California Forest Stewardship Program

FORESTLAND STEWARD

WORKING TOGETHER FOR HEALTHY FORESTS FALL 2000

Pest management in perspective

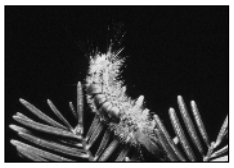
Laurie Litman

Pest management is another of those subjects that becomes more fascinating and less absolute the more you learn about it.

To consider this topic properly, we should begin at the beginning with a somewhat philosophical question: what is a pest? In reality, a pest is simply any organism–insect, fungus, plant, bacteria, mammal, etc.–that interferes with our plans or gets in our way. A pest is a nuisance, a problem, a blight, but it's not inherently bad or evil.

Your response to any pest problem depends on your tolerance for the damage or nuisance. Before taking any action, you should stop and figure out what's happening and decide whether you really need to do anything about it.

Most of the time, pest problems are manageable. Natural population fluctuations may cause a temporary increase in a pest population, but these are usually brought under control by a corresponding increase in predator populations. The checks and balances that have evolved in the ecosystem over time provide stability and generally don't require any intervention on our part.



Pests: (top to bottom) Douglas-fir tussock moth on white fir; bear damage on Douglas-fir; larval galleries of the Western pine beetle.

Photos courtesy Jesse Rios

Photo courtesy David Adams

Pitch canker is an example of an exotic pest.

In many cases a pest situation is complicated by the existence of a pest complex, a number of pests that act in various ways on a tree. We see this in Oak Mortality Syndrome *(see page 4)* where numerous pests are found associated with diseased trees. One is the primary pathogen which is responsible for the disease; the others are considered secondary pests, they come in only after the tree is weakened and further the damage. When dealing with a pest complex, it makes sense to identify and control the primary pest or

(continued on page 7)

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Changes

Let me introduce myself…

Jeff Calvert

I am Jeff Calvert, a fourth generation Californian. Until August of this year I had worked my entire forestry career in the private sector. After graduation from Cal in 1979, I started with Champion International at McCloud. There I worked primarily in inventory and reforestation. Then I had a short stay at Santa Fe Pacific, Mt. Shasta, before opening a consulting business in Alta, California, in 1987.

At that time my wife and I purchased a portable sawmill and began to build our home on the property our family has farmed and logged since 1858. Today, I am blessed to be raising my family on the ranch where my great-grandfather and my grandmother were born.

Although for many years my forestry talents have been used primarily to produce timber harvest plans for my clients, I have had an opportunity to serve on the Placer County Resource Conservation District (RCD). My association with RCDs has provided me with a base for this new endeavor at CDF and some knowledge of the process. I have been an admirer of the ability of the RCDs to work with landowners and groups of landowners in conjunction with the Natural Resource Conservation Service and other federal and state agencies to produce positive results in such fields as fuels management, wildlife restoration, environmental education, watershed improvements, recycling and agriculture.

The Stewardship Forester in Sacramento is not just an administrator but a facilitator. This position should be one that is responsive to the needs of the public. Like my predecessor Jim Geiger, I believe I should serve you,

Jeff Calvert

the landowners, with timely information, quick call-backs and a dedication to resolution of potential conflicts within the system. This is what I have done in business and I bring this attitude to my new job here in Sacramento.

These are exciting times for those of us in forestry. True, there are new obstacles to overcome but there is also the potential to discover new ways of solving old problems. Groups that were once polarized are beginning to work together for managing natural resources that are mutually beneficial for all the stakeholders. Communities are coming together to consider and seek solutions to both the problems and the opportunities within their watersheds. New technologies and new uses for old technologies will provide alternative uses for wood and their by-products. Concepts such as agroforestry may provide income and opportunities for forest landowners as they begin to find markets for their various specialty forest products that can be produced on even small acreages.

We live in an age of unbelievably fast global communications. Libraries of information are available to us in our own homes via the Internet. We have the ability from our own homes to disseminate information, opinion and ideas in a matter of seconds to thousands of people. We live in a time and place with unprecedented wealth. With that blessing comes responsibility and great opportunity. It is an opportunity for me to help you find methods to manage your natural resources in ways that will benefit each other and our communities.

FORESTLAND STEWARD

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Seasonal Stewardship

State nurseries provide seedlings for landowners

If you are looking for seedlings for reforestation projects, the California Department of Forestry and Fire Protection can help. Two nurseries, the L.A. Moran Reforestation Center and the Magalia Reforestation Center, exist to help small private landowners at a reasonable cost.

The Moran Center, near Davis, has containerized seedlings (grown in small pots) while the Magalia Nursery carries bareroot stock (seedlings taken out of the ground). Each nursery has its own catalog and mailing list.

In addition to seedlings, both these nurseries offer lots of expert advice and information. There are handouts on seedling protection, planting and a variety of related topics. And if they don't have what you need, they can help you find it.

The state nurseries sell tree planting stock only for the following purposes:

- ◆ reforestation
- ◆ erosion control and watershed protection
- ◆ farm windbreaks
- ◆ cut Christmas trees on private lands
- ◆ fuel wood on private lands
- ◆ reforestation on public lands

Trees for landscaping or beautification projects must be purchased from private nurseries. The CDF nurseries will also provide a listing of private nurseries for seedlings and seeds.

Seedlings are available on October 15 at the Moran Center and in December at Magalia (the trees cannot be lifted out of the ground until they are in dormancy).

Trees are sold in minimum quantities of 50/species for containerized stock and 100/species for bareroot. It's important to put in your order for the entire season as early as possible since many species do sell out. Once you reserve your trees with payment, you're set. You can take possession of the seedlings as you need them; the nursery workers will babysit your trees until you're ready to plant.

Order forms, planting and other nursery information is now available on the CDF website at ***www.fire.ca.gov/ResourceManagement/StateNurseries.asp***.

L.A. Moran Reforestation Center
5800 Chiles Road
PO Box 1590
Davis, CA 95617
(530) 753-2441

Magalia Reforestation Center
640 Steiffer Road
Magalia 95954
(530) 873-0400

Call the
California Forest Stewardship Helpline
with any forestry-related question
1-800-738-TREE

Plan for the coming winter

It's time for your annual walk around the property in preparation for winter. Look at roads, check your culverts, stream crossings, and other potential problem areas. The following classic recommendations were made in this newsletter two years ago and still apply today:

◆ Check your existing culverts. A good time to do this is during the first rain. Go out in your rain gear, take a shovel, clear out any debris and place it where it cannot get back into the watercourse. Sediment deposits that threaten to plug the culvert may need to be excavated. Bent or damaged culvert ends should be straightened and reopened. Outlets experiencing erosion can be armored or fitted with a downspout, and culverts that experience overflow problems may need a larger or second overflow pipe.

◆ Look at the drainage of the whole road. Besides culverts, check waterbars, outsloping, and ditches for problems. Clear out trash barriers, culvert inlet basins, and pipe inlets. Ditches should be cleaned and heavy vegetation trimmed. Excavate all unstable or potentially unstable fills and sidecast.

◆ Waterbars can be constructed on unsurfaced roads where little or no traffic will occur. These are high maintenance structures that must be built and maintained properly. (Detailed information on waterbar design can be found in the *Handbook for Forest and Ranch Roads* by Weaver and Hagans. Purchase from Mendocino County RCD 707-468-9223)

◆ Seasonal, unsurfaced roads can be badly damaged by even occasional use during wet periods when the road bed is soft. Once seasonal and temporary roads have been winterized, they should be gated and closed to nonessential traffic.

Oak Mortality

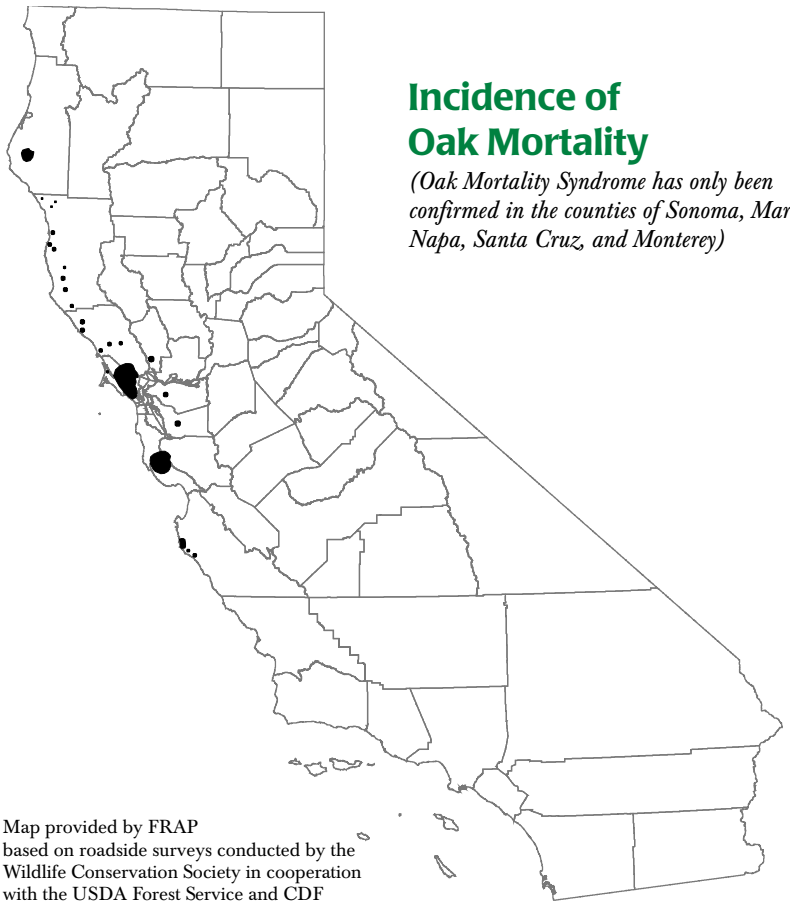
Pathogen found, more questions remain

Laurie Litman

The mysterious Oak Mortality Syndrome (also known as Sudden Oak Death) recently became a little less mysterious as researchers identifed a fungus in the genus *Phytopthera* as the probable culprit in the case. Although more questions than answers remain, this is a giant step forward toward an eventual understanding of the disease.

Oak Mortality Syndrome was first observed in Marin County in 1995 where seemingly healthy tanoak trees *(Lithocarpus densiflorus)* suddenly turned brown and died in a matter of weeks. Symptoms included dark, oozing sap and a rapid wilting and browning of leaves. A number of pests were associated with diseased trees: various bark beetles and a fungus of the *Hypoxylon* genus were invariably found. Theories regarding the cause of the disease ranged from a single pathogen to a pest complex or stress response in the trees.

Since tanoak has little economic value and is considered by many an undesirable species, early reports of the die-back did not cause much concern. However, as the rate of die-back increased and moved into other counties, and as other species such as coastal live oak *(Quercus agrifolia)* and black oak *(Quercus kelloggii)* were also found to be infected, people began to take notice.



Incidence of Oak Mortality

(Oak Mortality Syndrome has only been confirmed in the counties of Sonoma, Marin, Napa, Santa Cruz, and Monterey)

Map provided by FRAP based on roadside surveys conducted by the Wildlife Conservation Society in cooperation with the USDA Forest Service and CDF

The new fungus is an unknown, as yet unnamed, species of *Phytopthera,* a group that is responsible for many plant diseases**.** (Another infamous member of that group was responsible for the potato blight that devastated Europe.)

Fungi are unlike higher plants in that they lack chlorophyll and can't produce their own food. Instead, they feed on substances drawn from living or dead plants or animals. This newly identified *Phytopthera* releases enzymes that break down cells in the tree, causing the red oozing symptoms. Eventually, nutrients are unable to travel between the roots and crown, resulting in brown leaves and tree death.

At this time, it appears that the bark beetles and other species of fungi associated with the diseased trees may simply act as secondary pests, that is, they come in after the trees are weakened by the *Phytopthera*. While not the primary pathogen, these secondary pests cause additional damage and may hasten tree death.

We still have much to learn before adequate measures are found to respond to this disease. One basic question that needs to be answered is how the disease spreads. It is known that *Phytopthera* species generally move through wood, soil, and water. Researchers are concerned that the disease may be transported in soil on

the tires of cars and bikes, the shoes of hikers, by animals, etc. Preventing the movement of soil and wood from infected areas is a difficult undertaking but may be critical to slowing the spread of the disease.

We also need to learn some basic facts about the disease: what species of trees are susceptible, which areas are at risk, what kinds of resistance exists, what role the beetles play in transport and tree death, how environmental factors may play a role, and, most importantly, what kind of management options exist to deal with this disease.

While the present situation is serious, the potential long-term consequences of Oak Mortality Syndrome are even more grave.

Oaks provide vital habitat and food for many species of animals–deer, birds, rodents, invertebrates–including many sensitive species. The death of large numbers of trees can have far-reaching effects on these communities.

There is also a great deal of concern about the fire consequences of the disease. The die off of large numbers of trees–up to 90 percent of affected species in some areas of Marin County–will add additional fuel to the forests in the form of dead and decaying trees. Worse yet is the possibility that the forest communities will change in such a way as to become more flammable. Oaks tend to be fire resistant when healthy and can be counted on to slow a wildfire. In fact, fire control efforts often take advantage of this characteristic of hardwood stands. If the hardwood forest is devastated by the die-back, these forests may be transformed by the colonization of more flammable species. There is speculation that this conversion of hardwood forests could change fire behavior and increase wildfire damage well into the next century.

At this time there is no known control for this disease. Researchers are pursuing a number of areas including the development of a fungicide to combat this pathogen, but in the meantime, the best recommendation is to keep oaks healthy and try to mitigate any stress to the trees. The California Oak Foundation has information on the care of oaks (see website address in the box below). Any dead trees should be cut down and the logs covered with clear plastic sheets to prevent emergence of beetles.

Visit these sites for background and research updates

California Oak Mortality Task Force
http://www.suddenoakdeath.org

UC Cooperative Extention in Marin Sudden Oak Death site
http://cemarin.ucdavis.edu/index2.html

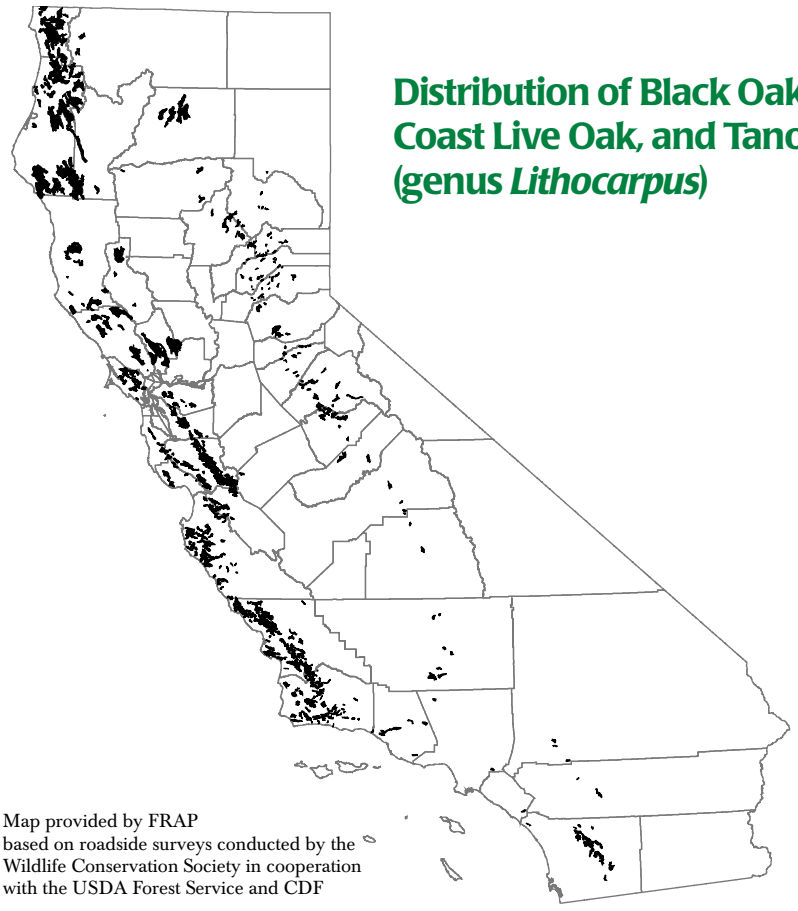
UC Integrated Hardwood Range Management Program (IHRMP)
http://danr.ucop.edu/ihrmp/

CAMFER
http://camfer.CNR.Berkeley.EDU/oaks/

Greenbrae.org
http://www.greenbrae.org/

UC IPM Online
http://www.ipm.ucdavis.edu/

California Oak Foundation
http://www.californiaoaks.org/



Distribution of Black Oak, Coast Live Oak, and Tanoak (genus *Lithocarpus*)

Map provided by FRAP
based on roadside surveys conducted by the Wildlife Conservation Society in cooperation with the USDA Forest Service and CDF

Update

Pitch canker continues to be a threat

Pitch canker is an example of what can happen when an exotic pest is introduced into a new environment.

The pathogen, a fungus called *Fusarium subgutinas* f. sp. *pini*, was first discovered in Santa Cruz County in 1986. In that relatively short time it has spread to Alameda, Contra Costa, Los Angeles, Marin, Monterey, Mendocino, Orange, San Benito, San Diego, San Francisco, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Solano, and Sonoma counties. Thousands of trees have died.

In addition to its geographical spread, the disease has spread from Monterey Pine to a number of other pines and (infrequently) to Douglas-fir.

The symptoms of the pitch canker disease are varied. There is often wilting and fading of needles with resin exuded from the infection site. Foliage becomes yellow, then red, then falls from the branch. Pine cones abort and remain closed on infected whorls. Copious amounts of crystallized white resin produced by bole (stem) cankers can be seen on limbs and bark. (Note that a number of other conditions can cause similar symptoms so it is important to get a positive diagnosis for pitch canker.)

Various species of bark, twig and cone beetles are known to transmit the pitch canker. These secondary pests can also cause tree death.

At this time there is no cure for pitch canker. However, there is optimism about the long-term survival of Monterey Pines because a certain level of genetic resistance appears to be present in the population. Currently, efforts are being made to breed resistant trees, but until resistant varieties are available, it is recommended that Monterey Pine not be used in landscape plantings.

People in infected areas are asked to take the following precautions in order to reduce the spread of the disease:

- Use Lysol™ or a 10% bleach solution to sterilize tools and machinery used to prune, cut, or chip trees.
- Limbs and small pieces of wood from diseased trees may be chipped and buried or burned. (Insects may survive in cut wood or chips for many months and the fungus can survive in cut wood up to a year.) Any material removed from the site should be tightly covered with a tarp during transit and taken to the nearest landfill or designated disposal facility. Do not transport diseased wood out of infested counties.
- Logs from diseased trees may be split for firewood for local use but should be seasoned beneath a tightly sealed, clear plastic tarp to prevent the buildup of insects. Do not stack pine

(continued next page)

Naturally infected native California species:
Bishop pine *(Pinus muricata)*
Coulter pine (*Pinus coulteri)*
Foothill (formerly digger) pine *(Pinus sabiniana)*
Knobcone pine *(Pinus attenuata)*
Monterey pine *(Pinus radiata)*
Monterey x knobcone pine *(Pinus radiata x attenuata)*
Ponderosa pine *(Pinus ponderosa)*
Shore pine *(Pinus contorta)*
Torrey pine (*Pinus torreyana)*
Douglas-fir *(Pseudotsuga menziesii)*

Native species susceptible in greenhouse seedling tests
Jeffrey pine *(Pinus jeffreyi)*
Sugar pine *(Pinus lambertiana)*

Native species resistant in greenhouse seedling tests
White fir *(Abies concolor)*
Coast redwood *(Sequoia sempervirens)*
Giant sequoia *(Sequoiadendron giganteum)*
Incense-cedar *(Calocedrus decurrens)*

Female cones on infected whorls remain closed and abort before or after reaching full size.

Photos courtesy David Adams

Large main stem canker. Note copious resin flow associated with canker.

Pests (cont.)

Pitch Canker *(from page 6)*

Pitch Canker Zone of Infestation

firewood next to living pines or transport it to uninfested counties.

- Even seeds may carry the pathogen. Do not transport pine seeds out of infected areas.
- Avoid using potentially infested chips near healthy pines or Douglas-fir.
- Do not transport pine logs out of infested counties.
- Any untreated pine material that originates within infested counties is a potential source of pitch canker disease, unless treated to eliminate the disease.

–the information in this article came from the Pitch Canker website at ***http://frap.cdf.ca.gov/pitch_canker/****. There you can learn about the disease, view a map of the Zone of Infestation, find local contacts, learn about legislation, and much more.*

Pest management *(continued from page 1)*

cause of the weakened trees.

Pest problems generally arise when something in the ecosystem changes– either the host becomes more susceptible or a pest more effective. It can be a natural occurrence like climatic change, the introduction of a non-native organism, or any number of other circumstances.

Stress is often at the heart of a pest problem. Healthy trees have natural defenses to injury and are much less likely to suffer from pest attack than those that are stressed. For this reason, the best strategy in dealing with pests is generally a proactive effort to keep your forest healthy.

One of the most important stress-causing agents is drought. Others include excessive rain, competition from other trees, air pollution, soil problems such as compaction, excess pruning, insect damage, etc. Knowing how to maintain the health of your trees and minimize stress is an integral part of pest management.

Non-native (exotic) pests are another cause of excessive pest damage, a problem that may accelerate with the current increase in global trade. Exotic pests are organisms that have escaped the predators and pathogens that keep them in check in their homeland. At the same time, our native species may lack the traits that confer resistance and therefore be highly susceptible to attack. For example, the pitch canker disease *(see page 6)* is caused by an exotic fungus that has found an extremely susceptible host in our native Monterey Pine. Luckily, a significant percentage (around 15%) of the pines have genetic resistance to the pitch canker disease. The fact that this resistance existed in the population in the absence of the pathogen is a mystery but it clearly demonstrates the importance of maintaining genetic diversity in forest populations. A diverse gene pool increases the odds of a population adapting successfully to new, potentially threatening, conditions in the environment.

When a pest problem does occur, it's important to approach it in a thoughtful, knowledgeable manner. Integrated Pest Management (IPM) was developed as such an approach.

The first step in IPM is continuous monitoring of your forestland. You need to know what is normal and detect problems as early as possible. This includes identifying stressful conditions and mitigating them, encouraging natural control, and maintaining the health of the forest.

If a pest problem is detected, identification is necessary. There are books available as well as knowledgeable experts eager to help you identify or confirm a pest problem and offer advice.

Pest treatment can be expensive, and in some cases include the use of toxic chemicals, so a thorough evaluation is important before taking action. This evaluation involves looking at the potential damage and all alternative treatments in the context of your objectives for your forestland. This takes into account your tolerance level for the damage, the economic and environmental consequences of both the problem and various treatment options, as well as other variables. Often, the "no action" alternative is found to be the best, most appropriate action.

When treatment is considered necessary, the least toxic, least disruptive, long-term alternative should be followed with the goal being not to eradicate the pests but to keep damage at a tolerable level.

–for more information on IPM and pest control, contact your local UC Cooperative Extension Advisor or CDF Forest Pest Specialist.

Making the Rules

Become familiar with the California State Board of Forestry & Fire Protection

The California State Board of Forestry and Fire Protection is important to anyone interested in forestry issues. The Board develops general forestry policy for the state, guides the Department of Forestry and Fire Protection, and regulates professional foresters among other duties. The list of powers and responsibilities is long and diverse.

The Board is charged with protecting the state's forest resources–timber, park and recreation reserves, woodland, brush-range watersheds–and "all such lands in private and state ownership that contribute to California's forest resource wealth."

As in so many things, California was the first in the country to develop a Board of Forestry and Fire Protection, at that time a three-person educational and advisory body appointed in 1885. This early Board was joined by a State Forester in 1905 and the Division of Forestry in 1927. In 1947, the state legislature passed the Forest Practice Act which increased the Board's standing. And it was in 1973, with the passage of the Z'berg-Nejedly Forest Practice Act, that the Board of Forestry and Fire Protection was reorganized and given the powers and responsibilities it has today.

Members of the Board of Forestry and Fire Protection are appointed by the governor on the basis of their "professional and educational qualifications and their general knowledge or interest in the problems that relate to watershed management, forest management, fish and wildlife, range improvement, forest economics, or land use policy."

MISSION STATEMENT

The California State Board of Forestry and Fire Protection's mission is to provide policy leadership and to generate public interest and support in those matters key to the future of the state's forest and rangelands.

A specific ratio of board representation is required by law: 5 members from the general public, 3 from the forest products industry, and 1 from the range-livestock industry. The chair of the Board is appointed by the governor while the vice-chair is elected by the members.

Board members are generally appointed for a 4-year term; reappointment at the end of this period is allowed. Terms are staggered, providing continuity, and all appointments must be confirmed by the State Senate.

In addition to the Board members, there is an Executive Officer appointed by the Board to handle business matters and a forester appointed by the Board of Forestry and Fire Protection to assist the Executive Officer and oversee the Forester Licensing Program.

Within the Board there are three committees: Ecosystem Management, Forest Practices, and Resource Protection. Advisor committees are sometimes appointed for specific issues. There are also committees established by law to advise the Board, such as the Professional Foresters Licensing Committee and the Range Management Advisory Committee.

For more information, check the Board site at ***http://www.fire.ca.gov/BOF/BOF.asp***.

Meet the members of the Board

Stan Dixon, Vice-Chair
Chair of the Resource Protection Committee
appointed July 13, 1999
public member

Mark A. Bosetti, RPF
appointed December 27, 1999
forest products member

Raymond J. Flynn, RPF
appointed August 4, 1997
public member

Robert Heald, RPF
appointed June 17, 1992, re-appointed in 1996 and 1999
public member

Kirk Marckwald
appointed July 13, 1999
public member

Tharon O'Dell, RPF
Chair of the Ecosystem Management Committee
appointed June 1993, reappointed 1997
forest products member

Gary C. Rynearson, RPF
appointed April 13, 2000
public member

Chris Rowney
Executive Officer

Daniel R. Sendek
Executive Officer Foresters Licensing

New Logging Regulations

In March of this year, the Board of Forestry and Fire Protection adopted a set of changes to the Forest Practice Rules designed to protect coho salmon and impaired watersheds. These rules are in effect for a limited time period, recently extended by the Board to January 1, 2002.

A summary of the changes follows:

Intent

- Defines "watersheds with threatened or impaired values" and recognizes that they exist and need special prescriptions for timber harvesting activities.
- Specifies that the intent of timber operations in and around those Watercourse and Lake Protection Zones (WLPZ) within watersheds with threatened or impaired values is to ensure beneficial uses of water and that riparian zones be fully protected from site specific and cumulative impacts of timber operations.
- Beneficial uses of water and the functions of riparian zones shall be
  1) maintained if in good condition;
  2) protected where threatened; and
  3) restored where impaired.

Protection

- Protection must also be provided for riparian functions.
- The watercourse and lake protection measures set forth in the Rules are minimum protection measures; additional protection or restoration must be provided where water-related values are threatened or impaired.

Watersheds with Threatened or Impaired Values

- Every timber operation shall meet the following goals:
  1. Not result in any measurable sediment load increase
  2. Not result in any measurable decrease in stability of watercourse channel or bank
  3. Not result in any measurable blockage of aquatic migratory routes
  4. Protect and maintain stream flows during low water periods
  5. Protect and restore trees for large woody debris recruitment
  6. Protect shade canopy for stream temperature control
- 150-foot minimum WLPZ for all Class I streams with 85% overstory shade canopy retained. 85% for the first 75 feet and 65% for the next 75 feet.
- No salvage logging is allowed in a WLPZ without an approved Habitat Conservation Plan (HCP), Sustained Yield Plan (SYP) or approved plan.
- Large woody debris (LWD) standards are prescribed for Class I watercourses.
- No-cut buffers within Class I watercourses out to the transition line.
- Pre-THP adverse cumulative watershed effects shall be considered.
- Watercourse Transition Line is 2 times the bankful depth for confined channels. For unconfined channels it is the outer edge of the active channel boundary.
- During the winter period no skid trails, landings or roads shall be constructed or used on slopes over 40%
- RPFs shall identify all active erosion sites and address remediation in the plan.
- Site preparation shall be designed to prevent movement of soil into a watercourse.
- Logging road crossings of Class I watercourses must not disrupt normal hydrologic and biologic processes and must have a stable bed.

Roads and Landings

- New road construction shall be designed to minimize the adverse effects of long-term site occupancy of the transportation system.
- New and reconstructed logging roads shall be no wider than needed for the widest equipment to be used and single lane with adequate turnouts for safety.
- Specific provisions of construction shall be identified for roads on slopes greater than 50 percent or must be properly engineered when using cuts and fills.
- All Class I crossings will meet 100-year flood standard and allow for passage of all life stages for fish.

Keeping Current

There are a number of ways to follow Board of Forestry and Fire Protection activities:

- Go to Board meetings. They meet approximately once a month and these meetings are open to the public. (Dates, times, and location are subject to change. To verify, call (916) 653-8007.)

  Next meeting: November 6–8

- You may request to be put on the mailing lists to receive the Board agendas and minutes by making a request in writing to:

  State Board of Forestry and Fire Protection
  P.O. Box 944246
  Sacramento, CA 94244-2460
  (916) 653-8007

- There are numerous nonprofit organizations that report on new legislation and policy changes.

- There is quite a bit of information on the Board of Forestry and Fire Protection website if you want to poke around a bit. This is probably the best way to find Rule change notices.

  BoF homepage
  http://www.fire.ca.gov/bof/

  General information (agendas, minutes, reports, etc.
  http://www.fire.ca.gov/bof/board/board_current_docs.html

  Proposed Rule Packages
  http://www.fire.ca.gov/bof/board/board_proposed_rule_packages.html

  Public Resources Code
  http://www.leginfo.ca.gov

  California Code of Regulations
  http://www.oal.ca.gov

Resources

Call the Helpline for local contacts

The California Forest Stewardship Helpline should be the first place you turn with any forestry question. Staffed by Claralynn Nunamaker, a Registered Professional Forester and consummate resource person, you will find answers to, or referrals to, any question or concern.

The Technical Assistance Resources listed below are primarily statewide contacts, but local experts are often available for your technical needs. Once again, the Helpline will put you in touch with the best person or office to provide assistance.

In addition to a great store of information, advice, and referrals, Claralynn maintains a collection of publications and other resources on diverse forestry topics, from archaeology to taxes. And many of the publications and resources mentioned in this newsletter are available through the Helpline.

So just remember 1-800-PET-TREE (or 1-800-738-8733) for all your forest stewardship questions or e-mail Claralynn at *ncsaf@mcn.org*.

Technical Assistance Resources

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

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

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

Forestry Assistance Specialists
Jill Butler (Santa Rosa)
(707) 576-2935

Rich Eliot (Fortuna)
(707) 946-1960

Tess Albin-Smith (Fort Bragg)
(707) 961-1531

Adam Wyman (Red Bluff)
(530) 529-8548

Chris Waters (Camino)
(530) 644-2345 x292

Tom Sandelin (Fresno)
(559) 243-4108

Glenn Barley (Riverside)
(909) 320-6120

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

California Association of RCDs
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carcd@ns.net

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
Marty Berbach
(916) 327-8839
mberbach@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

FRAP website: a treasure trove of information

The Fire and Resource Assessment Program of CDF, affectionately known as FRAP, is responsible for assessing the amount and extent of California's forests and rangelands, analyzing their conditions, and identifying alternative management and policy guidelines.

To this end, the FRAP website is filled with information and goodies of all types. FRAP projects fall into the following general categories:

- people
- land
- cover
- fire
- watersheds
- forests
- hardwoods & range

Projects address diverse important issues within the state, such as project development patterns and associated impacts, monitoring vegetation change by magnitude of change and cause, even issues related to Pitch Canker.

What can you expect to find on the website? There are maps, for example the interactive "Salmon and Watersheds Mapping Tool" that allows you to identify if a specific area is within a threatened or impaired watershed for the purpose of the new Forest Practice Rules. There are scores of publications, most of which can be accessed online. There are also numerous captivating studies, for example "Bioregional Demographic Trends and Implications for Biodiversity" or "How Will Increased Population Affect Wildfire Incidence?" And for those who like statistics, this is definitely the place to be. Charts and graphs abound, allowing you to draw your own conclusions on important questions related to forestry.

Find the FRAP website at ***http://frap.cdf.ca.gov***

Calendar

October 26–29, 2000

SERCAL's 7th Annual Conference: Trends and Lessons in Ecological Restoration
Santa Barbara, CA
The Society for Ecological Restoration California Chapter (SERCAL)
Susan Clark 661-634-9228, *smclark@lightspeed.net*
http://www.sercal.org

October 27, 2000

CLFA Fall Workshop: Road Maintenance
Sacramento, CA
California Licensed Foresters Assn.
Hazel Jackson 209-293-7323, fax 209-293-7544, *clfa@volcano.net;* $125-$150
http://www.clfa.org/

October 27, 2000

TMDL: Total Maximum Daily Load Program in California Rivers
San Francisco, CA
UC Berkeley Extension
510-642-4111, fax 510-642-0374; $295
http://www.unex.berkeley.edu/enroll

November 2, 2000

Groundwater Use and Management in California
San Francisco, CA
UC Berkeley Extension
510-642-4111, fax 510-642-0374; $295
http://www.unex.berkeley.edu/enroll

November 4, 2000

11th Annual Creeks, Wetlands, and Watersheds Conference
Aquatic Outreach Institute
Aquatic Outreach Institute, 510-231-5778
$25. Pre-registration is required. Also will be held on November 11, 2000.

November 6–8, 2000 9 a.m.

Board of Forestry and Fire Protection
Sacramento, CA
California Dept. of Forestry
916-653-8007; fax 916-653-0989

November 8, 2000

Water and Ecosystem Management Assessment Methods
Berkeley, CA
UC Berkeley Extension
510-642-4111, fax 510-642-0374; $295
http://www.unex.berkeley.edu/enroll Course code EDP 258798

November 8– 9, 2000

Smoke Management Training Workshop
Tenaya Lodge, Yosemite, CA
Cal-EPA, Air Resources Board, Interagency Air & Smoke Council
Dannie-Marie Mitchell 916-327-2977
dmitchel@arb.ca.gov; No charge

November 14–15, 2000

4th PNW Integrated Vegetation Management Conference–The Forces of Change: The Power and Politics of Vegetation Management
Portland, OR
Western Forestry and Conservation Association 503-226-4562, *richard@westernforestry.org*
$125 before 11/1; $150 after
Greg Cox, IVMA Program Chair, 360-575-5116, *gccox@longfibre.com*

November 16–17, 2000

Annual Meeting of the California Forest Pest Council
Sacramento, CA
California Forest Pest Council
David Wood, *bigwood@nature.berkeley.edu*
Topics: Oak sudden death and other hardwoods disease problems, forest pests, & forest pest mgmt.

November 27–30, 2000

Managing Watersheds in the New Century
Monterey, CA
Watershed Management Council
Rick Kattelmann 760-935-4903, *rick@icess.ucsb.edu* or 510-273-9066
$195-$225; After 9/26 add $100 late fee
http://www.watershed.org/wmc

November 27–Dec 1, 2000

Fire Conference 2000: The First National Congress on Fire Ecology, Prevention and Management
San Diego, CA
Joint Fire Science Program, Cal. Assn. for Fire Ecology, Int'l. Assn. of Wildland Fire, Tall Timbers Res. Sta., & Univ of Calif.
800-752-0881 or 530-757-8777
$275 w/o meal; $325 w/meals
http://www.universityextension.ucdavis.edu/fire/ Section 002U631 or 002U632

December 3–5, 2000

Western Forestry Conference
Coeur d'Alene, ID
Western Forestry & Conservation Assn.
Freida 888-722-9416 or 503-226-4562, *freida@westernforestry.org*
http://www.westernforestry.org

January 8–12, 2001

Natural Resources Communication Workshop
Chico, CA
Western Section of The Wildlife Society
Dr. Jon K. Hooper 530-898-5811 or 898-6408, *jhooper@csuchico.edu;* $595
Deadline for applications is November 3

January 9–10, 2001

Forestry Inventory And GIS: Real Challenges, Practical Solutions
Portland, OR
A1 Inventory Working Group, Society of American Foresters and Western Forestry and Conservation Association
Richard Zabel 888-722-9416 or 503-226-4562, *freida@westernforestry.org*
http://www.westernforestry.org

January 16–18, 2001

22nd Annual FVMC: Water, Aquatic Resources, & Vegetation Management
Redding, CA
Forest Vegetation Management Conference
Sherry Cooper 530-224-4902, fax 530-224-4904, *shcooper@ucdavis.edu*
$100 ($95 plus $5 lunch fee)

January 19–20, 2001

NorCal Society Of American Foresters Winter Meeting
Sacramento, CA
NorCal Society of American Foresters
Bill Keye 530-365-9172, *bkeye@snowcrest.net* or Sherry Cooper 530-224-4902, *shcooper@ucdavis.edu*

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!

Find a more comprehensive calendar, updated monthly, at the California Forest Stewardship website:

http://ceres.ca.gov/foreststeward

Tree Notes

Tree Notes can assist landowners

Tree Notes *is a series of short papers produced by the California Department of Forestry and Fire Protection to provide information on various pests and threats to forests. These resources are available from your local forester at any CDF Unit or call/write Jesse Rios, Forest Pest Specialist, PO Box 944246, Sacramento, CA 94244 (916) 653-9476.* ***Tree Notes*** *can also be found on the California Forest Stewardship website,* ***http://ceres.ca.gov/foreststeward****.*

1 ***Protecting trees from construction impacts***
Sherburn R. Sanborn
4/89 revised 12/90

2 ***Tree roots-major considerations for the developer***
Bruce W. Hagen 4/89

3 ***Controlling bark beetles in wood residue and firewood***
Sherburn R. Sanborn
12/91 revised 7/96 Donald R. Owen

4 ***The eucalyptus longhorned borer in California***
Sherburn R. Sanborn
7/89 revised 3/91

5 ***Ponderosa pine twig scale***
Raymond G. Stine 1/90

6 ***Annosus root disease in California***
David Adams 3/90

7 ***Keeping native California oaks healthy***
Bruce W. Hagen 6/90

8 ***Ips beetles in California***
(Coleoptera:Scolytidae)
Stephen R. Scott 7/90

9 ***The red turpentine beetle***
Donald R. Owen 8/90

10 ***The fir engraver beetle***
Donald R. Owen 3/91

11 ***Dwarf mistletoe in California***
David Adams 3/91

12 ***Frost damage in eucalyptus***
Sherburn R. Sanborn 2/91

13 ***The western pine beetle***
Donald R. Owen 4/91

14 ***Tree topping–a threat to trees***
Bruce W. Hagen 11/91

15 ***Pitch canker disease in California***
Andrew J. Storer and Paul L. Dallara 11/92

16 ***Madrone canker in California***
David Adams 1/93

17 ***Fire safe landscaping***
Jeanette Knudson 1/93

18 ***Managing elm leaf beetle***
Bruce Hagen 3/93

19 ***Managing Bark Beetles in Urban and Rural Trees***
Bruce Hagen 1/95

20 ***Current status of pitch canker disease in California***
Paul L. Dallara, Andrew J. Storer, Thomas R. Gordon and David L. Wood 7/95

21 ***Sequoia pitch moth–enemy of five*** California pines
David Adams 7/96

22 ***Western gall rust***
David Adams 9/97

23 ***Diplodia Blight of Pines***
Donald R. Owen 5/98

24 ***New pests threaten urban eucalyptus***
Bruce Hagen 11/99

25 ***Blackstain root disease of ponderosa and Jeffrey pines***
Don Owen 7/00

26 ***Oak Mortality Syndrome: Sudden Death of Oaks and Tanoaks***
Brice A, McPherson, David L. Wood, Andrew J. Storer, Pavel Svihra, David M. Rizzo, N. Maggi Kelly, and Richard B. Standiford
(to be released soon)

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_____

e-mail _____

❑ Forestland Steward is also available on the internet. Would you like to receive an e-mail alert of each new issue instead of a hard copy?

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