

# Inconsistent Application of Environmental Laws and Policies to California's Oak Woodlands<sup>1</sup>

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## Abstract

We examine inconsistencies in the application of environmental laws and policies to California's oak woodlands and associated resources. Specifically, large-scale vegetation removals receive different levels of environmental oversight depending on location, tree species, and the final land use designation. Hence, situations arise where the scale of impacts to the ecosystem can be similar but are regulated differently depending on forest type. These inconsistencies can lead to environmental impacts, confusion, and inherent inequities among private landowners. The historical, institutional, and political climate under which the Forest Practice Act and California Environmental Quality Act were developed has resulted in the dichotomy that oak woodlands face. We use agricultural development in California's North Coast watersheds and the potential impacts to anadromous fish conservation to illustrate the problem. Examining this scenario provides a better understanding of how and why oak woodland resources continue to diminish in some parts of California. We also explore improvements that should be made to provide environmental review and full disclosure to ensure fair and equitable protection of natural resources and consequences for landowners. These include more emphasis on consistent environmental review, ecosystem management, watershed level planning, and protection of natural communities in addition to individual tree protection.

## Introduction

Oaks span across many of California's diverse climatic zones and define the landscape for its many residents. California oak woodlands are primarily held in private ownership, and many historic and modern day land-uses have reduced their biological integrity. In 1909 botanist Willis Linn Jepson states: "In some regions where the horticultural development has been rapid or the needs of an increasing population urgent, extensive areas have been cleared to make room for orchards or gardens, and scarcely a [valley oak] tree remains to tell the story of the old time monarchs of the soil, in other regions the destruction has not been so complete" (Pavlik and others 1991). Walter (1998) provides an overview of how past land-use practices have changed the landscape of California so dramatically that in some cases counties "have lost their natural heritage" and only retain remnants of their past biological richness.

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Oaks continue to be removed for urban and agricultural development despite modern environmental protection policies (Jensen and others 1993). The removal of oak woodlands is not directly regulated by the State, but there are applicable State, local, and more recently Federal policies and statutes that tangentially relate to oak woodland resources. This is dramatically different from the State's current role in overseeing tree removal and regeneration on conifer-dominated sites. This difference has resulted in a dichotomy of social and environmental policies produce an inconsistent level of protection for natural resources that rely on the natural continuum that exists between these forest types across the landscape. To illustrate the problem, we present a case study from North Coast California where anadromous fish conservation is essential and forest conversion for vineyard development is occurring in both woodlands and timberlands. Since many environmental protection policies revolve around the potential application of the California Environmental Quality Act (CEQA), we elaborate on its relevance to this discussion.

### **At the State Level**

The State Board of Forestry is recognized as having the legislative authority to regulate both privately owned conifer and oak woodland forest types. With the passage of the Z'Berg-Nejedly Forestry Practice Act of 1973 (FPA), the Legislature reorganized the Board and concomitantly expanded its powers and responsibilities. The FPA, in combination with the Forest Practice Rules (FPR) set forth by the Board, are designed to identify and mitigate any potential negative impacts from the harvesting of timber as a requirement of the California Environmental Quality Act (CEQA). Prior to the harvesting or clearing of commercial tree species for other land uses, a Timber Harvest Plan (THP) or a timberland conversion permit respectively, must be prepared by a Registered Professional Forester (RPF), and approved by the California Department of Forestry and Fire Protection (CDF). These serve as *functional equivalents* of an Environmental Impact Report (EIR) under CEQA.

Historically, the Board has focused its regulatory authority on those lands capable of producing "commercial species," conifers deemed economically important under the FPA and some hardwood species growing on timberland. It chose to support an educationally based program for oak woodlands. Only under specific circumstances are pre-determined oak species and other hardwoods recognized by the Forest Practice Rules. In all other situations, if oak species are removed from lands not designated as timberlands for purposes other than development they are not afforded protection under the FPA, thereby, not categorically subject to CEQA. This has led to some confusion because under specific circumstances species such as black and Oregon oaks (*Quercus kelloggii* and *Q. garryana*) are recognized as commercial species and are regulated by CDF while in others circumstances they are not. In this case, the economic value of the surrounding trees determines which parcels receive government oversight prior to oak removal, ultimately resulting in an environmental review process that excludes the intrinsic values associated with native trees such as oaks occurring outside of commercial timberlands.

### **At the Local Level**

The educational path for California oak protection was established with the creation of the University of California's Integrated Hardwood Management Program

(IHRMP) in 1986. In 1993 the Board delegated to the IHRMP the responsibility of assisting counties in the development of locally based conservation strategies for oak woodlands in lieu of a statewide regulatory program. In response to this directive, counties have developed a wide array of resolutions, ordinances and voluntary efforts through a variety of committees, Board of Supervisor actions, resolutions and initiatives.

This decentralized approach to oak conservation has promoted a variety of schemes that have been developed, modified and implemented throughout the oak region of California in an attempt to address both oak woodland aquatic and upland issues. A variety of resolutions (e.g., Tehema, Shasta, Madera Counties), various ordinances (e.g., Sonoma, Lake, Santa Barbara), evaluation committees (e.g., Lake, Madera), monitoring efforts (e.g., El Dorado) and ballot measures (e.g., Santa Barbara) have been initiated to address a wide array of oak conservation issues. In many instances, the adopted mechanisms have focused on a single resource issue such as tree protection rather than a comprehensive strategy. A recent newspaper article elucidated how local tree ordinances to protect heritage oaks in developed areas have proliferated, and sometimes results in a burdensome level of oversight for many small landowners (Purdum 2001). Additionally, it is becoming apparent that many of these local initiatives lack adequate monitoring mechanisms capable of evaluating their effectiveness.

In the presence of continued land-use practices that alter habitats, counties are now faced with the reality of trying to prevent landscape scale impacts to oak woodlands without the benefit of sufficient resources. In a few cases, the responsibility of compliance with oak protection policies lays with a local Resource Conservation District or an ad hoc committee. In almost all other cases, county planning departments have this responsibility. Due to limited financial resources and expertise, it is difficult for counties to comply with existing federal and state regulations such as the Endangered Species Act and the Clean Water Act, let alone implement an oak conservation strategy. Additionally, local government has a difficult time assessing natural resource loss in an unbiased manner because of political pressure from interest groups trying to avoid environmental regulation and associated costs.

## **CEQA and Cumulative Impacts**

The primary tool available to local planners to mitigate negative impacts of development to the environment is CEQA. According to Fulton (1999) the primary role of CEQA is to address four functions.

- To inform decision-makers about significant environmental effects
- To identify ways environmental damage can be avoided
- To prevent avoidable environmental damage
- To disclose to the public why a project is approved even if it can lead to environmental damage.

CEQA has been one of the most hotly contested planning laws since its inception in 1970. The Little Hoover Commission (1994) chided CEQA process as “complex, lengthy, and costly, resulting in inconsistency and inequity.” This report,

which evaluated how CEQA was being applied through the Forest Practice Rules, emphasized that an important flaw in the CEQA process was its piecemeal approach of evaluating cumulative impacts from repetitive timber harvests within watersheds. Though cumbersome and often costly, the CEQA process is the only existing comprehensive system that can effectively review the environmental impacts of land-use.

By definition cumulative impacts are “two or more individual effects which, when considered together, ...compound or increase other environmental impacts”. Another way of stating this definition was established by the courts as “an analysis that assesses cumulative damage as a whole greater than the sum of its parts” (*EPIC v. Johnson* (1<sup>st</sup> Dist. 1985) 170 Cal.App.3d 604, 625 [216 Cal.Rptr. 502] because “the full environmental impact of a proposed...action cannot be gauged in a vacuum” (*Witman v. Board of Supervisors* (2d Dist. 1979) 88 Cal.App.3d 397, 408 [151 Cal.Rptr.866]). These cases established the precedent that an agency may not treat a project as an isolated single-shot venture in the face of persuasive evidence that it is but one of several substantially similar operations. It further recognized how unless cumulative impacts are analyzed, agencies tend to commit resources to a course of action before understanding its long-term impacts.

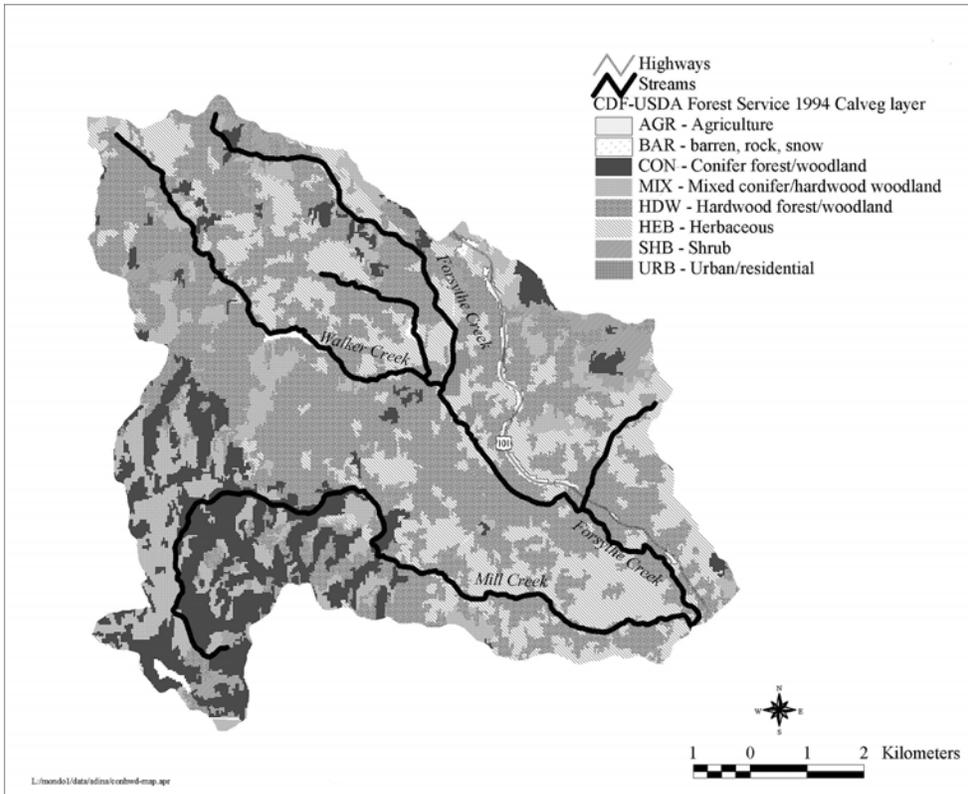
Undeniably, the evaluation of cumulative impacts from land-use projects is one of the most challenging issues facing resource managers and planners. A recent UC report evaluating cumulative watershed effects from timber harvesting points out the extreme difficulties of this task in the absence of a centralized database from which to make assessments. In this report, Dunne and others (2001) recognized the daunting task monitoring forest land-use practices to minimize cumulative impacts from repetitive timber harvesting plans even for a State agency such as CDF. Given the difficulty for an agency the size of CDF to monitor cumulative impacts, one could surmise the difficulty a county agency would have performing similar functions. Additionally, the Dunne Report was evaluating the current timber harvest process of repetitive harvest and replanting of timber resources that does not result in the conversion of timberland. This is quite different from the challenges facing local planners who are attempting to identify cumulative impacts to oak dependent environs from practices that result in the conversion and net loss of oak woodland acreage.

### ***Migrating Fish and the North Coast Forest Continuum***

Through a separate set of Forest Practice Rules, the Z'berg-Nejedly Act recognizes the need for the protection of stream zones, soil stability, and cumulative effects during timber harvest. A recent independent scientific panel determined the level of protection for salmon was inadequate (Ligon and others 1999); and led to amendments for stream zone protection on timberland by the Board of Forestry. These policy changes were driven by the fact that populations of anadromous salmonids are in danger of extinction throughout the western United States.

Within California, tree removal to facilitate changes in land use have influenced the temperature, sediment load, and physical structure of rivers and streams, making them substantially less hospitable for these native fishes. Parts of Central and Northern California have Mediterranean-climate where populations of salmon and steelhead trout occupy watersheds dominated by hardwood rangelands and woodlands. In many North Coast watersheds salmon migrate through conifer-

dominated drainages and ultimately complete their journey to their spawning areas in a predominately oak woodlands habitat type. After spawning juvenile salmonids will spend a significant portion of their early life stages in the oak-dominated portions of the watershed in preparation for their down stream migration to the ocean. While in this phase, juvenile fish are susceptible to degradation of either in-stream or near stream habitats. In fact, within a single and adjacent drainage that support the same population of fishes both conifer and hardwood dominated cover types exist (*fig. 1*).



**Figure 1**—Walker and Mill Creek planning watersheds in the Russian River with vegetation cover types as mapped by CDF-USDA USFS 1994 Calveg are mapped to illustrate the forest continuum that exists between conifer and hardwood forests. Walker and Mill Creeks have historic records of steelhead runs, and Forsythe Creek once had coho and steelhead (CDFG 1920-2000 historic fish records). Agricultural conversion in the conifer dominated sections would fall under CEQA review as part of a conversion permit, while other areas are not likely to have “commercial species” and would not fall under any comprehensive environmental review.

Since the current oversight by the State is primarily restricted to a narrow definition of timberland, salmon are not protected to the same extent across their migratory pathway to and from natal spawning grounds and the marine environment. To illustrate the point, we can examine the Russian River, which has some mesic conifer forests, and many headwater reaches that run through oak woodland and shrub habitat. This same continuum between forest types exists throughout the northwestern counties of Sonoma, Mendocino, and Humboldt; in the Russian, Navarro, Eel, Klamath, and Smith River systems. In other parts of California a

similar continuum exists with conifer dominated mountainous forests transforming into oak dominated types in drier or lower elevation sites within the same watershed, making the current division between conifer and hardwood forest types arbitrary when assessing impacts to watersheds, migratory species and ecosystem integrity.

Non-development activities (e.g. large-scale tree removal, road building, grading and recontouring) that result in the loss of oak forest cover are only subject to regulations surrounding streambed alterations and water quality issues. By contrast riparian areas designated as timberlands are afforded protection under the watercourse and lake protection clause of the Forest Practice Rules. The statute's explicit intent is to prevent the removal of "water, trees or large woody debris from a watercourse or lake, the adjacent riparian area, or the adjacent flood plain in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water" (FPA Article 6). The absence of a policy that recognizes the existence of the forest continuum including oak dominated forests establishes a double standard of environmental protection. Equally important is the fact that the burden of regulations is not shared equally among adjoining landowners with different forest types. Landowners with "commercial trees" are subject to the FPA at considerable expense if they want to convert the site (remove the trees), while those with only hardwood cover are not subject to the FPA. For this reason, in the North Coast, current forest policy does not adequately protect natural resources across the continuum that exists between conifer and hardwood dominated forest types and differentially impacts neighboring landowners.

## **Agricultural Conversions in North Coast Watersheds**

An example of the environmental consequences of the inconsistent application of current policies that exists between forest types is the differential regulatory process for native vegetation removal associated with vineyard development. Vineyard expansion is an increasingly important environmental issue as vineyards are expanding into upland and coastal sites, previously occupied by native vegetation (Merenlender 2000). When timberland is removed for vineyard development a timberland conversion permit (CEQA document) is required from CDF. In the North Coast wine grape growing region, CDF has approved 10 timberland conversions in Sonoma County totaling 239.9 acres, 4 in Mendocino equaling 399.5 acres, 19 in Napa for 388.44 acres; and there are 18 others pending approval. Of these, two EIRs were requested by local planning departments; which resulted in one company electing to drop their request and the other opting for withdrawal of the project following strong public concern expressed during the CEQA public review process. It is important to note that the total amount of timberland converted is often less than the area of vineyard developed.

By comparison sites not designated as timberland, such as oak woodlands and shrub communities, are not afforded protection under the Forest Practice Rules, and therefore are not given categorical statewide considerations under CEQA, thereby circumventing environmental review and public participation. As a consequence, thousands of acres of oak woodlands and rangelands have been removed to establish new vineyards throughout coastal California (Merenlender 2000) without a systematic environmental review process prior to conversion. This inconsistent application of environmental policy makes it virtually impossible to assess

cumulative impacts for the proposed development and inhibits any comprehensive analysis of the environmental impacts across the landscape.

While region-wide vineyard development can have a wide array of adverse effects on forests, watersheds, wetlands, fish, and wildlife (Garrison 2000), these impacts are not likely to be adequately addressed by local oak woodland protection initiatives not subject to CEQA. Furthermore, local policies have historically been designed to conserve soil and protect water quality as a means of addressing county-based fiscal restraints. Additionally, counties often exempt agricultural development from CEQA review in response to strong vocal opposition.

The following examples illustrate how policies addressing environmental impacts of agricultural expansion have developed at the local level. In all cases, committees representing diverse interests including agriculture and environment were involved in the policy development.

1) After a large number of oak trees were removed for vineyard development in Santa Barbara County, the County began a collaborative process to address oak woodland protection that brought together people with diverse interests through a series of workshops. In November 1998 there was a narrowly defeated oak woodland protection ballot initiative in Santa Barbara County. Eventually, a set of guidelines to mitigate the environmental impacts of oak tree removal and to maintain viable oak habitats was established through the collaborative process. Subsequently, the Board of Supervisors directed the planning department to develop local regulations based on the results of the workshops that would set thresholds for oak removal depending on the parcel size and species proposed for cutting. Most recently, the Board has requested that the oak protection ordinance include an option for farmers to submit their own management plan that addresses oak conservation to a designated committee for review in lieu of the regulatory requirements.

2) Lake County has a set of voluntary vineyard and land-clearing guidelines that were established primarily to address erosion impacts on the water quality of Clear Lake. This non-binding review process applies only to conversions from existing agricultural land (continuously in agricultural production during the past ten years) to vineyard and has been implemented on a trial basis. In addition, the County has a grading ordinance that applies to clearing more than 10,000 square feet of native vegetation and is subject to review under CEQA.

In December 1999 Lake County required that a vineyard development project, which would clear 100 acres of native vegetation including blue oak (*Quercus douglasii*) and chaparral habitat, be subject to a focused EIR. A focused EIR requires that a specific subset of potential environmental impacts be analyzed rather than the more comprehensive environmental impact studies mandated for a full EIR. This was the first vineyard development that was obliged by a county to produce such a document. This decision sent shock waves through the agricultural community both locally and statewide.

3) Napa County has conservation regulations aimed at vineyard development intended to minimize physical disturbance to a site, prevent soil erosion, improve water quality, preserve riparian areas, and avoid development of steep slopes. The regulations were put into place in 1991 and require setbacks from stream corridors of 35 feet for flat areas and 105 feet and greater for slopes over 40 percent. Napa County also requires that an erosion control plan be submitted prior to vineyard planting. In September 1999 the Sierra Club filed a lawsuit against Napa County

stating that, through the erosion permitting process, the County was making discretionary decisions on erosion control plans for proposed vineyards less than 30 percent slope without applying a CEQA review. They also filed suits against some landowners who were developing vineyard on steep hillsides. The suits were settled in April 2000 and resulted in the County's confirmation that discretionary review was in place without CEQA review and agreeing to pursue studies on the application of CEQA for these cases. The Sierra Club also settled with the private parties following an agreement that vineyards on slopes greater than 50 percent and that are not yet entirely graded for planting would receive environmental review through the CEQA process.

In order to avoid CEQA review, counties and cities have restricted their review process to ministerial actions only, such as checklists of best management practices in order to verify that the requirements were met. Standardized checklists of what should and should not be done for agricultural developments to protect natural resources would be difficult to develop given the differences in site characteristics that exist across the landscape. Therefore local regulators and resource conservation districts generally argue that each site is different and requires flexibility in determining the appropriate techniques to prevent soil erosion and protect water quality, let alone to assess the cumulative environmental impacts that can result from deforestation.

4) In February 2000, Sonoma County adopted a vineyard erosion and sediment control ordinance that requires erosion control plans and minimal stream set backs (e.g., 25 feet) for new vineyard development on certain slopes, and restricts development on slopes greater than 50 percent. This ordinance does not address upland vegetation removal and other habitat conservation issues. Prior to adoption, however, the Board of Supervisors ensured that the ordinance processes would be ministerial rather than discretionary to avoid CEQA.

## **Summary**

The current forest policies and conservation strategies for California's forests fail to recognize the natural continuum between conifer and hardwood types. As a consequence, a dichotomy has developed between statewide and local conservation strategies that creates a double standard for environmental protection and regulatory burden to landowners. Examining the North Coast case of anadromous fish and their biological dependence on oak dominated forest landscapes illustrate the need for consistent environmental protective measures regardless of forest type. Given commonly expressed policies to move toward watershed level planning, ecosystem management, and sustainable land use practices, the differential treatment of conifers and hardwoods based on economic value should be reexamined.

Current statewide forest policy relegating all oak woodland protection to local control, while maintaining regulatory oversight of conifer-dominated forests is insufficient to protect California's ecosystems. Furthermore, it continues a trend of shifting environmental planning obligations from the state to local level (Fulton 1999) without the counties being provided with the necessary resources to adequately evaluate their programs. While local oak protection policies encouraged by the Board of Forestry may have been well intentioned it is becoming apparent that where in place, these usually provide only limited review of the potential environmental impacts that can occur when extensive amounts of native vegetation are removed. As

we discuss, the existing regulatory structure neglects environmental review of many large conversions of wildland due to agricultural development and makes cumulative impact analysis impossible.

The current expectation that counties will be able to protect oak woodland ecosystems and evaluate cumulative environmental impacts due to deforestation is unrealistic given that even CDF had not been able to implement such an analysis (Dunne and others 2001). County planners are overloaded trying to assess project impacts to the environment in developed areas, and rarely have the jurisdiction, resources, or expertise to protect whole ecosystems. Even in Lake County, where extensive native vegetation removal may trigger CEQA review, the scope of review is often limited and demonstrates that a local grading ordinance may not be the best planning mechanism to address wildland conservation and cumulative impacts. The lack of local resource protection is forcing Federal Resource Agencies to step in and take actions that are often extremely unpopular with the local citizenry making meaningful dialog for conservation even more difficult.

As demands on California's forestlands increase and become more varied, using commercial timber growing potential value to set the level of state funded environmental regulation is turning out to be insufficient. In an attempt to address some of the environmental concerns regarding watershed conditions the Resources Agency has enacted the North Coast Watershed Assessment Program (NCWAP). The approach is a good first step toward developing a centralized database aimed at a better understanding of the existing conditions that may be limiting anadromous fish recovery on a watershed-wide basis. Making this information available to local interest groups and government will enhance their ability to put local land use decisions in a broader environmental perspective. However, as it stands now in the North Coast, future land use can continue to go unchecked across a large extent of our coastal watersheds not defined as timberland.

Herein lies the need for statewide conservation planning and environmental review beyond timberlands into oak woodlands in order to protect California's wildlands and associated resources such as anadromous fish. A first step might be a centralized repository of information to assess environmental impacts of proposed large-scale oak woodland removal. While limited in scope, locally based oak conservation measures should also be encouraged to protect oaks within developed areas of cities and counties. Without addressing oak woodland conservation at these two scales, the current inconsistencies in forest management and local oak policies will continue to fuel the intense debate throughout the oak regions of California as land-use increases in scope and magnitude. Perhaps a blend of State oversight to ensure our oak woodland landscapes is protected and local policies that can account for resident differences in oak distribution and land use policies could improve the environmental review process that is currently lacking. Improving our ability to address landscape level oak woodland conservation would lessen the burden on small landowners who can sometimes find themselves regulated tree by tree.

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