ihrmp>

The **UC Forest Products Laboratory** does research and education in various areas involving California's wood resources including hardwood utilization. <http://www.ucfpl.ucop.edu/>

The **Institute for Sustainable Forestry (ISF)** promotes ecological and economical well-being of forest-based communities in Northwestern California. The focus is on developing a sustainable hardwoods industry. Their website contains information on certification, research projects, and numerous publications and educational opportunities. <http://www.isf-sw.org>

The **California Oak Foundation (COF)** is dedicated to protecting and perpetuating California's native oak woodlands and the wildlife habitat and watershed benefits they provide. They have excellent information about oak woodlands, including a booklet on the care and planting of oaks. There is also an online estate planning guide, "Preserving Family Lands in California." <http://www.californiaoaks.org/index.html>

The **California Hardwood Industry Initiative** was established in October, 1996 to increase investment in companies that use California hardwoods in a sustainable manner. Learn more at <http://commerce.ca.gov/regional/hardwood/index.html> ▲

Technical Assistance Resources

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

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

California Department of Forestry and Fire Protection
Forest Landowner Assistance Programs
Jim Geiger
(916) 653-8286
jim_geiger@fire.ca.gov

California Association of RCDs
Thomas Wehri
(916) 447-7237
carcd@ns.net

California Resources Agency:
California Environmental Resources Evaluation System (CERES)
Deanne DiPietro
(916) 653-8614
deanne@ceres.ca.gov

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

Farm Service Agency
Larry Plumb
(530) 792-5520

California Dept of Fish & Game
Barrett Garrison
(916) 653-1738
bagarris@hq.dfg.ca.gov

U.C. Cooperative Extension Forestry
Richard Harris
(510) 642-2360
rrharris@nature.berkeley.edu

Gary Nakamura
(530) 224-4902
gmnakamura@ucdavis.edu

USDA Forest Service
Sandra Stone
(707) 562-8918
sstone/r5@fs.fed.us



Calendar

March 2, 2000

CLFA Spring Workshop: Interactions Between Silvicultural Practices And Wildlife Habitats

Sacramento, CA
California Licensed Foresters Assn.
Hazel Jackson 209-293-7323;
clfa@volcano.net; \$130-\$155; www.clfa.org/

March 2-5, 2000

18th Annual Salmonid Restoration Conference

Fortuna, CA
AmeriCorps Watershed Stewards Project,
Cal. Comm. Salmon Trollers, CCC, etc.
707-268-8182; salrestfed@aol.com; \$55-\$100
www.northcoastweb.com/srf

March 3-4, 2000

CLFA Annual Conference: Forestry Trends For The 21st Century

Sacramento, CA
California Licensed Foresters Assn.
Hazel Jackson 209-293-7323, fax 209-293-7544; clfa@volcano.net; \$150-\$175
<http://www.clfa.org/>

March 6-9, 2000

19th Vertebrate Pest Conference

San Diego, CA
The Vertebrate Pest Council
Terrell Salmon 530-752-8751, fax 530-752-4154; tpsalmon@ucdavis.edu; \$135
<http://www.davis.com/~vpc/welcome.html>

March 7-8, 2000

Forest Road Stewardship Workshop

Corvallis, OR
Oregon State University
Conference Assistant 541-737-2329
conference@cof.orst.edu
www.cof.orst.edu/cof/extended/conferen

March 7, 14, 21, 28 & April 4

Ranch Water Quality Planning Short Course

Willows and Maxwell
Calif Cattlemen's Assoc, CARCD, etc.
530-865-1107; mrhorney@ucdavis.edu; \$30

March 11, 2000

Grant Writing Course For Citizen Watershed Groups

Sacramento, CA
Sacramento Urban Creeks Council
Dave Tamayo 916-456-6154;
tamayo2@jps.net; \$25

March 14-16, 2000

Forestview
Beaverton, OR
Atterbury Consultants, Inc.
503-646-5393, 503-644-1683
jaschenbach@atterbury.com; \$495
<http://www.atterbury.com>

March 20-31, 2000

Volunteers Needed For Forest Conservation Days 2000

Saratoga, CA
NCSAF, Americorps, Cal. For. Prod.
Comm., Cal. For. Soils Council,
CDF, Davey Tree, Forest Prod. Soc., ISA,
PG&E, PLT, SRM, TAT, USFS, UC, etc.
Don Gasser 707-253-0576, Laura Alber
510-482-8478
Overnight accommodations available

March 30, 2000

Applying The Basics Of California Hydrology

San Francisco, CA
UC Berkeley Extension; \$295
510-642-4111, fax 510-642-0374
<http://amber.berkeley.edu:4243/em/nr7.html>
Course EDP 263129

April 3, 2000

Managing California Watersheds: A Statewide Conference

Sacramento, CA
UC Davis Extension
800-752-0881, fax 530-757-8558
\$180, before March 6 \$155
www.universityextension.ucdavis.edu Section
994U600

April 6, 2000

TMDL: The Total Maximum Daily Load Program In California Rivers

San Francisco, CA
UC Berkeley Extension
510-642-4111, fax 510-642-0374; \$295
<http://amber.berkeley.edu:4243/em/nr8.html>
Course EDP 253781

April 17-19, 2000

National Watershed Outreach Conference

San Diego, CA
US EPA, UC Coop Extension, UC Sea
Grant, Aquatic Outreach Institute, & Co.
of San Diego Watershed Working Group
Stacie Craddock 202-260-3788
craddock.stacie@epa.gov or Melissa Bowen
703-385-6000 bowenme@tetrattech-ffx.com;
\$85; [www.epa.gov/OWOW/watershed/](http://www.epa.gov/OWOW/watershed/outreach/events/aprilconf.html)
[outreach/events/aprilconf.html](http://www.epa.gov/OWOW/watershed/outreach/events/aprilconf.html)

Maintaining Forest & Ranch Roads in the Sierra Nevada

April 14-San Andreas
April 28-North Fork
May 12-Georgetown

One-day workshops for private landowners about rural road design and maintenance. Presented by UC Cooperative Extension in collaboration with local RCDs. Cost: \$15. Call 530-224-4902 or e-mail shcooper@ucdavis.edu for more info.

Coming in spring and summer: Forest Stewardship Workshops in the Central Sierras and Southern California. Call Sherry Cooper, 530-224-4902, for details.

April 24-25, 2000

Riparian Management Areas: The Ecology, Functions And Management

Wilsonville, OR
Western Forestry & Conservation Assn.
503-226-4562 fax 503-226-2515
richard@westernforestry.org
www.westernforestry.org

April 27-29, 2000

Forest Landowners of California Annual Meeting

Lake Natoma Inn, Folsom
Includes field day at Edwards Family Tree Farm in Colfax.
Dan Weldon, 916-972-0273;
dweldon@forestlandowners.org

For more information on these calendar items, call the number given or the Forest Stewardship Helpline, 1-800-738-TREE. To submit an event or to receive this calendar by e-mail, contact Sherry Cooper, 530-224-4902; shcooper@ucdavis.edu.

ONLINE CALENDAR!

You will find a more comprehensive calendar, updated regularly, at the Calif. Forest Stewardship website:
<http://ceres.ca.gov/foreststeward>



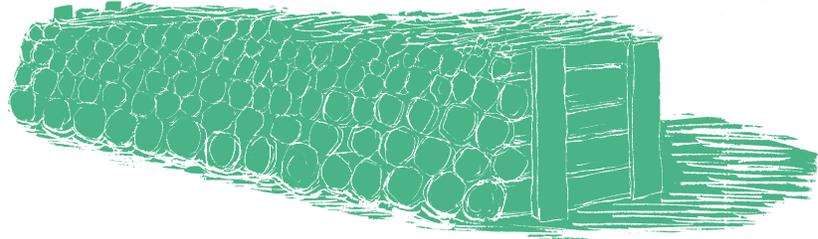
Wildlife Tips

Minimize wildlife disturbance when cutting firewood in oak woodlands

William Tietje, UC Integrated Hardwood Range Management Program

Firewood cutting in the oak woodland can be conducted with minimal damage to most wildlife if care is taken to protect the habitat resources that wildlife use. In evaluating possible woodcutting projects, consider the available habitats and how selective wood removal would alter them. Indiscriminate firewood cutting tends to remove important wildlife resources such as snags and downed wood, and simplify vegetation structure and composition. These and other adverse effects of woodcutting can be minimized with thoughtful planning. Here are some considerations and guidelines for developing a wildlife-compatible firewood harvesting plan.

- Acorn production differs greatly between trees and between years. Monitor acorn production for at least two years and mark good acorn producing trees. Protect these trees during firewood harvesting.



- Thinning should consider the woodland's long-term regeneration capabilities. This is important to preserve both woodland viability and management options. When cutting, leave seedlings and saplings to ensure replacement. For sustained yield, never remove more wood than can be added by growth. If regeneration is not adequate to maintain the woodland at a given level, either do not cut or supplement natural regeneration with planting.
- Many kinds of wildlife depend on oak snags for food and shelter. Sometimes habitat values may be better maintained by leaving a snag and cutting a living tree instead—though not one that

is a prolific acorn producer. Retain at least one snag per acre.

- Zones of vegetation along water courses are especially valuable to wildlife. These riparian zones provide an unusual diversity of food and cover resources. Be very selective in cutting in riparian areas or, better yet, do not cut at all.
- Wildlife cover is usually reduced by firewood cutting due to direct removal of the trees and removal of associated brush and ground cover. To compensate this loss, use branches of cut trees to construct brush piles for cover. The piles will be used by quail, other small birds, and small mammals for raising young, and for shelter from predators and winter weather.

- Maintain corridors that will enable wildlife to move between blocks of habitat. Especially important are those corridors that connect feeding and watering areas.

- For aesthetic and wildlife values, and to ensure regeneration, maintain a mixed-species and uneven-aged woodland.

— reprinted from *“Wildlife Among the Oaks: A Management Guide for Landowners,”* a publication of the Integrated Hardwood Range Management Program. Single copies are free on request from IHRMP, 163 Mulford Hall, No. 3114, University of California, Berkeley, CA 94720-3114, FAX: 510-643-5438, rippee@nature.berkeley.edu

How can the *Forestland Steward* newsletter help you?

I'd like to see more information on _____

My suggestion is _____

Add me to the mailing list / change my address:

Name _____

Address _____

City, Zip _____ Phone _____

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