

A photograph of a man and two children walking away on a forest path. The man is wearing a green and blue plaid shirt and blue jeans. The children are wearing a green shirt and blue pants, and a pink shirt and blue shorts. The forest is dense with tall trees and sunlight filtering through the canopy. A magnifying glass is positioned over the text, focusing on the word "Forests".

We care for the
Forests



The mission
of the
California
Forest Products
Commission
is to enhance
the public's
understanding
of the benefits
of forestry and
forest products
in California.



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Cover: *A managed stand in a private forest in Nevada County, California.*

Ame environme

America's use of wood products is up. As U.S. demand for wood rises, greater environmental devastation takes place — not in America — but in places with few or no environmental safeguards.

Our country's most startling environmental paradox is that even as activists succeed in getting our government to declare more and more U.S. forestland off limits to tree harvesting, America is destroying more forestland than ever before.

How? By demanding more and more wood while harvesting less and less of our own. If U.S. tree harvesting declines and U.S. demand for forest products rises, somebody has to pick up the slack. Somebody has to provide the United States and other developed nations with the wood products we aren't willing to harvest from our own backyards.

So, who is picking up the slack? Third World nations such as Indonesia, Cambodia and the Philippines. America has created a domino effect, in which California gets its wood from Oregon or Washington, which gets its wood from Canada, which gets its wood from some other country, and so on.

At the end of the line — filling the void created by U.S. environmental policies — are less developed nations where environmental protections are lax or non-existent. These nations are more than willing to allow devastation of their forestlands and look the other way.

In other words, Americans — who are well able to harvest their timber without devastating the environment — are preserving their forests by allowing huge tracts of tropical forests in Third World countries to be reduced to scarred wasteland. As U.C. Berkeley forestry professor emeritus William J. Libby

America's Environmental paradox



has written, this is like "locating a landfill for an affluent city in a neighboring community that needs the money and is willing to put up with the smell."

In the past decade, as U.S. wood imports have grown by about a billion cubic feet, domestic production has fallen by nearly half a billion cubic feet. California, which was self-sufficient in wood only 20 years ago, now imports 80 percent of its forest products.

What is this doing to the environment? According to Libby, for every acre of forestland not harvested for timber here, two acres must be harvested in tropical forests of the Third World. The government of Indonesia, for example, reports that an area the size of the state of Connecticut is being cleared of forest each year. Forest depletion deprives native peoples of their primary source of energy for cooking, water sterilization, and warmth: firewood.

Here in America, we don't live on that kind of subsistence level. But we do use lots of wood. For instance, wood makes up about half of a modern home's construction. New housing starts continue to increase, and the typical U.S. home has doubled in size in the last 20 years — from 1500 square feet to 3000. Alternative building products are not an option, since they require much more energy to produce than wood and are not renewable.

Growing and harvesting our own trees in an environmentally responsible way is the best thing America can do for the global environment. But tell that to many environmental groups — which scream the loudest about Third World forest devastation, while at the same time demanding that U.S. forestland be left alone — and their retort will be that lumber

companies are propagandizing in order to exploit forests everywhere.

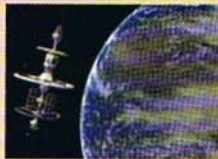
American leadership can solve this dilemma — but not by pointing fingers of blame. The solution doesn't lie in environmentally irresponsible harvesting of timber in the United States or anywhere else. But neither does it lie in cordoning off more and more U.S. forestland from timber harvesting while turning a blind eye to the environmental consequences elsewhere.

There is more forestland in this country today than there was in 1900. In California, more than one-and-a-half times the annual consumption of wood is added as new growth onto existing trees each year, and goes unharvested. It's impractical to think a state the size of California will ever return to self-sufficiency. But it's irresponsible not to utilize more of this unprecedented forest growth.

Moreover, no-cut, total fire suppression policies on federal lands have created a forest that is dangerously dense, the source of devastating wildfires. Our forests desperately need thinning, which makes use of our own forests into a win-win situation for everyone, including Third World nations.

Why can't environmentalists put away their animosity toward private landowners and timber companies, link arms with the private sector, and help us use our most sustainable resource in an environmentally responsible way? We have the answer — the only obstacle right now is politics.

Forests are part of a natural cycle that goes back to the creation of our planet. Like other forms of life, they grow, live and die. Over time, they change and adapt to new conditions. Today, the challenge for foresters, and for all of us, is how to grow and conserve our forests while supplying the wood products we increasingly want and need.



Technology and Forestry
Satellite images and computer modeling are among the latest technologies used by California's licensed foresters to map and manage their land. Satellite data confirms that North America's forests have grown in volume roughly 20 percent since 1970.



Before the last ice age, redwood trees covered much of the North American continent. Today, mostly as a result of evolving geological and climactic conditions they're limited to a narrow strip of land along the Pacific coast from Oregon to Monterey, California.

If you go into the mixed conifer forests that grow along the western slope of the Sierra Nevada mountains, you'll see softwood trees like giant sequoia, sugar and ponderosa pines, incense cedar and white fir. You'll also find a variety of hardwood trees, like black oak. They may look as if they've been there forever, but they haven't.

Ancient forests were quite different from the ones we see today. Over hundreds of thousands of years, the different species shifted

Rethinking the myth

When most of us imagine what our forests looked like, say, a hundred years ago, we think of a lush, thick, uniform forest untouched by man. As counterintuitive as it may seem, precisely the opposite is true.

As the pictures in this presentation show — taken from the same spots about one hundred years apart — the forests of a century ago were far more open than the forests of today.

In fact, some of man's efforts to protect the forest — through total fire suppression and policies that prohibit harvesting, for example — have created forests that are unnaturally thick and overcrowded, unhealthy, and dangerous. Many public lands have as many as 300 trees per acre where 30 or 40 once thrived, and some have reached astronomical densities of 2,000 trees per acre.

Forests that just 150 years ago were described as being open enough to gallop a horse through without hitting a tree are now packed with logs and trees of all sizes — you can barely walk through them, let alone ride a horse. This fuels the wildfires that are now devastating our forests.

Historically, low-level fires sculpted the land and left islands of large trees surrounded by meadows and savannahs. Those gentle fires stayed on the ground as they wandered around and under trees — in some cases you could walk over the flames without burning your legs. They created a forest in which the bigger, more devastating fires couldn't develop the momentum they need to ravage entire regions.

Today, after a century of total fire suppression and restrictive harvesting policies that prevent the tree thinning that is needed, every fire has the potential to wreak catastrophic damage.

Restoring our sick forests to health and their historical grandeur is going to require active forest management. The good news is that thinning our forests to their optimum density can help meet our need for wood products even as we sustain a diverse, healthy forest for generations to enjoy.

of the ancient forest



These photos are from a 2001 book by forestry expert George E. Gruell, entitled Fire in Sierra Nevada Forests: A Photographic Interpretation of Ecological Change Since 1849.

The photo above shows the upper Yosemite Valley in 1899 with meadows occupying much of the valley floor; the photo on the right shows the same location in 1994 crowded with dense conifers and woody plants.



The photo on the left was taken in the 1890s; the area had not been logged. The photo below shows the same location in 1993.

In this 1993 photo, the ridge to the left had been logged seven years earlier; the remaining landscape was untouched.



around the landscape independently of each other as they responded to changing climactic conditions. It was only about 4,500 years ago that the forests we see today formed when the trees migrated up mountainsides after the last ice age.

Nature hasn't been the only force shaping our forests. As early as 12,000 years ago, Native Americans were changing forests to fit their needs. They cut trees for building materials and to clear land to grow crops. They changed vegetation patterns by digging roots, cultivating plants and spreading seeds. But the most dramatic way they changed the forest was with fire.

Native Americans deliberately set fires to clear land for planting and to keep forest floors open and easy to travel through.

Fire was used to drive game during hunts, and to eliminate pests. Their fires did much the same thing as fires caused by lightning strikes by keeping the forest clear of large build-ups of brush and creating a mosaic pattern of grasslands, open woodlands and closed forests. That began to change when European settlers arrived.

The new settlers had a different view of the forests than the Native Americans. Europeans tended to see them as an endless supply of wood for building and energy. They also cleared forestland to plant crops.



Fire is part of the forest cycle. Native Americans set them to clear the forest floor for planting and hunting. Today, we use controlled burns and mechanical thinning to help prevent damaging wildfires.

As people began to settle closer to and in forests, another major change took place in the natural cycle. They began to prevent and put out any fires that started, whether by humans or nature. That, along with ever-increasing limitations on harvesting, has resulted in forests which today are choked with dense brush and too many young trees in the understory. They're stressed, weakened and vulnerable to drought, insect infestations and uncontrolled wildfires.

The problem is especially acute on our public lands. The national forests in California around Lake Tahoe and Lake Arrowhead are good examples of how sup-

pressing fire and virtually eliminating harvesting has created a dying forest just waiting to explode into catastrophic wildfire. Once that happens, and experts agree it will, it could take many decades for the forests to recover. If foresters can't replant burned areas, fast growing plants such as chamise and manza-

nita can take over and the forests may never return to their natural state.

California private forests, on the other hand, are managed to prevent catastrophe. Balancing the need to protect air, soil and water quality with the need to reduce fuel loads, foresters use sophisticated machinery along with controlled burns to clear underbrush, often re-creating the mosaic pattern of trees and meadows that was common before European settlers arrived.



California foresters plant an average of 7 new trees for every one harvested. For at least 25 years, growth has exceeded harvest in California forests.

The most common California



The best-known tree in California, redwood is very resistant to decay and insect damage. It's used for decking, outdoor furniture, fences, beams, siding, trim, paneling and general joinery.



Ponderosa pine bark is more fire-resistant than many trees. Often found in exclusive stands where other trees have burned away, its attractively grained wood is used for trim, shelving, windows, moulding and interior paneling.



non trees in forests



The Douglas fir is the second tallest tree in the world, next to the redwood. Its wood is strong and light, ideal for structural lumber, windows, doors, moulding, flooring, paneling, chairs, furniture and tables.



Incense cedar isn't really a cedar. Misnamed because it has aromatic wood like true cedars growing in Europe, Africa and Asia, incense cedar is used for moulding, decking and siding, but the best known use is for pencils.



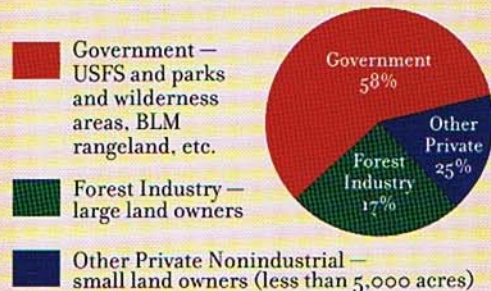
A look at California forests.

California has more forestland than any state except Alaska. The 52,281 square miles of public and private forests make up 37% of all the land in California. That's almost as much as we had 100 years ago, and every year we're managing to grow more.

California forests are unique for their diversity. There are more than 600 wildlife and 4,000 plant species native to our forests, including the coastal redwood and its cousin the giant sequoia.

California also has the most protected forests in the world. More than 8 million acres are set aside for parks, wildlife habitat and botanical and wilderness areas. Foresters practice sustainable forestry to keep the remaining timberlands healthy and productive so there will always be enough trees to meet our needs for wood products.

Ownership of forestland in California



Forest Industry is private forestland designated as a Timber Production Zone (TPZ). Nonindustrial forestland may or may not be productive, and is not designated for commercial use.

(Source: American Forest & Paper Assoc. 2001)

We're managing to keep our forests in balance.

A forest is a complex ecosystem that affects the quality of our water, air, and the lives of the animals and people living there. It's the job of the forester and other professionals to maintain the delicate balance of nature while providing the forest products we use.

A dense, overcrowded forest provides little except cover for animals. Thinning the forest creates open spaces that encourage the growth of plants that feed deer, elk, bear and other wildlife. Thanks to improved forest management techniques, the black bear population has doubled in the past 20 years, and deer and elk populations have increased dramatically.

Leaving standing dead trees, or snags, on harvest sites provides homes and perches for animals and birds.

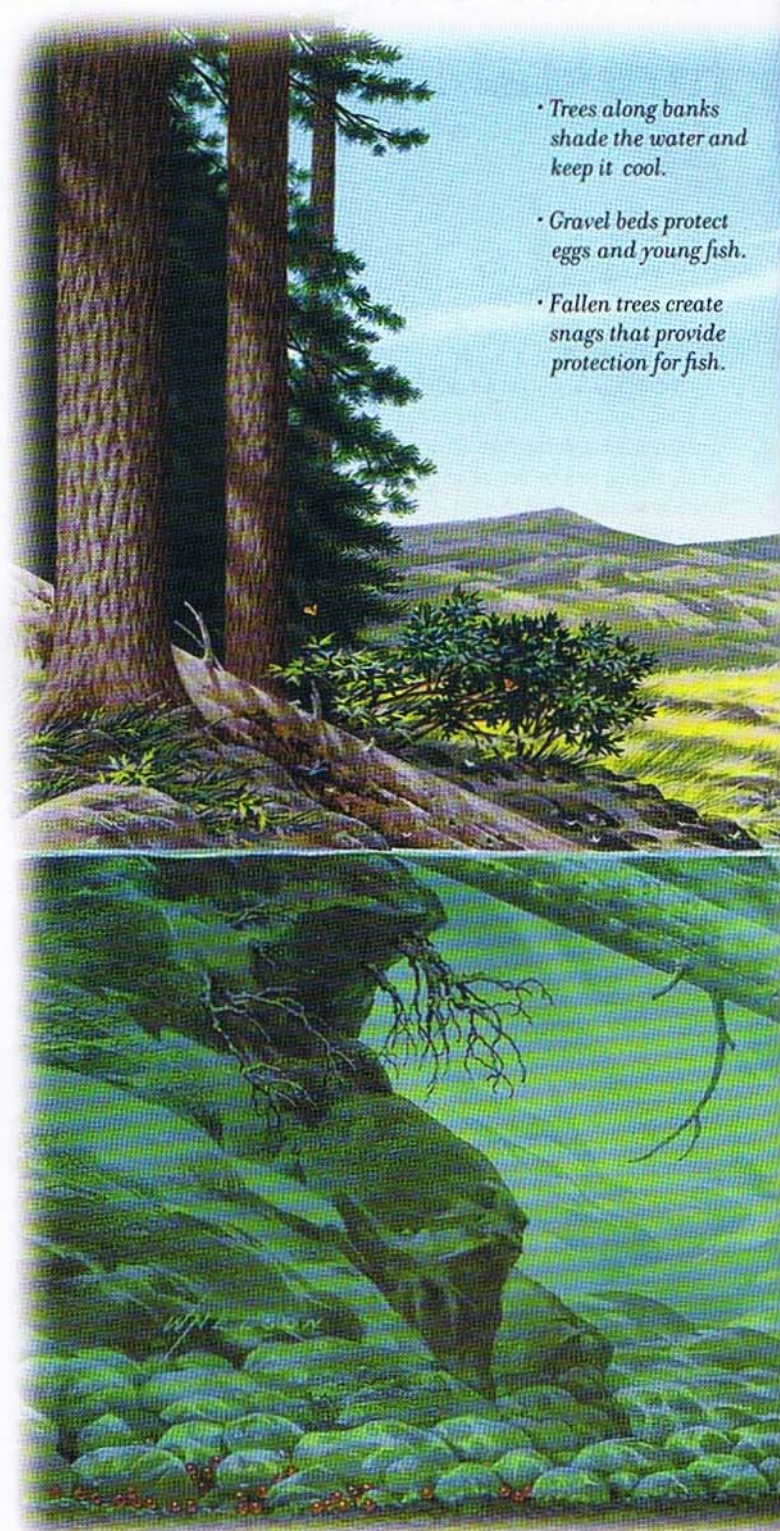
Spotted owls are at home in managed forests. When the owls were included under the Endangered Species Act, it was thought they nested only in old growth forests. More complete research has found that

they nest close to where wood rats, their favorite food, are abundant. The highest recorded concentration of spotted owls is on private land harvested regularly to supply wood



Wildlife researchers have found old growth forests are not the spotted owl's preferred habitat. They like younger, open forests that attract wood rats, their favorite food.

What makes a

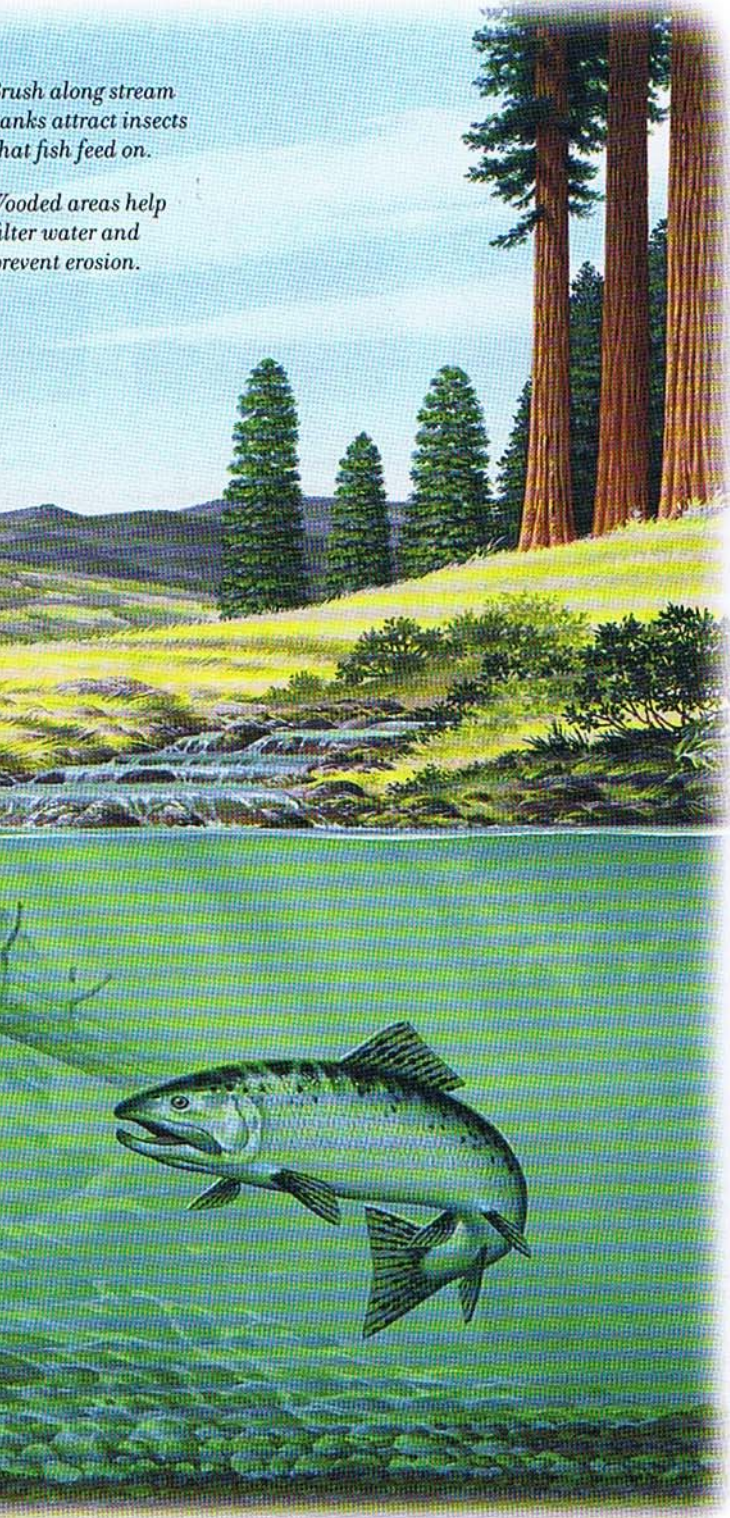


- Trees along banks shade the water and keep it cool.
- Gravel beds protect eggs and young fish.
- Fallen trees create snags that provide protection for fish.

healthy stream

Rush along stream banks attract insects that fish feed on.

Wooded areas help filter water and prevent erosion.



products. Active forest management encourages the growth of the grasses and succulent plants that wood rats eat.

The quality of our water is directly affected by the health of our forests. A healthy forest acts like a giant sponge, preventing excess erosion and silting by soaking up rain and snow and gradually releasing it into streams. Healthy forests also remove pollutants from water.

Because of heavy rainfall, soil types and earthquake activity, streams along the northern California coast have more sediment flowing into them than almost any streams in the world. Earthquakes, fires, floods and landslides still create a continual cycle of destruction and renewal that's lasted millions of

years. The fish and plants that live here evolved for eons under these conditions.

From the 1940s to the 1980s, government agencies required landowners to remove large woody debris from streams. That policy has been reversed because it's now known that wood in streams is an essential part of fish habitat. Foresters mimic the natural landslides and erosion by putting woody debris, rocks and gravel back into waterways. Forest products companies also have hatcheries and research programs that are improving the outlook for fish in California streams.



Foresters have set aside more than 99% of the natural habitat of the marbled murrelet, a sea-going bird that prefers nesting in older forests.

California forests are the most protected in the world.

Nowhere else are there so many strict regulations to protect the trees and the ecosystem than in public and private forests. The forest products industry is one of the most heavily regulated industries in the state, and no activity is more restricted than logging. The California Forest Practice Act alone has 973 regulations that dictate exactly how private

forestlands are used and maintained.

Public and private forests are sometimes managed differently. Park and wilderness areas are managed for preservation, with no harvesting permitted. National forests have traditionally been managed for multiple use, including timber production. During the past decade, harvesting in these forests has been severely limited,

putting many forest products companies out of business and increasing our dependence on wood products from foreign countries and non-renewable substitutes for wood.

There is a perception that private forest owners can do anything they want on their lands, but California private forests are more heavily regulated than public forests in many ways. The Z'berg-Nejedly Forest Practice Act is the most restrictive in the nation and governs all harvest-related activities on California private lands. It limits the type and location



California private forests are the most protected forests in the world. In most cases, foresters can't harvest a single tree without a comprehensive ecological plan.

Forest management



Clearcutting

Clearcutting can be used to mimic a natural fire. All the trees in a small area are removed to create open areas that quickly sprout grasses and forage for animals. It's an ecologically friendly way to manage forests with species that grow best in open sunlight. Clearcutting is strictly regulated in California.



Seedtree

Seedtree harvesting is like a clearcut, except that a few healthy trees are left standing to naturally reseed the area.



Shelterwood

Shelterwood harvesting involves leaving some trees standing to provide shade and shelter for seedlings. When the trees are grown, they are removed.

Some of the federal and state laws and their impact on public forests

- **Federal Endangered Species Act:** forbids logging and other activities that may harm threatened or endangered species or their habitats.
- **Federal Clean Water Act:** mandates using the best management practices to minimize water pollution.
- **California's Porter-Cologne Act of 1969:** allows the State Water Resources Control Board to regulate and control the quality of the state's water.
- **California Professional Forester Licensing Act:** establishes stringent requirements for licensing of Registered Professional Foresters.
- **California's Z'berg-Nejedly Forest Practice Act of 1973:** governs timber harvesting activities on private lands, and insures protection for fish and wildlife.
- **Federal and California Clean Air Acts:** establish requirements to protect and enhance the quality of our air resources.

Forest management practices



Group Selection
 Selective cutting removes individual trees in a cycle. Large trees are cut and smaller trees are left standing to reseed the area. When the small trees have grown large enough, they are cut and the trees that grew from their seeds are left to reseed the area, continuing the cycle.



Single Tree Selection
 Strategically removing individual trees of different sizes helps maintain diversity. This harvesting technique is used mainly in watercourse and lake protection zones and areas with special considerations such as protected wildlife habitats and parks.



Group Selection
 Selective cutting removes individual trees in a cycle. Large trees are cut and smaller trees are left standing to reseed the area. When the small trees have grown large enough, they are cut and the trees that grew from their seeds are left to reseed the area, continuing the cycle.

State laws with the greatest impact on private forests.

Federal Multiple Use-Sustained Yield Act of 1960: requires that harvest be in balance with growth and for the "harmonious and coordinated management" of national forests for recreation, range, timber, watershed, wildlife and fish.

National Environmental Policy Act: requires the government to evaluate activities that could impact the environment and provide an environmental impact statement.

National Forest Management Act: requires plans to maintain the diversity of plant and animal communities.

California Endangered Species Act: makes the conservation, protection, restoration and enhancement of any threatened or endangered species and their critical habitat a state policy.

California Environmental Quality Act of 1973: requires an environmental impact report for activities on state and private properties.

of harvests, restricts clearcuts and mandates buffer zones next to streams, lakes and other protected areas.

Under the act, a written harvest plan must be prepared by a Registered Professional Forester and submitted to the state before trees are removed. The plan must describe in detail how the harvest will be done, how and when the site will be replanted, and all the measures that will be taken to prevent erosion, maintain water quality and protect wildlife and fish habitat. Recreation areas, visual corridors and historical, archaeological and cultural landmarks are given special attention.

The harvest plan is given a complete review by agencies like the state Department of Forestry and the Department of Fish and Game. Sometimes the Division of Mines

and Geology, the Department of Parks and Recreation, the Coastal Commission, regional planning agencies and water quality boards review the harvest plan. Federal agencies such as the Fish and Wildlife Service and the National Marine Fisheries Service may also get involved.

The Forest Practice Act protects one of our most important natural resources. At the same time, it recognizes the public's need for products made from trees. It's the law forest product companies follow to make sure their forests will remain healthy and productive for generations.



It takes as much training to become a Registered Professional Forester as it does to become a lawyer, and they're licensed much the same way doctors are.

Nothing goes to waste in the forest.

Thanks to modern technologies and management techniques, every part of a tree is put to good use.

Sawmills use computers and laser-guided saws to get the most lumber from a log. Bark is used for fuel, or for landscaping products. Wood chips are used to make pulp and paper. Sawdust is used as fuel, or turned into products like artificial firelogs. Chippers turn small trees and branches into fuel. Sawmills burn chips to power the electrical generators that in turn run the sawmill. Some operations

generate excess electricity they can sell to power companies. The ash that remains after burning is used for soil enhancement by farmers, or in filters to purify water. Even rocks picked up during harvesting are separated and used for building roads.

New adhesive and milling technologies have helped the forest products industry

turn what used to be waste wood into useable products. Small pieces of wood that once were burned or dumped are turned into laminated and glued products like oriented strand board, finger-jointed mouldings and engineered trusses and floor joists.

Wood today is harvested with the help of light-on-the-land equipment, and turned



Geneticists are unlocking the secrets to improving tree growth and immunity to disease. What they've learned helps trees mature 35% faster than just a few years ago.

Trees are an friendly.

California Timberland Growth & Removals

Annual removal includes trees cut for harvesting, forest improvement and land development.

Net annual growth is total growth minus losses to insects, disease and fire.

Year	Net Annual Growth*	Annual Removals*	Removals as % of Growth
1952	519,000	1,132,500	218
1962	579,600	1,021,500	176
1970	790,237	927,758	117
1976	792,337	835,207	105
1986	1,046,199	830,476	79
1991	1,085,683	908,025	84
1996	1,323,000	605,071	46

*1000 Cubic Feet

paper pulp

tree cross section



Environmentally resource



board lumber



into products we use every day – in home construction, books, toilet paper, medicines, fabrics, cosmetics, pencils, musical instruments, and much more.

Back in the forest, branches and needles are left on the forest floor to prevent erosion and soil damage. As they decompose, they return valuable nutrients for the next generation of trees.

Energy from trees.

Years of drought, insects and fire suppression have left many forests weakened and filled with too much woody debris, or biomass, creating a fire hazard that threatens trees, wildlife and humans.

Sophisticated machines like feller-bunchers make it possible to thin the forests to keep them healthier and remove the fuel ladder that could turn a controllable low-intensity ground fire into a much more destructive wildfire. Harvesting biomass decreases competition for sunlight and nutrients. The remaining trees are less stressed and better able to survive drought and insects and grow more quickly.

Biomass is also a source of "green energy." Companies use biomass to generate electricity to run sawmills. In some areas, they generate enough electricity to sell to local power companies, helping to supply light and power to nearby towns.



Trees are the only 100% renewable, recyclable resource we have. It takes much less energy and resources to make products from wood than from steel, plastic, concrete or aluminum. It's also better for air and water quality.

Wood is efficient.

Every building product we use comes from natural resources. Since 1955, we have all consumed twice as much steel and wood, 4 times more cement, 5 times as much



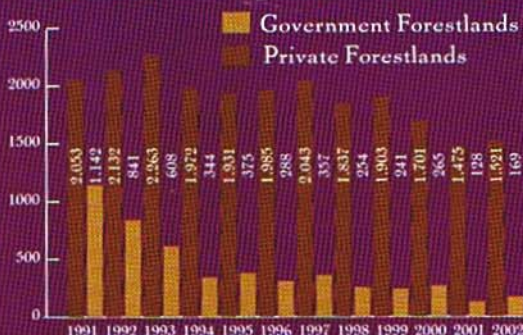
Nothing goes to waste in the forest. Computers and laser-guided saws get the maximum amount of lumber from every log. The remaining sawdust and woodscraps are used to generate electricity to run the sawmill.

plastic, and 7 times more aluminum than all of humanity before us. Of all those natural resources, wood is the most efficient and ecologically friendly and the only one that's renewable. In fact, the net growth of California forests has more than doubled since 1952.

- The power to make trees grow comes from

the sun. The power to produce steel, aluminum, plastic and concrete comes from non-renewable gas and petroleum.

Timber Harvest on Government and Private Lands in California 1991-2002

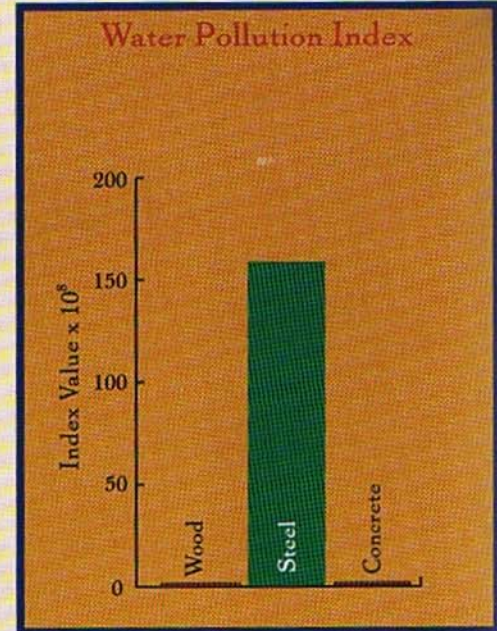


Harvest levels in million board feet MMBF

We are using more wood and harvesting less, yet our forests are overcrowded and imports come from less-protected forests.

Building with wood for the environment

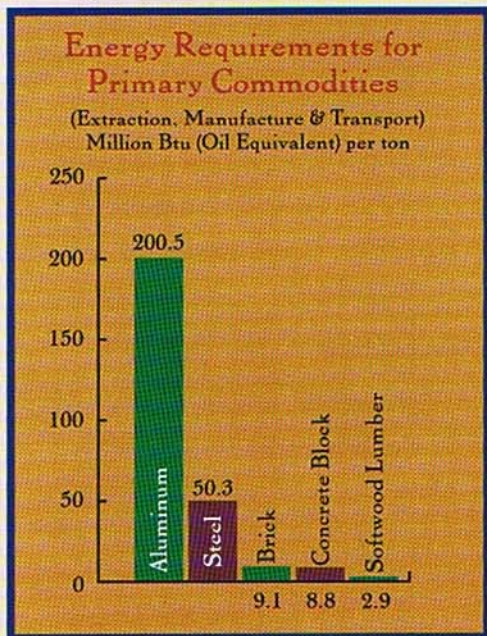
Replacing a billion board feet of wood with materials like steel and concrete requires 100 extra gallons of oil and emits 7.5 million extra tons of CO₂ in lumber and wood products.



- Plastic is not bio-degradable. It remains in its current form for at least 500 years.
- Known oil reserves will last less than 50 more years at the current rate of consumption.
- It's estimated we'll run out of bauxite, the main ingredient in aluminum, in less than 200 years.
- Trees help clean the air. As they grow, they absorb carbon dioxide and release oxygen. Trees lock in the carbon, returning it to the soil when they decompose, instead of releasing it into the air and contributing to pollution.
- Wood is more energy efficient in a building and insulates 413 times better than steel, 8 times better than concrete, and 2,000 times better than aluminum.

Wood is better for the environment.

Manufactured substitutes consumes nearly 720 million tons of carbon. Sixty percent of energy consumed in manufacturing is self-generated.



California forests are important to our economy.

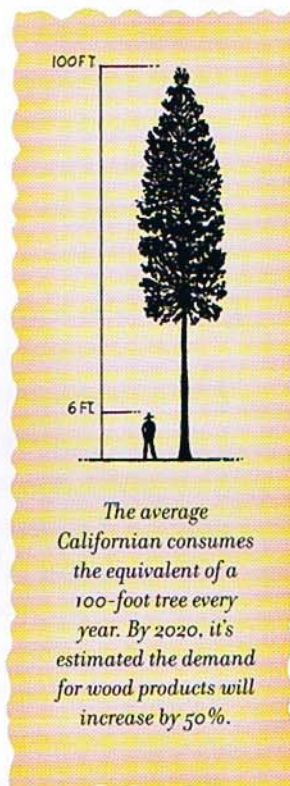
California is the third leading producer of forest products, after Oregon and Washington. California forest products, wood, paper and allied companies produce more than \$16 billion worth of products every year.

In 1999, Californians used approximately 9 billion board feet of lumber, enough to build about 600,000 standard-sized homes. Largely due to ever-increasing limits on the amount of timber that can be harvested on federal lands, our forest products companies can supply less than a quarter the wood products Californians use. By the year 2020, it's

estimated our demand for wood products will increase by 50%. Unless things change dramatically, California will have to import more and more of its wood from countries that lack the forest management expertise and strong environmental protections that California has — our impact on the global environment will steadily worsen.

The forest products industry is one of the 10 largest private employers in the state. In many Northern California counties, it's the largest. The jobs created by the forest products industry employ more than 110,000 people with a payroll of more than \$4 billion every year. Those 110,000 jobs support more than 300,000 additional jobs in service industries, retail, transportation, agriculture and government.

The taxes paid by forest products companies and their employees have a huge impact on local communities. Employees of forest products companies pay more than \$500 million in income taxes each year. In 2001, forest products companies paid almost \$20 million in California Yield Taxes. The forest products industry also makes considerable contributions for schools and road improvements throughout the state.



Q Are we cutting down our old-growth forests?

A Of course, not. In fact, the number of old-growth trees in California is increasing. According to the U.S. Forest Service, in about 90 years old-growth trees will reach levels not seen since the early 20th century. California currently has more than 2.4 million acres of virgin old-growth forests in parks and wilderness, including nearly 100,000 acres of protected redwoods donated in part by forest products companies. All told, 97 percent of California's old-growth forests are already preserved in public ownership. Forest products companies harvest wood from forests that have been harvested at least once already.

Q Is "clearcutting" a necessary management technique?

A In some cases clearcutting is the most environmentally responsible way to harvest trees. Clearcutting is a scientifically sound, ecologically proven way to regenerate forests and maintain biologically diverse habitats – it mimics the results of natural, low-intensity fire and provides a rich environment for plants and animals that prefer early stages of forest development. Clearcutting also requires fewer roads than other harvesting methods, and since clearcut areas are replanted and left alone to mature, it actually reduces human intervention.

Clearcutting is used when foresters follow an 'even-aged' forest management plan, and is especially effective for harvesting and growing trees that thrive on direct sunlight, such as Douglas fir and ponderosa pine, two of the fastest growing species. Clearcut areas are always replanted with native species and become healthy young forests in less than a decade.

Answers to so common questions ab



California allows for and strictly regulates clearcutting. Clearcuts can never exceed 40 acres, and the vast majority are less than 20 acres.

Q Do the regulations we have now ensure sustainable forests?

A Yes, and no. California's private forests are among the most protected forestlands in the world. Comprehensive plans that demonstrate sustainability must be approved before a single tree can be cut. In fact, the licensing requirements for foresters and the soil, water, air, fish and wildlife protection mandated by California's regulations either meet or exceed the requirements recommended by independent certifiers concerned with maintaining environmental protection.

Nevertheless, researchers at Cal Poly State University, San Luis Obispo say California's inflexible and redundant forest regulations are becoming counterproductive, and may have unintended consequences. For example, the high cost of regulatory compliance often makes conversion of privately owned forestlands into housing subdivisions more profitable than continuing to maintain land as a forest. Unless changes are made, land conversion could become a serious threat to the future of our forests and environment.

One of the most y asked ut our forests



Q Why not thin forests just around communities to reduce the risk of fire?

A Because it won't protect those communities from fire. Today's catastrophic wildfires feast on an abnormal abundance of fuel, throw millions of pounds of pollutants into the air, destroy wildlife and watersheds, and leave a desolate landscape scarred by erosion.

Massive fires roaring through hundreds of square miles of unthinned, overgrown forest simply do not respect narrow fuelbreaks. Firebrands – burning debris – can be launched up to a mile in advance of a wildfire and destroy homes no matter how much cleared space surrounds them. Thinning around communities won't stop wildfires, and it won't protect communities. Nor will it protect the watersheds where more than 75 percent of the state's drinking water originates. The only way to live safely in a forest is to actively manage it to make the entire forest healthy.

Q Does forest harvesting hurt fish?

A California's forest products companies spend millions of dollars to ensure that fish habitats are not harmed by tree harvesting. Forestry companies employ numerous scientists – including hydrolo-

gists, geologists, and biologists – and fund the vast majority of fish habitat research. They manage forests to ensure that salmon and other fish can get to and from spawning grounds unhindered, and establish wide buffer zones to preserve shade canopies and protect streams during harvesting. Foresters also leave large woody debris in streams to create deep, cool pools that are critical to the life cycle of salmon, and include effective erosion control measures in forest road building. Federal, state, and regional agencies must approve of measures taken to protect animal habitats before any harvesting plan can be implemented. As a result, California's actively managed, private forestlands provide some of the best fish habitats in the world.

Q Why is it important to actively manage California's forestlands?

A Active forest management can substantially decrease the frequency and impact of catastrophic wildfires. With forests covering more than a third of the state, how these resources are used and protected affects all Californians. Hundreds of communities and thousands of acres are at significant risk from wildfire. The carbon monoxide that fills the air and erosion that spoils our drinking water after catastrophic wildfires affect millions.

The forestry industry has the know-how, equipment and infrastructure to make our forests healthy, naturally resistant to fire, insects and disease, and home to diverse animal habitats. At the same time, all Californians use wood products, which are vital to our state's economic well being. Active forest management enables us to harvest wood in an environmentally sustainable way.

Choose California-grown wood



**Good for our environment,
good for our economy.**

We all use wood products. If the wood we use isn't coming from California, it's coming from someplace where the environment is not as well protected.



California-grown wood meets the highest environmental standards for:

Sustainability and replanting

Soil, air, and water quality

Fish and wildlife protection

Harvesting practices

California's private forestlands are safeguarded by some of the most stringent environmental regulations in the world and managed by licensed experts. Wildlife, watersheds and air quality are all protected during harvesting. Our state laws help ensure that if trees are being harvested in California, sustainable forestry is being practiced.

Yet, for all of our state's naturally rich soil, ideal tree-growing climate and millions of acres of forestland, California is a net importer of wood. We import about 80 percent of the wood used here. It makes better economic sense to help



California's forestry industry is a leading agricultural producer and proud participant in the California Grown campaign.

meet our increasing demand for wood products from California's abundant forests.

Purchasing California-grown wood is an investment in our home state that leads to more jobs and a healthy forest economy that is good for everyone – from the families that grow the trees, to all the people along the way who supply the wood products we use in our everyday lives.



Be Californian Buy California GrownSM

Learn more about California forests.

WEB SITES

The California Forest Products Commission is not responsible for content or changing links.

ALL INCLUSIVE SITES

Forestworld
www.forestworld.com
Steve Nix's All About Forestry,
www.forestry.about.com
Steve Shook's Directory of Forest Products, Wood Science & Marketing,
www.forestdirectory.com

ASSOCIATIONS/RELATED ORGANIZATIONS

American Forest & Paper Association,
www.afandpa.org
American Forests,
www.amfor.org
American Wood Council,
www.awc.org
APA-The Engineered Wood Association,
www.apawood.org
Associated California Loggers,
www.calog.com
California Forest Products Commission,
www.calforests.org
California Forestry Association,
www.foresthealth.org
California Licensed Foresters Association,
www.clfa.org
California Redwood Association,
www.calredwood.org
Evergreen Partnership,
www.ep.org
Forest Industry Network,
www.forestindustry.com
Forest Landowners of California,
www.forestlandowners.org
Forest Products Society,
www.forestprod.org
Forest Stewardship Program,
www.ceres.ca.gov/foreststeward
Greenspirit,
www.greenspirit.com
Incense Cedar Institute,
www.pencils.com
Northern California Society of American Foresters,
www.norcal saf.org

Pacific Logging Congress,
www.pacificloggingconference.com

PaperLoop.com,
www.paperloop.com

Society of American Foresters,
www.safnet.org

Technical Association of the Pulp and Paper Industry, Inc. (TAPPI),
www.tappi.org

Western Wood Products Association (WWPA) Barometer Report,
www.wwpa.org/econpubs.htm

Western Wood Products Association,
www.wwpa.org

PUBLICATIONS

Crow's Market Reports,
www.crows.com

Evergreen Magazine,
www.evergreenmagazine.com

Forestry,
www.oup.co.uk/foresj/

Journal of Forestry,
www.safnet.org/pubs/periodicals.html*JOF

Loggers World,
www.loggersworld.com

Seventh American Forest Congress Publication,
www.yale.edu/forest_congress/

GOVERNMENT

California Department of Forestry and Fire Protection (CDF),
www.fire.ca.gov

Department of Fish and Game,
www.dfg.ca.gov

United States Forest Service,
www.fs.fed.us

GENERAL PUBLICATIONS ON FORESTRY

Order the following publications from CNPS,
1722 J Street, Suite 17,
Sacramento, CA 95814.

California's Changing Landscapes: Diversity and Conservation of California Vegetation. Barbour, et al. 1993. California Native Plant Society.

Terrestrial Vegetation of California. Barbour and Major. 1988. California Native Plant Society.

California Forest Health in 1994 and 1995. U.S. Forest Service, Pacific Southwest Region. Report R5-FPM-PR-002. Order from USDA Forest Service, Pacific Southwest Region, 630 Sansome St., San Francisco, CA 94111.

Order the following publications from American Forests, P.O. Box 2000, Washington, D.C. 20013:

Forest Ecosystem Health in the Inland West: A Science and Policy Reader. 1995. American Forests.

Understanding Community-Based Forest Ecosystem Management. 1998. American Forests.

Forests A History of Resiliency and Recovery. MacCleery, D.W. American. 1993 (rev.). Order from Forest History Society, 701 Vickers Avenue, Durham, NC 27702.

Forests & Salmon: Forest-Fisheries Management Relationships in Northern California. Forest Foundation.

Order from The Forest Foundation, 853 Lincoln Way, Auburn, CA 95603

How Can We Live with Wildland Fire? 1997. UC Cooperative Extension Service. Order from California Communities Program, Human and Community Deve., University of California, One Shields Avenue, Davis, CA 95616-8523.

Order the following from Communication Services, Division of Ag and Natural Resources, University of California, 6701 San Pablo Avenue, Oakland, CA 94608-1239.
www.danres.ucdavis.edu
Phone orders (800) 994-8849.

Sustaining Site Productivity on Forestlands. UC DANR Publication 21481. 1990.

Sugar Pine: Status, Values, and Roles in Ecosystems. Proc. Of a symposium. UC DANR Publication 3362. 1996.

The Forest Products Industries in California: Their Impact on the State Economy. UC DANR Publication CNR002. 1994.

FOR TEACHERS

California Environmental Education Interagency Network,
www.ceres.ca.gov/education/

California Foundation for Agriculture in the Classroom,
www.cfaite.org

CREEC Network,
www.creec.org

Curriculum for Forest Landowners,
www.enr.berkeley.edu/departments/espm/extension/about.htm

Pacific Logging Congress,
www.pacificloggingconference.com

Project Learning Tree,
www.plt.org

Technical Association of the Pulp and Paper Industry, Inc. (TAPPI),
www.tappi.org/paperu

Temperate Forest Foundation,
www.forestinfo.org

The Forest Foundation,
www.calforests.org/ff_order.html

Much of the information in this brochure is courtesy of the following sources:

American Forest & Paper Association

California Department of Forestry and Fire Protection

California Forestry Association

California State Board of Forestry

Evergreen Magazine

Forest Resources of the US. 1992

The Pacific Lumber Company

Why Salmon Are in Hot Water. A Fish Story of Global Proportions. Dr. Vic Kaczynski

Sierra Club

State of California Department of Fish and Game

Temperate Forest Foundation

US Department of Energy

USDA Forest Service
Fact vs. Fiction In The Environmental And Structural Claims for Steel. Dr. Frank Beall

The Giant Sequoia Forest: A Window Into The Past And A Vision For The Future.

Dr. Thomas Bonnicksen
White Settlement Begins: Wood Fuels The Nation's Progress. Douglas MacCleery

A Firestorm In Federal Forest Management. Dale McGreer

Knowing Your Trees. G.H. Collingwood and Warren Brush

ATHENA Sustainable Materials Institute

Canadian Wood Council

The Environmental Research Group, School of Architecture, UBC

The Status and Future of Salmon in Western Oregon and Northern California. Dr. Daniel Botkin and the Center for the Study of the Environment

Flame and Fortune. Steven Pyne et al.

Resources for the Future. Frederick and Sedjo
Manufacturing Energy Consumption Survey. Dr. James Bowyer

Building Materials in the Context of Sustainable Development. Forintek

Canada Corporation
Technological Change in the Timber Industries in the Pacific Northwest: Historic Background and Future Implications. Dr. Brian Greber

Western Wood Products Association.



California Forest
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“We need a new vision for North America’s forests. A vision that restores a productive and harmonious relationship between forests and people. Such a promising view of the future can only be achieved by better understanding our past.”

— Dr. Thomas Bonnicksen

Visiting Scholar and Board Member, The Forest Foundation
Professor of Forest Science, Texas A&M University

“The forests must be, and will be, not only preserved but used, and the experience of all civilized countries that have faced and solved the question shows that forests, like perennial fountains, may be made to yield a sure harvest of timber while at the same time all their far-reaching beneficent uses may be maintained unimpaired.”

— John Muir

Environmentalist and Founder of the Sierra Club, 1885

“We have been led to believe that when we use wood we are causing a bit of the forest to be lost. This is not the case. When we buy wood we send a signal into the marketplace to plant more trees, and produce more wood.”

— Dr. Patrick Moore

Co-founder and former President of Greenpeace
President of Greenspirit

