#126

Timber Harvest Plans:

A Flawed Effort to Balance Economic & Environmental Needs

June 1994

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The Little Hoover Commission, formally known as the Milton Marks Commission on California State Government Organization and Economy, is an independent state oversight agency that was created in 1962. The Commission's mission is to investigate state government operations and -- through reports, and recommendations and legislative proposals -- promote efficiency, economy and improved service.

By statute, the Commission is a balanced bipartisan board composed of five citizen members appointed by the Governor, four citizen members appointed by the Legislature, two Senators and two Assembly members.

The Commission holds hearings on topics that come to its attention from citizens, legislators and other sources. But the hearings are only a small part of a long and thorough process:

* Two or three months of preliminary investigations and preparations come before a hearing is conducted.

* Hearings are constructed in such a way to explore identified issues and raise new areas for investigation.

* Two to six months of intensive fieldwork is undertaken before a report -- including findings and recommendations -- is written, adopted and released.

* Legislation to implement recommendations is sponsored and lobbied through the legislative system.

* New hearings are held and progress reports issued in the years following the initial report until the Commission's recommendations have been enacted or its concerns have been addressed.

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The Honorable Willie L. Brown Jr.
Speaker of the Assembly
and Members of the Assembly

The Honorable James Brulte
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Dear Governor and Members of the Legislature:

In a year when state policymakers' focus is on yet another budgetary shortfall of billions of dollars, the problems plaguing the Timber Harvest Plan process may seem minor. With a total cost of $30 million to the timber industry and state regulators combined, the price of the process is small compared to the billion-dollar industry that it regulates. But the perversities of timber harvest policies and practices are a microcosm of what can go wrong when government focuses on process rather than outcome. The results all too often are unsatisfactory programs that burden the economy without benefitting the public.

The Little Hoover Commission examined the Timber Harvest Plan process and found the following problems:

- The intra-agency process for reviewing Timber Harvest Plans is complex, lengthy and costly, resulting in inconsistency and inequity. How a plan is treated is largely dependant on whether, by chance or design, it falls into the 20 percent of plans reviewed by the Department of Fish and Game -- a department that apparently has different standards, goals and priorities than the Department of Forestry and Fire Protection, which is ultimately responsible for approving the plans.

- Despite the hoops that timber operators must jump through and the barriers erected by the planning process, the environment is not being effectively protected because of the flawed concept that the Timber Harvest Plan process is based on -- namely that ecology can be addressed on a parcel-by-parcel basis. In addition, the State's focus is almost entirely on procedural steps rather than on the eventual outcome. As a result, what occurs in the real world may have very little relationship to what is prescribed in a harvest plan, and there is no mechanism for linking demonstrated effectiveness of mitigation measures to future policy directives.

Milton Marks Commission on California State Government Organization and Economy

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Because of these problems, the Commission has made eight recommendations designed to provide better protection for the environment while streamlining the process for timber harvesters, particularly those with logging operations that will have a minimal impact on surrounding ecosystems.

At a time when California's economy continues to be depressed and stagnant, it is critical that government function in such a way that citizens' interests -- both short and long term -- are protected. A reformed Timber Harvest Plan process holds that promise, allowing the commercial use of a natural resource that provides products used by everyone while protecting the future quality-of-life values that are California's chief asset. The Commission urges you to take the steps necessary to make the process more effective and efficient.

Sincerely,

Richard R. Terzian
Chairman

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Executive Summary

Executive Summary

About 18 percent of California's land mass is composed of productive forests, an extensive and valuable natural resource that provides not only timber and wood products, but also wildlife and fish habitat, recreational opportunities and esthetic enjoyment. A challenge facing state government is to allow multiple uses of this resource without degrading its value or allowing any one use to dominate or exclude the others.

To carry out this responsibility, the State has created the Timber Harvest Plan process to regulate logging activities. Originally a streamlined procedure that assured continued logging while acknowledging environmental needs, the process has been reshaped and molded in response to new state laws, federal laws and court decisions. While the focus of many of these new thrusts is on issues other than logging -- such as preservation of species and protection of water quality -- the impact on timber operations is substantial and tangible.

Timber Harvest Plans have grown increasingly complex in response to emerging laws and policies. At the same time, the ground rules for what is allowed, what mitigation measures are required and what is forbidden are constantly changing and are rarely clearly understood by all the parties involved. Despite the frequent reforms and fine-tuning, the process remains an inadequate tool for protecting both economic and environmental interests.

The ripple effect from how timber harvest proposals are handled touches all Californians in both direct and subtle ways. The timber industry employs 113,000 people, with another 300,000 jobs linked to timber operations. Counties where logging occurs receive millions of dollars in timber taxes. An unrestricted approach to timber harvesting threatens to eliminate plant and animal species that can never be replaced, while an overly restrictive approach drives the cost of wood products up, affecting prices on everything from pencils to houses.

The Little Hoover Commission has identified the key problems with the Timber Harvest Plan process in two findings and has proposed meaningful reform of the State's approach in eight recommendations.

The Process

Finding #1: The current Timber Harvest Plan process is complex, inequitable and costly, producing frustration for the administering state departments, the timber industry and environmental advocacy groups.

Participation in the review of Timber Harvest Plans is spread across two agencies, four departments and seven boards, leaving the process open to inconsistent policy application and fragmented leadership. Rules regulating the process change so frequently that participants are often unclear about what standards they are required to meet. In addition, the process is the target of criticism from all sides, including:

- State departments, which say they lack the resources to do the thorough review required by a combination of state and federal laws.

- The timber industry, which says demands for more information as new laws, regulations and court orders come into play makes the Timber Harvest Plans increasingly lengthy and costly for the harvesters. Timber industry interests are also critical of approval delays -- especially in the case of controversial and complicated harvesting proposals.

- Environmental groups, which say the limited amount of time for public input effectively rules out any meaningful analysis and

response. Too often, they add, the plan is a paperwork exercise that is routinely approved.

Recommendation #1: **The Governor and the Legislature should direct the Board of Forestry to develop integrated policies and guidelines -- in consultation with the Department of Forestry and Fire Protection, the Department of Fish and Game, the timber industry and environmental groups -- to govern wildlife, fish and plant issues raised by Timber Harvest Plans.**

Recommendation #2: **The Governor and the Legislature should enact legislation that make regulations promulgated by the Board of Forestry effective at specific times of the year.**

Recommendation #3: **The Governor and the Legislature should enact legislation to extend the public comment period for Timber Harvest Plan reviews and require notification of outcome.**

The Outcome

Finding #2: The Timber Harvest Plan process has not proven effective in achieving a sound balance between economic and environmental concerns.

The authorizing statutes for the Timber Harvest Plan set the stage for logging while acknowledging the need to protect natural resources, including waterways, wildlife, fish, plants, scenic views and recreational areas. Despite timber industry complaints about the process, harvesting on private land has declined only marginally in the past five years and plans are routinely approved -- both signs that economic interests are being met. But the plan process has proven less effective in protecting the environment, as demonstrated in three areas:

- The process looks at potential damage on a site-by-site basis rather than across entire ecosystems, making it difficult to assess cumulative impacts over time and throughout watersheds.

- Litigation rather than resolution is often the focus of the participants, leading to a strained decision-making process and lack of consensus.

- Resources and priorities are devoted to issues of process rather than outcome, with the result that people are more interested in dotting i's and crossing t's than in how effective mitigation measures are.

Recommendation #4: **The Governor and the Legislature should enact legislation to require the completion of master protection plans for watersheds containing productive forests.**

Recommendation #5: **The Governor and the Legislature should direct the Board of Forestry to establish a certification process allowing timber owners to satisfy environmental concerns in advance of harvest proposals.**

Recommendation #6: **The Governor and the Legislature should direct the Board of Forestry to develop an objective environmental-risk assessment system that would assist in the evaluation of Timber Harvest Plans.**

Recommendation #7: **The Governor and the Legislature should enact legislation establishing a public appeals process to allow non-litigation challenges to Timber Harvest Plan approvals.**

Recommendation #8: **The Governor and the Legislature should enact legislation to direct the Department of Forestry and Fire Protection to draft a plan within one year for shifting priorities from plan review to performance monitoring, feedback on effectiveness of requirements and enforcement activities.**

Introduction

Introduction

California's forests are a vast resource for the State's citizens, providing wildlife and fish habitat, recreational opportunities, esthetic enjoyment and a wide array of timber products. These multiple and often competing uses are regulated and managed through federal and state laws that are designed to ensure that no single use elbows out the others. One such law is the Z'berg-Nejedly Forest Practice Act, which sets forth the Timber Harvest Plan process to regulate how, when and to what degree forests are logged.

How the State carries out the Timber Harvest Plan process can have a dramatic impact on Californians. That impact is tangible for citizens living within hiking or even driving distance of timberlands targeted for harvest. They may enjoy fishing forested streams, backpacking shaded trails or merely taking in a scenic vista in areas untouched by loggers. Or they may be one of the 113,000 people directly employed by the timber industry or the 300,000 people in "ripple-effect" jobs that are linked to the forests.[1] And in 54 counties, timber harvesting is a tax resource to fund local services, with a 2.9 percent tax rate yielding more than $26 million for county coffers in 1992.[2]

The effect of timber harvesting policies are not, however, limited to local areas. Even citizens in the most urbanized regions of the State have a stake in what goes on in the distant tracts of trees, as these two examples at the extreme opposite ends of the policy spectrum show:

- When land is bulldozed into barren desolation and no trees are replanted, entire species may be lost, soil erodes and the quality of nearby waterways is altered; in short, California loses a portion of its rich and self-renewing diversity. On a personal level, such a loss may mean that an ailing cancer patient cannot receive a bark distillate that is believed to be a potent treatment because a tree species has been logged into extinction.

- When logging is halted and the material source for products used in everyday life becomes scarce, prices are driven upwards for everything from houses to pencils. One practical effect is to make California's already-costly homes even further out of reach for average wage earners. Recent timber harvest bans have reduced supplies and pushed up costs so much that the price for a 2,000-square-foot home that requires almost 16,000 board feet of framing lumber increased by $4,600, or almost 4 percent, between October 1992 and February 1993.[3]

In recognition of the numerous and varied impacts, the Timber Harvest Plan process seeks to balance environmental and economic needs, protecting the rich natural resources while allowing property owners to reap the value from their lands. Finding the proper balance is not an easy task; extremists on one end of the spectrum believe a single footstep in the forest -- let alone logging -- is an unacceptable degradation of fragile ecosystems, while at the other end property-rights zealots believe that even complete destruction of the environment is an owner's sacred prerogative. Fortunately, the bulk of the people who either use or manage the Timber Harvest Plan process recognize that there is room for multiple, divergent uses of forests.

The Timber Harvest Plan process allows a critical review of prospective logging operations by the California Department of Forestry and Fire Protection (CDF), the Department of Fish and Game (DFG), the Division of Mines and Geology, the Department of Parks and Recreation and the Regional Water Quality Control Boards. Incorporation of measures to mitigate damage, offset habitat loss and enhance forest renewal after harvesting may be required before a plan is approved.

A well-run system for regulating harvests would have clear guidelines, predictable results, streamlined processes and an outcome that preserves the environment

without unduly hampering economic activity. But despite years of refinements and revisions, the Timber Harvest Plan process appears to fall short of these goals. The following criticisms are often heard:

- The timber industry complains that the process is long, costly and inconsistent.

- Environmentalists charge that there is inadequate public input, sketchy potential damage assessment and a complete lack of mitigation enforcement.

- State officials say they lack the resources to cope with the demands placed on them, even if science provided absolute answers to questions raised when wildlife's needs meet man's desires -- which it does not.

In short, many of the players feel that the Timber Harvest Plan has become a paperwork morass that stifles the economy through job destruction and material price increases without adding a concomitant, meaningful level of protection to the environment.

Brought to the attention of the Little Hoover Commission by Senators Tim Leslie and Mike Thompson, the widespread dissatisfaction with the Timber Harvest Plan process prompted the Commission to conduct a study of the issues. In addition to falling within the Commission's statutory mandate to examine state programs for efficiency and effectiveness, the Timber Harvest Plan study also fulfills the Commission's recently adopted goal of identifying and examining State-erected barriers that discourage business development and depress the economy. Within this context, the Commission recognizes both short- and long-term issues: the impact of the immediate economic effect of timber harvesting and the eventual "quality-of-life" effect of allowing systematic degradation of the State's natural resources.

Working with an advisory group of representatives from state departments, the timber industry, environmental organizations and forestry consultants (please see **Appendix A** for a list of those who participated), the Commission identified issues, conducted research, reviewed academic literature and held a public hearing (please see **Appendix B** for a list of the Commission's witnesses). In addition, multiple field trips to different types of forests and harvest operations give the Commission's work an "on-the-ground" perspective.

The result of the Commission's six-month study is this report, which begins with an Executive Summary and this introduction. The following sections include the Background, two chapters of findings and recommendations and a conclusion. The report closes with appendices and endnotes.

Background

- *Productive forest lands comprise about 18 percent of California's acreage.*
- *The production of lumber and wood products is a billion-dollar industry in California, which ranks third in the nation in volume produced.*
- *The life cycle of a forest is a slow but complex movement through birth, growth, death and rebirth. Management techniques are similarly complex.*
- *Harvesting is governed by state laws, regulations and policies, as well as federal laws and court decisions.*

Background

Studying the Timber Harvest Plan process is not a simple matter of identifying procedural steps, costs and benefits. A complex background of issues sets the stage for much of what happens during the Timber Harvest Plan process. The immense magnitude of California's forest lands has spawned a commensurate industry of wood product producers that is a predominant economic force in some parts of the State. Similarly, the ever-changing nature of the life cycle of a forest is matched by a diversity of methods for managing forest growth and productivity. And, finally, an interwoven web of laws and regulations has given rise to polarized players who rarely find a middle ground of consensus in the quest to use California's natural resources in multiple ways.

Almost 8 million acres of forests are subject to timber harvest plans

California's total land mass is 101 million acres, with 85 million acres of forest and rangeland. Productive forests (those capable of growing at least 20 cubic feet of industrial quality wood per acre each year with continuous management) comprise about 18 percent of the total land mass, or 18.544 million acres. Of that amount, 2.013 million acres are preserved from logging permanently, such as in parks and wilderness areas. Another 8.707 million acres is owned by the federal government, with logging activities and other uses administered by the United States Forest Service.[4] As Table 1 on the next page shows, that leaves 7.824 million acres -- or 47.3 percent of the loggable land -- potentially subject to the Timber Harvest Plan process.

TABLE 1
Owners of Productive Forests Subject to State Control

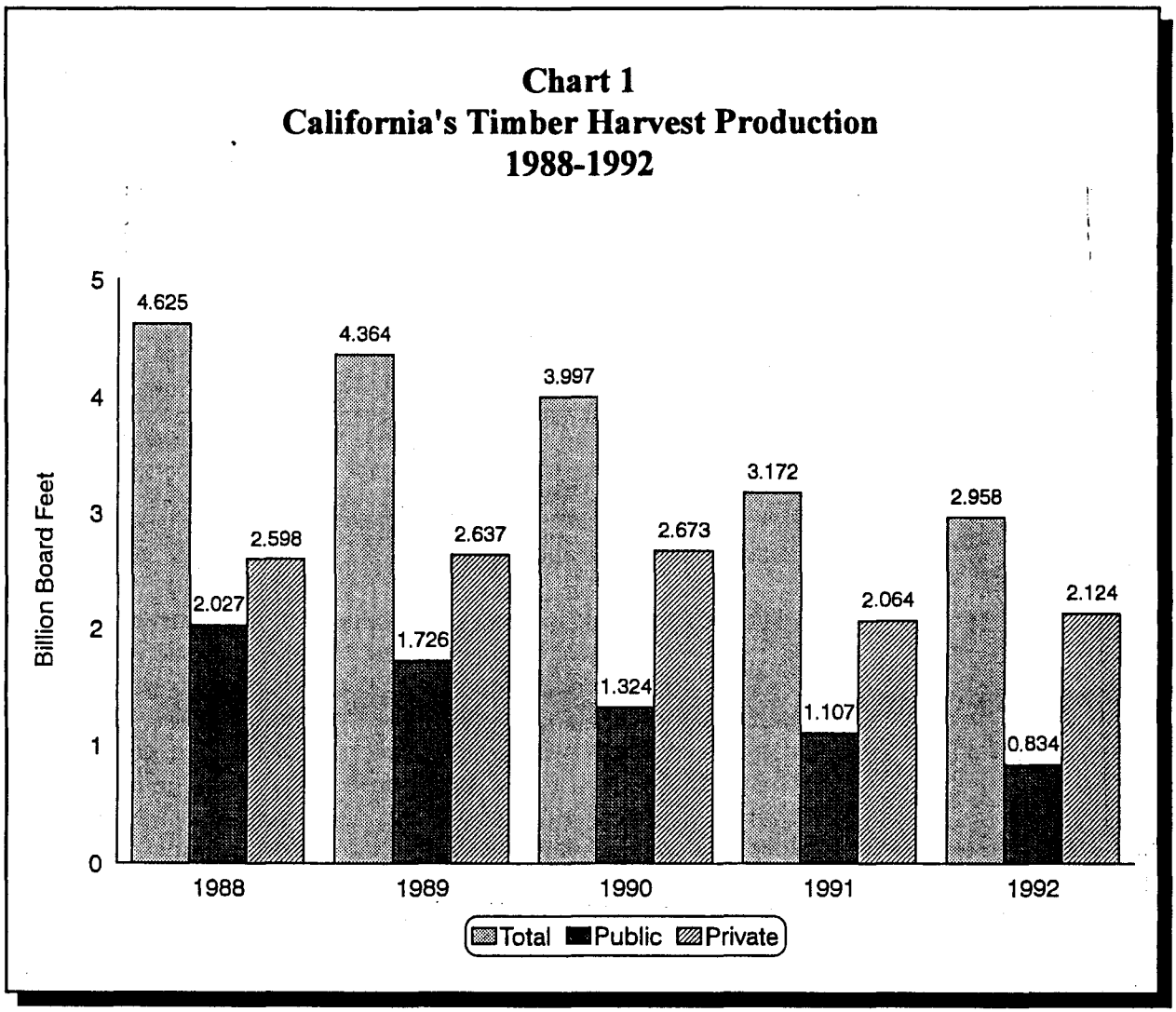
Ownership	*Acreage*	*% of Total*
Public (other than federal government)	698,000	8.9
About 120 timber companies (primary business is timber)	3,758,000	48.0
60,000 to 100,000 small private owners	3,368,000	43.1
Total	**7,824,000**	**100.0**

Source: Department of Forestry and Fire Protection

As the table indicates, the main timber industry is composed of a relatively small number of businesses that own less than 4 million acres. Their holdings constitute almost half of the forest land subject to the Timber Harvest Plan process and about 20 percent of the State's total productive forest lands.

California is a major national producer of wood products

Although 70 percent of timber harvested in California remains in the State, California is a major supplier of wood products for the entire nation, ranking number three behind Oregon and Washington. California harvested 3.0 billion board feet of lumber in 1992, behind Oregon's 5.7 billion board feet and Washington's 5.0 billion board feet.[5] The California figure for 1992 represents a steady decline in total timber harvested during the past five years, as Chart 1 on the next page indicates.



Source : State Board of Equalization

As the chart indicates, the volume of timber harvested dropped from 4.625 billion board feet in 1988 to 2.958 billion board feet in 1992. The sharpest decline came in logging operations on public land (dropping from 2.027 billion board feet to less than a billion board feet). Private land harvests fluctuated from 2.598 billion board feet in 1988 to a five-year high of 2.673 billion in 1990 to a relatively low 2.124 billion in 1992.

Even though volume has declined, timber production is a significant part of the State's economy. The upward pressure on prices that has been created by the declining amount of timber harvested is reflected in Table 2 on the next page which shows the value of harvests for the same five years.

TABLE 2 California's Timber Harvest Values 1988-1992			
Year	***Dollar Value in Millions***	***% Change from Prior Year***	***% Change in Harvest Volume***
1988	$669.16	N/A	N/A
1989	$762.74	+14.0	-5.6
1990	$890.46	+16.7	-8.4
1991	$661.79	-25.7	-20.6
1992	$902.36	+36.3	-6.7

Source: State Board of Equalization

As the table indicates, the value of timber harvested during the five-year period has increased from $669.16 million to $902.36 million despite annual decreases in harvest volume. (The drop in value for 1991 can be explained by the marketplace's slow reaction to the sharp 20.6 percent cut in timber production -- a conclusion that is further reinforced by the steep rise in value the following year when there was a more "normal" decline in volume harvested.)

Forests progress through a cycle of birth, growth, death and rebirth

The almost-billion-dollar timber industry revolves around a non-static resource that is not well understood by much of the public. Trees do not simply stand and form part of the landscape's backdrop while man decides whether to cut them down. Forests are dynamic and progress at a leisurely pace through a full life cycle of birth, growth, death and rebirth, sometimes affected by man and other times affected by nature's potpourri of catastrophes, including lightning-sparked fires, floods, disease, insect infestation and windstorms. Biologists identify several distinct stages in a forest's life, with the beginning stage most easily identified after some major disturbance has left land clear:[6]

- ***Stand initiation stage:*** Seeds dropped from nearby trees and plants, blown by the wind or scattered by birds in flight take hold and begin to sprout. The variety of vegetation will include grasses, shrubs and infant trees. This stage is typified by full sunshine since nothing has reached an age or height that would provide shade. Different species will grow at different rates and, depending on soil,

water and nutrient conditions, certain ones will begin to dominate the new stand of trees.

- ***Stem exclusion stage:*** Dominant trees and plants begin to crowd out their less-suited neighbors. Increased foliage shades the forest floor, killing sun-loving species; others simply find their room to expand blocked by more vigorous competitors. With little ground-level habitat for food and cover (formally called the understory of the forest), animal species are limited.

- ***Understory reinitiation stage:*** As the trees grow older and taller, new plants, shrubs and trees begin to develop on the forest floor. Their environment may be low sunlight/high shade or sunny patches filtered down through areas where trees have died or branches have fallen. Animals are more prevalent, with a diverse habitat provided by young plants and fallen, rotten or hollow trees.

- ***Late successional stage:*** The life-span of trees is long, especially Douglas firs, which may live more than 1,000 years, and coastal redwoods, which may top 1,500 years. But eventually trees die from old age, disease or disaster. Towards the end of their lives, forests with old-growth trees are typified by the large variation in vegetation. Where trees have died and fallen, the "understory" thrives and becomes the overstory. Where old trees remain vital, pervasive shade may continue to hold the understory plant life in check. This stage of the forest is a fertile breeding ground for rebirth, with dying trees falling to the ground, returning nutrients to the earth and paving the way for sunshine to encourage the next generation of trees.

Forests play host to different ecosystems at different stages

As the descriptions indicate, a forest is not merely a collection of trees. Different wildlife and plants may flourish in a forest at different times because of changing availability of cover and food sources. Soil conditions change as forests age and drop materials that decay and add to the nutrient base. Creeks and pools may play host to some aquatic life when they are sun-drenched and other types of water creatures when they are deeply shaded and water temperatures drop. The rate that silt filters into the water differs as plants develop and put out root systems that hold soil in place. All of these factors add up to an ecosystem -- the interlocking conditions that at any one time sustain a specific set of biological diversity.

When an individual or a business owns the land on which a forest grows, their activities may impact the forest ecosystem. How timber operators choose to handle their land is influenced by the life-cycle stage of the forest they own, as well as by their objectives. While some may simply be interested in the immediate value of the logged trees, most who are in the business for the long run aim for sustained yield: the ability to harvest timber from an area in perpetuity by ensuring that timber is replaced by new growth as fast as it is taken out.

How man manages forests for various uses is an art called silviculture

The art of cultivating forests to achieve sustained yield or any other objective is called silviculture. Using one of several silviculture methods, man may establish a new forest (through natural seeding, man-controlled seeding or planting young trees), manage the composition and growth of a forest (through thinning of unwanted trees or use of herbicides to control vegetation), and harvest timber. There are several different approaches to harvesting, each with benefits and drawbacks. Three of the approaches are identified as even-aged management -- developing and maintaining forests that have trees of about the same age. The fourth approach is uneven-aged management, also known as selection.[7] Each is described in Table 3 on the next page:

TABLE 3 Common Silviculture Systems				
Attributes	***Even-Aged Management***			***Uneven-Aged***
	Clearcut	***Seed Tree***	***Shelter Wood***	***Selection***
Definition	Cutting an entire stand of trees; regeneration by seeding or planting; the new stand will be all the same age	Removing mature trees but leaving scattered superior trees to naturally reseed area; once the new trees are established, seed trees are harvested	Similar to seed tree, but superior trees are left standing	Removing mature and intermediate trees selectively on a site; smaller volume, greater frequency of harvest
Advantages	Lower costs for logging and transportation; full sunlight on new growth; can replant with improved stock	Lower cost than shelter wood or selection methods for logging; low regeneration cost; full sunlight on new growth; good breeding	Less erosion risk; some shade and habitat remains; seedlings are protected by mature trees; good breeding	Stand of trees remains balanced; decreased erosion risk; more visually appealing; wildlife habitat maintained; sustained yield of timber
Disadvantages	Soil erosion; lengthy time before next harvest; visually unappealing; no forest cover for wildlife	Destroys existing vegetation by controlled burning of site; many seeds needed for regeneration; not all species can regenerate this way	Requires careful, more costly logging so trees are not damaged; not all species can regenerate this way	Increased cost of logging; frequent entry into the forest; potential damage to residual trees

Source: Department of Forestry and Fire Protection

As the table demonstrates, no single silviculture method is either completely without disadvantage or totally lacking in advantages, leaving ample room for people with different interests to disagree on how forests should be treated. Undisturbed by either man or natural catastrophe, the changes that take place in a forest ecosystem are usually slow and gradual. A devastating fire, started from a lightning strike, can destroy an ecosystem overnight -- and no man-made laws

can protect a forest from that possibility. Similarly, a harvest operation can also destroy an ecosystem, but here laws can have an effect. Thus, the federal and state governments have established policies that regulate timber harvesting, both directly and indirectly.

The state laws that specifically address timber harvesting began with the Forest Practice Act in 1943, which basically prohibited cutting trees less than 18 inches in diameter. Eight years later, provisions were added to limit stream damage and protect fisheries. In 1963, major changes beefed up the State's ability to enforce regulations, including allowing the State to seek an injunction to halt operations not in compliance with regulations and to strip operators of their permits if they failed to follow approved procedures.[8]

State law seeks a balance but sets harvesting as main goal

The keystone state law, under which California still operates today, was enacted in 1973. The Z'berg-Nejedly Forest Practice Act expressly recognized the multiple uses of the State's forest resources but also set out the primary goal of harvesting timber. It states:

> *The goal of maximum sustained production of high-quality timber products is achieved while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, regional economic vitality, employment and aesthetic enjoyment.*[9]

The Timber Harvest Plan originally was a simple and straightforward process created to carry out the law's mandate. But it wasn't long before court decisions, federal laws and other considerations began to overlay the pro-harvest, directive language of the Z'berg-Nejedly Forest Practice Act and require modification of the Timber Harvest Plan process. Those factors included:

- A 1976 court ruling that made timber harvests subject to the California Environmental Quality Act (CEQA, Public Resources Code Sections 21000-21177).[10] This meant that before harvesting could occur, an Environmental Impact Report had to be completed for each site. The Act, however, does allow state officials to certify alternative processes as meeting CEQA's requirements in place of an Environmental Impact Report as long as certain elements are ensured: review by multidisciplinary agencies, public review of written documentation and input, and required mitigation to minimize environmental impact. In 1979, the Resources

Agency Secretary certified the newly revised Timber Harvest Plan process as functionally equivalent to an Environmental Impact Report.

- The federal Clean Water Act, which required states to control and minimize sources of pollution and maintain water quality in watersheds and streams. Forest management and harvesting of timber can add to soil erosion into waterways and can affect the temperature of water -- thus altering the natural state of water that provides a home for plants, fish and animals.

- The federal and state Endangered Species Acts, which requires that plants, fish and wildlife in danger of becoming extinct be protected and that their habitat be preserved.

Timber Harvest Plan process has been shaped by suits, laws

Creating a process that meets the variety of concerns expressed in laws and court rulings has proven an elusive goal. Numerous lawsuits have been filed over Timber Harvest Plans, particularly where old-growth redwoods, at-risk wildlife and sensitive watersheds are involved. Competing interest groups -- mainly environmentalists on one side and timber harvesters and employees on the other -- have fought to shape the Timber Harvest Plan process to meet their own needs through court rulings, legislative tinkering, ballot initiatives and input into the regulatory process.

While looming large in the eyes of those directly involved, the Timber Harvest Plan process does not make the list of top ten issues on surveys about what concerns Californians most. But in 1990 the issue surfaced more visibly when environmentalists placed Proposition 128 ("Big Green") and Proposition 130 ("Forests Forever") on the ballot and the timber industry countered with Proposition 138 ("Californians for New Forestry"). All were soundly defeated despite big-bucks campaigns ($5 million on Forests Forever and $8 million on Californians for New Forestry). But it was difficult to tell whether the voters' rejection was based on the merits of the proposals since almost every other proposition on the lengthy ballot was defeated as well. All three initiatives envisioned abandoning the project-by-project approach of the current Timber Harvest Plan and changing to a broader-based, cumulative-impact approach that would look at entire ecosystems.

Even though the initiatives failed -- or perhaps because of that failure and the fear of future expensive

ballot battles -- the industry, environmental organizations, state departments and legislative representatives turned to a process of discussions and negotiations that culminated in AB 860 in 1991. This bill, known as the Sierra Accord, banned clearcutting of old-growth forests, instead laying out alternative tree-removal standards. Clear-cutting was also regulated on other lands, reducing the maximum size from the current 120 acres to 20 acres. Stream-protection zones were established, with a requirement that 50 percent shade had to be maintained. Overall harvesting was limited to 27 percent of timber inventory per decade in each watershed. And owners of more than 5,000 acres were required to prepare long-term timber management plans for the State's review.[11] The bill was vetoed after passing both houses of the Legislature, with the Governor expressing concern in his veto message that the economy could not bear the strain of the further inroads on timber harvesting jobs that might occur.

A similar coalition put together new legislation for 1992, which became known as the Grand Accord, but both environmental and timber industry groups began to splinter over compromises that they found less and less palatable. This time the bill did not even make it to the Governor's desk.

State efforts to streamline process, improve protections have fallen short

In the meantime, state officials charged with overseeing the Timber Harvest Plans turned to the regulatory process to adopt similar concepts. But that, too, has proven to be a perilous procedure. They adopted temporary emergency regulations dealing with sustained-yield planning in October 1991, only to withdraw them when the Office of Administrative Law (OAL) -- which must approve all governmental regulations -- indicated it would reject them. The regulations were then adopted on a non-emergency basis in October 1992, only to be rejected by OAL in July 1993. The regulations were tried again in October 1993, resubmitted to OAL in November 1993, amended in December 1993 and then the original rules were approved by OAL in January 1994. The amendments were forwarded to OAL in January 1994, but then were withdrawn in February 1994. The regulations, originally slated to become effective March 1, 1994, were then delayed and then become effective May 1, 1994.

In the midst of the attempted regulatory changes, the Governor on June 7, 1993 issued an executive order that instructed all departments to speed up the Timber Harvest Plan process and to develop within 60 days new procedures for quicker and more consistent government approval. Testifying to the Commission in February 1994

(well past the Governor's 60-day deadline), state officials said they were continuing to work on meeting the goals of the Governor's directive.

Blocked on the ballot, stymied in the Legislature and frustrated by the convoluted regulatory system, the competing interest groups have yet to strike a deal that will make harvesting choices painless -- or at least less controversial. Timber interests argue compellingly that the State can afford neither to destroy jobs nor to drive up prices for building materials by heavily restricting harvesting, as the federal government has done on its land. But with pro-business reforms passed by the Legislature in 1993 and with the economy beginning to pull out of its nose-dive, the timber industry employment-doomsday arguments may be losing steam.[12] Environmentalists, on the other hand, argue that species like the spotted owl will disappear forever, unlike jobs that can be developed in other fields, if the ecosystems are not protected. Their arguments are undercut, however, by recent indications that owls are far more plentiful and adaptable than environmentalists have been willing to admit.[13]

Commission's report examines efficiency of process and weighs outcome

Against this backdrop of competing interests, complex forest conditions and economic consequences, the current Timber Harvest Plan process can be examined for efficiency and effectiveness. The following two findings explore these issues with two main questions: 1) Does the process itself operate as well as it should, providing consistent answers in a competent and productive way? 2) Is the outcome of the Timber Harvest Plan process consistent with the goals of the State to provide balanced, multiple uses of natural resources?

The Process

- *The Timber Harvest Plan process is frustrating for all participants: the industry, environmentalists and state departments.*
- *Different priorities and perspective lead to inquities and inconsistencies in how plans are handled.*
- *Time is a problem: The industry says plan processing takes too long, while environmentalists say there isn't enough time for adequate review.*

Recommendations:

- *Develop guidelines that will ensure consistency.*
- *Restrict changes in regulations to once or twice a year.*
- *Extend public comment period and provide better outcome disclosure.*

change so often and quickly that it is impossible to keep up with the latest nuances. Critics maintain that a plan that is designed around one set of rules may be held to an entirely different standard before the approval process is complete.

Board of Forestry records show that a total of 76 rulemaking packages were promulgated and put into effect in the 16 years between 1978 and 1994, an average of five a year. During the two-year period from 1990 to 1992, 16 rulemaking packages were enacted and during the latest 1992-1994 period eight packages have been adopted or promulgated so far. A Board analysis indicates that 43 percent of the rule changes were in response to concerns raised by state agencies, 22 percent in response to new laws and the remaining 35 percent were split about evenly between timber industry requests and public concerns.[20] (Please see **Appendix C** for a description of the rule changes by year.)

Changes that come so quickly, one on top of another, make it difficult for all the players to have the same thorough understanding of what is required and what is allowed. Other agencies that deal with multiple regulatory changes have succeeded in organizing their process in a more orderly manner, according to experts on the State's regulatory process. While state law makes new regulations effective 30 days after they are approved by the Office of Administrative Law and filed with the Secretary of State, the law also allows a regulation to have a later effective date if ordered as a policy matter by the rule-making agency and included in the regulation itself. Currently, however, the Board of Forestry practice is to have regulation changes take effect 30 days from filing.

State departments claim they lack staff for thorough review

While there is general dissatisfaction with inconsistent and unclear policies, each of the participants in the Timber Harvest Plan process also has specific complaints keyed to their own interests. For state departments, the issue is one of resources. The three major players on the state side of the program each complain that they do not have adequate staff to do a thorough job of analysis and review. More specifically:

- CDF spent $6.4 million and assigned 74 staff in 1989-90 to handle 1,587 Timber Harvest Plans. By 1993-94, plan submissions had dropped to 1,206 but the department had increased spending to $9.1 million and staffing to 98. Despite the augmented ability to process the plans, CDF complains that the

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The Process

Finding #1: The current Timber Harvest Plan process is complex, inequitable and costly, producing frustration for the administering state departments, the timber industry and environmental advocacy groups.

Participation in the review of Timber Harvest Plans is spread across two agencies, four departments and seven boards, leaving the process open to inconsistent policy application and fragmented leadership. Rules regulating the process change so frequently that participants are often unclear about what standards they are required to meet. In addition, the process is the target of criticism from all sides, including:

- State departments, which say they lack the resources to do the thorough review required by a combination of state and federal laws.

- The timber industry, which says demands for more information as new laws, regulations and court orders come into play makes the Timber Harvest

Plans increasingly lengthy and costly for the harvesters. Timber industry interests are also critical of approval delays -- especially in the case of controversial and complicated harvesting proposals.

- Environmental groups, which say the limited amount of time for public input effectively rules out any meaningful analysis and response. Too often, they add, the plan is a paperwork exercise that is routinely approved.

For different reasons, there is general consensus by all parties that the Timber Harvest Plan process, which is constantly undergoing fine-tuning and reform, is a moving target that is both cumbersome and inefficient.

Timber harvest process requires a plan prepared by a forester

The Z'berg-Nejedly Forest Practice Act (Public Resources Code Section 4511 et. seq.) requires that, before any harvesting occurs, a Timber Harvest Plan be prepared by a registered professional forester, submitted to CDF and approved by the department director. CDF has 45 days (unless mutually waived at one of several stages by the submitter and the department) after the plan is filed to convene a review team, analyze the plan for conformance with the State's objectives and approve or reject the plan. Once approved, the plan is valid for three years, with a maximum extension of two years. The Timber Harvest Plan process is waived in emergencies (such as after-fire cleanup) and exemption mechanisms are provided.

Plans include information about:

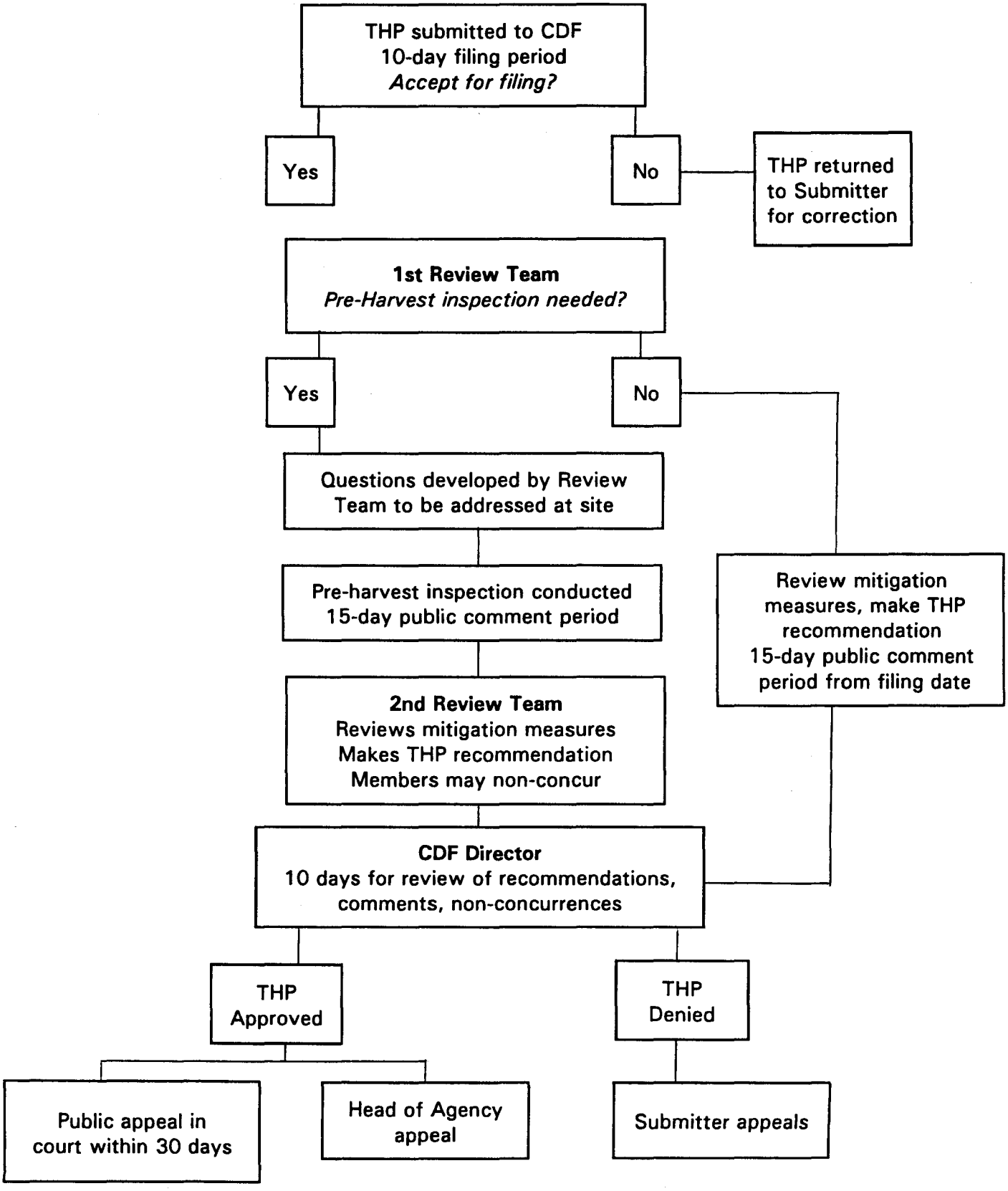
- The proposed timber operation, such as owner, harvester and expected start and completion dates.

- The existing condition of the forest, such as the location of streams and roads, acreage, presence of sensitive wildlife and a description of the land.

- The anticipated approach for harvesting without damaging the environment, including silvicultural method, logging equipment to be used, erosion control plans and habitat protection steps.

When a plan is submitted, a multi-stage process begins, as diagrammed on the next page in Chart 2:

Chart 2
Timber Harvest Plan (THP) Review Process



As the chart indicates, a plan is first reviewed for accuracy and completeness. If errors or omissions are found, CDF returns the plan for corrections within 10 days and the amended plan may be resubmitted. Once a plan is determined to be accurate and complete, it is accepted for filing.

Once the plan is filed, CDF convenes the first review team, composed of representatives from CDF, DFG, the affected Regional Water Quality Control Board and the following agencies if the plan falls within their jurisdiction: the Department of Parks and Recreation, the Regional Coastal Commission and the Tahoe Regional Planning Agency. A representative of the local county government may also sit on the team and the Division of Mines and Geology provides consulting expertise on geological conditions.

Reviewers may decide to visit the harvest site and ask questions

The first review team determines if a pre-harvest inspection of the site is necessary. If so, questions and concerns from all agencies are compiled so they may be discussed with the registered forester who prepared the plan during the site visit. Typical areas of concern are the effect of harvesting on the overall watershed (the area on beyond the forest singled out for harvesting that is defined by how water drains and flows through a system of rivers and streams); the threat to habitat for wildlife or plants that are sensitive, threatened or endangered; the danger of increased soil erosion or landslides; and the effect on existing streams and streambeds. Team members discuss measures the harvest operator could take to lessen environmental impact, assessing both cost and effectiveness of different mitigation alternatives.

After the inspection, the plan is reviewed for a second time. The team may decide the plan does not conform to state standards and recommend to CDF's director that it be rejected. More typically, mitigation measures may be recommended for inclusion in the plan and the team forwards the plan to the CDF director for approval. If a department that has a different perspective or priority from CDF's believes the team has incorrectly left out mitigation measures, that department may file a non-concurrence on the team recommendation with documentation for its preferred mitigations.

The completion of the pre-harvest inspection (or the filing of the plan if there is no pre-harvest inspection) triggers a 15-day period during which the public may comment on the plan and suggest modifications. At the

close of this period, CDF's director has up to 10 days to consider the review team's recommendation, any dissenting or modifying recommendations by participating departments and the public input. The director then either denies or approves the plan.

If the plan is rejected, the submitter has 10 days to appeal and request a public hearing, with a response required within 30 days. If the plan is approved, DFG or the State Water Resources Control Board may file a "Head of Agency" appeal if they continue to have concerns, as long as they have participated in the pre-harvest inspection and review process. The public's only recourse to reverse a Timber Harvest Plan approval is to file a lawsuit within 30 days.

The team process for reviewing plans involves several agencies

As the review team composition and the decision-making process indicates, the Timber Harvest Plan review involves several different state bodies, with CDF acting as the lead agency and final arbiter of decisions. A description of the entities involved and their responsibilities:

- ***California Department of Forestry and Fire Protection*** -- CDF administers the Timber Harvest Plan process in accordance with the Z'berg-Nejedly Forest Practice Act, the California Environmental Quality Act and the Forest Practice Rules (California Code of Regulations Title 14). Its duties include accepting the plans for filing once they are complete and accurate, assembling the interdepartmental team that reviews the plans, conducting inspections, consulting with other departments, proposing mitigation measures to protect ecosystems, providing a mechanism for public input and state response, approving the plans once they conform with state standards and taking enforcement action if necessary. The department in 1993-94 spent slightly more than $9 million and used almost 100 personnel on Timber Harvest Plan activities.

- ***The Board of Forestry*** -- The board, nine members appointed by the Governor, is responsible for formulating and adopting rules that carry out state policy regarding timber harvesting as expressed in laws. Their timber harvesting-related duties besides rule-making include registering and regulating professional foresters and licensing and regulating timber operators.

- ***The Department of Fish and Game*** -- DFG has three roles in helping CDF assess Timber Harvest Plans:

  - Acting as a technical consultant, DFG provides CDF and the Board of Forestry with biological expertise on wildlife, fishery and plant life.

  - DFG administers the California Endangered Species Act and is the lead state agency for the Federal Endangered Species Act. Thus, the department ensures that protective measures are taken for species listed as threatened or endangered, as well as advocating on behalf of "sensitive" species or species of concern (those that are not yet listed but that are believed to be fragile).

  - When a Timber Harvest Plan proposes altering a streambed, DFG is in charge of creating a legally binding agreement that lays out mitigation measures to protect fish and wildlife.

  The department in 1993-94 spent almost $900,000 and earmarked 14 staff for Timber Harvest Plan activities.

- ***Division of Mines and Geology*** -- A unit within the Department of Conservation, the division identifies geological factors that indicate the potential for landslides, erosion and slope instability. Their review is particularly concerned with proposed road construction, stream crossings, logging on steep slopes and areas of high erosion hazard. The division in 1993-94 spent $450,000 and used five staff for Timber Harvest Plan reviews.

- ***Department of Parks and Recreation*** -- The department reviews Timber Harvest Plans when there is a potential impact on state parks, either from direct contact with the harvest site, increased traffic or diminished scenic qualities. A single forester is on staff to handle Timber Harvest Plans as needed.

- ***The State Water Resources Control Board and five of its nine Regional Water Quality Control Boards*** -- The Porter-Cologne Act of 1969 (Water Code,

Sections 13000-14050) provided the State Water Resources Control Board and the nine area boards under it with the authority to protect, maintain and enhance the quality of California's water. In addition, under the Federal Water Pollution Control Act of 1972 (Public Law 92-500, also referred to as the Clean Water Act), the state board is the lead agency for halting water pollution. Degradation of streams, rivers and other water from logging activities falls in the jurisdiction of the state board and the five regional arms that encompass the state's harvesting sites and is subject to the State-adopted standards for water quality. The board in 1993-94 spent almost $1 million and earmarked 10 staff for Timber Harvest Plan activities.

Different priorities lead to disputes, turf battles, inconsistencies

As the descriptions make clear, CDF is in charge of a process that is subject to extensive outside regulation through state and federal laws that address a variety of factors beyond the timber being logged. CDF's perspective is not always the same as the other departments involved -- and according to those subject to the Timber Harvest Plan process, the differing perspectives can lead to turf battles, time-consuming disputes and inconsistent policy application.

Plan submitters are particularly critical of the role played by the Department of Fish and Game, which estimates that it becomes involved in the review of approximately 20 percent of Timber Harvest Plans. The timber industry charges that DFG staff fail to disclose their concerns during pre-harvest inspections when issues could be resolved or research initiated, instead raising them later and delaying the process.

In addition, timber harvesters say that DFG biologists sometimes make recommendations not grounded in proven scientific findings, not based on actual knowledge of conditions or not in line with state policy. Three examples given by the timber industry include:

- DFG wanted the timber harvester to develop a "late-seral" habitat management plan (late seral is a phrase that denotes plants and animals near the end stage of a life cycle succession). But the plan submitter argued that no endangered or threatened species had been found and that the State's regulations do not require mitigation of impact on species that have not been listed as endangered or threatened. In addition, DFG acknowledged that there would be no jeopardy to the federally and

state protected marbled murrelet. CDF approved the plan despite DFG's non-concurrence.[14]

- On another site, DFG wanted harvesting plans altered so no clearcutting would take place near the habitat of tailed frogs. The harvester argued that although tailed frogs were to be found on the site, the species is neither endangered, threatened nor on the Board of Forestry's sensitive-species list. It is on DFG's list of species of special concern, a list of potential candidates for the State's endangered and threatened rankings. But state regulations do not require protective measures for such species. While the harvester agreed to several compromise measures to meet DFG concerns, DFG filed a non-concurrence. CDF approved the plan.[15]

- A plan that proposed to thin five acres on top of a ridge was met with resistance by DFG, which argued that in the surrounding 30,000-acre watershed 47 percent of the timber had been clearcut in the past decade. With both the northern spotted owl and the bald eagle reported in the area, DFG said that, while there was no direct impact on the two protected species, the cumulative impact on streams would reduce fish life and therefore reduce the available food source. DFG recommended that the plan prohibit any discharge of sediment into the waterway, hauling in the watercourse and tractor operations in some areas. The timber company countered that there was no factual evidence the waterway would be degraded, that a zero net discharge plan was unnecessary and not prescribed by state regulation, and that DFG lacked specific quantitative data. CDF approved the plan and DFG filed a non-concurrence.[16]

DFG defends its efforts to ensure plans protect species

DFG officials say neither the delays nor the requests for extra mitigation efforts are unreasonable. They say some Timber Harvest Plans contain little or no baseline information about fish and wildlife on timber sites. That means that when biologists participate in pre-harvest inspections, they may not be able to determine immediately all of the areas of concern and further information may be sought later. This causes a delay -- but the delay is actually the fault of the submitter who did not supply adequate information to begin with, the department believes.

While the Timber Harvest Plan process as outlined in regulations focuses on how to harvest timber with the least impact, DFG feels its mission is to protect fish and wildlife resources from significant direct and cumulative impacts resulting from timber operations. This reversal of priorities, some believe, makes DFG more sensitive to plant, animal and fish needs than to the balance sought in the current Timber Harvest Plan process or to the pro-harvest goals envisioned in the Z'berg-Nejedly Forest Practice Act.

DFG's resources limit its review activities to 20% of plans

DFG says it singles out the 20 percent of the Timber Harvest Plans that it reviews based on the existence of threatened, endangered or sensitive species in the area, old-growth forests, waterways that are used by fish who swim upstream to spawn, landscape-wide evidence of cumulative impact and wetlands or other unique habitat.

Examples given by DFG of its input into the Timber Harvest Plan process that it believes is critical to protecting plant, fish and wildlife through reasonable measures include:

- Restrictions on removing fallen trees and large logs on the banks of a stream. DFG argued that disturbing the "downed woody material," as it is called, would release large amounts of soil and sediment into the creek. This would pose a risk to both the coast cutthroat trout and the torrent salamander living there. The plan submitter agreed to the restrictions.

- A survey to tally and mark a minimum number per acre of green wildlife trees, snags (standing dead trees) and hardwoods so they could be avoided during the logging and preserved as habitat. The harvester had indicated an intent to save such trees, but DFG felt that without a survey in advance there would be no means of enforcing the agreement to leave trees in place selectively. The plan submitter accepted DFG's recommendations.

- Weekly surveys for greater sandhill cranes during their breeding season. If cranes were found, a buffer zone eliminating logging operations within one-quarter mile of the cranes would be established. The cranes are listed as a state threatened species. While acknowledging that the timber operation would have little impact on crane habitat, DFG was concerned that the timing of the

logging might disrupt their breeding. The cranes are believed to be particularly sensitive during courtship, incubation and young-chick stages, although little scientific information about protective measures has been developed. While buffer zones in this kind of case are not addressed in the Board of Forestry rules, the plan submitter ultimately did agree to DFG's recommendation.

It is examples like the last one that lead to industry charges that plans are not handled consistently and "by the book." Of two similar plans filed at the same time, one may surface on DFG's 20 percent review list and the other may be overlooked. The result is vastly different treatment, industry sources say. While some plan submitters find it easiest to work out a compromise with DFG, others are insistent that they should not have to take measures that are not required in the regulations and that have a dubious claim to being scientifically based.

CDF sometimes is in the middle of conflicting goals for plans

Complaints are not limited to the timber industry. Staff in different departments complain that some personnel seem to be in the pocket of industry while others charge that problems are created by obstructionist pseudo-scientists who want to protect everything. Amidst these charges and counter-charges, CDF must pick and choose the advice it will heed as it completes the approval process. It is difficult to find hard data on how often CDF ignores mitigation recommendations by other departments and how effective accepted recommendations are.

One participant in the Timber Harvest Plan process, however, has examined its record of input. The Division of Mines and Geology performed two studies, one covering plans submitted in the mid to late 1970s and the other covering the late 1970s to early 1980s.[17] The results showed that of 267 recommendations made in 35 Timber Harvest Plans, 220 were accepted or modified by the review team -- an 82.4 percent success rate. Recommendations implemented in the field totalled 187. An assessment of the effectiveness of those 187 recommendations showed that 167 worked partially or fully. The Division was able to use the information not only to determine how pertinent its role is in the review process but also to assess whether recommendations it makes are valid and worthwhile.

On beyond questions of effectiveness, state personnel in affected departments are also frustrated with the lack of direction for interpreting regulations about

complex natural resource issues. DFG has attempted to address this and the issue of inconsistency by developing guidelines to assist field personnel on plan reviews. Rather than being helpful, these guidelines have been viewed by the timber industry as underground regulations -- restrictive rules adopted without the public-input process required for formal regulations. The example cited is DFG's guidelines on snags, the standing dead trees that are considered important to wildlife habitat, nutrient recycling and forest diversity. The industry said the guidelines conflicted with existing regulations and imposed additional restrictions on harvesters.[18]

While viewed as a sign of inconsistency when state departments take different approaches to the regulations, flexibility is the word used by the Board of Forestry for the leeway allowed to professional foresters. The forester may develop alternative practices to those required by the regulations based on site-specific data and use his or her professional discretion in determining what to include in the Timber Harvest Plan.

Mutual mistrust is outcome of a process open to interpretation

The different perspectives brought to the process by the timber harvester, the professional forester and the different department personnel, coupled with the flexibility allowed in the regulations and the demands of laws not specifically directed at forests, yields an unsurprising result: mutual mistrust and rancorous exchanges. Neither issues nor responsibilities are clearly enough defined to avoid turf battles, according to those mired in the process.

Half of that equation -- the departmental responsibilities -- was addressed in a document entitled "Roles, Responsibilities and Authorities of the Departments of Fish and Game and Forestry and Fire Protection," which was issued by the Secretary for the Resources Agency on January 4, 1994 as part of the response to the Governor's directive to streamline processes. The other half -- clearly defining issues -- has yet to be resolved, although it has been a long-standing recommendation. A formal report to CDF in 1989 recommended that the Board of Forestry and DFG work together to develop guidelines for wildlife issues as they relate to the forest practice rules.[19]

Although the Board of Forestry has not managed to satisfy the concerns of those using the Timber Harvest Plan Process, it has not ignored the complaints. The Board has frequently fine-tuned the program through regulatory changes. In fact, this has given rise to another source of frustration and criticism: The forest practice regulations

change so often and quickly that it is impossible to keep up with the latest nuances. Critics maintain that a plan that is designed around one set of rules may be held to an entirely different standard before the approval process is complete.

Board of Forestry records show that a total of 76 rulemaking packages were promulgated and put into effect in the 16 years between 1978 and 1994, an average of five a year. During the two-year period from 1990 to 1992, 16 rulemaking packages were enacted and during the latest 1992-1994 period eight packages have been adopted or promulgated so far. A Board analysis indicates that 43 percent of the rule changes were in response to concerns raised by state agencies, 22 percent in response to new laws and the remaining 35 percent were split about evenly between timber industry requests and public concerns.[20] (Please see **Appendix C** for a description of the rule changes by year.)

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increasing complexity of plans and required considerations during review have made it difficult to do a thorough, timely and accurate job. [21]

- DFG says that the department's responsibilities regarding the Northern spotted owl, listed by the federal government as threatened in July 1990, have forced it to reassign 12 staff formerly handling timber plans. Timber Harvest Plans are now reviewed by DFG only a spot basis, with the department estimating it examines only 20 percent of plans filed. The department expressed concern that it will be understaffed to respond appropriately if the Timber Harvest Plan process is refined in the future to require more widespread assessment of cumulative, large-area impacts of logging.[22]

- The State Water Resources Control Board, indicating that funding and staffing does not match its need to be involved in Timber Harvest Plans on sensitive watershed areas, has directed Regional Water Quality Control Boards to use their discretion and only review plans where board involvement will be cost-effective. The state board says that any diminished involvement in the review process may threaten the legal underpinnings that allow the Timber Harvest Plan to be used in place of an Environmental Impact Report, in addition to placing federal funding that is dependent on water quality oversight at risk.[23]

Timber harvesters complain about plan delays, cost and complexity

While bureaucracies often complain that there are not adequate resources to meet obligations, critics of the Timber Harvest Plan process acknowledge that staffing constraints exist and are a primary cause of the treatment inconsistencies met by plans filed at different times. In addition, limited staff resources contribute to a primary criticism lodged by the timber harvest industry -- delayed processing. The industry also charges that plans are growing increasingly lengthy and costly.

Length and cost data are difficult to pin down because different Timber Harvest Plans vary greatly in these two areas. Industry sources say the average plan runs about 100 to 150 pages and costs the timber owner between $8,000 and $15,000 to prepare.[24] But complicated or controversial plans may run to hundreds of pages and cost upwards of $100,000.

Using the average figures and the 1993 number of plan submissions (1,206), it can be estimated that the timber industry as a whole pays between $10 million and $18 million annually to prepare plans. Based on 1993-94 budget figures, the State's various departments and boards spend more than $11 million analyzing the plans. The total $20 million to $30 million cost from both sides represents a 2 to 3 percent factor when applied to the entire billion-dollar timber harvest value (although timber included in the value figures logged on federal land is not subject to the Timber Harvest Plan process, a factor that drives the cost up, possibly to 5 percent).

The industry's contention that plans are getting lengthier is easier to document. When CDF's Santa Rosa office measured the file space taken up by Timber Harvest Plans, it found that in 1989 plans averaged one-quarter of an inch thick, rising to a third of an inch in 1990, slightly more than half an inch in 1991 and three-quarters of an inch in 1992. The average size leaped dramatically to an inch and one third in 1993. For comparative reference, a standard ream of paper (500 sheets) is two inches thick.

Opportunity for delays in plan approval comes in two places

The issue of delays can be examined in two different ways: before filing and after filing. The first opportunity for delay occurs before the plan is accepted for filing. When the plan is reviewed for completeness and accuracy, it can be returned to the submitter for corrections. This allows a delay because the mandated timeline for review and approval begins when a plan is filed, not simply submitted.

As Table 4 below shows, plans have been returned with increasing frequency during the past five years:

TABLE 4
Timber Harvest Plans Returned to Submitters
1989-93

Status	*1989*	*1990*	*1991*	*1992*	*1993*
Plans Received	1,587	1,573	933	1,007	1,206
Plans Returned	173	376	326	437	496
% Returned	11%	24%	35%	43%	41%

Source: Department of Forestry and Fire Protection

As the table indicates, in 1989 the most plans were submitted and the least number were returned, for an 11 percent return rate. By 1992, the rate of return had climbed to 43 percent, leveling off slightly to 41 percent in 1993 when almost 500 plans were returned for corrections.

The industry contends that CDF has been overly critical, rejecting plans for unimportant differences in wording or "missing" information that is actually in the plan. In addition, plans have been submitted, returned, corrected and resubmitted, only to have the plan returned again for some other oversight not noted in the first review.

CDF, however, contends that the plans are returned for valid reasons. The department studied the plan returns in 1993, documenting the reasons for the initial rejection. Table 5 on the next page shows the reasons for plan returns:

TABLE 5
Summary of Reasons for Returning Timber Harvest Plans to Submitters
1993

Inadequate Portion of Plan	*% of Returned Plans*	*Examples of Missing Data*
Notice of Intent	68%	Name of forester, plan submitters, owners; location by county; distance of nearest stream; estimated size of area; regeneration plan to be used; Notice of Intent to be posted
Watercourse and Lake Protection	52%	Justification for proposed alternative practices; map of all watercourses; plans to retain shade, stabilize banks; soil deposits to be removed
Inadequate Mapping	52%	Information on map not clear; location of roads; location of watercourses; location of areas of erosion hazard; location of boundaries
Cumulative Impacts Assessment	48%	Past and future projects; watershed resources; biological assessments; soil assessments; rationale for establishing resource areas; vehicular traffic impacts
Harvesting Practices and Erosion Control	28%	Justification for measures to stabilize soil; information on areas with slopes in excess of 50 percent; winter operating plans; use of tractors; mitigations needed for unstable areas
Contents of Plan	20%	Phone number of timber operators; type of equipment to be used; listed species and habitat; general physical description
Implementation of Act Intent	16%	Information regarding forester's responsibility to provide information about the plan, resource areas and nature of operation in sufficient and clear detail
Archeological	16%	Tribal contacts; identified sites; description of survey methods; separate addendum about sites
Silvicultural Methods	12%	Description of the method to be used; ineligible exception to stocking standards; information about alternatives
Insect Prevention	12%	Feasible measures to mitigate in area identified as insect infestation zone; alternatives to protect pine brood material
Wildlife Protection Practices	12%	Recommended surveys not conducted; description of steps to protect habitat; justification for way species and habitat will not be impacted

Source: Department of Forestry and Fire Protection

As Table 5 indicates, plans returned often had simple items missing, such as the complete names and addresses of the landowners. But they also fell short in more significant areas, such adequately describing plans to preserve habitat and protect waterways.

In 1993, CDF worked with the California Licensed Foresters Association and the Professional Foresters Examining Committee (an offshoot of the Board of Forestry) to develop a Timber Harvest Plan checklist. Released in June 1993, the checklist is supposed to assist foresters in filling out Timber Harvest Plans completely and accurately. The list has 68 items to be checked off after completion, including the most basic information (such as names and addresses) and more detailed topics (such as silvicultural methods, soil stabilization plans and watercourse protections steps). How successful the list will be in reducing the number of returned plans and cutting down on the approval delays has yet to be determined. In October 1993, CDF adopted the checklist as its official guideline for determining whether a plan is ready for filing and set a policy of allowing minor problems to be fixed with "pen and ink" changes or faxed responses from the forester.

Processing 20% of 1993 plans took longer than 45-day limit

The other area for delay occurs during the review process when departments are trying to gather enough information to make valid assessments of plans. Using the mandated 45-day timeline, CDF reviewed the records for plans submitted from January 1, 1993 through November 25, 1993 to determine how many were delayed. Of 817 plans, 653 (80 percent) were approved in less than 45 days and 164 (20 percent) took longer than 45 days. The department reported the following typical reasons for the delays:

- Time extension for pre-harvest inspection -- requested by forester, to allow plan modifications, because of bridge out, because of bad weather blocking access.
- Awaiting forester response on Northern Spotted Owl determination.
- Awaiting requested engineering geologist report.
- Wildlife cumulative impacts evaluation incomplete.
- Discovery of archeological site.

- DFG -- consultation on marbled murrelet, concerns about old-growth tree issues, request for fish study to document the lack of need for zero-net discharge restrictions.

- Required consultations with federal agencies when endangered species are involved.

- Discovery of sensitive, threatened or endangered species late in the plan process.

While data was not quantified according to the size of the timber harvest area, many believe the approvals that are delayed beyond the 45 days usually involve large, complex or controversial projects.

Environmentalists say timeline too short for adequate review, comment

While the delays and lengthened timelines are aggravating for timber operators, environmental advocacy groups have the opposite problem. They find the 15-day public comment period too short and inadequate for proper analysis and response to Timber Harvest Plans -- particularly since circumstance often pares the 15 days down to a much shorter period. For purposes of efficiency and postage savings, CDF sends out mass notifications of several Timber Harvest Plans at once to persons who have asked to be notified.

For example, one person received on December 2, 1993 a notification about eight Timber Harvest Plans that had been mailed on November 30, 1993 by the department. The plans had different filing dates (November 23, 24 and 29), resulting in three separate close-of-comment dates: December 8, 9 and 14. This meant the person had six, seven and 12 days respectively to go to a CDF regional office, obtain copies of the Timber Harvest Plans, review and assess each, and then provide pertinent comments on eight plans.

Further frustrating meaningful public input is the fact that the public is not notified again when a Timber Harvest Plan is revised, either by the submitter or by department modification. In fact, such modifications are not brought to the attention of participating departments either if the review team has already completed its meetings about the plan, so the other agencies often are not able to alter their assessment based on the final plan.

Environmentalists question whether the current process meets the CEQA requirements for "a reasonable time for review and comment by other public agencies and the general public."[25] In addition, environmentalists

complain that the process is a rubber-stamp paperwork exercise that rarely stops logging regardless of environmental conditions. Table 6 displays the actions taken on Timber Harvest Plans during a five-year period:

TABLE 6
Timber Harvest Plan Outcome
1989-93

Status	*1989*	*1990*	*1991*	*1992*	*1993*
Plans filed	1,587	1,573	933	1,007	1,206
Approved	1,535	1,353	821	909	1,084
Denied	13	12	2	1	2
Dept. non-concur	3	4	5	4	13

Source: Department of Forestry and Fire Protection
Note: Numbers do not add up because plans may be withdrawn before rejection or approved in another year.

As Table 6 shows, very few Timber Harvest Plans are rejected: 13 in 1989, dropping to 2 in 1993. And despite complaints about turf wars, departments outside of CDF rarely file the paperwork to indicate that they do not concur in the decision to approve a plan: three were filed in 1989, jumping to 13 in 1993.

Plan process is not blocking harvesting despite complications, cost

One conclusion that can be drawn from the statistics is that CDF is operating true to the directive of the Z'berg-Nejedly Forest Practices Act to allow harvesting. The Timber Harvest Plan process is not blocking logging operations, though it may be making them more complicated or costly. Instead the process apparently is designed to allow harvesting while requiring measures to minimize damage to the environment -- a different standard than prohibiting harvesting to prevent damage to the environment.

The same philosophy of enabling harvesting can be seen in the processes that govern timber operations in the nation's other two major wood supplying states, Oregon and Washington. Both states offer a streamlined process:

- Oregon's equivalent to the Timber Harvest Plan is a single, two-sided page "Notice of Operation/Application for Permits" to be completed 15 days before logging begins. An added written plan may be required if the harvesting is near a sensitive site, such as a fish-bearing stream. These

plans, which are required for 15-20 percent of the timber operations, usually run about a dozen pages. Between 15,000 and 20,000 notices are filed per year, with the cost for filing ranging from $40 to $2,000.[26]

- Washington requires a four-page "Forest Practice Application/Notice," with added material depending on the classification that Washington has assigned to the forest. Class I forests require no application or notification while Class IV forests require an approved application, an Environmental Impact Statement, information about threatened and endangered species and other reports, as well as a 60-day review period. With about 13,000 applications a year, costs range from $50 to $75,000.[27]

Both states, however, are moving toward more stringent restrictions. In Oregon, the Board of Forestry recently reviewed a rule package that would significantly increase protection for water and riparian habitat. Washington adopted in 1992 rules and standards that concentrated on environmental issues such as waterquality and habitat protection.

Plan process must meet many needs including equity and consistency

While California's process may be more intensive than that required by other states at the moment, its requirements do not appear out of line when considered in the context of the multiple laws and mandates it is designed to satisfy: the California Environmental Quality Act, laws regarding the preservation of species and laws regulating water quality, among others. Criticisms about the process resulting in inequities, inconsistencies and frustrating interchanges, however, are widely acknowledged as credible. An important goal for the State should be to enact reforms that will transform the current Timber Harvest Plan morass into an equitable and efficient process.

Recommendation #1: ***The Governor and the Legislature should direct the Board of Forestry to develop integrated policies and guidelines -- in consultation with the Department of Forestry and Fire Protection, the Department of Fish and Game, the timber industry and environmental groups -- to govern wildlife, fish and plant issues raised by Timber Harvest Plans.***

A key problem is inconsistent critiques of and decisions about Timber Harvest Plans. One plan may be required to address certain wildlife issues even though they are not clearly delineated in the forest practice regulations while another similar plan may be overlooked by biologists. The adoption of mutually acceptable guidelines and policies would provide a framework for equitable and predictable treatment of all plans.

Guidelines should have enough flexibility to account for site-specific conditions, yet provide enough parameters to ensure consistency. Such guidelines would assist in narrowing current differences in perspectives by departments that must interpret existing rules and would provide an accountability structure for decision-making.

The legislation authorizing the interpretive guidelines should clearly link the guidelines to existing regulations as clarifying material, allowing their adoption in the form of an "operations manual," as other state departments have done, to avoid the arduous and drawn-out regulatory process. Although the guidelines would not be subject to the regulatory public-input process, the Board should be instructed to ensure participation in the drafting of the guidelines by all interested parties.

Recommendation #2: The Governor and the Legislature should enact legislation that makes regulations promulgated by the Board of Forestry effective at specific times of the year.

The large number of forest practice regulatory changes that take place each year causes confusion and frustration for timber owners, foresters and state agencies. Grouping regulatory changes so they become effective at one or two specific dates a year (such as January 1 or July 1) would allow for better advance planning by the industry and preparation time for state departments. The legislation should ocntinue the current provision for immediate adoption of emergency regulations when justified.

Recommendation #3: The Governor and the Legislature should enact legislation to extend the public comment period for Timber Harvest Plan reviews and require notification of outcome.

The current 15-day period -- sometimes reduced by mail time and other factors -- does not allow adequate time for thorough analysis and response. And the existing practice of modifying plans without alerting the public may result in the public being unable to supply pertinent input. Instead, public members who have requested to be on a notification list should be alerted when a plan is first submitted (rather than when it is accepted for filing) and then notified again when the plan is sent forward by the review team with its recommendations and any non-concurrences to the Department of Forestry and Fire Protection's Director. The first notification would serve as an "early warning" system that harvesting is contemplated, while the second notification would give the public access to the plan as modified and critiqued by state officials.

Granting the public a 10-day response period from the time the plan is forwarded to the director (and modifying his decision-making time to 15 days to allow him to consider the public input) would result in an overall

longer public comment period without significantly delaying the Timber Harvest Plan process.

The Outcome

- *Timber Harvest Plans have not protected the environment from degradation.*
- *The plans are too narrow in scope, examining only a small portion of an ecosystem.*
- *State efforts are focused more on procedural steps than on the desired outcome: a balance between economic and environmental needs.*

Recommendations:

- *Require planning on a watershed or ecosystem basis.*
- *Create a public appeal process and encourage mediated solutions.*
- *Shift focus from plan approval to monitoring and enforcement.*

The Outcome

Finding #2: The Timber Harvest Plan process has not proven effective in achieving a sound balance between economic and environmental concerns.

The authorizing statutes for the Timber Harvest Plan set the stage for logging while acknowledging the need to protect natural resources, including waterways, wildlife, fish, plants, scenic views and recreational areas. Despite timber industry complaints about the process, harvesting on private land has declined only marginally in the past five years and plans are routinely approved -- both signs that economic interests are being met. But the plan process has proven less effective in protecting the environment, as demonstrated in three areas:

- The process looks at potential damage on a site-by-site basis rather than across entire ecosystems, making it difficult to assess cumulative impacts over time and throughout watersheds.

- Litigation rather than resolution is often the focus of the participants, leading to a strained decision-making process and lack of consensus.

- Resources and priorities are devoted to issues of process rather than outcome, with the result that people are more interested in dotting i's and crossing t's than in how effective mitigation measures are.

As documented in earlier sections of this report, timber harvest volume on private land, dollar value of statewide production and plan approvals reflect the success the timber industry has had. Table 7 below recaps figures for 1989 through 1992:

TABLE 7
Timber Harvest Success Indicators
1989-92

Measure	*1989*	*1990*	*1991*	*1992*
Volume in billion board feet	2.637	2.673	2.064	2.124
Value of harvest	$763 million	$890 million	$662 million	$902 million
Plan approval rate	97%	86%	88%	90%

Source: Department of Forestry and Fire Protection, State Board of Equalization

As the table indicates, the timber industry has seen a moderate decline in harvest volume, a substantial increase in dollar return and a high success rate in getting Timber Harvest Plans approved. Although industry critics have found the plan process lengthy, costly and frustrating, harvesting has hardly been regulated to a standstill on private lands in California. This is particularly true when the five alternatives to the Timber Harvest Plan process (authorized in Title 14 of the California Code of Regulations) are examined. They are:

- ***Modified Timber Harvest Plan*** -- Available since July 1993, this process may be used if a timber owner has less than 100 acres and can meet 16 criteria indicating that there will be little environmental impact. Very few have been submitted, according to CDF.

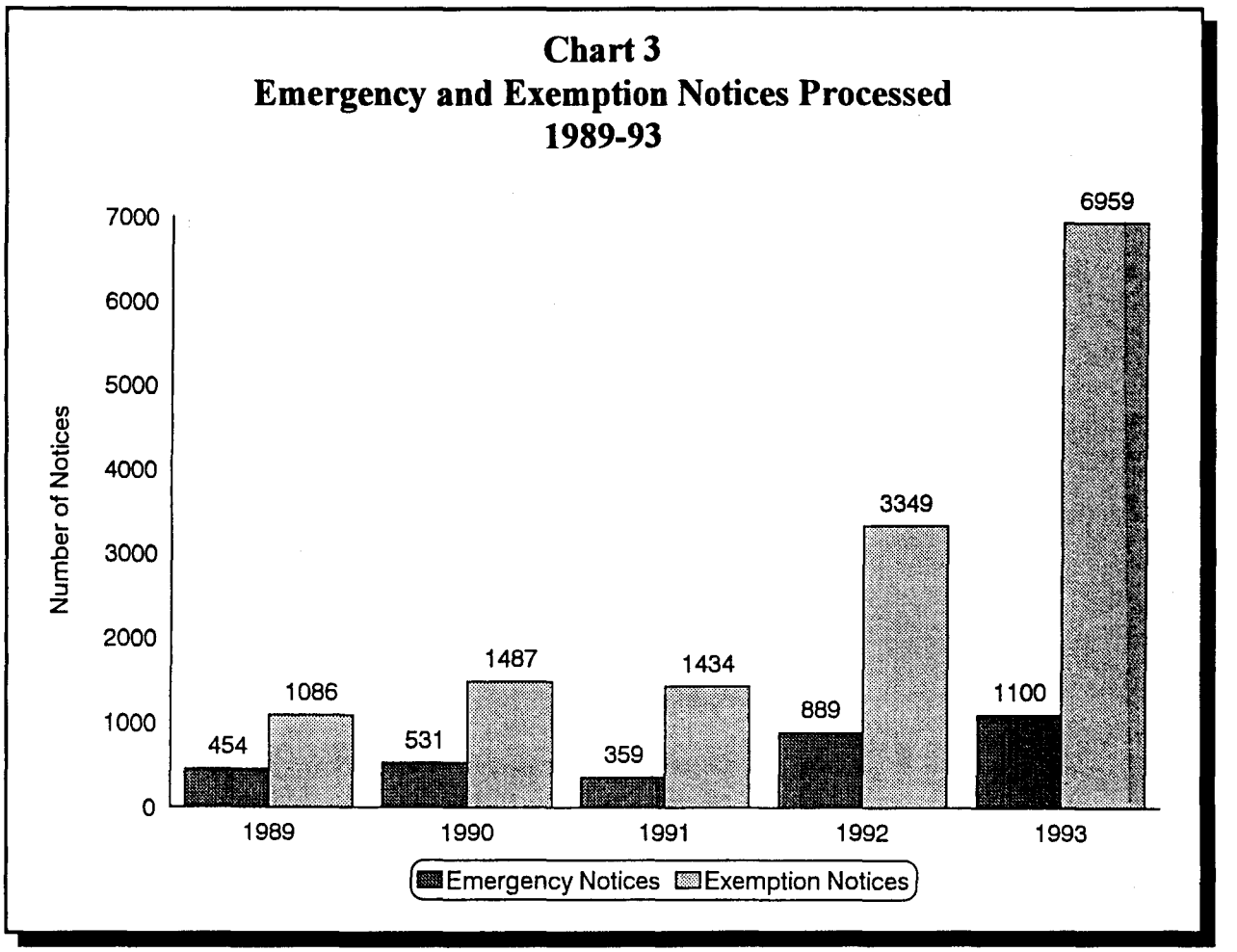
- ***Non-industrial Timber Management Plan*** -- If an owner has less than 2,500 acres and is not in the business of manufacturing forest products, a management plan may be used. The owner must choose to use uneven-aged management methods (selectively harvesting trees) and must plan for sustained yield over time. The department estimates that 30 plans have been approved.

- ***Emergency Notice*** -- An emergency notice must be submitted to CDF before timber operations begin and is valid for 60 days (with a 60-day extension under certain circumstances). Emergencies that qualify for this process include the need to remove trees that are dead or dying from insects, disease or animal damage; trees that are damaged as a result of wind, snow, freezing weather, fire, flood, landslide or earthquake; trees that are dead or dying from air or water pollution; and removal of trees for the emergency construction or repair of roads.

- ***Conversion Exemption*** -- The conversion exemption allows someone to harvest less than three acres if they are going to convert the land to some other use. Department officials complain that this alternative is often abused by people who simply want to remove the timber but who have no intention of using the land for something else. But those who use the process claim that filing a Timber Harvest Plan is too expensive for such small areas and the environmental effects are minimal.[28]

- ***Exemption*** -- An exemption is allowed when someone is harvesting Christmas trees, harvesting dead, dying or diseased trees or preparing a site for use through burning and herbicide application. Under this exemption, the owner does not have to submit a Timber Harvest Plan and a work-completion report, nor does he have to replant trees.

Chart 3 on the next page shows the number of emergency notices and exemptions processed by CDF from 1989 through 1993.



Source: Department of Forestry and Fire Protection

As the chart indicates, the number of emergency notices and exemptions totalled slightly more than 1,500 in 1989. By 1993, the number had skyrocketed to more than 8,000: 1,100 emergency notices and 6,959 exemptions. This far outstripped the 1,206 regular Timber Harvest Plans submitted for approval in 1993.

Rather than the raw number of plans, exemptions and emergency notices that are sought, it is the acreage harvested and the board feet produced that determine the impact of logging operations. CDF officials said they stopped compiling acreage figures for exemptions and emergency notices after 1991, and they cautioned that figures before then should be used carefully. Exemptions sometimes affect an entire ownership of thousands of acres even though a much smaller site may actually be harvested. Table 8 on the next page shows comparative figures for 1989 through 1991:

TABLE 8 Acreage Subject to Harvesting by Category 1989-91			
Program	***1989***	***1990***	***1991***
Timber Harvest Plan	NA	232,389	241,398
Emergency Notices	87,474	137,708	52,096
Exemptions	1,433,277	1,382,683	1,181,028

Source: Department of Forestry and Fire Protection

As the table shows, the number of acres subject to harvesting under exemptions regularly tops 1 million, with acres logged under Timber Harvest Plans running at less than one quarter of that amount.

Another set of figures to be approached cautiously is the comparative volume harvested under Timber Harvest Plans, emergency notices and exemptions. The State Board of Equalization uses data that is self-reported by taxpayers and typically not audited. While companies filing major Timber Harvest Plans may be fairly credible in reported board feet logged, individuals with small cuts may be less inclined to report their totals accurately. Nonetheless, the board believes the figures are close enough for comparison purposes: In 1993, 1.791 billion board feet were harvested under Timber Harvest plans (62.4 percent of total volume), .246 billion board feet were logged under exemptions (8.6 percent) and .215 billion board feet were harvested under emergency notices (7.5 percent).[29]

Exemptions under plan process hold potential for ecological damage

The acreage and harvest volumes outside of the Timber Harvest Plan process are figures that worry state officials and environmental advocates, who see the potential for damage resulting from individually small but widespread pockets of logging. But these issues rarely capture public attention.

Concern most often surfaces publicly when harvesting threatens old-growth forests -- stands of trees that have lived for hundreds of years and that could not be easily replaced. But this is actually a small issue on privately held land compared to many other environmental concerns. About 2 million acres of old-growth timber are in California's national forests, with another 230,000 on

state lands. Only about 140,600 acres are held in private hands or by other public agencies.

Plans are a snap-shot approach rather than a panoramic view

The major environmental complaint about the Timber Harvest Plan process is that the plans are small snapshots of forests at a certain point in time rather than panoramic perspectives that examine entire, dynamic ecosystems over a long time span. The difference is critical in the ability of the State to protect resources and species. Harvesting that is reviewed a small section at a time may appear to have very little effect on a certain plant or animal. But when a multitude of harvest operations are approved on an individual basis, their combined effect -- known as the cumulative impact -- may be devastating. Properly assessing cumulative impacts, experts agree, requires baseline measurements of existing conditions and accurate predictions about how those measurements will change from the effect of timber operations.

The dispute about the Timber Harvest Plan's ability to assess cumulative impact is not new. Environmentalists took their contention that the California Environmental Quality Act requires cumulative-impact assessments for timber harvesting to court and won in 1985 when the court ruled that several approved plan examples showed that the plan process at that time did not provide an adequate environmental review.[30]

The current forest practice rules attempt to address the need for a cumulative impact assessment but critics find the requirements of what must be included in a Timber Harvest Plan both burdensome and unproductive. While the rules outline the appropriate resources to be assessed, they also make it clear that no actual quantification of the resources is required. Topics to be addressed by the Timber Harvest Plan, according to "Technical Rule Addendum Number 2, Cumulative Impact Assessment," include:

- ***Watershed Resources*** -- sediment, water temperature, organic debris, chemical contamination and peak flow.
- ***Soil Productivity*** -- organic matter loss, surface soil loss, soil compaction and growing space loss.
- ***Biological Resources*** -- habitat, including snags, woody debris, cover and road density.

Under each of the sections, the rules state, "No actual measurements are intended." The result is that cumulative assessments are merely guesswork that neither accurately define an existing baseline of information nor credibly predict the outcome after harvesting. As one person testified to the Commission:

> *The largest single part of the [Timber Harvest Plan] is the cumulative impacts assessment and it is a farce. It says right in the instructions, "no actual measurements are intended" and that's before they tell you that water temperature impacts are more important when approaching the threshold of tolerance for certain species. How are you going to tell if you can't measure the temperature? Those four guys who went out for a whole year to assess water quality were not allowed to take a thermometer; they had to stick their hands in the water and guess.*[31]

Cumulative impacts over space, time are key to good environmental plans

Environmentalists believe the key to making the Timber Harvest Plan process effective is to measure cumulative impacts over broad areas, such as entire watersheds where a diversity of plant, wildlife and fish species interact as they seek needed habitat, food and cover. The timber industry maintains such an approach is too costly and complicated on a project-by-project basis. The State Water Resources Control Board agrees. The board says there is a great deal of effort, information and multidisciplinary expertise necessary to develop a cumulative assessment and to determine appropriate mitigation measures. The board summarizes its stance in the following:

> *Trying to address [cumulative watershed effects] on a [Timber Harvest Plan-by-Timber Harvest Plan] basis and using only the expertise of a lone [registered professional forester] results in:*
>
> - *Inadequate "boilerplate" analyses and mitigation measures.*
> - *Overburdening the Timber Harvest Plan preparer with extensive informational requirements that state agencies are in a better position to provide.*

- *Repeated unnecessary reassessment of cumulative watershed effects in each of several Timber Harvest Plans in a given watershed.*

- *Significant redundancy of documentation and waste of review team agency resources.*[32]

The watershed approach to judging cumulative assessments is paralleled in breadth by a concept known as ecosystem or landscape assessment. Rather than a single-species approach to evaluating impact on the environment, an ecosystem assessment looks at the complete range of biological diversity in an area of mutual interaction. For instance, instead of concentrating on how the spotted owl is affected by logging, an ecosystem assessment would determine what different plants, animals, fish and other organisms are present in an area and how the balance between them will be affected by man's activities.

The Natural Communities Conservation Program, a precedent-setting experiment authorized by the federal government, took this multi-species approach in an area of California where the gnatcatcher's listing as threatened had blighted prospects for future development. Planning across a large area, government and the private sector worked together to identify territories that would need to be preserved and sections that could be developed. Without the plan, developers would have been required to submit to a rigorous, expensive and delaying Environmental Protection Act review for each new housing development, building or road.[33]

Broader planning would allow streamlined approval for many plans

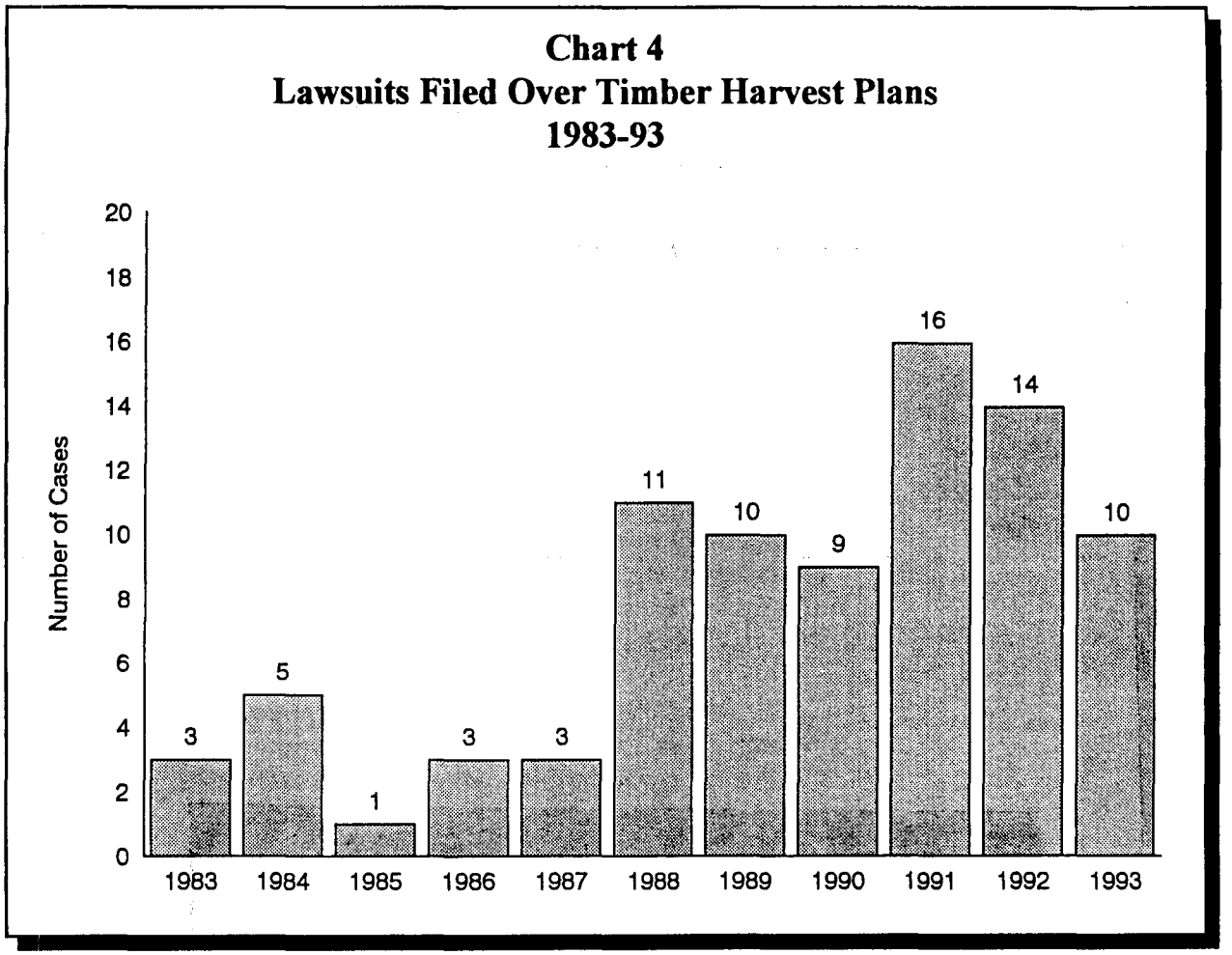
All participants in the Timber Harvest Plan process acknowledge the problems with dealing with environmental impacts on a harvest-by-harvest basis. They recognize the value of mapping broad-based assessment areas and then addressing timber projects as they fit within the overall plan. Timber industry officials have said such a system would allow many harvests that have minimal impact to be quickly and inexpensively processed. State officials look to such a system to better prioritize and allocate resources so that timber harvest proposals that are the most problematical can be rigorously reviewed while others are passed over lightly. And environmentalists say damage cannot be avoided until true assessments of cumulative impact are made.

The widespread agreement, however, does not mean such a change will come simply or soon, those familiar with the timber plan process say. A key question yet to be settled is who should bear the cost of an assessment that may spread over many ownerships and include both timber eyed for harvest and acreage held for other uses. Reaching agreement on how areas should be defined, on what measurements must be taken and on other factors may prove difficult when science in this arena has yet to reach a stage of absolute answers.

Lack of public appeal mechanism leads to challenges in court system

In addition to failing to address cumulative impacts effectively, the design of the Timber Harvest Plan process encourages litigation rather than consensus-shaped resolution to problems. The process lacks a public appeal mechanism that would allow plan approvals to be challenged short of court action. As a result, when environmentalists or other interested parties believe that CDF has reached a bad decision, a lawsuit may follow.

Typically, the Attorney General represents the State in such lawsuits. Chart 4 on the next page depicts the number of lawsuits filed between 1983 and 1993.



Source: Department of Justice

As the chart shows, 85 lawsuits were filed during the past 11 years. From 1983 to 1987 few suits were filed but the number jumped sharply in 1988 to 11, peaked at 16 in 1991 and remained in the double digits for 1992 and 1993.

Table 9 on the next page displays the disposition of the cases:

TABLE 9 Disposition of Timber Harvest Plan Lawsuits	
Disposition	***Number of Suits***
Suit dropped	9
Suit dismissed	13
Plan withdrawn	7
Plan upheld	13
Plan set aside	18
Settlement	10
Pending in court as of January 1994	7
Pending on appeal as of January 1994	4
Other	4
TOTAL	**85**

Source: Department of Justice

As the table indicates, results of lawsuits vary greatly. While 18 plan approvals were found to be unwarranted by the court, 13 were upheld and in 13 cases the court dismissed the lawsuit. Suits were also either dropped (9) or settled out of court (10).

Although it is difficult to categorize lawsuits, which often touch on a variety of issues, the suits in general addressed old-growth forest harvesting, inadequate cumulative assessment and assertions that the State had failed to follow regulations in approving plans. Of the 85 cases, 49 (57 percent) were filed against plans submitted by three major timber companies -- an unsurprising statistic since complicated or controversial harvests tend to be pursued by larger companies.

Litigation is an expensive, divisive way to reach balanced decisions

Litigation is not only expensive to pursue -- 10 of the cases involved more than 300 hours of state attorney time and four exceeded 500 hours, according to the Department of Justice -- but it also tends to increase antagonism and harden positions. The result over time can be disadvantageous to both economic and environmental interests.

While there is no formal recourse for appealing Timber Harvest Plan approvals, mediation has proven successful in at least two areas where it has been tried.

Both the Quincy Library Group and the Center for Resolution of Environmental Disputes at Humboldt State University have successfully resolved issues arising from controversial Timber Harvest Plans. Such an approach has been characterized by the Clinton Administration as "the natural resources movement of the 1990s."[34]

While the lack of credible cumulative impact requirements and the abundance of litigation indicate the Timber Harvest Plan process is not working well, there is also other compelling evidence that the environment is not well served. A partial listing of indicators of environmental damage includes:

- The federal Environmental Protection Agency has listed 17 of Northern California's rivers as "impaired" waterways. The EPA cites sediment discharges from logging activities as the major contributor damaging the rivers.

- The federal government has listed the marbled murrelet as a threatened species, citing the loss of nesting habitat from the logging of old-growth and mature forests.

- The Board of Forestry has been petitioned to list the coho salmon as a sensitive species because of their declining population. The decline has been attributed to the effect logging has had on stream temperatures, sediment in spawning areas and overall habitat degradation.

Team reviewed 100 harvest sites, found planning process flawed

In addition, a multidisciplinary-team assessment of results has shown that Timber Harvest Plans are not always effective in protecting resources. The State Water Resources Control Board assembled a team with representatives from CDF, DFG, the board and the timber industry to conduct a monitoring study to determine if rules were effective in protecting water quality. After visiting 100 approved Timber Harvest Plan sites where logging had already been completed, the team reported, among other things, that:

- Descriptions in Timber Harvest Plans of sensitive sites, resources at risk and potential adverse effects were vague and unsupported.

- Feedback about the results of recommendations was non-existent, computer databases for resource information were not used, and intra-departmental communication was either lacking or at cross-

purposes, with DFG and Board review team members feeling frozen out of the process by CDF.

- Compliance with requirements listed in the Timber Harvest Plan during actual logging was either lacking or poor, resulting in lost or damaged resources.

- Enforcement was inadequate due to reluctance to press criminal charges or belief that charges would not be filed by local law enforcement officials.

- Monitoring to compare resource conditions before and after timber harvest operations was non-existent.[35]

Enforcement through citing violations of plans, orders not a priority

Although the report was completed in 1987 and many refinements of the Timber Harvest Plan process have been made since then, most of the issues cited by the team remain unresolved today. For instance, while CDF is the lead agency responsible for enforcing forest practice rules and for pursuing violations through the criminal courts, enforcement is not a priority. The Board of Forestry explained:

> *The bottom line is that each timber harvesting plan must have a record that supports the decision to approve or deny. To this end, most of CDF's staff time is spent in preparing a defensible record of decision rather than in doing field inspections.*[36]

Environmentalists have decried such attention to paperwork:

> *The most important function of a [Timber Harvest Plan] is to provide a paper trail so the agencies can demonstrate to the courts that they have considered required criteria... [This has resulted in lengthy "describe and cut" plans that function as a] paperwork coverup of the State's failure to protect the forest environment.*[37]

The reluctance to pursue enforcement is attributed to several factors. Department inspectors for the water quality boards do not take enforcement action for reasons including:

- Difficulty in getting a district attorney to bring action against an alleged violator unless the damage is severe.

- Burden of evidence is borne by the inspector, with extensive commitment of time and effort to documenting case.

- Cost-benefit higher for attending to other work unless the problem is severe.

- Reluctance of inspector to give an offender a criminal record for a minor offense.[38]

Despite the factors working against enforcement activity, violations are cited and cases pursued. Table 10 below gives statistics for 1989 through 1993:

TABLE 10
Forest Practice Rule Violations Cited

Statistic	*1989*	*1990*	*1991*	*1992*	*1993*
Violations cited	1,075	1,241	1,049	NA	NA
Court cases	100	118	71	83	90

Source: Department of Forestry and Fire Protection

As the table shows, a typical year yields a little more than 1,000 violations (the department did not compile statistics for 1992 and 1993 citations). The portion that are actually pursued in court, however, is quite small, hovering near 100.

Environmentalists argue that without a rigorous monitoring and enforcement effort, Timber Harvest Plans are little more than a paper commitment, easily written and easily ignored. At least one major timber producing state has taken that message to heart. Washington's Department of Natural Resource has created a "Program for the Nineties" that shifts the management philosophy underlying the regulation of harvests. The department is taking more risk at the front-end of the process, reviewing plans quickly, while redirecting its efforts to compliance and enforcement through a comprehensive monitoring program. The department believes that even if errors or omissions are not caught on harvest applications, the monitoring process will reveal the discrepancies -- thus

encouraging adequate plans without having to rigorously review them.

The key to effective plans is monitoring, enforcement

Critics of California's system believe that an enhanced monitoring and enforcement effort is one element that would improve the effectiveness of the Timber Harvest Plan process. In addition, there is widespread acknowledgement that plans must be viewed within the context of entire ecosystems or watersheds rather than on a plot-by-plot basis. Finally, participants in the process are seeking ways to reach consensus and avoid litigation without sacrificing economic and environmental needs. A tiered approach to Timber Harvest Plans would incorporate solutions to these concerns, sorting out minimal-impact harvest proposals at the gate and diverting them into lower levels of review while focusing full analytical resources on plans with the highest potential for environmental damage.

Recommendation #4: The Governor and the Legislature should enact legislation to require the completion of master protection plans for watersheds containing productive forests.

Timber Harvest Plans cannot be fully effective in minimizing damage to the environment unless they address cumulative impacts across a broad area. Assessing those impacts on a plan-by-plan basis is inefficient, costly and open to questions about credibility.

A more effective approach is to map large areas and produce sustained yield plans that show how timber can be harvested continuously over time without degrading the environment. When a Timber Harvest Plan is filed, it can then be compared with the master plan. If it fits in -- in terms of harvestable timber, lack of danger to resources and other factors -- then the plan can be approved with a minimum of review.

The master plans would set a baseline of data about existing resources, delineate sensitive areas and chart specific geologic features that may affect timber operations. The plans should be developed with adequate input from state departments, timber harvesters and environmentalists and should be subject to extensive public review. Plans would have an expected life of 10

years, with modifications possible as new data and scientific advances developed.

Potential sources of funding to conduct the planning process include a temporary added tax on timber harvested, a fee surcharge for Timber Harvest Plan filings or environmental license plate fees.

Recommendation #5: ***The Governor and the Legislature should direct the Board of Forestry to establish a certification process allowing timber owners to satisfy environmental concerns in advance of harvest proposals.***

The Timber Harvest Plan process makes no distinction between timber owners who have demonstrated environmental concern and those who are only interested in logging trees. As a result, the burdens of the process are just as bad for those who conduct timber operations with minimal environmental impact as for those who are cutting down trees without regard for sensitive areas.

One way to expedite the process without allowing environmental protection to lapse is to create a Certified Forest Plan process. Under this concept, a landowner could document forest health, sustainable productivity of the forest and extent of wildlife, fish and plant resources in a single plan for a major holding of timber. Once the forest plan was certified, timber harvest operations on the land would earn a quick cursory review rather than a full-blown environmental assessment as long as the logging was in compliance with the certified plan.

Recommendation #6: ***The Governor and the Legislature should direct the Board of Forestry to develop an objective environmental-risk assessment system that would assist in the evaluation of Timber Harvest Plans.***

Currently there is no systematic way to ensure that the most environmentally sensitive Timber Harvest Plans are submitted to a more rigorous review than those plans with less potential impact. While the Certified Forest Plan outlined in Recommendation 5 would filter some harvesting operations out of the review system, a need remains to prioritize plans based on something other than subjective, personalized perspectives.

An objective rating system would allow state departments to focus their energies on the plans most in need of regulation, monitoring and compliance efforts. The risk assessment system would include ratings for cumulative watershed effects, sensitive resources and habitat variety. The system should, when properly developed with input from state departments, harvesters and environmental interests, reasonably predict the potential for environmental damage from individual Timber Harvest Plans.

Recommendation #7: The Governor and the Legislature should enact legislation establishing a public appeals process to allow non-litigation challenges to Timber Harvert Plan approvals.

Members of the public have little avenue for recourse other than filing a lawsuit if they disagree with a plan approval or believe further restrictions should be imposed on harvesting operations. Providing an alternative to litigation could save money, encourage compromise solutions and diminish the animosity that is usually heightened by legal processes. Potential places in the state bureaucracy for establishing the appeals process include the Board of Forestry, the Office of Administrative Hearings or the Secretary for Environmental Protection.

Recommendation #8: ***The Governor and the Legislature should enact legislation to direct the Department of Forestry and Fire Protection to draft a plan within one year for shifting priorities from plan review to performance monitoring, feedback on effectiveness of requirements and enforcement activities.***

With staff focused on taking the correct procedural steps to review Timber Harvest Plans, little effort is devoted to monitoring compliance, assessing the outcome of requirements and enforcing orders. But without these activities the Timber Harvest Plan is simply part of a process rather than an effective tool to achieve desired results.

CDF's plan should consider funding sources for establishing monitoring teams, systems for assessing effectiveness in a comparative fashion and modifications of enforcement authority, such as adding civil fines to the current criminal sanctions.

Conclusion

Conclusion

The Timber Harvest Plan process is called upon to meet the demands of a variety of state and federal laws, policies and court rulings as it attempts to balance economic and environmental interests. Despite frequent reforms and active participation by departments with appropriate areas of expertise, the process serves neither the timber industry nor environmental concerns well.

The Little Hoover Commission has found that the timber industry faces a process that is increasingly lengthy, costly and frustrating. In addition, the Commission concludes that the plans' required assessments of potential environmental damage lack credibility and mitigation measures are rarely evaluated for effectiveness, leading to inadequate protection of the environment.

Reform of the Timber Harvest Plan process is needed in two general directions:

- The process should be streamlined for harvest operations with minimal potential for environmental impact and sharply focused on plans involving sensitive areas and resources.

- Priority should shift away from paperwork compliance and toward outcome-based results

through more intensive use of monitoring, enforcement and effectiveness evaluation.

California's forests are a rich resource that can be used safely and continuously to meet a variety of needs if managed well. Redirecting the Timber Harvest Plan process to make it more efficient and effective will produce the sound management needed to protect the State's natural assets.

Appendices

APPENDIX A

Little Hoover Commission
Timber Harvest Plan Advisory Committee

Douglas P. Wheeler, Secretary
The Resources Agency

Mike Chrisman, Deputy Secretary
The Resources Agency

Ken Delfino, Deputy Director
Department of Forestry and Fire Protection

John Sullivan, Chief Deputy Director
Department of Fish and Game

Banky Curtis, Deputy Director
Department of Fish and Game

Jim Steele, Program Manager
Department of Fish and Game

Dean Cromwell, Executive Officer
State Board of Forestry

Trinda Bedrossian, Supervising Geologist
Department of Conservation

Gaylon Lee, Forest Activities Manager
State Water Resources Control Board

Frank Reichmuth, Water Resource Engineer
Regional Water Quality Control Board

Krist A. Lane, Staff Director
Senator Mike Thompson

Julie Oltmann, Associate Consultant
Senator Tim Leslie

Tom Thompson
Louisiana-Pacific Corporation
California Forestry Association

Herb Baldwin
Sierra Pacific Industries
California Forestry Association

John Geoghegan
Forest Resources Council

Neal Ewald, Simpson Timber Company
Forest Resources Council

Charlie Brown
Fruit Growers Supply Company
Forest Resources Council

Dan Weldon, Executive Director
Forest Landowners of California

Fred Landenberger
Forest Landowners of California

Robert Rynearson
California Licensed Foresters Association

Keith Chambers, Timber Lands Manager
The CHY Company

Terry Terhaar
Planning and Conservation League

Kathy Bailey
Sierra Club

William F. Grader, Executive Director
Pacific Coast Federation of Fisherman Assn

Robert Hrubes, Ph.D.
LSA Associates, Inc.

Andrea E. Tuttle, Ph.D.
Andrea Tuttle & Associates

Helen Libeu, Small Forest Landowner

Linda Perkins
Friends of Salmon Creek & Albion River
Watershed Protective Association

APPENDIX B

Witnesses Appearing at
Little Hoover Commission Timber Harvest Plan Public Hearing

February 24, 1994, Sacramento

Douglas P. Wheeler, Secretary for Resources
The Resources Agency of California

Bill Dennison, President
California Forestry Association

Sharon Duggan, Environmental Attorney
Representing the Environmental Protection Information Center, Mendocino Environmental Center, and the Redwood Coast Watershed Alliance

Richard A. Wilson, Director
Jim Branham, Chief Deputy Director
Department of Forestry and Fire Protection

Robert J. Kerstiens, Chairman
State Board of Forestry

Boyd Gibbons, Director
Department of Fish and Game

Edward G. Heidig, Director
Department of Conservation

Walt Pettit, Executive Director
State Water Resources Control Board

PUBLIC COMMENT

Herb Baldwin
Sierra Pacific Industries

Rose Comstock
Private Forest Landowner

Patrick Higgins
Consulting Fisheries Biologist

Ron Landsburg
Licensed Timber Operator

Helen Libeu
Small Forest Landowner

Terry Terhaar
Planning and Conservation League

Tom Thompson
Louisiana-Pacific Corporation

APPENDIX C

The following table shows from 1978 through 1994, the number of forest parctice rule changes per year, the area of change in the forest practice rules, and in response to who initiated the change:

TABLE 12 BOARD OF FORESTRY FOREST PRACTICE RULE CHANGES		
1978-1979		
Number	Description	In Response To
1	Waiver of sampling rules	Industry
2	More flexible rules for timber harvesting in Santa Cruz, San Mateo, and neighboring counties	Industry
3	Easier qualification for THPs involving clearcuts on expired old approved plans	Industry
4	Specification of timber operator and employee responsibility	Public
5	Clarification of the identity of RPF's in charge	Public
1979-1980		
1	Timber operator certification of THP responsibility	Public
2	Allowance of broadcast burning of slash under a project burn permit	Industry
3	Limit of timber harvesting on private lands proposed for wilderness status	Agency & Public
1980-1981		
1	Clarification of definition of emergency operations to provide for a financial emergency	Industry
2	Modification of rules related to utility rights-of-way	Agency
3	Addition of California Black Oak as a commercial species	Agency
4	Modification of waiver for sampling rules	Agency
1981-1982		
1	Clarification of language related to description of silvicultural management systems	Agency & Public
2	Clarification of definition of a stream and development of more flexible watercourse and lake protection rules	Agency & Public

3	Revision of Erosion Hazard Rating system	Agency & Public
4	Revision of road and landing rules	Agency & Public
5	Revision of timber harvesting and erosion control rules	Agency & Public
6	New stocking sampling rules	Agency
1982-1983		
1	Revision of rules related to timber harvest plan process, including review teams, plan contents, and emergency notices	Statutory
2	Review of rules guiding the Directors review of plans	Statutory
3	Revision of forest insect and disease protection rules	Statutory
4	Revision of rules to provide greater protection to certain bird species and their nesting sites	Agency & Public
5	Substantially damaged timberlands	Industry
6	Adoption of rules for Coastal Commission Special Treatment areas	Statutory
7	Adoption of rules for Monterey and Santa Clara Counties	Statutory
1983-1984		
1	Public notice for the Southern Subdistrict of the Coast Forest District	Agency & Public
2	Decrease stocking requirements on lower quality forest sites	Agency & Industry
3	Rules for Santa Cruz, San Mateo, and Marin counties	Statutory
1984-1985		
1	Specification of transition regeneration silvicultural method	Industry
2	County appeal and waiver	Statutory
3	Increased public notice	Statutory
4	Amendments to Coastal Zone special treatment area rules	Agency
5	Creation of the general alternative in the rules	Industry
1985-1986		
1	Clarification of feasible alternatives	Agency
2	Definition of unstable areas	Agency & Public

3	Amendments for SB 398	Statutory
4	Definition of significant adverse impacts	Agency
1986-1987		
1	Timber operator notary requirement	Public
2	Silvicultural practices for the Southern Subdistrict	Industry
1987-1988		
1	Notification of operations	Statutory & Agency
1988-1989		
1	Commercial species and resource conservation standards	Agency
2	Limited exemption from timber harvest plan requirements	Agency & Industry
3	Emergency slash disposal rules	Agency
4	RPF and timber operator responsibility rules	Agency & Public
1989-1990		
1	Erosion control maintenance	Statutory
2	Site preparation	Statutory
3	Timber harvest plan notification	Agency
4	Emergency spotted owl rules	Agency
5	Road performance bonding for SB 856 counties	Agency & Public
6	Cable skid roads	Agency & Industry
7	State parkland and federal land exemption	Statutory
8	Head of agency appeal	Statutory
1990-1992		
1	Notice of start of timber operations	Agency
2	Expansion of Department review time	Statutory
3	Amendments to road and landing rules	Agency
4	Permanent spotted owl rules	Agency
5	Emergency marbled murrelet rules	Agency
6	Amendments to hazard reduction rules	Agency

7	Non-industrial timber management plans	Statutory
8	Cumulative effect and related rules	Agency & Public
9	General wildlife species rules	Agency
10	Forestry reform emergency rules (later dismissed by court)	Agency
11	Protection of archeological and historical resources	Agency & Public
12	Director's guidance rules	Agency
13	Permanent marbeled murrelet rules	Agency
14	Notice of conformance	Agency
15	Notice of intent	Agency
16	Listing of sensitive wildlife species	Agency & Industry
1992-1994		
1	Non-industrial landowner regulatory relief	Industry
2	Late Successional Forest Stands	Agency & Public
3	Sensitive watersheds	Agency & Public
4	Amendment of spotted owl rule to provide for state designated biologist	Agency
5	Biomass harvest rules	Industry
6	Emergency Pacific Yew rules	Statutory
7	3 acre/one-time conversion (ongoing)	Public
8	Silviculture and sustained yield (ongoing)	Agency & Public

Source: Board of Forestry

Endnotes

Endnotes

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