Appendix F

Forest Resources Report

Humboldt 2025 General Plan

Prepared by
Humboldt County Department of Community Development Services

Forest Resources and Policies

A Discussion Paper for Community Workshops

October 2003 Draft
Revised April, 2006

Acknowledgements

This report was prepared with the assistance of the following: Michael Dyett, Dyett and Bhatia; and Forest Review Committee (James L Able, Mark Andre′, John Marshall, Gary Rynearson, Steve Luani, Christopher Carroll, and Gary F. Howard). Interested individuals who provided written comments on a preliminary draft include: Shirley Shelburn, Humboldt Watershed Council; Yana Valachovic, U.C. Cooperative Extension; and David Spreen, Kneeland. Humboldt County Department of Community Development Services staff involved in preparation of this report include: Kirk Girard, Kirk Gothier, Tom Hofweber, Michael Wheeler, Michael Richardson, Martha Spencer, and Chinmaya Lewis.

Executive Summary

The *Forest Resources* report is part of the first step of Phase II of the General Plan Update. This second phase of updating the General Plan entails gathering data, examining the changed situation since the most recent General Plan update, and preparing to look ahead to the year 2025.

BACKGROUND

Phase I of the General Plan Update Process included the preparation of a *Critical Choices Report.* In the *Critical Choices Report,* prepared to scope issues for the General Plan Update process, the following issues scored high with regard to timber resources.

- Develop updated County-wide policies for timber resource protection and management and include consideration of economic, social and environmental affects of harvesting;
- Implement these policies in specific areas through Plan and zone modifications, other areas of County jurisdiction (e.g., roads) and policy input to state and federal agencies.

The *Critical Choices Report* was presented to the Humboldt County Board of Supervisors, and the Board gave specific direction for updating the Humboldt County General Plan with regards to forest resources. The following choices from the *Critical Choices Report* illustrate the decisions for direction related to forest resources that were developed in that effort:

NR6c **Comprehensive inventory of forest lands; review plan and zone designations and employ merger and patent parcel development standards to maximize protection of forest lands.**

NR7b **Develop policies for specific aspects of forestry management that impact communities, e.g. impacts to roads, harvesting at the urban fringe, changes to flood elevations.**

In September, 2002, the Department of Community Development Services released the *Natural Resources and Hazards Report* prepared by Dyett and Bhatia. Chapter 2 of this report presents maps of the vegetation distribution for each of the watershed planning areas of the county which includes mapping of the forest vegetation types. Chapter 3 of this report describes Humboldt County's forest resources, with an emphasis on timberlands and production. The mapping of these two chapters of the *Natural Resources and Hazards Report,* along with additional mapping prepared for the *Forest Resources Report,* largely addresses the first component of *NR6c*. The *Natural Resources and Hazards Report* includes a discussion of the regulatory framework and addresses the policy framework and some options that respond to issues related to forest resources. The Forestry Review Committee found the chapter on forest resources short on discussion and analysis and recommended a more detailed treatment of forest resource and potential policy options. The primary purpose of the *Forest Resources Report* is to implement the directives of *NR6c* and *NR7b*. Secondarily, the Forest Resources Report provides some additional background information related to forest resources in Humboldt County; is responsive to some comments from the Forestry Review Committee; and includes additional analysis of policy options developed pursuant to the directives of *NR6c* and *NR7b*.

FINDINGS

- **Forest Resources in Humboldt County:** Humboldt County's mild and wet climate and good soils are very conducive to timber production. There are 1,900,000 acres of forestland in Humboldt County, 1,700,000 of which are considered suitable for production.

- **Economics of Humboldt County Forest Resources:** The Humboldt County timber harvest value has consistently been over 20% of the statewide total and most recently (2001) accounted for a third (33%) of the total statewide timber harvest value. Other trends include: a gradual decrease in timber harvest volumes from 1948 to 2000; a steady and marked shift from old growth to young growth economy in timber harvesting; and a steady increase in the value (nominal stumpage prices) from 1978 to 2001.

- **Conversion of Timberlands:** Since 1985, only approximately 1,000 acres have been converted as a consequence of direct rezones out of TPZ applied for and approved by the Planning Commission and Board of Supervisors. Approximately 910 acres of this were part of the County's Eureka Community Plan in 1995. Several other factors have played a role in direct conversion out of TPZ in Humboldt County: public acquisition by State or Federal agencies, land trusts established for conservation purposes, and private (non-profit interest group) acquisitions for purposes of donation to public entities for preservation. As of the year 2000-2001, total acreage of TPZ was 983,173, indicating a loss of 78,616 acres since 1977. The vast majority of this acreage was due to acquisitions for public use.

- **Forest Management That Impacts Communities:** A number of potential land use conflicts between forest management operations and other urban uses have been identified. Such conflicts are most acute along the urban/timberland interface areas. Such interface areas were assessed for all Humboldt County communities and watersheds and found to be most prominent in the Eureka Basin sub-watersheds.

- **Regulatory Framework:** There are significant regulatory authorities at the Federal, State and Local Government levels addressing forest management, including: the California Forest Practices Act, California Environmental Quality Act, Federal Clean Water Act, U.S. Forest Service Regulations, and Local Government timber production zoning regulations. Nonetheless, the need to address some potential impacts on the urban fringe was identified by the public during development of the Critical Choices Report and this need was approved for further study by the Humboldt County Board of Supervisors.

KEY ISSUES

Key issues are addressed through development of policy options. Proposed policy options and key issues include the following:

- **Should the County address conversion of small timber parcels to non-timber uses** and initiate discussions about modifications to requirements for timber harvesting plans to protect and enhance timber resources and respond to needs of those with small timber holdings, while maintaining water quality and protecting fishers, sensitive habitats, and recreational opportunities?

- **Should the County create a two-tier system of TPZ zoning**, with larger lot sizes for existing and potential industrial timberland and smaller lot sizes for timberland within or adjacent to Community Plan Areas?

- **Should the County promote local models of sustainable forestry**? The County could facilitate participation in certification programs, such as those established by the Forest Steward Council and the Sustainable Forest Initiative, which can help California producers compete on a national basis?

- **Should the County create a Timberland Infrastructure Maintenance and Improvement Program?** Such a program would include a systematic approach to identifying public service needs (law enforcement and fire protection) and public improvement needs as well as cooperative funding mechanisms, including provisions for cost-sharing between the County and the forest industry.

- **Should the County further research the possibility of expanding the use of Natural Resource Zoning** to inland areas, designating those pockets of area within timberlands which have high habitat value or sensitive species and because of these values should be reserved from harvesting?

- **Should the County define "Critical Watershed Areas" where the County would review Timber Harvest Plans within the County jurisdictional area?**

- **Should the County increase it's role in the review and monitoring of Joint Timber Management Plans?**

NEXT STEPS

Consistent with the themes in the *Critical Choices Report,* several additional reports are being prepared: *Moving Goods and People*, Managing Natural Resources and Planning for Hazards (*Natural Resources and Hazards Report)*, *Agricultural Resources Report* and this *Forest Resources Report.* In addition, "sketch plans" will be developed, depicting alternative land use scenarios and circulation patterns for the County. The primary purpose of these reports and plans is to solicit public review and comment regarding updating the County General Plan.

After public input, information in the various individual reports and plans will ultimately be incorporated into one comprehensive Phase II Report, which will provide policy options for each of the General Plan themes. The Phase II Report will be presented to the public and County decision makers.

The next steps in the process involve public and stakeholder review of the Forest Resources Report and comment on the policy options through a deliberative workshop process. Then, the policy options and applicable comments will be presented to the Board of Supervisors for final selection of policies to be included in the General Plan Update process.

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Introduction

This *Forest Resources* report is part of the first step of Phase II of the General Plan Update. This second phase of updating the General Plan entails gathering data, examining the changed situation since the most recent General Plan update, and preparing to look ahead to the year 2025.

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In the *Critical Choices Report*, prepared to scope issues for the General Plan Update process, the following issues scored high with regard to timber resources.

- Develop updated County-wide policies for timber resource protection and management and include consideration of economic, social and environmental affects of harvesting;
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In September, 2002, the Department of Community Development Services released the *Natural Resources and Hazards Report* prepared by Dyett and Bhatia. Chapter 2 of this report presents maps of the vegetation distribution for each of the watershed planning areas of the county which includes mapping of the forest vegetation types. Chapter 3 of this report describes Humboldt County's forest resources, with an emphasis on timberlands and production. The mapping of these two chapters of the *Natural Resources and Hazards Report* largely addresses the first component of *NR6c*. The *Natural Resources and Hazards Report* includes a discussion of the regulatory framework and addresses the policy framework and some options that respond to issues related to forest resources. The Forestry Review Committee found the chapter on forest resources short on discussion and analysis and recommended a more detailed treatment of forest resource and potential policy options. The sole purpose of the *Forest Resources Report* is to implement the directives of *NR6c* and *NR7b*. Secondarily, the Forest Resources Report provides some additional background information related to forest resources in Humboldt County and includes additional analysis of policy options developed pursuant to the directives of *NR6c* and *NR7b*.

FOCUS

This *Forest Resources Report* is an effort to further address the issues related to the direction given by the Board of Supervisors in the Critical Choices Report and expand on the information presented in Chapter 3 of the *Natural Resources and Hazards Report* prepared by Dyett and Bhatia (September 2002). This report additionally provides for a more detailed discussion and analysis of the issues identified by the Forestry Review Committee and included as Appendix A in the *Natural Resources and Hazards Report.* Issues identified by the Forestry Review Committee relate to: public service/improvement concerns with respect to law enforcement, roads and drainage infrastructure that supports timber harvesting, fire protection, and land use conflicts. These issues are also discussed in the section on policy options. This report further describes Humboldt County's forest resources, with an emphasis on timberlands and production. Then, the regulatory framework is described; and the final section addresses the policy framework and options that respond to issues related to forest resources.

It is important to note that the California Forest Practices Act and the California Department of Forestry and Fire Protection have primary authority over the regulation of Timber Harvesting activities in the State. The County's role through the General Plan Update process is to ensure the continuance of vital resource production lands through appropriate policies, land use designations, and zoning and to address potential impacts on communities near the urban fringe.

SOURCES

The primary sources for this paper have been the *Natural Resources and Hazards Report*, the Humboldt County Community Development Services Department (which includes the Building and Planning divisions and the Office of Economic Development), California Department of Forest and Fire Protection, the U. S. Forest Service, the Forestry Review Committee, organizations that commented no the *Natural Resources and Hazards* report, and the general literature.

Maps for this paper have been prepared using County GIS data. It is important to note that the County GIS database is still in the process of being refined. New data are still being made available and will continue to refine our understanding of the County's current conditions.

NEXT STEPS

Consistent with the themes in the *Critical Choices Report,* several additional reports are being prepared: *Moving Goods and People*, Managing Natural Resources and Planning for Hazards (*Natural Resources and Hazards Report)*, *Agricultural Resources Report* and this *Forest Resources Report.* In addition, "sketch plans" will be developed, depicting alternative land use scenarios and circulation patterns for the County. The primary purpose of these reports and plans is to solicit public review and comment regarding updating the County General Plan.

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1. Inventory of Forest Lands (Critical Choices Directive NR6c)

1.1 FOREST RESOURCES IN HUMBOLDT COUNTY

There are 1.9 million acres of forested land in Humboldt County, covering more than 80 percent of the county's total land area. National Forests encompass nearly 338,000 acres within the county; National and State Parks include 70,000 and 72,000 acres, respectively. National and State Wildlife Areas cover 2,600 and 2,000 acres. County and Community Parks account for 1,000 acres. The Bureau of Land Management's Forest Reserves cover 7,600 acres. Altogether, these public forested lands (also including reserves, parks, and other holdings) total over 490,000 acres or 26 percent of all forested lands in Humboldt County.

1.1.1. LAND SUITABLE FOR PRODUCTION

Forest resources, much like agricultural resources, are dependent on the quality of the climate and soils. Humboldt County's mild and wet climate and good soils are very conducive to timber production. There are 1,900,000 acres of forestland in Humboldt County, 1,700,000 of which are considered suitable for production (see Table 3-2 of the *Natural Resources and Hazards Report*, Source: Dyett & Bhatia, 2002, and Humboldt County GIS 2002). About 900,000 acres are part of the Timber Production Zone (TPZ).[i] This acreage is equal to 45 percent of the total land acreage in the county. Humboldt County has the largest harvest of any county in the state of California. In 1996, Humboldt County had a harvest of more than 500 million board-feet of timber, or nearly 23 percent of the total harvest in California.

1.1.2. FOREST SITE CLASSES

Each county assessor grades Timberland Production Zones for productivity based upon their ability to produce wood. In California, five general site classes are established within three general forest types: young-growth redwoods, whitewoods (Douglas-fir), and ponderosa pine and mixed conifers. Site I denotes areas as having the highest timber productivity while Site V denotes areas as having the lowest timber productivity. Using a formula contained in Section 434.5 of the Revenue and Taxation Code, the State Board of Equalization (SBE) annually establishes the value for each site by general forest type. The following site classification table (Table 1) and SBE set values show TPZ productivity ratings and associated value.

Table 1. Site Classification and potential tree heights in Timberland Production Zone.

Productivity Potential[1] (Site Class)	Potential tree height Young-Growth Redwoods	2002 land value/acre[2]
I	>= 180	$284
II	155-179	231
III	130-154	201
IV	105-129	175
V	< 105	55

1-rated by potential tree height in feet at 100 years old, except the last column at 300 years old

2-State Board of Equalization 2002 timberland values

ProductivityPotential[1] (Site Class)	Whitewoods (All Douglas-fir) [2]	2002 land value/acre[3]
I	>= 194	$201
II	164-193	149
III	134-163	124
IV	103-133	93
V	< 103	49

1-rated by potential tree height in feet at 100 years old, except the last column at 300 years old

2-including also Sitka spruce, grand fir, hemlock, bishop pine, and Monterey pine stands

3-SBE 2002 land values

Timberland Production Zone is also classified for operability based upon accessibility, topography, soil type, and legislative or administrative constraints. In this summary, all the inoperable land and homesteads in the following TPZ acreage table are lumped into the Site Class V. For the most part counties have just one forest type reflected in their site table. Two exceptions are Humboldt and Mendocino counties. Humboldt County's forest conditions require use of both redwood and whitewood tables. This is shown in the Table 2.

Table 2. Timberland Production Zone (TPZ) acreage by Site Class in Humboldt County as of 2000-2001.

	Site Class By Acreage					
	I	II	III	IV	V	Total
Redwood	**9,014**	**309,102**	**80,876**	**2,864**	**1,151**	**403,006**
Whitewood	**1,222**	**94,588**	**395,191**	**87,450**	**1,717**	**580,167**
TOTAL	**10,236**	**403,689**	**476,066**	**90,314**	**2,868**	**983,173**
Percent	**1**	**41**	**48**	**9**	**0.3**	

Comparing public policies that strive to protect "prime" agricultural land, Sites I and II can be viewed as "prime" timberland. These are the most productive forest sites to grow wood or to attain forest structure with large trees. To the extent that these considerations are important, public policy choices to be discussed at the end of this chapter should consider what additional forms of support may be appropriate to keep these lands in TPZ.

1.1.3. FOREST TYPES

Trees are generally classified as hardwood (including all oaks, alders, and other deciduous or broadleaf species) or softwood (including fir, spruce, pine, redwoods and all other coniferous or needle-bearing species), although some "hardwoods" are softer than softwoods. Forest types, as listed by the California Department of Forestry, are categorized by the dominant species or mix in that region.[ii]

Table 3 lists all forest types that occur in the county. A more generalized depiction of forest types is provided in Figure 2-2 (Vegetation Types) in Chapter 2, Biological Resources, of the *Natural Resources and Hazards Report* (Dyett and Bhatia, 2002).

Table 3: Forest Types in Humboldt County.

Habitat Type	*Acres*
Douglas-Fir	701,437
Montane Hardwood	469,351
Redwood	428,277
Montane Hardwoods Conifer	167,452
Montane Riparian	51,165
White Fir	33,366
Coastal Oak Woodland	32,812
Klamath Mixed Conifer	18,918
Red Fir	6,884
Jeffrey Pine	2,451
Closed-Cone Pine Cypress	614
Ponderosa Pine	73
Blue Oak Foothill Pine	27
Other	143
Total	**1,912,970**

Source: Humboldt County GIS.

The most common forest types in Humboldt County include the following:

- Douglas-fir forest, the dominant forest type in the county, is found at elevations of 500 to 2,000 feet (normally above redwoods, but also below in the southern county), and includes a variety of oaks and pines, with yew, cedar, and hemlock also growing in moister sites.
- Montane hardwood forest is found largely in steep canyon slopes and ridgetops, dominated by the canyon live oak, with other oaks, pines, madrone, and laurel at lower elevations.
- Redwood forest grows primarily along the coast and in nearby lowland areas, with redwoods interspersed with a variety of other conifers and red alder.

- Montane hardwoods conifer forest occurs farther inland, above rainier areas, and includes black oak, white oak, live oak, along with white firs and Douglas-firs.
- Montane riparian forest, which is generally not productive, is marked by bigleaf maple, California bay, and Fremont cottonwood.

1.1.4. RESOURCE VALUE

Public and private forest lands in the County provide many economic, social and environmental roles. The following paragraphs focus their economic importance. Environmental and social roles are addressed in more detail in the watershed by watershed treatments of Volume II of the *Natural Resources and Hazards Report*.

Economic Value

The post-war economy brought a boom to the lumber markets and local Douglas-fir and redwood timber industry. Technological improvements also brought power saws, bulldozers, rafts, tugs, trucks, and trailers. From an annual level of 23.4 million board feet (MMbf) in 1947, timber production in Humboldt County rose to 305.7 MMbf in 1955 and, with annual fluctuations, reached 350.9 MMbf in 1964. More recently the County timber production has been in the range of 350 to 500 MMbf (Figure 1). The increased value of harvested timber in recent years has led to a dramatic increase in overall agricultural value.

The timber industry has economic implications for many components of the local economy. Lumber mills, trucking and shipping of wood products, professional services, and a variety of other industries benefit from the leading role of timber harvesting in the County. In terms of land use, timber production represents 14.1% of the land use in the Unincorporated Coastal Zone portions of the County and 46.5% of the land use in the remainder of the County Unincorporated areas (*Building Communities*, Dyett and Bhatia, 2002). Clearly timber production is a key component of the County's economic well being.

In terms of economic significance statewide, as shown in Figure 1, Humboldt County has consistently played a key role in providing timber resources and related products to the state and region. Additionally, according to the report ***Prosperity: the North Coast Strategy for the New Economy:***

> *"Lumber-based manufacturing generates about 75 percent of the total County manufacturing income. Twenty seven percent of the timber produced in the State of California comes from Humboldt County. Though timber plays an extremely important role in the local economy, it once played a much greater role. However, technological innovation reducing the labor necessary, conversion from a virgin to second growth manufacturing and regulatory issues reducing the amount of local timber harvested, has severely curtailed the employment in this industry. Presently, local mills are spending approximately 2 million dollars per month to purchase logs from other states and foreign countries.*
>
> *There are economic opportunities that can be expanded upon. The Forest and Lumber Products Cluster meeting identified additional opportunities to use local lumber in value*

added products. The cluster also provides opportunities to link with the tourism industry in many ways."

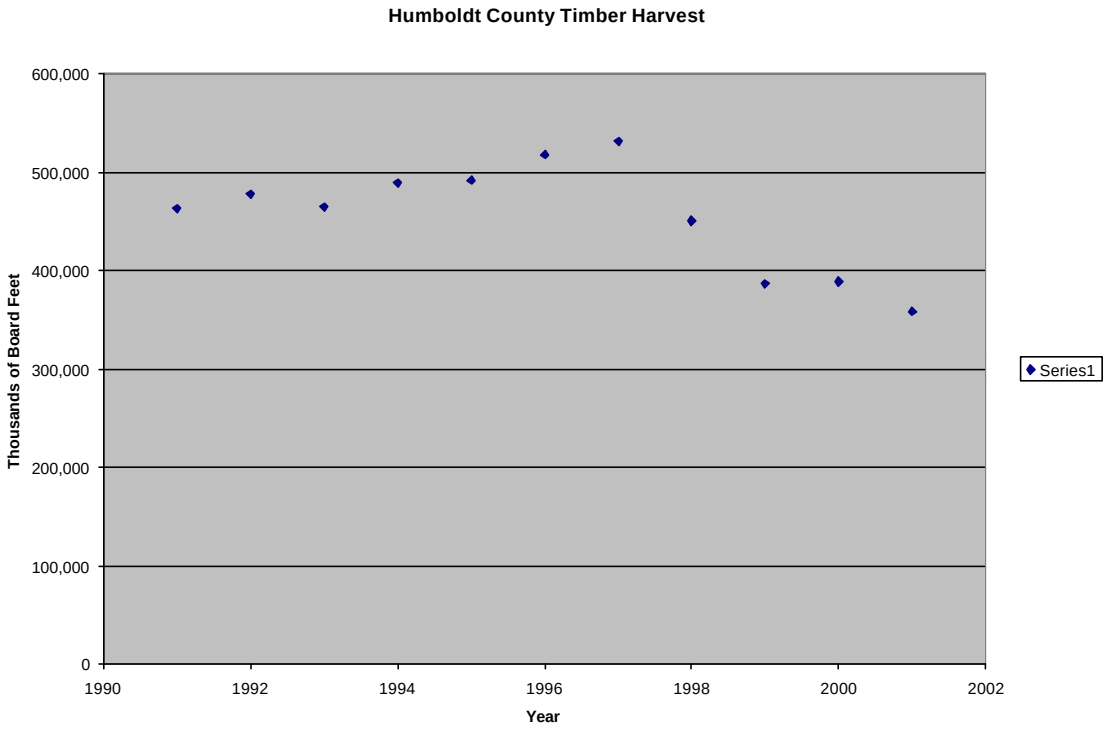

Figure 1. Humboldt County timber harvest in Thousands of Board Feet for the years 1990 to 2002. (Source: State Board of Equalization, Agency Planning and Research Division, Research and Statistics Section, Table G-27, http://www.boe.ca.gov/).

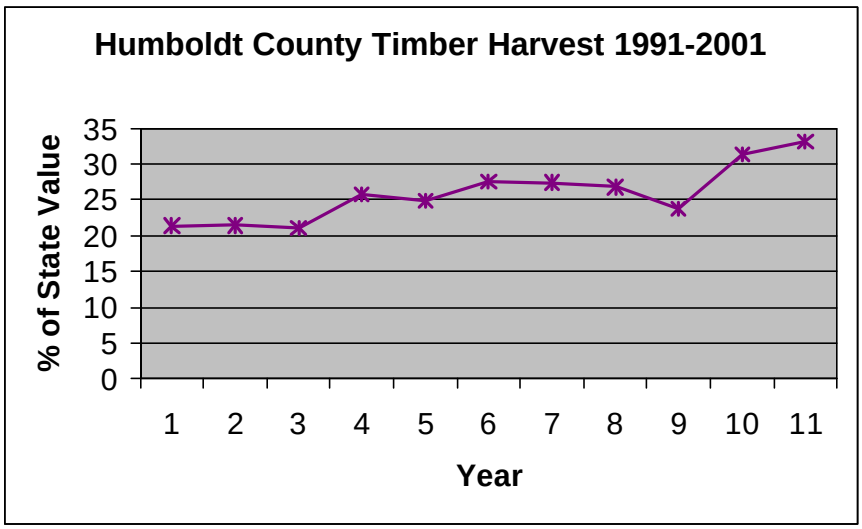

Figure 2. Humboldt Count Timber Harvest as a percentage of total State timber harvest value for the years 1991 to 2001.

As shown in Figure 2, The Humboldt County timber harvest value has consistently been over 20% of the statewide total and most recently (2001) accounted for a third (33%) of the total statewide timber harvest value.

Other trends in the economics of timber harvest in Humboldt County have been reported by Richard B. Standiford (2003). These include:

- A gradual decrease in timber harvest volumes from 1948 to 2000 (Figure 3).
- A steady and marked shift from old growth to young growth economy in timber harvesting (Figure 4).
- And a steady increase in the value (nominal stumpage prices) from 1978 to 2001 (Figure 5).

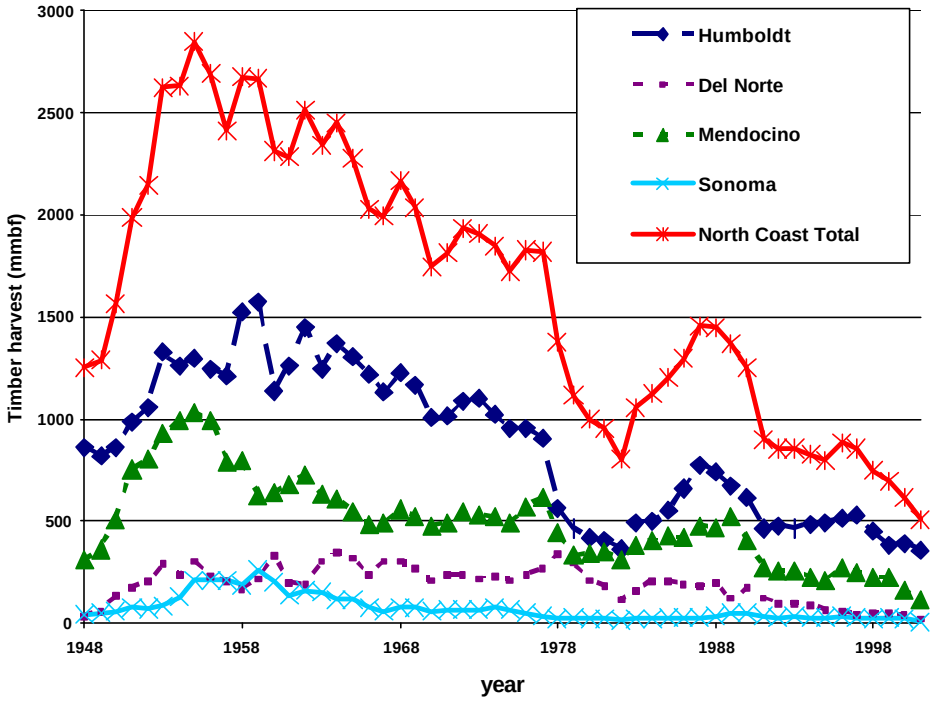

Figure 3. North coast timber harvest by County - 1948 - 2001 (Richard B. Standiford, U.C. Berkeley Cooperative Extension, 2003).

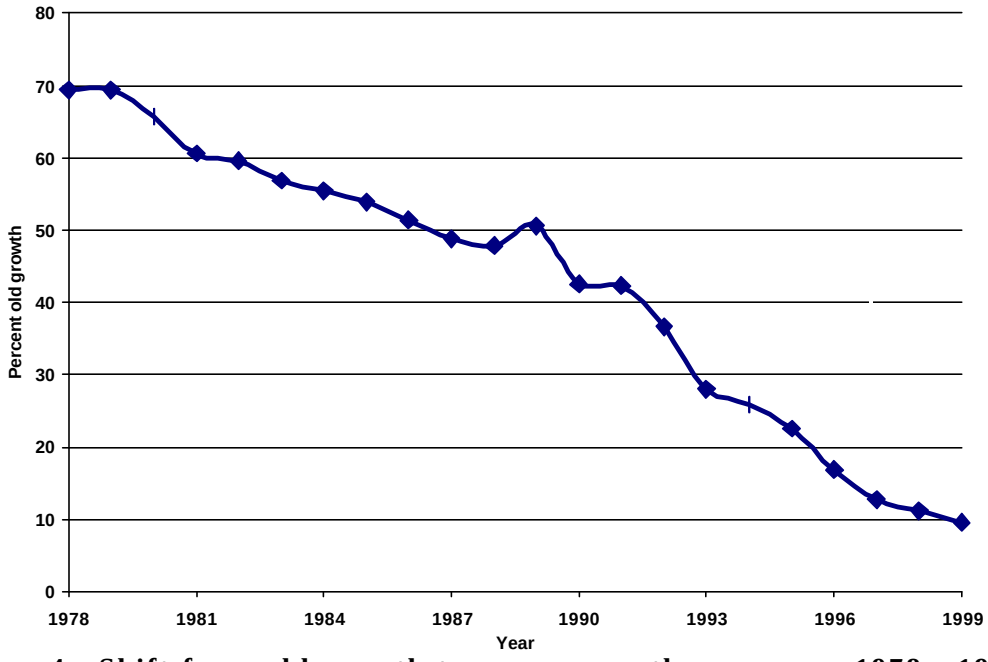

Figure 4. Shift from old growth to young growth economy - 1978 - 1999 (Richard B. Standiford, U.C. Berkeley Cooperative Extension, 2003).

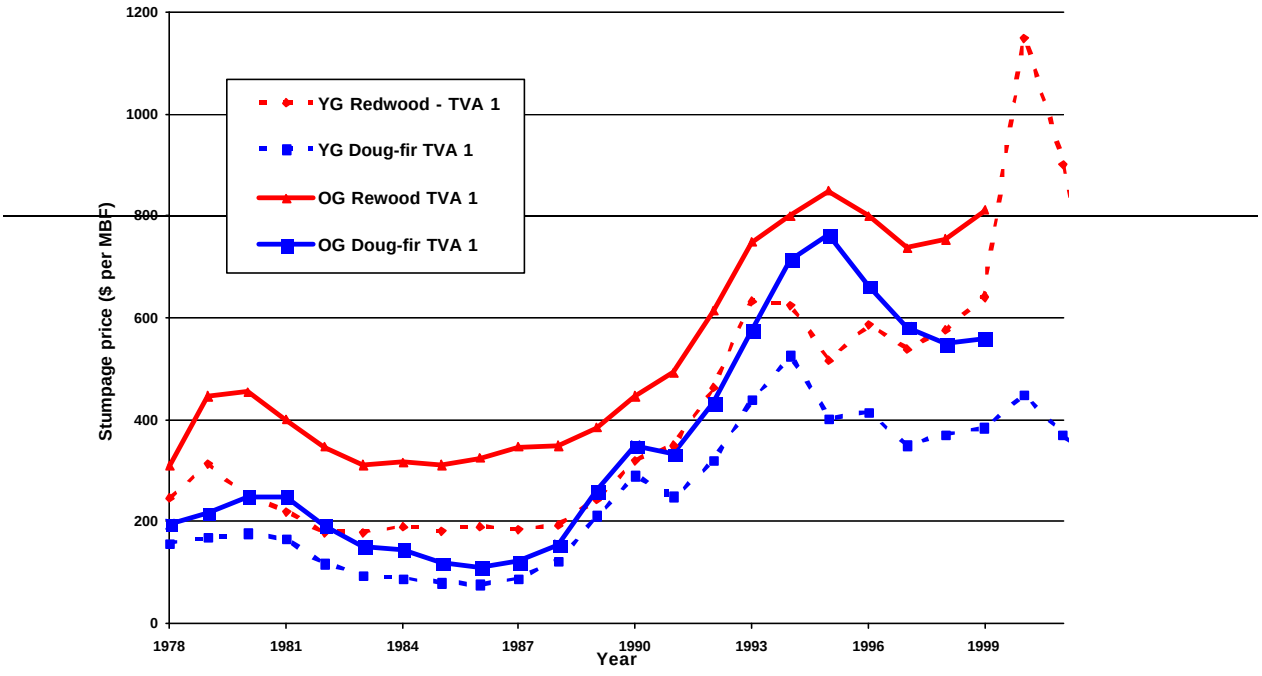

Figure 5. Nominal Stumpage Prices - 1978 - 2001 for Humboldt and Del Norte Counties (Richard B. Standiford, U.C. Berkeley Cooperative Extension, 2003).

1.2 FOREST LAND OWNERSHIP PATTERNS

LARGE LANDOWNERS AND INDUSTRIAL LAND

Industrial timberland is land owned by companies that either operate a sawmill or manage at least 5,000 acres of productive timberland. Non-commercial owners are not considered industrial. The five largest timberland owners in Humboldt County are industrial lumber companies. Industrial timberland owners (listed in Tables 4 and 5) own a combined area of 657,098 acres, two-thirds of timberland in Humboldt County. Figure 6 and Map 1 display industrial and non-industrial timberlands in the County.

Most of the remaining large landowners (those owning 2,500 acres of timberland or more) in the county are family trusts and foundations, although three ranches (the Russ Ranch and Timber Company, Gift Ranch, and Perry Ranch) and the Yurok Native American tribe, which owns nearly 2,900 acres, also rank as large timberland owners.

Table 4: Industrial Timberland Owners (timberland acreage only).

Owner Designation[1]	Acres
Owner A	339,355
Owner B	215,107
Owner C	38,576
Owner D	25,024
Owner E	17,266
Owner F	11,358
Owner G	10,412
Total	657,098

[1] At the request of the FRC, for privacy purposes, owners are presented anonymously.

Source: Humboldt County GIS 2002.

Table 5. Forty Largest Private Land Ownerships. (TPZ and other acreage)

Owner	# of Parcels	Acres
1	1,179	341,916
2	1,028	219,881
3	268	38,742
4	80	29,535
5	190	25,493
6	173	21,903
7	94	16,555
8	82	16,434
9	66	15,083
10	106	12,701
11	48	12,173

12	87	12,061
13	39	11,358
14	45	10,687
15	48	10,300
16	37	9,868
17	43	8,993
18	30	8,871
19	59	7,949
20	38	7,315
21	28	6,304
22	34	6,186
23	22	6,091
24	64	6,090
25	16	6,089
26	28	5,750
27	46	5,034
28	19	4,964
29	45	4,820
30	22	4,554
31	26	4,524
32	25	4,489
33	31	4,409
34	45	4,189
35	19	4,141
36	25	4,082
37	22	4,070
38	26	3,934
39	25	3,609
40	51	3,591
All Land Ownerships		
Category	**# of Parcels**	**Acres**
Forty Largest Private Land Ownerships	**4,359**	**934,737**
Other Private Lands > 640 Acres	**1,958**	**229,689**
Other Private Lands < 640 Acres	**37,205**	**429,417**
Public Lands	**4,260**	**673,767**
Lands in Cities	**NA**	**18,777**
County Total	**47,782**	**2,286,387**

Note: Names and numbers were derived from HCCDS's GIS and LIS databases. Some title names were aggregated in order to simplify land holdings for this table. Additional names may be shown on land titles that are not included here. Names were made anonymous at the request of the FRC.

1.2.2. SMALL LANDOWNERS

Small timber landowners can be characterized as follows: residential forest owners (typically 1-9 acre parcels); small to medium forest owners (40 to 160 acre parcels); and large forest owners (over 160 acre parcels). During Phase I of the General Plan Update, the issue of small landholdings and their needs was raised. Figure 6 shows the distribution of industrial timberland and other timberland, which includes both large and small landholdings. Table 6 shows the parcel sizes for non industrial timberlands (combination of AE/TPZ ownership) and the respective parcel sizes for small timberland owners.

Table 6: Parcel Sizes For Non-Industrial (Other) Timberland (TPZ/AE zoned).

Acreage Ranges	*Number of Parcels*	*Percent of Total*
40 acres or fewer	1028	27.6
41 - 80 acres	975	26.2
81 - 160 acres	856	23.1
Greater than 160 acres	859	23.1
Total	**3718**	**100**

Nationwide, small and medium forest owners represent a size category that is experiencing the greatest growth in numbers of owners and acres represented (Best and Wayburn 2001). Though often fragmented in nature, these forest properties can still provide many major forest values. They can be managed for periodic timber or other forest-based revenue though major harvesting typically occurs only once or twice in an owner lifetime. This size ownership is often responsible for contributing more acres to the class through increasing subdivisions, lot line adjustments, certificates of compliance, or determinations of status, thus swelling the numbers of small forest landowners in the last twenty years.

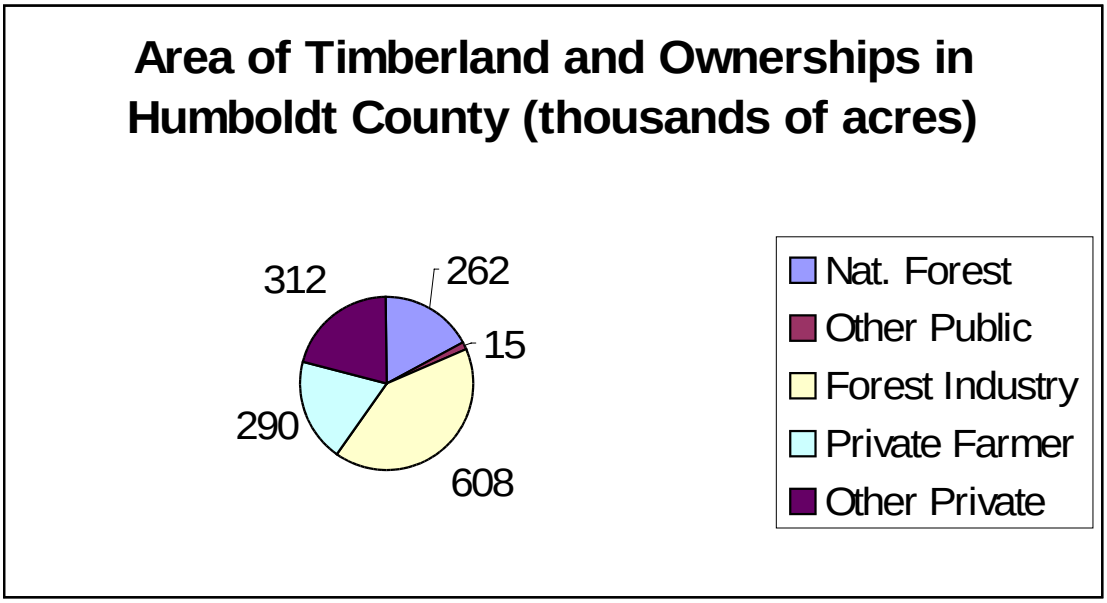

Figure 6. Timberland ownership in Humboldt County.

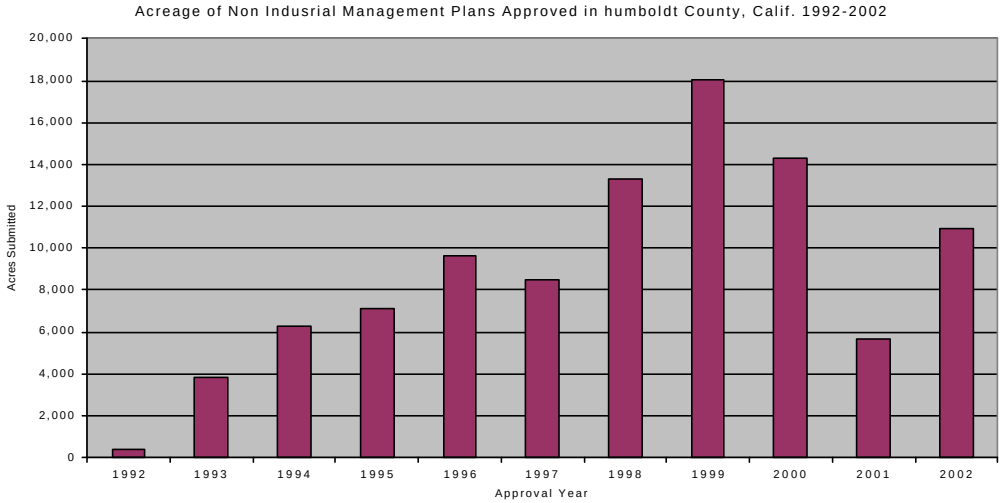

Figure 7. Non-industrial Timber Management Plan Submissions for Humboldt County (John Marshall , California Department of Forestry and Fire Protection, 2003).

As can be seen from Figure 7, there has been an general increasing trend in the number of acres submitted to the California Department of Forestry and Fire Protection for Non-industrial Timber Harvest Plans for the years 1992-1999. As the harvest plans may be valid for a number of years, cumulatively this represents a greater and greater amount of acreage of non-industrial land under harvest plans. However, the relative number of acres compared to industrial timber lands is small, and represents only about 5% of the acreage of industrial forest lands or 3% of combined industrial forest and national forest lands. The data suggest an increasing trend in harvest requests for non-industrial forest lands.

According to the Humboldt Watershed Council, 24% of Humboldt County's non-industrial private forests (NIPF) are not zoned TPZ. This figure was calculated as the difference between the total acreage of TPZ and USFS statistics of private timberland ownership. Figure 8, which is based on the USFS statistics, shows the distribution of non-industrial private timberland not zoned TPZ in Humboldt County. County staff researched this issue using GIS data sources on hand and produced a more precise mapping, differentiating softwoods and hardwoods (Map 2).

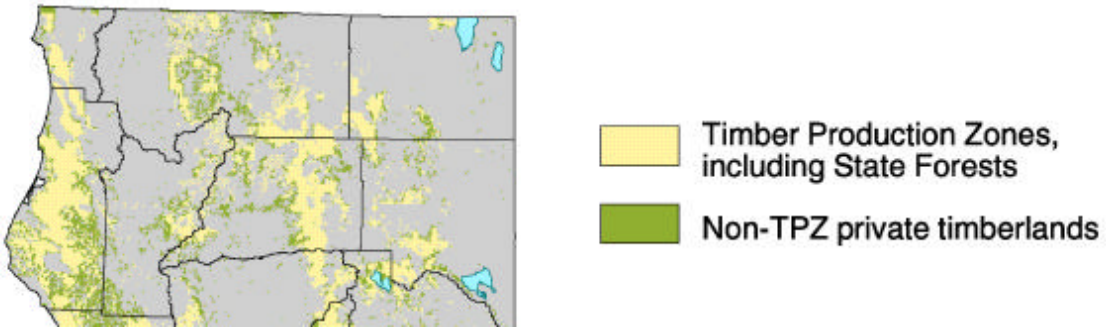

Figure 8. Private timberland and Timber Production Zone lands in Humboldt County (Shih 2002).

As can be seen from these figures, there are significant areas in southern and eastern Humboldt County with timberlands that are not zoned TPZ. There are a number of reasons why private timberland owners may not have want their land zoned TPZ; among these are the following:

- A desire not to have others trespassing or harvesting on their property.
- The landowner does not want to commit for at least ten years – especially if they want freedom to sell and/or subdivide.
- Landowner is not aware of the long-term investment potential of timber for their own and the County's economic advantage.
- The landowner does not perceive that there would be enough financial gain from annual tax decreases to make a rezone application worth the $3,000+ application fee.
- The landowner has less than 160 acres and therefore has no current opportunity to apply for the same privileges that were granted to Humboldt County forest land owners in 1976 when the *ad valorem* timberland tax was changed to TPZ timber yield tax.
- Because of these factors, the Humboldt Watershed Council has suggested that NIPF owners who are willing to commit to low-impact, sustainable timber harvesting should have a window of opportunity to apply for TPZ zoning, even if they have less than 160 acres.

The recommendation to allow for a window of opportunity for rezone into TPZ of NIPF parcels smaller than 160 acres will be addressed in the policy options section. Such a proposal requires additional research to assess the fiscal impacts on the County as there are many unknowns at this time: number of acres, number of interested land owners, number of parcels, ability of such lands to meet the requirements of TPZ, etc. Such a proposal, if feasible, would be limited in term and for parcels smaller than 160 acres would require preparation of a TMP. The TMP should include a plan which demonstrates the feasibility and viability of sustainable timber harvesting.

An alternative suggested by the Forestry Review Committee is to allow for such rezoning into TPZ of parcels less than 160 acres only if they already have a Non-Industrial Timber Management Plan on file. This alternative may also be considered in further analysis of this policy option.

1.3 TIMBER HARVEST ACTIVITY IN HUMBOLDT COUNTY

There have been great fluctuations in the acres presented to CDF for Timber Harvest Plan activities, with a general trend of steady increase since 1982 (see Figure 9).

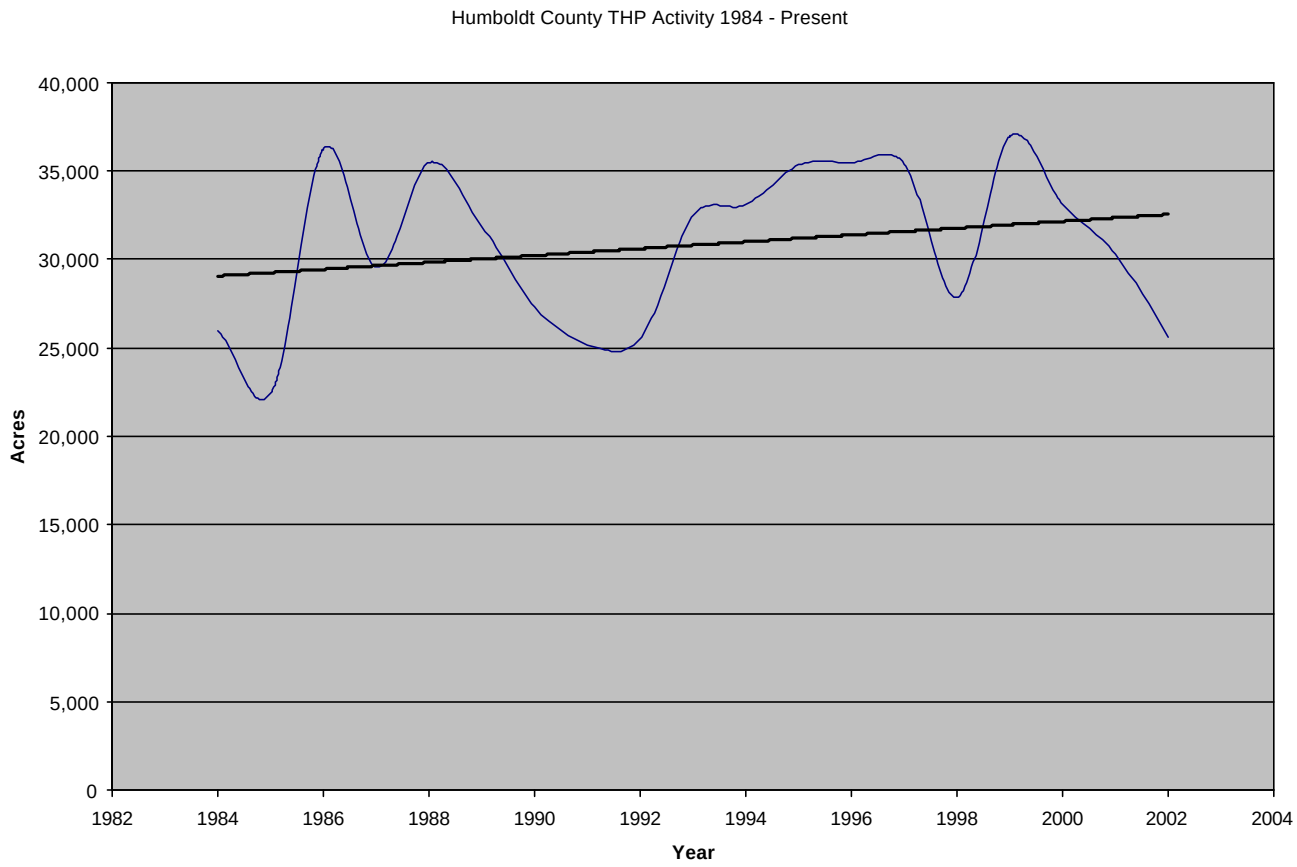

Figure 9. Acres submitted to CDF for Timber Harvest Plan activities between 1982 and 2002 (source CDF database).

In terms of economic significance statewide, as shown in Figure 2, Humboldt County has consistently played a key role in providing timber resources and related products to the state and region. The following table represents the acreage, number, and range of THP submitted within Humboldt County for 2002 by plan submitter.

Table 7. Timber harvest plan submissions to CDF for Humboldt county in 2002. (Source: John Marshall, CDF 2003.)

Applicant	Simpson Resource Company	Scotia Pacific / Pacific Lumber Company	Others	Total
No. of THP's	53	91	34	178
Acres	4,475	10,682	20,212	35,369
Range (Acres)	25-181	39-300	1-512	1-512
Average Acres	84	117	149	114

Information that can be used to perform the analysis necessary to guide public policy in the area of timber harvest plan review is beginning to become available. For example, in a preliminary research effort, County staff obtained the Timber Harvest Plan (THP) database from the Department of Forestry and Fire Protection and integrated the harvest data with our GIS mapping of three specific watersheds: Eureka Plain, Lower Eel, and the Van Duzen. The results are shown in Maps 3, 4, and 5 respectively. These figures portray the different treatments under even-aged and uneven-aged harvests and graphically show the areas of the treatments for the time periods covered. Each map also includes a trend analysis showing acres of treatment with year, and each includes tables showing the number of THPs and acres for each year. The tables also present the total acres for each treatment type and include a parcel size category listing.

A complete, in-depth watershed-by-watershed analysis of timber harvest plans throughout the County is not feasible at this time as it involves a level of study that is beyond the scope of this report. For a few key watersheds, the maps show the timber harvest information that is presently available. The GIS mapping in Maps 3, 4, and 5 shows the complexity that would be involved in comprehensive watershed analyses and cumulative impact assessment, should that approach be adopted for one or more key watersheds subsequent to policy option review.

The tables embedded in the maps also show the type of information contained in the database that could be analyzed on a watershed basis to further investigate timber harvesting practices. These include the following parameters: types of treatments; trend analysis in acres treated each year over time; the range and average number of acres addressed under each timber harvest plan; and the relative amounts (acres) and types of treatment methods (clearcut, selective cut, etc.) under each timber harvest plan.

Once again it is important to note the direction given by the Board of Supervisors in the Critical Choices Report:

NR7b **Develop policies for specific aspects of forestry management that impact communities, e.g. impacts to roads, harvesting at the urban fringe, changes to flood elevations.**

One way to address this directive is to develop policy options that provides for an analysis of cumulative or watershed-wide timber management activities that have an impact on the urban fringe or changes in flood elevations or impacts to roads. Policy options 3.4 and 3.6 in Chapter 4 are responsive to this directive.

In an effort to further identify those areas in the County that may have a significant "urban fringe" which abuts potentially active timber lands, staff prepared a series of maps (one for each community planning area) which illustrate areas of interface between residential/ commercial/ industrial land use designations and those areas with a Timber land use designation.

1.4 CONVERSION OF TIMBERLAND

Timberland conversion, the transfer of timberland to other uses, occurs as a result of General Plan amendments and new subdivisions, as well as through the Certificate of Compliance process, which involves recognition of historic parcels that may be substandard to minimum parcel sizes and densities established by the General Plan. One quarter of all the Certificate of Compliance applications submitted since 1985 have been on agricultural properties and timberlands, affecting more than 18,000 acres. Also, more than one half (53 percent) of all the lot line adjustment applications since 1985 have been on agricultural and timberlands, affecting more than 16,000 acres.

These changes are primarily reflective of the breakup of old family ranches. Timber production on these areas may still be viable; and it is unclear what specific effects this trend has had on the timber economy. However, forest management practices are generally not enhanced with smaller parcel sizes. Land ownership patterns, for example, are likely to become more complicated with smaller parcel sizes, which may inhibit resource production.
Direct land use conversions by rezone out of TPZ (Timber Production Zone) have been more limited, on the order of 1,000 acres over the last 25 years, 910 acres of which were part of the County's Eureka Community Plan in 1995.

An additional conversion issue that has long been a topic of debate is conversion by public acquisition, highlighted most recently by the Headwaters Forest Reserve acquisition, which removed 7,500 acres from timber production. While such conversions maintain the open space values of the lands, they are lost to the economic sector.

Finally, another process by which timberland conversion occurs is through the "Less than 3 acre Conversion Exemptions" which allow for the ministerial approval of conversion of less than 3 acres for other permitted land uses such as residential development.

1.4.1. NATIONAL TRENDS IN TIMBERLAND CONVERSION

Forest Ownerships are Fragmenting. On a national and global scale there has been several recent trends that have impacted forestland ownership and could potentially be factors in timberland conversions in Humboldt County. On a national level it has been shown that forest ownerships are fragmenting. Statistics presented by Best and Wayburn (2001) demonstrate a continuing shift to smaller, more residential ownerships and the concurrent reduction in the mid-sized, mostly non-industrial ownerships. There are growing numbers of individual ownerships with an increasing number of parcels along the urban-rural interface and in the accessible rural areas, especially along rivers and lakes. Given these trends, it is likely that today more forestland is owned by individuals and families who are less interested in timber harvesting as an important revenue source than was the case in the past. In Humboldt County this trend is manifested in the breakup of family ranches and other large tracts under individual ownership. Often times the breakup may not be by direct subdivision, but could occur through the Determination of Status/Certificate of Compliance process where there are underlying patent parcels.

I**ndividual Landowners are Aging**. Another trend in forestland ownership is that individual landowners are aging. As of 1994, an estimated 2.5 million individual forest owners nationwide were 65 years or older and hold 23.5% of the total privately owned forests. An additional 2 million owners were estimated to be between 55 and 64. Many of these individual ownerships will go through some sort of intergenerational transfer in the next 20 years. Often times with such property transfers, tracts can be broken up and parcel sizes reduced. For some of these property transfers, unfunded estate taxes could force some degree of subdivision or unplanned timber harvest in the 1,000 acre plus size class. Additionally, owners in the 500 to 999 acre size class could be affected, depending on timber stocking and value. At current levels of estate tax, single owners of more than 500 acres begin to incur tax liability, exclusive of residential value or other assets and assuming no estate plan is in place. As can be seen in Tables 5 and 6, Humboldt County has numerous property owners in this category, thus representing a situation were further estate breakup and parcel size reductions can be expected of the next 20 years for non-industrial private timberland property owners.

Forest Industry is Restructuring. Again, as reported by Best and Wayburn (2001) much of the 1990s can be characterized as a period during which the forest industry is restructuring. Industry was marginally covering its cost of capital and generating little if any free cash flow; and pulp prices were wildly volatile. The result has been an acceleration in industry consolidation and turnover in U.S. industrial forestland and processing facilities, in an effort to improve stakeholder returns and compete successfully in an increasingly globalized business sector. To compete with low cost producers in Asia and South America, U.S. companies have been upgrading the efficiencies of their processing facilities, and, in the course, many mills have been closed or changed ownership. This has been particularly apparent in Humboldt County, which has seen the closure or sale of numerous major forest product mill facilities: L-P lumber mills (Samoa and Big Lagoon), L-P Samoa Pulp Mill, Eel River Sawmills, Simpson Samoa Pulp Mill, Palco Mills A and B in Scotia, etc. Companies are also seeking out the highest-yielding soils and species worldwide to grow fiber as fast as possible.

Larger companies have taken the course of industrial consolidation to gain efficiencies and greater control over the resource and markets, and a wave of mergers has swept this sector in the last five years. To unlock the increased market value of their forests, many large industrial companies are divesting themselves of these lands or restructuring the ownership in such a way as to gain greater investor value. Virtually all major forest products companies have sold major tracts in recent years. Pulp and paper companies have been net sellers. The majority of lands have been acquired by other industrial timber owners, as well as institutional investors. For example, over three years Georgia-Pacific sold its timberlands completely, with its California holdings bought by a TIMO on behalf of a pension fund, while Louisiana-Pacific has sold all of its California holdings, with much of this property being acquired by Simpson Timber Company. It is unknown at this time what the long term effects of this widespread restructuring might be on timberland conversion. There is a potential that changing ownerships and decreased interest in maintaining less productive soils and species could ultimately result in some conversions.

Financial Ownership of Forestland Is on the Rise. Another trend in forest ownership apparent in the 1990s is that financial ownership of forestland is on the rise. Forestland is evolving into a

financial asset, owned for its value as a portion of a diversified investment portfolio. This type of ownership is increasing as investors seek greater tax efficiency and liquidity of their holdings. Another reason behind this trend is due to investment by pension funds, which are tax-exempt investors. Pension funds are the largest financial owners of forest lands in the United States. With the growing investment by pension funds, it is likely that financial ownership of private forests in the U.S. will accelerate. Many of the forest lands from which industrial corporations have divested themselves have gone into financial ownerships. There is no guarantee that the demands of the capital markets for return form these forests will be any different than the demands experience by the forest industry. Hence, these owners would have similar management perspectives to other large forest owners such as forest products companies. In reviewing the 40 largest landowners in Humboldt County, it is evident that the largest forest land ownerships remain in the hands of industrial timber operators, Tribes, family ranches or individual ownerships.

1.4.2. STATE TRENDS IN TIMBERLAND CONVERSION

A recent study of Timberland Conversions in California from 1969 to 1998 was completed by Tian-Ting Shih (2002) of the California Department of Forestry (Technical Working Paper 1-01-02). Based on a 1994 U. S. Forest Service Inventory and Analysis estimate, approximately 7.4 million acres of timberland statewide are in private ownership and about 5.5 million acres of that total is zoned for timber production (TPZ). The remaining 2.9 million acres are not zoned TPZ but are treated as Timberland for purposes of forest practice regulation requiring conversion permits. Figure 8 shows the approximate location of private timberlands and TPZ lands in Humboldt County.

Under CDF's regulations, "conversion" from timber growing to other land uses may occur on land that is zoned for timber production or land that is still timberland but which is not zoned for timber production. Within non-TPZ timberlands, under Section 1100(g) of the California Code of Regulations (CCR), timberland conversion means transforming timberland to a non-timber growing use through timber operations where: future timber harvesting will be prevented; stocking requirements will not be met within five years; or there is a clear intent to divide timberland into ownerships of less than three acres (requires a timberland conversion permit).

Shih's analysis divides the state into three regions, with Humboldt County in the Coast region consisting of the Northern and central coast counties of Alameda, Colusa, Contra Costa, Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, Yolo, and western Trinity County. Over the past 30 years (1969-1998), 45,345 acres or 40 percent of timberlands converted in California were in the Coast region with an average of 259 acres per conversion. More recently (last two decades) the average acreage of timberland conversion permits issued was around 50 acres each year for the Coast region. During the first decade (1968-1977) 96 percent of the conversions were for grazing lands. More recently, conversions for subdivision development shifted from four percent during the first decade to 24 percent for the last decade. By acreage, more than half of timberland conversion statewide was used for subdivision development during the last two decades.

Another large factor in conversion of timberland in the region has been for the purpose of conversion to vineyards. Between 1991 and 1998, a total of 1,186 acres were converted to vineyards, with the bulk of these conversions in Medocino (32%), Sonoma (30%) and Napa (17%) counties. Timberland conversion to vineyards in Humboldt County, however, has been minimal so far, as most vineyard development here has been on non-timbered lands and there are fewer locations (notably Willow Creek, Briceland, and Myers Flat) in the county suitable for commercial production.

Statewide, from 1979 to 1998 only 36 out of 344 timberland conversions (direct rezone out of TPZ) were conducted on TPZ zoned land, and accounted for only 20 percent of the total timberland conversion acreage. Within these rezoning acreages, 7 percent were converted for subdivision development, 8 percent for recreation, and the remaining 85 percent for other land uses. This is in contrast to the picture for Humboldt County, where direct land use conversions by rezone out of TPZ have been more limited, on the order of 1,000 acres over the last 25 years, 910 acres of which were part of the County's Eureka Community Plan in 1995 to provide for more residential development.

Since most timberland conversions are conducted on non-industrial private land, timberland converted at historic rates has not significantly impacted California's timber supply, but has caused concerns when timberland conversions occurred around urban areas for subdivision and vineyard development. As reported by Shih, with California's large population and economic growth and public policies on land use unchanged, the overall trend is expected to rise for the next decade.

1.4.3 HUMBOLDT COUNTY TRENDS IN TIMBERLAND CONVERSION

When the Timber Production Zone potential was initially applied in Humboldt County in 1977, a total of 1,103,842 acres were identified as possible for TPZ zoning. During the TPZ zoning program, landowners had the opportunity to "contest" the zoning into TPZ by filing a written affidavit that a parcel had a "higher and better use" which was not included as a compatible use in the County's TPZ Ordinance or that the parcel was not physically suited for timber production. In response to these affidavits, 42,053 acres were not zoned into TPZ. Additionally, as a consequence of Redwood National Park expansion in 1978, an additional 51,115 acres were considered but not zoned into TPZ. Subtracting the opt-out acreage leaves 1,061,789 acres in TPZ.

As of the year 2000-2001, total acreage of TPZ was 983,173 (see Table 2), indicating a loss of 78,616 acres since 1977. A significant change occurred with the expansion of Redwood National Park in 1978 which involved approximately 50,000 acres. As stated above, only approximately 1,000 acres of this has been as a consequence of direct rezones out of TPZ applied for and approved by the Planning Commission and Board of Supervisors. Approximately 910 acres of this were part of the County's Eureka Community Plan in 1995.

Several other factors have played a role in direct conversion out of TPZ in Humboldt County: public acquisition by State or Federal agencies, land trusts established for conservation purposes, and private (non-profit interest group) acquisitions for purposes of donation to public entities for preservation. The latter category includes groups such as Save-the-Redwoods League, Ancient Forest International, and The Nature Conservancy. Most notable among recent federal acquisitions is

that of the Headwaters Forest which resulted in a 7,472 acre preserve managed by the Bureau of Land Management. Additionally, there were additions to Grizzly Creek State Park amounting to 761 acres in 1999 and 691 acres in 2003. A recent U. S. General Accounting Office report entitled *Federal Land Acquisitions in California Since January 1994* (GAO. 2000. GAO/RCED-00-239), identified acreage reportedly acquired by all Federal agencies during the previous seven year period. For Humboldt County the full ownership acreage reported during this seven year period was 5,210 acres. This figure does not include acreage that may have been acquired by third parties and donated to a federal agency or the more recent Headwaters Forest and Grizzly Creek transactions.

Other significant timberland conversions occurred as a consequence of the "Redwoods to Sea" and similar programs. In one transaction, this program of the Save-the-Redwoods League and Ancient Forest International resulted in the buyout of 3,800 acres of timberland from the Eel River Sawmills and transfer of ownership to the Bureau of Land Management. There are numerous other smaller purchases by these and other interest groups that have resulted in conversion and transfer to public entities. In 1998, the Save-the-Redwood League purchased a total of 690 acres, including the Hartsook Inn property in Garberville, and, in 2000, the League purchased over 4,785 acres of land statewide. The League's Master Plan calls for numerous future additions to existing State and Federal redwood forest land holdings throughout Humboldt County though no specific acreages are identified. Efforts of Ancient Forest International are also ongoing for additional purchases, such as the 705 acre "Hole in the Headwaters."

Continued timber land conversion from TPZ through acquisition by non-profit organizations and donation to public agencies is likely. Unlike direct purchase by State of Federal agencies, which include compensation such as the Headwaters Fund to offset impacts to local government, there is no compensation from these non-profit acquisitions. The acreage involved can be significant and a greater factor in timberland conversion than either direct subdivision or rezoning.

Certificates of Compliance/Determinations of Status. In addition to conventional methods of creating legal parcels (i.e., through subdivisions pursuant to the Subdivision Map Act), certificate of compliance/determination of status projects have sometimes been used to establish new parcels. A Certificate of Compliance is a legal document, which certifies that a parcel of land complies with the Subdivision Map Act. In other words, it is a document that states that a particular parcel of real property has been legally created.

There are a number of different ways to subdivide real property. The most common way is by tract map or parcel map. These processes are recognized by the State of California and by Humboldt County as being legal means of subdividing. However, many parcels were created long before these processes became widely accepted. Generally, if a parcel was created without using a process established by the Subdivision Map Act, yet was created prior to a specific date, then it is considered to be legally created.

The issuance of a Certificate of Compliance simply means that the parcel complies with the Subdivision Map Act. It does not mean that it complies with the Zoning Ordinance, Building Code, General Plan, or any other law or ordinance. Additionally, the issuance of a Certificate of Compliance does not necessarily mean that the lot has an approved means of access. Zoning, building codes, and access are not criteria used to determine the issuance of a Certificate of Compliance. It is feasible that a Certificate of Compliance can be issued for a parcel that is

otherwise "unbuildable" or not suitable in terms of minimum size for the applicable zoning, such as TPZ.

Table 8 gives the acreage of TPZ zoned lands involved in Determinations of Status/Certificates of Compliance (DS/CC) for the seven year period 1995 to 2001. Not all of the acreage involved represents timberland or timberland conversions. Many of the large ranch parcels in the county have split zoning with a mix of Agriculture Exclusive and TPZ lands. As some of these ranches change hands, recognition of historic property boundaries occurs. In some cases, this may precede breakup of some large ranch holdings or it may be for purposes of establishing more logical management units. For example, the 1998 acreage includes a 934 acre estate of AE/TPZ land which applied to be broken up by a combination of DS/CC and Lot Line Adjustment to result in partially TPZ zoned parcels of 576 acres, 210 acres and 147 acres (this application was subsequently rescinded due to a agricultural preserve contract). In addition, some industrial timber land owners sometimes use the DS/CC and LLA processes to establish timber management units or for tax structuring.

Table 8. Determinations of Status/Certificates of Compliance for TPZ & TPZ/AE* zoned lands between 1995 and 2001.

Year	1995	1996	1997	1998	1999	2000	2001
Acres	1,453	1,980	297	16 (934)	366	1,617	1,083
No. Parcels	11	24	11	5 (3)	20	57	28

**Includes parcels with split zoning of AE/TPZ and some pending applications.*

As indicated by Table 8A, the number of applications received by the County for Determination of Status/Certificates of Compliance for TPZ lands has increased substantially for the four year period between 2001 to June, 2005. One quarter of all the Certificate of Compliance applications submitted from 1985 - 2000 was on agricultural properties and timberlands, affecting more than 18,000 acres. Since 2000, over 67% of all Certificate of Compliance/ Determination of Status applications received by the County has been on agricultural and timberlands, affecting over 53,000 acres. Two large industrial timber companies, Eel River Sawmills and Barnum Timber have submitted applications for DS/CC on over 30,000 acres of TPZ land in the past 4 years.

Table 8a. Determinations of Status/Certificates of Compliance for TPZ & TPZ/AE* zoned lands between 2001 through June 2005.

Year	01-02	02-03	03-04	04-05*
Acres	14,861	6,605	12,809	22,230
No. Parcels	61	27	152	167

*Through June, 2005

Lot Line Adjustments. A lot line adjustment is typically a minor movement of a property line(s) between two or more adjacent parcels. Lot line adjustments are used to correct minor trespasses or to add acreage to a parcel for the owners convenience. In addition, lot line adjustments have been used in combination with the DS/CC process to recognize and totally reconfigure a number of large acreage resource parcels. Lot line adjustments may affect TPZ zoned land in several ways. In some cases the adjustment may result in parcels smaller than 160 acres and require approval of a joint timber management plan. The Subdivision Map Act was revised in 2002 to require that LLA's involving more than four parcels must now be processed as a subdivision. This has effectively reduced the number of reconfigurations of resource lands by LLA into residential subdivisions.

Table 9 gives the acreage of TPZ zoned lands involved in Lot Line Adjustments (LLAs) for the seven year period 1995 to 2001.

Table 9. Lot Line Adjustments of TPZ zoned lands or partially TPZ zoned lands.

Year	1995	1996	1997	1998	1999	2000	2001
Acres adjusted between parcels < 160 acres	101	279	1,244	170	73	137	55
Acres adjusted from > 160 to <160 acre parcel size	0	0	189	337	257	80	0
Acres adjusted between parcels > 160 acres	478	478	894	3,154	435	1,367	0

For the most part, lot line adjustments have either been minor adjustments between substandard sized parcels (less than 160 acres) or have been reconfiguration of larger resource parcels. In five cases during this seven year period parcels smaller than 160 acres were allowed by lot line adjustment with the preparation and approval of Joint Timber Management Plans. Since 2001, TPZ parcels as small as one and five acres have been approved with Joint Timber Management Plans by the Forestry Review Committee.

Subdivisions. Between 1995 and 2001 there have been only 5 subdivisions that have involved significant areas of TPZ lands. These include: 1) a lot split involving 20 acres of TPZ; 2) five one-acre RS lots split off from 30 acres of TPZ; 3) reconfiguration of AE/TPZ lands from 327 acres to 160 and 167 acres; 4) 14 acres of TPZ split into two lots; and 5) division of a 662 TPZ parcel into parcels of 160 and 402 acres. From 2001 to June, 2005 there have been 8 subdivision applications received that have involved TPZ lands. These included 1) 5 parcels on 42 acres of TPZ/AE; 2) 2 parcels on 77 acres of TPZ; 3) 3 parcels on 75 acres of TPZ/AE; 4) 3 parcels on 309 acres of TPZ/AE; 5) 2 parcels on 173 acres of TPZ; 6) 3 parcels on 118 acres of TPZ/AE; 7) 3 parcels on 25 acres on TPZ land; and 2 parcels on 128 acres on TPZ/AE.

TPZ Zone Reclassifications. There has not been a lot of requests processed to rezone properties in the County out of Timber Production Zone. In the past seven years there has only been 9 direct rezones affecting TPZ lands, and of these, 7 were rezones from other zones into TPZ. The two rezones out of TPZ during this seven year period involved 10-year phase out of TPZ for a 30

acre parcel and a 20 acre parcel. As noted previously, direct land use conversions by rezone out of TPZ (Timber Production Zone) have been rather limited, on the order of 1,000 acres over the last 25 years, 910 acres of which were part of the County's Eureka Community Plan in 1995.

Less than 3 Acre Conversion Exemptions. Finally, another process by which timberland conversion occurs is through the "Less than 3 acre Conversion Exemptions" which allow for the ministerial approval of conversion of less than 3 acres for other permitted land uses such as residential development.

Chapter 1 Endnotes

[i] The TPZ area depicted in the County's GIS is generalized and includes some islands of non-timber lands.

[ii] California Forest Legacy Program, *Amendment to the Assessment of Need*, Sept 2000, pp 32-39, 193.

2. Forestry Management That Impacts Communities (Critical Choices Directive NR7b)

2.1 TYPICAL IMPACTS TO COMMUNITIES

Several California counties have addressed potential timber harvesting impacts to communities by adoption of county regulations specific to timber harvesting activities (CNPS 1999). The following list of California counties presents standards and requirements that were adopted in other areas of the State to address these types of impacts:

Santa Clara County

Winter is defined as October 15-April 15. The THP must be noticed to all landowners within 300 feet of the boundaries, or fronting a haul road. The Director must provide copies of the THP to the local school district and Santa Clara Valley Water District. The plan must define the likely traffic load of lumber trucks, and a map showing truck routes away from the THP area must be provided. Adjacent property lines must be flagged, log hauling cannot take place on weekends or holidays, 200 ft. visual buffers are maintained, performance bonding is required.

Santa Cruz County

Winter is defined as October 15-April 15. The THP preparer and the timber operator must tour the plan area together, if they are different people. The THP must be noticed to all landowners within 300 feet of the boundaries, or fronting a haul road. The Director must provide copies of the THP to the local school district, local water district and school district, and members of Board of Supervisors in district of THP . There is a pre-harvest inspection by the Forest Practice Officer for consistency with rules. Any review team member may participate in pre-harvest inspection. Fuelwood operations may not cut new roads, reconstruct old roads, take place on slopes >60%, or take place in erosion prone or unstable areas. Buffers of 500 ft. must exist around the nest of any rare or endangered bird. Log hauling cannot take place on weekends or holidays, performance bonding is required. A plan on erosion control must be provided.

Marin County

Winter is defined as October 1-April 15. THP maps must identify all habitable structures within 200 ft., the boundaries of the Marin County Recreation Corridor and routes showing truck routes away from the THP area. The notice of filing must be given to any school or school district on the haul road. The response of CDF to the THP, and review team recommendations must be made public, and team members can tour the plan area. All chemical used in land treatment must be identified. Any non-timber use of the land

planned for the next five years must be identified. Tractor yarding on slopes >50% is prohibited. The onset of a THP must provide sufficient county notification. Adjacent property lines must be flagged, log hauling cannot take place on weekends or holidays, 200 ft. visual buffers are maintained, measured from the center of roads, but in the Marin County Recreation Corridor the buffer starts at the first trees (but is no greater than 350 ft.). Clearcutting is not allowed, and reentry to cut areas cannot take place for 10 years. Logging is to be performed by Commercial Thinning or by Selection Method. Stocking standards are higher than required for other coastal areas, requiring by Basal Area Method 125 sq. ft. per acre for Site I lands, 100 sq. ft. per acre on Site II and III lands, and at least 75 sq. ft. per acre on Site IV lands. Section 927.10 also describes stocking requirements as defined by the Point Count method. Forest roads are single lane, less than 12 ft wide, and screened. Further details on felling requirements and road requirements are given in Section 927.11. Snags are to remain within 100 ft. of water or if they are in a WLPZ.

San Mateo County

THP maps must identify all habitable structures within 200 ft., firebreak locations, and scenic road locations. Tractor roads on slopes >50% must be flagged, adjacent property lines must be flagged, and log hauling cannot take place on weekends or holidays. All timber proposed for cutting must be marked, and the timber operator must be bonded.

Monterey County

Winter is defined as October 15-April 15. The THP must be noticed to all landowners on the boundaries, or fronting a haul road, and shall supply all assessor's parcel numbers within the THP. The Director must provide copies of the THP to the Public Water Agency Representative. Log hauling cannot take place on weekends or holidays, and logging roads, tractor roads and landings must be 100 ft. from a public road. Special standards apply to the Big Sur Coast (Section 965.6), where sanitation-salvage is the only silviculture method allowed west of Highway 1, all operations must be screened, new roads are not allowed in the critical viewshed of Highway 1 if it will degrade the viewshed, and is strongly discouraged on slopes >30%. Biological studies are required where sensitive plant and animal species are defined in the Big Sur LUP, and significant adverse impacts can cancel the THP. Within certain drainages defined by the Big Sur LUP, a qualified hydrologist or erosion control specialist must review the THP. The minimum setback on Class I and II streams is 150 feet. The timber operator must be bonded.

It is important to note that the California Forest Practices Act and the California Department of Forestry and Fire Protection have primary authority over the regulation of Timber Harvesting activities in the State through the Forest Practices Act. The County's role through the General Plan Update process is to ensure the continuance of vital resource production lands through appropriate policies, land use designations, and zoning and to address potential impacts near the urban fringe.

Some members of the Forestry Review Committee have commented that the majority of these performance standards are already regulated within the context of current rules and regulations within the framework of the Forest Practices Act and that it is unnecessary for the county to promulgate special county rules and that the General Plan is "not the appropriate forum" for rules governing timber operations (John Marshall, CDF 2003).

Apparently, other counties have not found this to be the case and have sought additional measures to address potential impacts where timber harvesting activities were having an impact on the urban fringe or on communities in their counties. County regulations such as these have been adopted by other counties in the state to ensure consistency of timber harvest plans with the General Plan, Local Coastal Plans and county ordinances, and further serve to ensure adequate mitigation of impacts of THPs with other uses and services. The approaches that other counties have taken to address these issues are presented here only to present one avenue that has been pursued elsewhere where local governments have deemed it necessary to go beyond the level of protection and environmental review which impacted communities receive through the Forest Practices Act process. This avenue is not recommended by the Forestry Review Committee, however, there remains the directive of the Critical Choices Report to develop some policy option(s) to address timber management activities on the urban fringe in Humboldt County. The County may wish to consider the approach of reviewing some individual Timber Harvest Plans in key watersheds where there may be a high interface between timber harvest operations and the urban fringe (this is discussed in further detail in the following section).

2.2 POTENTIAL LAND USE CONFLICTS

The county regulations identified in section 2.1 suggest a list of potential impacts to communities and a palette of Performance Standards that could be applied by local government during the timber harvest review process. These include the following:

Potential Impact to Community	Potential Performance Standard
Inadequate noticing to residents and agencies adjacent to a timber harvest area.	Noticing requirements: property owners (300 feet and adjoining haul route), school districts, water districts.
Wet season impacts	Definition of winter season (used for application of additional standards)
Traffic impacts	Traffic and haul route identification
Harvesting activities adjacent to residential areas	Restrictions on weekend and holiday operations (could also be addressed by zone designations)
Visual impacts	Visual buffers and setback requirements
Re-vegetation	Performance bonding requirements
Excessive road construction	Restriction on new road construction for fuel wood operations
Sensitive species	Buffers of 500 feet around nest sites of sensitive or endangered species
Sedimentation and erosion	Sedimentation and Erosion Control Plan required
Visual impacts	Clearcutting prohibited in certain areas

Standards such as these have been adopted by some Counties for implementation in review of Timber Harvest Plans.

Additional issues that have been raised during *Critical Choices* review and *Natural Resources and Hazards* review relate to Timber Harvest Plan reviews. Some citizens commenting on these documents indicated that there are some issues they believe are not being adequately addressed through the current THP review process. These were identified as follows:

- "*Forest lands offer services including watershed protection, carbon storage, wildlife habitat, and landslide prevention that make all forest lands worthy of greater consideration.*"

- "*The County may wish to consider some County Forest Practice Rules and Regulations.*"

- "*Understanding the retention of late-seral forest habitat is very beneficial to watershed health. Minimum standards for the retention of this habitat should be emphasized.*"

- "*Review of Timber Harvest Plans in a watershed context can avoid cumulative damage to a particular watershed.*"

Some members of the Forestry Review Committee have advised that all of these issues are adequately addressed within the context of the Forest Practices Act and there is no need for additional County regulations to address forest management. Nonetheless, the need to address some potential impacts on the urban fringe was identified by the Humboldt County Board of Supervisors in the Critical Choices Report:

NR7b **Develop policies for specific aspects of forestry management that impact communities, e.g. impacts to roads, harvesting at the urban fringe, changes to flood elevations.**

To be responsive to this directive, the following policy option was drafted for further consideration during the public review process:

Identify "Critical Watershed Areas," (i.e. those watersheds where there is perceived to be significant interface impacts between timber harvesting activities and community values) where the County would review Timber Harvest Plans within the County jurisdictional area. The County could choose to review Timber Harvest Plans only in Critical Watershed areas for potential impacts in key area of importance to local government and county citizens per the CEQA guidelines and recommend mitigation measures to further address the impacts that timber harvest operations have on the community. This would focus effort in urban/rural interface areas. Areas of critical analysis could include the potential for water quality impacts, increased sedimentation, potential for increased flooding downstream of timber harvest operations, impacts to county roads and drainage facilities, traffic and noise impacts.

To further assess the degree to which the individual community planning areas might be impacted by timber management activities that are conducted adjacent to other land uses a series of maps was prepared by the Planning staff GIS section. Maps 6 through 27 (one for each

community planning area) highlight those parcels that have urban type land use designations (residential, commercial, or industrial) and are located next to parcels with a Timber land use designation. Counts of the number of such parcels adjacent to timberlands are listed in Table 10.

Table 10. Number of residential/commercial/industrial parcels adjacent to Timber parcels in each community planning area.

Area	No. Parcels	Area	No. Parcels	Area	No. Parcels	Area	No. Parcels
Alderpoint	21	Weott	7	Garberville	47	Orick	3
Arcata	93	Blue Lake	111	Redway	41	Orleans	71
Avenues	39	Eureka	188	Benbow	36	Rio Dell	42
Miranda	25	Fieldbrook/ Glendale	158/ 110	Hydesville/ Carlotta	122	Trinidad/ Westhaven	60
Myers Flat	21	Fortuna	69	Jacoby Creek	208	Shelter Cove	0
Phillipsville	9	Freshwater	259	McKinleyville	92	Willow Creek	73

As can be seen from the results, almost all rural communities have fringe areas adjacent to potentially active timberlands. Those community planning areas with a relatively high number of parcels adjacent to timber lands include: Arcata, Blue Lake, Fieldbrook-Glendale, Freshwater, Eureka and Jacoby Creek. Based on this analysis, the Eureka basin watershed, which includes the community planning areas of Eureka, Arcata, Freshwater and Jacoby Creek, is numerically the most significant watershed in terms of having a high amount of "urban fringe" bordering on timberlands. The Blue Lake and Fieldbrook-Glendale areas have historically been slow growth areas and are not notorious for land use conflicts between timber and other uses, and the parcel sizes tend to be large, perhaps providing more of a buffer between uses. Based on the urban fringe analysis, the Eureka Basin Watershed or sub-watersheds within the Eureka Basin would be the likely primary candidates for Critical Watershed Areas.

2.3 TIMBER HARVESTING IN RESIDENTIAL AREAS - LESS THAN 3 ACRE CONVERSION EXEMPTIONS

The Department of Community Development Services regulates by zoning timber operations with an operational area under three acres. In many zones, such operations are "general agriculture" and are a principally permitted land use. Other zones, such as residential zones, require processing of a Special Permit or Conditional Use Permit. However, the removal of trees associated with a building or encroachment permit, or for the completion of subdivision improvements, even when not principally permitted, is excluded from the definition of "timber production" under the zoning ordinance and does not require a discretionary permit.

The State's regulations for conversion exemptions require that timber operations not be conducted in a "Watercourse and Lake Protection Zone" unless specifically approved by local permit (e.g. county, city). As such, in order for the County to authorize timber operations under the conversion exemption, a review for project conformance with the County's Open Space Element (OSE) is required. For a discretionary permit, this review would be handled as part of the permit and environmental review process. However, historically no such evaluation was performed by Planning for conversions that are otherwise principally permitted; therefore, a separate review step for demonstrating conformance with the OSE has recently been implemented. This review is done by the Building Inspection Division following the Streamside Management Area Ordinance requirements.

While timber operations may be conducted with Streamside Management Areas (SMA) per section 3432.7 of the General Plan, the showing of conformance with the General Plan for a conversion out of timberland must also take into consideration the "post-conversion use" proposed by the project (e.g. house site). The post-conversion use must similarly be a permitted activity within the SMA, or the plan for conversion must be modified to exclude any fill or grading (e.g. landing used for a future building pad) which is not consistent with the General Plan. Where appropriate, a Special Permit may be processed to reduce the width of the SMA provided the retained buffer area is supported by the Department of Fish and Game and the findings of the plan are met.

Under the current procedures, the Building Inspection Division conducts an OSE review of the proposed conversion area before the Department's authorized representative signs the "Declaration of Land Use and Zoning Conformance" on the CDF conversion exemption form.

3. Regulatory Framework

3.1 FEDERAL REGULATIONS

3.1.1. U.S. FOREST SERVICE REGULATIONS

Timber harvest activities of the U.S. Forest Service (USFS) are regulated by many federal laws. Under the Multiple Use and Sustained Yield Act of 1960, formal recognition was given to all types of resource uses in the management of the national forests. Timber production is one of the uses along with watersheds, fish, and others. In 1969, the National Environmental Protection Act (NEPA) promoted the thoughtful evaluation of potential impacts on the environment before a federal action, like a timber harvesting program on national forests, occurs. As a result, an Environmental Impact Statement (EIS) and public involvement is required when a federal action may cause a significant impact on the environment.

The National Forest Management Act of 1976 requires planning for each forest in the form of a Timber Management Plan. These land management plans follow policies to achieve the goals of the Act, such as, “insure that timber will be harvested from National Forest System lands only where…soil, slope, or other watershed conditions will not be irreversibly damaged”, and “protection is provided for streams, streambanks, shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment, where harvests are likely to seriously and adversely affect water conditions or fish habitat.”

3.1.2. SECTION 208 OF THE FEDERAL CLEAN WATER ACT

This section deals with "nonpoint" sources of pollution, of which soil erosion is one of the most common. After more amendments in the rules, the State Water Resources Control Board in 1988 conditionally certified the Forest Practice Rules as being the "Best Management Practices" (BMPs) to prevent stream sedimentation. Although a four-year monitoring and assessment program was placed on the certification, the program has not been done to date. The effectiveness of the new rules and their amendments in protecting the beneficial uses of water has only been evaluated by the Board of Forestry's interdisciplinary "208 Assessment Team," with the findings released in a 1987 report. The study team made visual observations and no quantitative measurements "because of study limitations."

More recently, Forestry Management Measures were identified by the State Regional Water Quality Control Board and the California Coastal Commission as necessary for protection of water quality and natural resource values from non-point water quality pollution as directed by Section 208 of the Clean Water Act. These management measures (MMs) have been identified in the statewide non-point pollution prevention program as follows:

"The SWRCB, CCC, and other State agencies have identified 12 MMs to address various phases of forestry operations relevant to controlling nonpoint sources of pollution that affect State waters. The forestry MMs are for the most part a system of practices used and recommended by the Board of Forestry and Department of Forestry and Fire Protection in rules or guidance.

California's MMs to address silvicultural sources of nonpoint pollution:

2A. ***Preharvest Planning***

2B. ***Streamside Management Areas***

2C. ***Road Construction/Reconstruction***

2D. ***Road Management***

2E. ***Timber Harvesting***

2F. ***Site Preparation/Forest Regeneration***

2G. ***Fire Management***

2H. ***Revegetation of Disturbed Areas***

2I. ***Forest Chemical Management***

2J. ***Wetlands Forest***

2K. ***Postharvest Evaluation***

2L. ***Education/Outreach***

On a national level, silviculture contributes approximately 3 to 9% of NPS pollution to the Nation's waters (USEPA, 1992a). Without adequate controls, forestry operations may degrade the characteristics of waters that receive drainage from forest lands. For example (1) sediment concentrations can increase due to accelerated erosion, (2) water temperatures can increase due to removal of overstory riparian shade, (3) dissolved oxygen can be depleted due to the accumulation of slash and other organic debris, and (4) concentrations of organic and inorganic chemicals can increase due to harvesting and fertilizers and pesticides.

Management Measures:

Preharvest Planning. Pursuant to MM 2A, silvicultural activities shall be planned to reduce potential delivery of pollutants to surface waters. Components of MM 2A address aspects of forestry operations, including: the timing, location and design of harvesting and road construction; site preparation; identification of sensitive or high-erosion risk areas; and the potential for cumulative water quality impacts.

Streamside Management Areas (SMAs). SMAs protect against soil disturbance and reduce sediment and nutrient delivery to waters from upland activities. MM 2B is intended to safeguard vegetated buffer areas along surface waters to protect the water quality of adjacent streams.

Road Construction/Reconstruction. Pursuant to MM 2C, road construction/reconstruction shall be conducted so as to reduce sediment generation and delivery. This can be accomplished by, among other means, following preharvest plan layouts and designs for road systems, incorporating adequate drainage structures, properly installing stream crossings, avoiding road construction in SMAs, removing debris from streams, and stabilizing areas of disturbed soil such as road fills.

Road Management. MM 2D describes how to manage roads to prevent sedimentation, minimize erosion, maintain stability, and reduce the risk that drainage structures and stream crossings will fail or become less effective. Components of this measure include inspections and maintenance actions to prevent erosion of road surfaces and to ensure the effectiveness of stream-crossing structures. The also addresses appropriate methods for closing roads that are no longer in use.

Timber Harvesting. MM 2E addresses skidtrail location and drainage, management of debris and petroleum, and proper harvesting in SMAs. Timber harvesting practices that protect water quality

and soil productivity also have economic benefits by reducing the length of roads and skidtrails, reducing equipment and road maintenance costs, and providing better road protection.

Site Preparation & Forest Regeneration. Impacts of mechanical site preparation and regeneration operations—particularly in areas that have steep slopes or highly erodible soils, or where the site is located in close proximity to a waterbody—can be reduced by confining runoff onsite. MM 2F addresses keeping slash material out of drainageways, operating machinery on contours, timing of activities, and protecting ground cover in ephemeral drainage areas and SMAs. Careful regeneration of harvested forest lands is important in protecting water quality from disturbed soils.

Fire Management. Prescribed fire practices for site preparation and methods to suppress wildfires should as feasible be conducted in a manner that limits loss of soil organic matter and litter and that reduces the potential for runoff and erosion. Prescribed fires on steep slopes or adjacent to streams and that remove forest litter down to mineral soil are most likely to impact water quality.

Revegetation of Disturbed Areas. MM 2H addresses the rapid revegetation of areas disturbed during timber harvesting and road construction—particularly areas within harvest units or road systems where mineral soil is exposed or agitated (e.g., road cuts, fill slopes, landing surfaces, cable corridors, or skidtrails) with special priority for SMAs and steep slopes near drainageways.

Forest Chemical Management. Application of pesticides, fertilizers, and other chemicals used in forest management should not lead to surface water contamination. Pesticides must be properly mixed, transported, loaded, and applied, and their containers disposed of properly. Fertilizers must also be properly handled and applied since they also may be toxic depending on concentration and exposure. Components of MM 2I include applications by skilled workers according to label instructions, careful prescription of the type and amount of chemical to be applied, use of buffer areas for surface waters to prevent direct application or deposition, and spill contingency planning.

Wetland Forest Management. Forested wetlands provide many beneficial water quality functions and provide habitat for aquatic life. Activities in wetland forests shall be conducted to protect the aquatic functions of forested wetlands.

Postharvest Evaluation. The goals of MM 2K are to incorporate postharvest monitoring, including: a) implementation monitoring to determine if the operation was conducted according to specifications, and b) effectiveness monitoring after at least one winter period to determine if the specified operation prevented or minimized discharges.

Education/Outreach. The goals of MM 2L are to implement pollution prevention and education programs to reduce NPS pollutants generated from applicable silvicultural activities."
(*California Management Measures for Polluted Runoff (CAMMPR)*, State Water Resources Control Board and California Coastal Commission, January 2000)

For the most part, the responsibility of monitoring of compliance with these management measures fall on the Board of Forestry, Department of Forestry and Fire Protection, and the Regional Water Quality Control Board.

3.2 STATE REGULATIONS

3.2.1. CALIFORNIA FOREST PRACTICE ACT

The Z'berg-Nejedly Forest Practice Act (FPA), adopted by the California legislature in 1973, inaugurated the most comprehensive timber harvesting regulation process in the nation. The FPA requires the preparation of Timber Harvesting Plans to ensure maximum sustained production through incorporation of regeneration methods, published yield tables, and a Sustained Yield Plan. The FPA specifies for fire protection zone rules, control of soil erosion, protection of streams, maintenance of drainage facilities, stocking requirements, and penalties for noncompliance.

Apart from THP regulations, the FPA also addresses Non-industrial Timber Management Plans, timberland conversion, licensing of forestry professionals, and establishment of forest management districts. The 1973 FPA has been revised and bound with excerpts from the Wild and Scenic Rivers Act, the Professional Foresters Law, and the Registration of Professional Foresters Rules into the California FPA 2002.

The FPA includes the following findings for timber harvesting by small landowners

- A substantial acreage of timberlands of the state are held by private non-industrial owners and that it is the policy of the state to increase the productivity of these timberlands under prudent management plans to serve the public's need for timber and other forest products;
- Minimal environmental harm is caused by prudent management of non-industrial timberlands because low volume production and dispersion around the state of these small tracts reduces damage to aesthetics, air qualify, watersheds, and wildlife; and
- It is the policy of the state to encourage prudent and responsible forest resource management of non-industrial timberlands by approving non-industrial timber management plans in advance and withdrawing governmental discretion to disapprove non-industrial timber harvest notices submitted pursuant to the approved non-industrial timber management plans.[i]

The Forest Practice Act allows the preparation of Non-industrial Timber Management Plans (NMTPs) with tax benefits for landowners with fewer than 2,500 acres of land not primarily engaged in the manufacture of forest products. The NMTP requires assessment of soils; stand structure; roads; potential growth; erosion problems; pest, disease, and fire potential; priority of forest values; and impacts of the planned operations on wildlife, water quality, aesthetics, grazing, recreation, and traffic.

Timber Harvesting Plans

Before timber can legally be harvested in Humboldt County, a Timber Harvesting Plan (THP) must be submitted to and approved by the California Department of Forestry and Fire Protection (CDF). CDF enforces the laws of the Forest Practice Act (FPA) and State Board of Forestry and Fire Protection (Board) that regulate logging on all privately-owned lands in California, encompassing ranchers, large timber companies, and small landowners with commercial operations.

A THP is "the blueprint submitted by a landowner to CDF outlining what timber they want to harvest, how it will be harvested, and the steps that will be taken to prevent damage to the environment."[ii] THPs must be prepared by Registered Professional Foresters (RPFs), who are specifically licensed to prepare them. Once approved, a THP is effective for up to three years.
Once a THP is submitted to CDF, the Department distributes Notices of Intent and Notices of Submission to interested parties. A first review is carried out by CDF, DFG, RWQCB, the California Division of Mines and Geology, and other agencies as needed; when the THP is deemed complete, it is officially filed. The review team conducts a Pre-Harvest Inspection and discusses its findings. A 30-day public comment period is opened, and all public comments receive a written response from CDF. The final recommendation is sent to the RPF; once the RPF responds, the THP goes to the Director of CDF to be approved or denied within 15 days.
Approval of a THP rests solely upon its compliance with state and federal rules and laws; a THP cannot be denied due to public unpopularity. A THP that does not comply with all forestry and environmental regulations is returned to the RPF, and can thereafter be approved when the RPF and landowner agree to necessary changes. Follow-up inspections are common, and can be cause for citing or fining the RPF and landowner or shutting down the operation.

3.2.2. CEQA

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:

> T*he 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.*

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 harvest subject to the California Environmental Quality Act (CEQA, Public Resources Code Sections 21000-21177). 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.

CEQA continues to be the basis for litigation concerning the adequacy of current forest practices. Recent court cases have ruled against CDF for its timber harvest plan (THP) review and decision-making process for failing to address certain CEQA requirements (e.g., Sierra Club vs. CDF, EPIC vs. Johnson, EPIC vs. MAXXAM).

3.2.3. HERBICIDE REGULATIONS

Herbicides are used in silvicultural practices on both public and private forest lands, primarily to remove vegetation that competes with the growth of commercially valuable timber. In the redwood region of northwestern California, the timber industry is the primary user of herbicides. In 1999 and 2000, Humboldt County's four largest timber companies sprayed 20,463 acres with forestry herbicides (CNPS 2002). These chemicals are used after clearcutting to kill broad-leaved trees and shrubs. Many of the targeted species are ecologically important pioneer native plants such as tanoak, madrone, manzanita, alder, and ceanothus, which stabilize and replenish disturbed and depleted soils.

Herbicide use is regulated by the California Department of Food and Agriculture and the County Agricultural Commissioners. The county can issue a Cease and Desist Order and a fine of up to $1,000 for violations. The North Coast Regional Water Quality Control Board has set a zero discharge level for 2,4,5-T and a 10 parts per billion discharge level for all other herbicides. It has waived waste discharge permits for most herbicide spraying on private lands, assuming that the Best Management Practices are adequate to protect water quality, but permits can be issued on a case-by-case basis when needed.

Although permits are required for restricted materials, the use of non-restricted herbicides is governed only by pesticide use reporting laws. These laws require applicators to file reports of amounts used and acres sprayed with county agricultural departments after spraying is completed. Public input procedures are complicated by the fact that the pesticide regulation system is a certified regulatory program under CEQA, with the County Agricultural Commissioners as Lead Agencies. However, because of this regulatory status, there is no discretionary permit or environmental review for each individual pesticide application action. The California Department of Pesticide Regulation, which oversees pesticide regulations statewide, has advised that the California Department of Forestry (CDF) is responsible for addressing cumulative effects of forestry herbicide use. However, CDF claims that herbicide use does not have to be addressed in timber harvest plans, since it is not a "reasonably foreseeable" part of the logging operation.

At the federal level, in 1984, in response to several court rulings, the USFS in California placed a moratorium on the use of herbicides for forestry application in the state in order to prepare an Environmental Impact Statement (EIS) for vegetation management and reforestation. After preparation of the EIS, herbicide use on federal lands in Humboldt County resumed in 1992.

Over the last decade, on average the USFS has applied herbicides to approximately 10-12,000 acres in California per year, primarily for "conifer release."

3.3 LOCAL REGULATIONS

Timberland Production Zone (TPZ)

The Timberland Production Zone (TPZ)[iii] was established in 1976 in the California Government Code as a new designation for lands for which the Assessor's records as of 1976 demonstrated that the "highest and best use" would be timber production and accessory uses. Public improvements and urban services are prohibited on TPZ lands except where necessary and compatible with ongoing timber production. TPZ land is generally clustered along a north-south axis through the middle of the county, from the western side of the Lower Klamath watershed to the center of the Lower Eel watershed. Although specific TPZ parcels have not been incorporated into the County's digitized map system (GIS), timberland and TPZ areas are generally depicted in Figure 3-1. Areas shown as timberlands on the map may include some small islands of non-timbered sites.

The original purpose of TPZ zoning, subsequent to the Z'berg-Nejedly Forest Practice Act of 1973 (FPA; see Section 3.4) and Z'berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976 (FTRA), was to preserve and protect timberland from conversion to other, more profitable uses[iv] and ensure that timber producing areas not be subject to use conflicts with neighboring lands. The Timberland Productivity Act of 1982 (TPA) later formalized the State's policy in favor of sustainable harvest, allowing for long-term availability of timber resources.
Land was zoned TPZ via three methods, for which parcels were assigned to one of three "lists":

- List "A" parcels were those assessed as timberland as of March 1, 1976. Landowners with parcels on this list that they wished *not* to be zoned TPZ were required to contest the assessment in writing; a majority of the County Board of Supervisors had to make a finding in agreement with the landowner for the land to be zoned otherwise.[v]
- List "B" parcels included some of the parcels judged to "constitute timberland, but which were not assessed for growing and harvesting timber as the highest and best use of the land" for property tax purposes.[vi] The Assessor evaluated all parcels in this class; those that according to the Assessor's judgment were at least "highly suitable" for timber production comprised List "B" and were treated like List "A" parcels.[vii]
- Another list, informally called "C," consists of those parcels not assessed as timberlands for which the landowner has successfully petitioned the County Board of Supervisors to be zoned TPZ and has demonstrated the suitability of the land for such designation.[viii]

Lands zoned TPZ are committed to timber production for the initial 10 years after the zoning declaration; the TPZ status is then renewed automatically every year thereafter. Land zoned TPZ, which the owner petitions to have rezoned otherwise, may be required to remain TPZ for one year after the rezoning declaration is made.

Parcels in the TPZ must be no smaller than 160 acres, or if a joint timber management plan (JTMP) is prepared and approved by a registered forester, 40 acres. A JTMP must include a management plan (identifying access, rights-of-ways, and stocking requirements as regulated by State law) and a management guide (describing the property, existing and proposed access, and timber inventory and stocking plan).[ix] The number of non-industrial TMPs submitted in Humboldt County has risen steadily over the past decade, from two in 1992 to 30 in 2000.

Joint Timber Management Plans

The Forest Taxation Reform Act (FTRA) states that parcels zoned as timberland preserves may not be divided into parcels containing less than 160 acres unless a Joint Timber Management Plan (JTMP) is prepared. JTMPs are required to ensure that newly created small parcels (less than 160 acres) will remain in timber production. With the preparation and approval by the Board of Supervisors of the JTMP, TPZ land may be divided into parcels as small as 40 acres. The JTMPs are to provide for the management and harvesting of timber by the original and any subsequent owners, and are recorded as a deed restriction (a Covenant, Codes and Restrictions (CC&R) document is used for this purpose) on all newly created parcels under this procedure. The deed restriction (CC&R) runs with the land rather than the owners, and is required to remain in force for a period of not less than 10 years from the date the land division is approved by the Board of Supervisors. All divisions of TPZ land creating parcels of less than 160 acres can only be approved by a 4/5th vote of the Board of Supervisors, and only as a condition of recording of the management plan as a deed restriction.

The content of the JTMP required by the FTRA is not defined by state law. The intent is to ensure that TPZ remains committed to the growing and harvesting of timber and compatible uses. County procedures require that a JTMP includes both a Management Plan and a Management Guide. The Management Plan is the legal document that is recorded with the deed, and identifies access, rights-of-way, and stocking requirements as regulated by State law. The Management Guide is the descriptive document that describes the property and outlines the management opportunities to the land owner. The Management Guide includes information such as: a description of the property, existing and proposed access, a timber inventory and stocking plan, and the proposed Timber Management Plan. Standards for the Timber Management Guide address the following:

- stocking component;
- access component; management statements;
- property description, maps, and timber inventory;
- management descriptions, including a discussion and justification of the silvicultural system selected;
- management organization detailing cost allocations for management, road construction , maintenance and protection; and
- management schedule for harvesting, regeneration, protection, and plan update.

Beyond these prescribed technical requirements, the ordinance requires that the plans be updated at 5 year intervals, developments such as roads and buildings must be located outside of TPZ areas if possible, and that subdivision approvals may be made conditional upon compliance with prescribed forest management practices.

Once the JTMPs are submitted for a given project, the Forestry Review Committee reviews the plan and makes recommendations to the Board of Supervisors, who make the final decision on the JTMP. The Forestry Review

Committee consists of seven Registered Professional Foresters who are appointed by the Board of Supervisors, and two non-voting members (the Director of Community Development Services and the Assessor or their designees). The Committee meets once a month, and the registered forester who prepares the JTMP and the property owner are encouraged to attend.

Once the Forestry Review Committee has reviewed the JTMP for conformance with State law, the item is scheduled for a public hearing before the Board of Supervisors. The Board of Supervisors considers the recommendations of the Forestry Review Committee and the public testimony received before taking action on the JTMP. The Board of Supervisors' decisions are final.

A possible short-coming of allowing subdivision of TPZ land down to 40 acres with a JTMP is that there is little follow-up tracking and monitoring of the success of the plans in the long term. Within the Planning Division, monitoring and tracking such plans has a lower priority than dealing with a continuous stream of new applications and is more often than not deferred indefinitely. While the amount of acreage involved for such plans is relatively small, a thorough review and assessment of past decisions would be beneficial in ascertaining whether or not the goals of maintaining productive timberland with smaller parcel sizes is successful. This task has been added into Policy Option 3.7 at the end of this report.

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[i] California Public Resources Code, § 4593.

[ii] California Department of Forestry and Fire Prevention, "CDF's Role in Timber Harvesting" at www.fire.ca.gov/ ResourceManagement/THinCA.asp, viewed 16 April 2002.

[iii] TPZ is referred to as Timberland Preserve Zone in some State documents, but is called the Timberland Production Zone for the purposes of the County General Plan. (California Government Code §51104.)

[iv] FTRA was introduced as a measure of tax relief for small timberland owners who could not keep up with the old, ad valorem tax system.

[v] California Government Code §51110.

[vi] California Government Code §51110.1.

[vii] Humboldt County Planning Department. *General Plan Revision Program, Policy Background Study: Timberlands* (§2.342). Summer 1981.

[viii] California Government Code §51113.

[ix] Humboldt County Community Development Services JTMP Brochure.

4. Policy Options

This section focuses on timber resource issues from a public policy perspective. In evaluating existing and future conditions, the County must consider the various policy options for the issues identified in Phase I of the General Plan Update, which are summarized in the Critical Choices Report. These key questions help frame the issues for policy options for biological resources. As background, the existing policies in the General Plan are presented, followed by a discussion of issues and policy options that respond to them. The policy evaluation worksheets are in the Appendix.

4.1 EXISTING POLICIES

Existing policies in the County General Plan generally encourage retention of timberlands for production. However, the County does provide an opportunity to remove timberland from TPZ for purposes of expanding existing communities (see #7B).

GOAL

To actively protect and conserve timberlands for long-term economic utilization and to actively enhance and increase county timber production capabilities.

POLICIES

1. Timberlands shall be retained for timber production, harvesting and compatible uses, and reclassification of Timberland Production Zones (TPZ) shall be done in accordance with statutory requirements.

2. Avoid, wherever practical, the location of any state or local public improvements and any improvements of public utilities, and the acquisition of land therefore, in Timberland Production Zones where the project will have a significant adverse effect on the production of timber.

3. Encourage the long-term management of timberlands.

4. Support the use of forest improvement programs, whether funded publicly or privately, whether in a TPZ or other forestland.

5. Affirm and support the public services provided by County government which are necessary in maintaining a viable forest products industry.

6. Encourage, consistent with the Rural Development Section 2550, improved site productivity, timber growth and harvesting through intensive forestry management.

7. The County supports zoning correction of land from the Timberland Production Zone when it can be found that:

    A. The original inclusion was in error or inappropriate; or

B. The conversion is necessary to provide for the logical expansion of an existing community.

COASTAL ZONE POLICY

The Local Coastal Program Technical Study on Timber states that "only Section 30243 of the Coastal Act provides policy considerations for Timber Preserve areas."[i]

California Public Resources Code § 30243: The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities.

4.2 FORESTRY REVIEW COMMITTEE RECOMMENDATIONS

The FRC identified a number of timberland issues for the General Plan Update. Following are the issues and some discussion on how the issues may be addressed in the General Plan Update process:

Public Service Issues

- *Law Enforcement needs to address public safety, vandalism, trespass, theft, toxic dumping, and public and private costs associated with protests in timberland areas.*
  Law enforcement needs and public safety is an issue that is recognized throughout all sectors of Humboldt County. Option 3.5 above is responsive to this issue.

- *A Fire Safe Element needs to be prepared which uses the State fire safe standards as a model.*
  A Master Fire Plan is being developed as part of the General Plan Update process under a separate contract.

- *Recreation opportunities on timberlands need to be reviewed for compatibility with timber production.*
  Recreation opportunities, constraints and policies are addressed in Chapter 5 of the *Natural Resources and Hazards Report.* The need for new policies should be addressed within the context of that analysis.

Public Improvement Issues

- *Public roads need to be improved to reduce hauling costs and address traffic safety. Costs of maintaining public roads in timberland areas should be apportioned based on use.*
  The County is responsible for the maintenance of over 1200 miles of roads and 172 bridges. Much of this mileage serves the rural portion of Humboldt County. As early as 1980 the County Public Works Department prepared a report for the Board of Supervisors documenting maintenance problems on existing county roads. The County is faced with increasing costs and decreasing revenues for road maintenance. Since the report was released, the County has been losing ground rapidly in relationship to maintenance and/or improvements to the existing County road system. The problems of increasing costs and

decreasing revenues has been forcing the County to review previous and existing policies in this area.

In response to specific requests for the resurfacing of a County road, the Department of Public Works instead recommended any available funds be invested in maintenance of existing urban roads in the County maintained system. The policy has thus been that rural roads will be allowed to deteriorate, recognizing that after such deterioration it is more expensive in the long run to rebuild them than to maintain them. Thus the Department of Public Works recommended against repair/rehabilitation of non-urban roads at the expense of the more highly used urban roads. Urban roads received a higher priority because they have a much higher traffic volume. With a 20% reduction in road maintenance crew funding as a consequence of Proposition 13, this was a hard decision that had to be made in the 1980's and represents the current situation today.

Transportation infrastructure is discussed in more detail in the report *Moving Goods and People.* Discussion and policy options for rural roadways maintenance are included in chapter 3 of that report (pages 43-46). Following are some policy options that were developed to address this issue:

EXISTING POLICY FRAMEWORK

4230 Policies

2. Humboldt County supports improvements and maintenance of public access roads to natural resource areas designated for timber production, agriculture and mining.
3. Significant increases in traffic volumes and turning movements on and off a major expressway/freeway at high volume at grade intersections should be discouraged.
4. Humboldt County supports the need for additional State revenue from sources such as State Gas Tax for the maintenance and reconstruction of County roads that carry heavy commercial truck traffic.
5. Humboldt County shall take action to support the increase of gas tax revenues to a level adequate for local street and road maintenance.
7. The County Planning Commission shall review all proposed abandonments of maintenance on County roads for conformance with the County General Plan before they are approved.

ISSUE

• How will the County address the current deficit in road maintenance?

All California counties are competing for funding to maintain existing roadways because existing revenue sources are not able to keep up with needs. State and federal funding often includes restrictions on use of funds. The Regional Transportation Plan calls for new legislation and more funding to maintain existing roadways, including uses of State Transportation Improvement Program funds to preserve and maintain the existing system until adequately funded local programs are developed.

A considerable number of roadway improvements and maintenance programs are identified through to the Regional Transportation Plan's horizon year of 2025. These programs will not address all of the critical road maintenance needs throughout the County but need to be considered when analyzing future land use and transportation scenarios. After modeling and analysis of land use scenarios, changes to funding priorities may need to be modified.

Likewise, roadway projects which have been targeted for state funding may inform additional opportunities for future development scenarios. For funding requirements, planned improvements for highways are divided by their nature for increasing roadway capacity (i.e. increasing the number of daily trips a roadway can handle). Short-term maintenance projects of a non-capacity-increasing nature are funded through the SHOPP program and roadway projects of a capacity-increasing nature are funded through the STIP. These are discussed in greater detail below.

SHOPP Roadway Maintenance Projects

Caltrans is responsible for state-highway improvements of a non-capacity-increasing nature for rehabilitation, safety or operational improvements through its State Highway Operation and Protection Plan (SHOPP). For Humboldt County, $51 million dollars of short term rehabilitation projects and $83 million dollars of long term rehabilitation projects are planned. The largest of these is the bridge replacement at Mad River. Additionally, $49 million dollars in long-term operational improvements are also being planned through the SHOPP.

Short-term STIP Funded & Candidate Roadway Projects

The State Transportation Improvement Program (STIP) is a list of projects selected from the Regional Transportation Improvement Program (RTIP) prepared by the Humboldt County Association of Governments and the Caltrans Interregional Transportation Improvement Program (ITIP). The Moving Goods and People Report Table 2-1 lists the major (by cost) STIP-funded short-range (2000-2010) improvement projects and their associated costs for Humboldt County. This list includes the construction of an interchange and frontage road on US 101 at the SR 36 junction, construction of Old Arcata Road and Myrtle Avenue (as an alternative route between Eureka and Arcata) and various rehabilitation projects throughout the County.

The County currently has many demands on the General Fund and no surplus funds available to support a comprehensive road maintenance program. Other counties have had success with local programs, funded by increased sales taxes, that include not only road maintenance but also support for bicycle and trail systems and public transportation facilities. Sales tax increases do require voter approval. Another option is to expand the idea of a Timberland Infrastructure Maintenance and Improvement Program, as proposed in the *Natural Resources and Hazards* paper, to include all rural roads. For additional discussion and relevant policy option see also the *Moving Goods and People Report.*

• **Option 3.21 Create a Rural Road Infrastructure Maintenance and Improvement Program.** A systematic approach to identifying rural road maintenance and improvement needs as well as cooperative funding mechanisms, including provisions for cost-sharing between the County, rural landowners, and the forest industry, could be established. This option would be an expansion of the Timberland Infrastructure Maintenance and Improvement Program.

• **Option 3.22 Establish a secure funding source for road maintenance that can not otherwise be funded under state and federal programs.** This could be done with an increased sales tax, transient occupancy tax, real estate transfer tax, or with multi-purpose assessment districts.

• **Option 3.23 Establish an "Adopt-a-Road" program to invite private sector support for road maintenance.** In return for annual contributions for maintenance for a specified segment of a rural road, the County would install signs that would identify supporters. This form of advertising may be attractive to local businesses; it has proved successful in many rural counties, and could be integrated into a rural "wayfinding" program with consistent signage.

• **Option 3.24 Create a Timberland Infrastructure Maintenance and Improvement Program.** A systematic approach to identifying public service needs (law enforcement and fire protection) and public improvement needs as well as cooperative funding mechanisms, including provisions for cost-sharing between the County and the forest industry, could be established. Looking at these needs on a watershed basis and a program, not a project-by-project basis is cost-effective and more efficient.

- *Drainage facilities need to be maintained on public and private roads to protect the roads and water quality.*
  Drainage facilities on public and private roads is an issue to be included in the rural roadways maintenance policies identified above.

- *Public water systems need to be developed to minimize water withdrawals from sensitive habitats and land use conflicts between timber producers and residential users who are concerned about erosion and water quality.*
  An analysis of the adequacy of public water systems and future policy options is included in the *Building Communities Report* (Chapter 5). Generally, water supply systems are considered adequate and there are no known instances where large scale water withdrawals are required from sensitive habitats. There are some historic examples where timber operations have resulted in increased sediment loading impacting residential uses both in terms of water quality and increased flooding as a consequence of increased sedimentation. These issues are being address by the Regional Water Quality Control Board under State water quality regulations.

  The North Coast includes areas having the highest sediment production in the United States (see Volume II: Detailed Watershed Characteristics of the *Natural Resources and Hazards Report*). Land use conflicts between timber producers and residential users have been attributed to increased sedimentation concerns. The construction and use of roads constitutes the primary source of sediment from forested watersheds (Division of Forestry 1972; Anderson 1976; Dodge 1976; Hauge 1977; Rice 1972; Department of Water Resources 1964; Board of Forestry 1979). As much as 90% of the sediment produced by erosion on timber sales comes from roads. In a study of suspended sediment in 68 northern California watershed, it was found that dirt logging roads increased sediment by 34% for each mile of road per square mile of watershed. Some types of harvest methods may use four miles of road per square mile of operation (Board of Forestry 1979). Roads in steep watersheds show about twice as much increase in sedimentation as roads build on moderately sloping watershed. More recently, the Regional Water Quality Control Board has required that timber operation roads be gravel surfaced to reduce sedimentation rates.

- *Public roads need to be improved to minimize erosion and water quality problems.*

Transportation infrastructure is discussed in the report *Moving Goods and People.* Discussion and policy options for rural roadways maintenance are included in chapter 3 of that report (pages 43-46). Drainage facilities on public and private roads is an issue to be included in the rural roadways maintenance policies identified above. Refer to the rural road mainenance discussion above.

- *Materials for road building from quarries and surface mining need to remain available in adequate quantities to keep construction costs down.*
  The *Natural Resources and Hazards Report* (Chapter 7) includes a discussion, analysis and policy options for mineral extraction. This chapter documents the distribution and viability of quarries and surface mining activities.

- *Utility companies should support timber production on adjacent timberlands.*
  If there are any specific suggestions on how this should be accomplished, they should be submitted for consideration as policy options.

Police Powers/Land Use Conflicts

- *Dwellings on residential lots are not compatible with timber production on adjacent or nearby lots because residential landowners have concerns about: traffic safety, dust, erosion control, slope stability, noise, smoke, water quality, sensitive habitats, views and aesthetic values. Litigation costs increase in the interface between timberland and residential lots.*
  There are two different aspects to this concern: 1) existing residential lots adjacent to TPZ; and 2) potential new residential lots adjacent to TPZ. With regard to the potential for creation of new residential lots and subdivisions in areas adjacent to TPZ, this issue would be addressed during project design and CEQA review and ideally include buffers or other mitigation to minimize impacts to residential areas from timber operations. For historically existing parcels adjacent to TPZ, this issue is dealt with on a case-by-case basis.

- *Utility companies manage their easements in ways that are not always compatible with timber production on adjacent lands. They have concerns about impacts to utility lines.*
  Further information on this issue is required. Are the utility company's concerns valid? What are some specific examples of conflicting uses that have occurred? If the utility company's concerns are not valid, why not? If they are valid, what are some potential remedies that might be suggested in the way of policy options?

- *Subdivisions to create small lots in or adjacent to timberlands increase the land use conflicts between timberland and non-timberland property owners.*
  With regard to the potential for creation of new residential lots and subdivisions in areas adjacent to TPZ, this issue would be addressed during project design and CEQA review and ideally include buffers or other mitigation to minimize impacts to residential areas from timber operations.

- *Allowing small lots into TPZ may discourage timber production because these lots are purchased and used primarily for residential purposes and, adjacent to small parcels with landowners who may object to timber harvesting activities. These lots would also benefit from tax relief that could encourage excessive harvesting rotation periods. Note: the*

Humboldt Watershed Council may support including smaller lots into TPZ to discourage timber harvesting driven by increased taxes.
The current minimum parcel sizes for TPZ have been considered appropriate for maintaining timber production. Small parcelization of TPZ property has been shown to be de facto conversion out of TPZ (Best and Wayburn 2001). Other incentives are available to deal with taxes on TPZ parcels (see discussion of Forestland Incentives in Appendix A).

4.3 ISSUES AND POLICY OPTIONS

Each key question or issue raised in the Critical Choices Report that relate to forest resources is discussed below. Based on County and public input, these policy options will be refined. Some of these options also will shape preparation of "sketch plans" (generalized land use plans for accommodating future development and protecting forest and agricultural resources), while others will be implemented through zoning and subdivision regulations or other programs.

Appendix B of the *Natural Resources and Hazards Report* provides a worksheet for the public to evaluate these policy options in the same format as used for the Building Communities Report.

ISSUE

- *Is the current forest land base protected under existing policies?*
- *What policy changes are necessary to enhance protections?*

As described above, public forested lands total 679,500 acres or 35.5 percent of all forested lands in Humboldt County. The establishment of Wilderness Areas, State and National Parks, and National Forest ensures that non-timberland forest resources will be available in the long-term. The Forest Practice Act and TPZ zoning, state-mandated but locally-implemented, are recognized as the primary means of protecting timberlands. Many of the private holdings are designated TPZ, which allows for managed timber production. Old growth forests may exist outside of public lands in a few areas. These special areas, as well as other forestlands that are limited in the county and support sensitive species, should be protected.

Despite these protective measures, some forest land is being converted to non-forest uses. The Critical Choices Report recommendation is to undertake a "comprehensive inventory of forest lands; review plan and zoning designations and employ merger and patent parcel development standards to maximize protection of forest lands." Based on the importance of forestland to the County, forestland conversion must be evaluated before policy alternatives can be developed.

Option 3.1 Initiate discussion with the timber industry and the environmental community about modifications to requirements for timber harvesting plans to protect and enhance timber resources and respond to needs of those with small timber holdings, while maintaining water quality and protecting fishers, sensitive habitats, and recreational opportunities. The Forest Practice Act specifically allows for

such "tailoring" of regulations, and the County's Forest Review Committee has been discussing these issues. One concern that would need to be resolved is that smaller holdings also allow for rural residential development which is sometimes not compatible with timber production because of concerns about traffic, safety, dust, erosion control, slope stability, noise, smoke, water quality, sensitive habitats and impacts on view sheds and scenic resources.

ISSUE

- *What are the needs of small-scale forest land managers and timber operators?*
- *How do the management decisions of property owners and State and Federal agencies affect the future of the County?*

The current 40-acre minimum lot size for TPZ lands potentially allows subdivision with approval of joint timber management plans. Rural subdivisions increase conflicts between timberland owners and non-timberland owners. Allowing smaller lots in the TPZ may discourage timber production in the County. Property owners who choose to subdivide forest resource lands may serve to undermine sustainable timber production. On rural residential lands, the timber is often clear cut and not replanted. Timbering practices on remaining small parcels may be difficult if residences are interspersed in the forest, due to harvest conflicts with rural developments.

Increasing the minimum lot size for core industrial lands would respond to concerns expressed by the industry related to land use compatibility. A two-tier system would address this issue, but also allow for smaller lots where appropriate – an idea that may be supported by the Humboldt Watershed Council because it could discourage intensive timber harvesting driven by increased taxes by allowing non-industrial timberland owners an alternative source of income from a rural subdivision. It would also allow non-industrial owners to participate in sustainable forestry.

Option 3.2. Create a two-tier system of TPZ zoning, with larger lot sizes for existing and potential industrial timberland and smaller lot sizes for timberland within or adjacent to Community Plan Areas. Department of Community Development to further research the proposal to allow a window of opportunity for Non-industrial Private Forest owners whose land is not zoned TPZ to rezone their land into TPZ. Either require a Timber Management Plan for parcels smaller than 160 acres and a requirement for a sustainable management plan for such parcels, or limit such rezoning to those parcels that already have a Non-industrial Timber Management Plan on file with CDF. The research should identify number of potential parcels, number of interested land owners, the fiscal impact that such a proposal would have as a result of altered tax standings, identify an appropriate time window for rezoning, etc.

ISSUE

- *What role should the County play in the management of forest resources?*
- *What aspects of forest management directly impact County jurisdictional interests?*

Due to the Forest Practice Act, forest management is generally not regulated by local policies and codes; the County can only influence the decisions made by State and Federal agencies. Given this limitation, the County's role is one of data collection, local opinion-gathering, and advocating for statewide policies beneficial to the County's economic and environmental health. Some aspects of forest management, such as harvesting within residential zones, are not preempted from local decision making.

Aspects of forest management with direct effects within the County's jurisdiction include roads, harvest operations directly adjacent to communities, and down-stream water resource impacts. Public roads will need to be improved to reduce hauling costs and address traffic safety, and cost-sharing arrangements for these improvements will need to be established. Drainage facilities also are needed to protect roads and minimize erosion and impacts on sensitive habitats and water quality.

Option 3.3 Promote the County as a model for sustainable forestry. The County could facilitate participation in certification programs, such as those established by the Forest Steward Council and the Sustainable Forest Initiative, which can help California producers compete on a national basis. This will have economic benefits.

Option 3.4 Create a Timberland Infrastructure Maintenance and Improvement Program. A systematic approach to identifying public service needs (law enforcement and fire protection) and public improvement needs as well as cooperative funding mechanisms, including provisions for cost-sharing between the County and the forest industry, could be established. Looking at these needs on a watershed basis and a program, not a project-by-project, basis is cost-effective and more efficient.

Option 3.5 Department of Community Development to further research the possibility of expanding the use of Natural Resource Zoning to inland areas, designating those pockets of area within timberlands which have high habitat value or sensitive species and because of these values are reserved from harvesting under the Forest Practices Act. This could potentially place sensitive habitat areas into a different zone with a different tax rate. Besides offering further protection to these areas, owners would receive relief in that such areas, if they cannot be harvested for resource reasons, would not be taxed as if they are productive timber lands. This option requires the development of criteria for inclusion into a potential Natural Resource Zone and an assessment of the acreage that would be involved and fiscal impact.

Option 3.6 Define "Critical Watershed Areas" where the County would review Timber Harvest Plans within the County jurisdictional area. The County could choose to review Timber Harvest Plans only in Critical Watershed areas for potential impacts in key areas of importance to local government and county citizens per the CEQA guidelines and recommend mitigation measures to further address the impacts that timber harvest operations have on the community. This would focus effort in urban/rural interface areas. Areas of critical analysis could include the potential for water quality impacts, increased sedimentation, potential for increased flooding downstream of timber harvest operations, impacts to county roads and drainage facilities, traffic and noise impacts.

Option 3.7 Increase the County's role in the review and monitoring of Joint Timber Management Plans. The County could choose to review all past Joint Timber Management Plans and assess their effectiveness in maintaining timber production, and to monitor and require 5 year updates of all Joint Timber Management Plans.

[i] Humboldt County Planning Department, *Local coastal Program Technical Study: Timber*, 1979, p 1.

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Appendix A

FOREST MANAGEMENT STRATEGIES

In 1999, the California Resources Agency convened a Forestland Incentives Task Force in an effort to improve the use of incentives an cooperative programs to conserve forest lands, promote sustainable forestry, and protect forest resources. Recognizing that there are increasing demands and pressures placed on private forest lands, the task force proceeded to identify incentives that state and local governments can provide to encourage private landowners to make smart choices in managing their forest lands for sustainable timber harvest, while protecting watershed values over and above the minimums required by regulation. Among the incentives identified for further action are: cost-share/financial incentives, conservation easements, certified sustainable programs, and tax incentives.

CONSERVATION EASEMENTS

The *Forestland Incentives* report (2001) discussed conservation easements and make recommendations regarding their use as an incentives tool. Issues related to conservation easements include: lack of landowner awareness, lack of adequate funding, and owners comfortable with having a government organization hold title. The benefits of conservation easements include their potential to educate landowners about stewardship and management practices. Also, prioritizing conservation easement acquisitions to high priority areas will serve to strengthen the support and credibility of easement programs. Among the recommendations for conservation easements included in *Forestland Incentives* are:

- The State should develop a conservation easement program using a private contractor.
- The Resources Agency should lead efforts to coordinate conservation easement development with other programs for protecting or restoring forest values.
- The Resources Agency should explore stable funding mechanisms.
- The use of conservation easements as credible third-party mitigations should be promoted.
- Establish target areas for conservation easements by working with county land use plans and local land use regulations and developing an inventory of areas to target for conservation.
- Provide incentives for counties to participate in conservation programs.

The key direction for the county under these recommendations is for the identification and prioritization of areas that may be appropriate for conservation easements.

Conservation Easements is also one of the policy initiatives suggested by the Pacific Forest Trust (PFT) to address forest management on private forest lands. The following excerpt is from the PFT website (http://www.pacific forest.org/):

> "*The Forest Legacy Program is a cooperative program between the USDA Forest Service and participating states. It provides funding from federal and state sources, in partnership with the private sector, for the acquisition of conservation easements on private forestlands to protect key resources while maintaining traditional uses of the land, including timber harvest, habitat management and watershed values. PFT works to build support for Forest Legacy, and ensure the program has the flexibility and responsiveness to meet landowner needs while achieving resource protection.*

Conservation easements are useful tools to reinforce forestry goals. Using these voluntary enforceable deed restrictions, landowners can protect the stewardship investments they have made in their properties.

Conservation easements are the best legal means to permanently protect the important natural values of a forest property and provide consistency in management — while keeping the land in private ownership and use. Land trusts, such as PFT, selected by the landowner become responsible for monitoring compliance with the easement and ensuring its provisions are being honored."

The California Department of Forestry and Fire Protection describes the Forest Legacy Program as follows:

"The purpose of the Forest Legacy Program (FLP) is to protect environmentally important forestland threatened with conversion to non-forest uses, such as subdivision for residential or commercial development.

To help maintain the integrity and traditional uses of private forestlands, the FLP promotes the use of permanent conservation easements. These easements provide a new approach, a new tool, with which the federal government, in cooperation with state and local agencies, private organizations, and individuals can preserve the rich heritage of private forests.

The program is entirely voluntary. Landowners who wish to participate may sell or transfer particular rights, such as the right to develop the property or to allow public access, while retaining ownership of the property and the right to use it in any way consistent with the terms of the easement. The agency or organization holding the easement is responsible for managing the rights it acquires and for monitoring compliance by the landowner. Forest management activities, including timber harvesting, hunting, fishing and hiking are encouraged provided they are consistent with the program's purpose.

The "Legacy" program as administered by CDF is comprised of two separate but complimentary programs: the Federal Forest Legacy Program and the California Forest Legacy Program. Below is a brief overview of the programs.

The federal Forest Legacy (16 U.S.C. Sec. 2103c) program was part of the 1990 Federal Farm Bill. It recognized that private forestland owners were facing increased pressure due to greater population densities and users demands, to convert their forestlands to other uses, such as housing subdivisions, rural lots and vineyards. Furthermore, forestland provides a wide variety of products and services including fish and wildlife habitat, aesthetic qualities, timber and recreation opportunities. Good stewardship of privately held forest lands requires a long-term commitment that can be fostered through a partnership of local, state and Federal government efforts.

The objective of the Federal Forest Legacy Program is to identify and protect environmentally important forestlands that are threatened by present or future conversion to non-forest uses. Priority is to be given to lands that can be effectively protected and managed

and that have important scenic, recreational, timber, riparian, fish and wildlife, threatened and endangered species, and other cultural and environmental values.

The Federal Forest Legacy Program is not solely a protection program. Eligible properties may be "working forests," where forestland is managed for the production of forest products and traditional forest uses are maintained. These forest uses will include both commodity outputs and non-commodity values. The purpose of these easements is to maintain these forests intact to provide such traditional forest benefits as timber production, wildlife habitat, watershed protection and/or open space. These forests remain in private ownership, except for the restrictions on development or other uses conveyed by the conservation easement to the agency selected by the landowner.

In both programs the involvement by private landowners is voluntary. Federal funds are limited to 75% of the value of the conservation easement with the remaining portion contributed by non-federal matching funds. Landowner contributions may be part of the match.

Project costs covered by the Federal Legacy grants include interests in lands (including actual purchase price), appraisals, land surveys, closing costs, establishing baseline information, title work, purchase of title insurance, conservation easement drafting and other real estate transaction expenses. Also included are funds expended to facilitate donations of land or interests in lands to a qualified and willing donee for Program purposes. For outright donations of a conservation easement or land, Federal funds may not be used to pay for an appraisal since the Forest Service does not need a determination of fair market value.

In 2000, Governor Gray Davis signed into law SB1832, the California Forest Legacy Act. This law allows the California Department of Forestry and Fire Protection to acquire conservation easements, and permit Federal, State agencies, local governments and nonprofit land trust organizations to hold conservation easements acquired pursuant to the California Forest Legacy Program. Money to fund the Program shall be obtained from gifts, donations, federal grants and loans, other appropriate funding sources, and from the sale of bonds pursuant to the Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act of 2000.

The agency or organization holding the easement is responsible for monitoring compliance by the landowner. CDF and the easement holders are responsible for working cooperatively with participating landowners to design their easements. It is expected that landowners will retain all responsibility for managing their forest resources consistent with the terms they establish in their conservation easements. Landowners participating in the programs will be required to prepare a multi-resource management plan that is the equivalent, or more extensive than, a Forest Stewardship Plan (as per US Forest Service guidelines). This plan must be acceptable to the state and approved prior to signing the acquisition of the easement.

Neither the Federal Forest Legacy Program nor the California Forestry Legacy Program Act of 2000 allows project funds to be used to cover monitoring costs. Endowments are

generally provided for by the landowner at the close of escrow sufficient to cover the costs over time."

Some of the reasons for increases in harvesting on non-industrial timber lands are economic, and could be a factor as some of the larger ranches in Humboldt County with significant timber resources are broken up or change hands. Conservation easements could be a useful tool in addressing this issue.

CERTIFIED AS SUSTAINABLE

Another emerging trend, particularly with regards to increasing harvest on non-industrial timber lands is the concept of sustainable forestry. Some interest groups within the circles of forestry management approaches (particularly the Institute of Sustainable Forestry and Forest Stewardship Council) have advocated that forest production should be certified as sustainable. Under this approach, not only must lands which produce the wood be certified, but so too must be all people within what is known as "the chain of custody." All points within the wood products journey from tree to customer must be certified in order for the product to be sold as "Certified Sustainable."

Forest management certification evaluates the practices of forest managers according to environmental, silvicultural, and social standards. If these standards are met, an operation is certified, and timber (or other non-timber forest products) harvested from that forest may be sold as certified. In general, candidate operations must meet the following broad principles:

1. long-term security for the forest (i.e., it will not be cleared in the foreseeable future);
2. maintenance of environmental functions, including watershed stability and biological conservation;
3. sustained yield forestry production;
4. positive impact on local communities; and,
5. the existence of a system for long-term forest management planning, management and monitoring (including a written forest management plan).

The following except by Lisa Miller about certified sustainable forests in Humboldt County is taken from the web site (http://www.humboldt.edu/~envecon/Indicators/certifiedforestacres01.htm):

"According to an approximation by Walter Smith (the head of the West division of Smartwood), Humboldt County has 38,658 acres of certified sustainable forests. These areas include the 1,125 [currently 1800] *acres of the Arcata Community Forest. 38,658 acres of sustainable forests seems like a lot until one considers that there is approximately 1.5 million acres of forest in Humboldt County. This means that only 2.6% of Humboldt forests are certified as sustainable. Of the approximately 1.5 million acres, 30% is owned by the federal government, approximately 35% by large industries such as Pacific Lumber Co., and approximately 35% by non-industrial entities such as homesteads and ranches. "Our forests are Forest Stewardship Council (FSC) certified. FSC certification is the most highly recognized certification program by environmental organizations (Rickenbach 2000).*

"In the last year, California's acres of certified sustainable forest has risen from 100,000 to more than 750,000 acres. This is due in large part to Home Depot's recent decision to stop selling wood products that come from old growth and endangered species and to give preferential treatment to certified sustainable lumber in its stores by the end of 2002. Home Depot's decision was made in response to protests by the environmental organization Rain Forest Action Network (RAN). After Home Depot made this decision, RAN turned its attention to the home building industry. The threat of protest encouraged Centex Homes and Kauffman & Broad, the largest home builders in the country, to develop policies favoring certified products (Rickenbach 2000).

"In the United States there are 8,389,096 acres of certified forests. Worldwide there are 45 million acres. The highest demand for certified lumber is currently in Europe where citizens seem to be more environmentally aware.

"The Humboldt County Mills that are currently certified to handle certified sustainable wood are Almquist, Blue Lake Forest Products [currently out of business]*, and Eel River Sawmills* [closed and recently re-opened but on a reduced scale]. *In order for a sawmill to be certified, they must prove that they have the facilities to separate and keep separate certified logs from non-certified logs. Almquist is also certified to use "rediscovered lumber" which is basically a wood recycling process that reuses wood from demolished buildings, wood by-products from other manufacturers and fallen trees carefully reclaimed from rivers and lakes….*

"Why is this important?
"Forests are home to over two thirds of all plants and animals on earth. [They] help keep our air and water clean and help stabilize the world's climate (FSC pamphlet). Their fuel keeps millions of people warm, their strength provides shelter, their roots prevent top soil erosion, they are playgrounds for many forms of recreation and their beauty provides inspiration and awe to us all. In other words, the natural capital supplied by healthy forests provides the materials for constructed capital and the foundation on which much cultural capital is formed. The cost to replace the services a healthy forest provides would be astronomical and some services are irreplaceable.

"Unsustainable forest management is causing massive soil erosion and biodiversity loss, as well as negatively effecting the economic future of many communities around the globe, especially in the Tropics. Significant forest loss is also dramatically reducing the world's oxygen supply, imperative for our continued survival. The careful management of remaining forestlands will greatly determine our collective ability to accommodate the world's growing needs for wood, as well as the future of the planet's biodiversity. Timber production, when managed effectively, maintains the long-term viability of commercial forests, protects biodiversity, and provides a continuous stream of social and economic benefits (www.smartwood.org).

"Certification involves regular evaluations of on-the-ground forestry practices by teams of qualified experts to ensure they are environmentally responsible, socially beneficial and economically viable (Ford). Forest certification is important to landowners and foresters

to ensure their careful long-term forest management is recognized and rewarded. It is important to wood manufacturers and retailers because it adds value to their products, giving them a competitive advantage in the growing environmentally informed markets. Forest certification is important to environmentally conscious consumers because it ensures that they are supporting foresters who grow, harvest and protect healthy forests for future generations."

The concept of sustainable forestry is one of increasing importance according to Michael Jenkins: "Dramatic change is underway in the forests products industry. For most of its history, the industry has consisted largely of companies oriented toward the rapid harvesting of standing native forests .Yet this practice clearly cannot last: at current rates of cutting, only a tiny remnant of original native forests will remain intact by the middle of the next century. At the same time, demand for wood products is expected to keep growing, driven by population increase and economic development. This increasing scarcity of natural forests is a concern for both the forest products industry and for the rest of us who depend upon the array of services forests provide." (Preface of *Capital Markets and Sustainable Forestry* by Constance Best, 1999). This concern has resulted in the development of sustainable forestry business models which are promoted as providing greater rates of return over the long term.

Along these lines, a recent report entitled *Forestland Incentives* (2001) has been released as part of the State of California Forestland Incentives Task Force and the Resources Agency Action Plan. The report was prepared by the California Resources Agency and the California Department of Forestry and Fire Protection and includes a discussion of and recommendations for Certification. The report concludes that Certification programs provide an independent third-party mechanism for ensuring that wood products are produced by properly managed forests, and for providing chain-of-custody verification for wood product companies selling certified wood products. In the United States there are two certification systems that have been accredited by the International Forest Stewardship Council. One of these is Scientific Certification Systems based in California, and the other is Smartwood, which has a small network of members nationwide, including the Institute of Sustainable Forestry in northern California.

Certification provides private and public benefits by creating a supply of certified sustainable forestry products, providing a pool of certified experts, and promoting long-term protection of habitats, watersheds, and other values. The disadvantages of certification include additional upfront costs to the landowner and the potential for creating additional regulatory oversight and restrictions by improving habitats to the point that they recruit endangered or threaten species. Among the recommendations from *Forestland Incentives* for Certification are the following:

- Encourage certification to evolve as a tool for promoting stewardship activities, allowing the market to validate it rather than government.
- The Resources Agency should sponsor a forest certification forum to consider the potential use of certification as an alternative to regulation.
- Certification should be used in conjunction with other incentive programs, e.g. conservation easements.

COST-SHARE/FINANCIAL INCENTIVES

Cost-share programs for protecting and improving forestland are available through State and federal agencies to fund on-the-ground management activities and projects. They require matching contributions in the form of cash or in-kind contributions. Among these programs is the California Forest Improvement Program (CFIP) administered by CDF. For a number of reasons, forestland owners are not taking full advantage of this program. The Forest Incentive Task Force identified the following concerns: 1) lack of adequate promotion; 2) projects like fuels treatments, pre-commercial thinning, etc. require a THP in order for the landowners to utilize sub-merchantable material; 3) the cost-share match may be prohibitive for some land owners; and 4) there are no "safe harbor" agreements to assure landowners of future ability to manage, harvest, or realize the results of their investments on their lands.

Additional concerns were identified with respect to current cost-share programs in general. Firstly, they are administered by agencies at the project level without consideration of whole watershed issues. Watershed assessment and planning as it relates to timber management is needed to ensure proper use of such programs and to address resource conservation problems. Secondly, cost-share programs have historically been under-funded or funding has fluctuated from year to year. Further, the application process is cumbersome and intimidating for many landowners. And, there is a lack of follow-up monitoring with many agencies. Finally, there is a need for greater outreach and education of landowners, policymakers, watershed groups and others to provide for more broad scale knowledge about the programs.

Due to these current weaknesses in cost-share programs, the Forestry Incentive Task Force made several recommendations for cost-share programs. Among these are the following:

- Improve the CFIP program by: increasing promotion; address problems identified in watershed analyses; reduce landowner cost-share; and cover the cost of third-party certification (see certified sustainable section above) for non-industrial lands.
- Improve outreach and promote use of coastal salmon funds.
- Improve cooperation among agencies and private landowners to improve forest stewardship.
- Develop increase funding and staff support for cost-share programs.
- Consider options for providing basin and planning watershed-level assessments.

For the most part, these and other recommendations of the task force are action items to be completed at the state level. The County's role would be as a cooperating agency to assist where possible in these efforts.

TAX INCENTIVES

An additional topic discussed in *Forestland Incentives* is that of tax incentives. The report recognizes that changes are needed in all three tax area – federal, State and local – to encourage long-term management for the full range of forest habitat values. Among the recommendations of the report are:

- Make needed changes to the federal tax code to redefine passive vs. active involvement and to create the ability to deduct stewardship activities on an annual basis.
- Identify needed changes to State tax credits and yield taxes, and draft appropriate legislation.
- Consider the relevance and value of a county property tax incentive for less intensive land uses, such as a "Natural Habitat Area Zoning" proposal.

TIMBER HARVEST PLAN REVIEW

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.

In June 1994, the Little Hoover Commission submitted it report *Timber Harvest Plans: A Flawed Effort to Balance Economic and Environmental Needs* to the Governor and Members of the Legislature. The Commission examined the Timber Harvest Plan process and found several problems, some of which continue to the present day. Among these are the following: 1) The inter-agency process for reviewing Timber Harvest Plans is complex, lengthy and costly, resulting in inconsistencies and inequity; and 2) The environment is not being effectively protected because of the flawed concept that the Timber Harvest Plan is based on – namely that ecology can be addressed on a parcel-by-parcel basis. The report further states that the State's focus is almost entirely on procedural steps rather than on 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.

The Timber Harvest Plan originally was a simple and straightforward process created to carry out the Forest Practice Act'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 harvest 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.

The Little Hoover Commission Report found that, "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."

Among the recommendations to come out of the report are the following: require planning for timber harvesting on a watershed or ecosystem basis; create a public appeal process and encourage mediated solutions (versus legal challenges in court); and shift focus from plan approval to monitoring and enforcement.

The Forest Practices Act provides that commercial logging is permitted upon CDF's approval of a timber harvest plan. CDF's process for approving timber harvest plans is a certified regulatory program pursuant to the California Environmental Quality Act (CEQA). Therefore, the timber harvest plan is a document that functions as the equivalent of an environmental impact report under CEQA. Many, if not all, of the issues mandated to be addressed under CEQA are of significance to local government. These might include: traffic, impacts to roads, noise, potential land use conflicts, inconsistency with community plans, etc. The County, however, is not involved in regularly reviewing and commenting upon timber harvest plans for harvest within its area of jurisdiction.

APPENDIX B - Policy Options Worksheets

Timberlands - Existing Policies	*Retain*	*Modify*	*Delete*	*Comments*
1. Timberlands shall be retained for timber production, harvesting and compatible uses, and reclassification of Timberland Production Zones (TPZ) shall be done in accordance with statutory requirements.				
2. Avoid, wherever practical, the location of any state or local public improvements and any improvements of public utilities, and the acquisition of land therefore, in Timberland Production Zones where the project will have a significant adverse effect on the production of timber.				
3. Encourage the long-term management of timberlands.				
4. Support the use of forest improvement programs, whether funded publicly or privately, whether in a TPZ or other forestland.				
5. Affirm and support the public services provided by County government which are necessary in maintaining a viable forest products industry.				
6. Encourage, consistent with the Rural Development Section 2550, improved site productivity, timber growth and harvesting through intensive forestry management.				
7. The County supports zoning correction of land from the Timberland Production Zone when it can be found that: A. The original inclusion was in error or inappropriate; or B. The conversion is necessary to provide for the logical expansion of an existing community.				

3. Forest Resources	*Responds to Phase I Issues; New Policy Direction (N)*	*Provides Economic Benefits*	*Provides Environmental Benefits*	*Requires Minimal Public Costs*	*Public Preference (Yes, No or Modify)*	Comments
Option 3.1 Initiate discussion with the timber industry and the environmental community about modifications to requirements for timber harvesting plans to protect and enhance timber resources and respond to needs of those with small timber holdings, while maintaining water quality and protecting fishers, sensitive habitats, and recreational opportunities.	✓	✓	✓	✓		
Option 3.2. Create a two-tier system of TPZ zoning, with larger lot sizes for existing and potential industrial timberland and smaller lot sizes for timberland within or adjacent to Community Plan Areas. Department of Community Development to further research the proposal to allow a window of opportunity for Non-industrial Private Forest owners whose land is not zoned TPZ to rezone their land into TPZ. Either require a Timber Management Plan for parcels smaller than 160 acres and a requirement for a sustainable management plan for such parcels, or limit such rezoning to those parcels that already have a Non-industrial Timber Management Plan on file with CDF. The research should identify number of potential parcels, number of interested land owners, the fiscal impact that such a proposal would have as a result of altered tax standings, identify an appropriate time window for rezoning, etc.	✓	✓	✓	✓		
Option 3.3. Promote the County as a model for sustainable forestry by facilitating participation in certification programs, such as those established by the Forest Steward Council and the Sustainable Forest Initiative. This might include hiring a consultant to study the best way for the County to encourage participation in these programs and/or having the County adopt a policy or policies for using Certified wood products.	✓	✓	✓	✓		
Option 3.4. Create a Timberland Infrastructure Maintenance and Improvement Program (TIMIP). As a systematic approach to identifying	✓	✓	✓			

public service needs (law enforcement and fire protection) and public improvement needs. The program shall be developed on an individual watershed basis. Establish cooperative funding mechanisms for implementing TIMIP programs, including provisions for cost-sharing between the County and the forest industry.						
Option 3.5 Department of Community Development Services to further research the possibility of expanding the use of Natural Resource Zoning to inland areas, designating those pockets of area within timberlands which have high habitat value or sensitive species and because of these values are reserved from harvesting under the FPA.			✓			
Option 3.6 Define "Critical Watershed Areas" where the County would review Timber Harvest Plans within the County jurisdictional area. Review THPs only in Critical Watershed areas for potential impacts in key areas of importance to local government and county citizens. Focus effort in urban/rural interface areas. Areas of critical analysis could include the potential for water quality impacts, increased sedimentation, potential for increased flooding downstream of timber harvest operations, impacts to county roads and drainage facilities, traffic and noise impacts.						
Option 3.7 Increase the County's role in the review and monitoring of Joint Timber Management Plans. The County could choose to review all past Joint Timber Management Plans and assess their effectiveness in maintaining timber production, and to monitor and require 5 year updates of all Joint Timber Management Plans.						