

Determining Significance Within CEQA: A New UC Program to Assist Planners in Conserving Oak Woodlands¹

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Abstract

In 2004, the California State Legislature passed Senate Bill 1334 (Bill), titled *Oak Woodlands Conservation: Environmental Quality*. This Bill states, “A county...shall determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment”. Once a determination has been made, counties have the option to 1) evaluate the utility of conservation easements as a vehicle for conservation; 2) enforce mitigation planting; 3) make a in-lieu contribution to the Oak Woodlands Conservation Fund (established in 2001 under the administration of the Wildlife Conservation Board), or implement other mitigation actions as outlined by the county. This Bill initiates a new attitude for the state that requires all counties to consider significant impacts as defined in the California Environmental Quality Act (CEQA) for all non-agricultural projects affecting oaks.

Faced with implementing this Bill, counties began asking the University of California (UC), the California Department of Fish and Game (DFG), the California Department of Forestry and Fire Protection (CDF) and the Wildlife Conservation Board (WCB) questions, including what types of projects fell under the purview of the Bill, what constituted “significant impacts,” and how to determine suitable, appropriate mitigation. To help answer these questions, the UC Integrated Hardwood Range Management Program (IHRMP) initiated a grant proposal to the WCB that was funded in early 2006. The grant proposed activities and products to specifically assist planners who are charged with implementing SB 1334 at a local level.

In response to the county questions, the agencies receiving inquiries about SB 1334 formed a committee to develop and disseminate information, including compliance guidelines and effective strategies to conserve oak woodlands. Specifically this committee charged itself with developing a strategy and tools that planners could use to analyze proposed project effects on oak woodlands. This new initiative includes both static and interactive Web-based decision keys, PowerPoint presentations, and visual comparison standards for assessing oak woodland impacts. Although these efforts are ongoing, the products will be important tools to help counties comply with SB 1334 and conserve their important oak woodlands.

Keywords: CEQA, Planning, Matrix.

Introduction

California continues to experience population growth and expansion into areas traditionally used for extensive and intensive agricultural operations. This growth is

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proving to be challenging rural county planning departments as they try and grapple with issues and subjects never before confronted regarding growth impacts to native oak forest systems (Giusti and others 2005). Though some level of growth and sprawl is ubiquitous throughout the state the regions witnessing the greatest increases include the Central Valley, Sierra foothills and Central Coast.

Oak removal can certainly have significant impacts on environmental quality (Johnson 1998; Merenlender and others 1998). Jurisdictions have used various planning vehicles and approaches to try and achieve oak conservation goals, including general plan language, zoning restrictions, tree protection ordinances, heritage tree recognition programs, and programs that support the purchase and development of conservation easements.

Until recently, counties have independently developed these policies and procedures to address development impacts to oak woodlands without clear direction from state resource agencies (Harris and Kocher 2002, Giusti and others 2005). This condition changed abruptly with the passage of SB 1334 (Kuehl, 2004) when the Legislature mandated that counties assess significant impacts as defined in CEQA to oaks in non-agricultural projects.

Previous to the passage of SB 1334 the state of California's position towards oak woodlands, as defined and administered by the California State Board of Forestry and Fire Protection, was that counties should develop and implement oak conservation policies that they felt appropriate (Giusti and Merenlender 2002). Consequently, the state has maintained a position that oaks would not be regulated in a similar fashion as conifer species, thereby deferring to counties to define and develop appropriate measures to insure oak woodland conservation.

SB 1334 represents a dramatic change in policy direction by mandating counties to comply with CEQA when significant impacts to oaks are identified. This shift has resulted in many requests for information from county planners, developers, home owners and others for help in understanding both the implicit and explicit implications of this bill. There is no question this legislative act has forced people to think about project impacts and subsequent effects on oak woodlands in terms never before considered. Additionally, it has pressed resource agencies and institutions toward a direction of providing information to help delineate the ambiguous terms and definitions as currently provided in CEQA.

UC's Approach to Providing Guidance to This Issue

The University of California's Integrated Hardwood Range Management Program (IHRMP) requested grant support from the Wildlife Conservation Board to develop a new program and source of information and educational materials to help planners implement this bill. The grant was awarded in February 2006. Following the grant award, an interdisciplinary team was assembled and included inter-disciplinary resource professionals from the WCB, CDF, FRAP, CDFG, and UC to outline a program that would provide a performance-based, rather than prescriptive-based, approach to oak woodland conservation in order to try and avoid the "institutionalized," rigid system currently in place for timber harvest practices.

There was consensus among committee members that county planners need access to science-based information that allows them to develop spatially explicit planning scenarios in the early stages of the development process. This is consistent with the recommendations made by Forman and Collinge (1997) who maintained that

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in order to conserve biological diversity, a crucial time for spatially derived planning is when the first 10 to 40 percent of the natural vegetation is altered or removed from the landscape. Furthermore, it was recognized that given the variety of regional situations that face county planners, it is important to first provide broad, conceptual conservation goals and then develop applicable tools that allow the concepts to be visualized “on the ground.”

Further guidance to the issue is provided by the Ecological Society of America (ESA) (Dale and others 2000) who developed a basis for conservation planning that captures the conceptual approach to planning that the committee supports. In their Land Use Committee Guidelines for Land Use Planning and Management, the ESA recommends:

- 1) Examine the impacts of local decisions in a regional context;
- 2) Plan for long-term change and unexpected events;
- 3) Preserve rare landscape elements and associated species;
- 4) Avoid land uses that deplete natural resources over a broad area;
- 5) Retain large contiguous or connected areas that contain critical habitats;
- 6) Minimize the introduction and spread of non-native species
- 7) Avoid or compensate for effects of development on ecological processes;
and
- 8) Implement land use and land management practices that are compatible with the natural potential of the area.

There was further consensus on the recognition of the chasm that exists between conceptual design and pragmatic implementation in the politically charged arena of county planning. It is clear that in order to have scientifically validated approaches included in the planning process requires the development of concise, well-articulated decision-making tools specific for oak woodlands. Those tools would strive to incorporate the current conventional wisdom pervasive throughout the literature that identifies those elements or characteristics most important for maintaining the integrity of oak woodlands (i.e., old trees/forests, maintaining rare and representative habitats, riparian corridors, water quality and quantity, ecosystem functions and natural connectivity). Additionally, any planning tools should strive to assist planners in promoting compatible land uses to avoid or minimize fragmentation whenever possible.

Finally, the question of “*What is Significant?*” has to be addressed if planners are to have any real chance to influence the direction and impacts of a proposed project. Rossouw (2003) suggests that *Impact Predictions* be based on measurable attributes that can be quantified or qualified based on the long-term nature of the change being proposed. In most cases, predictions of the impacts can be conceptually developed under the subject headings of:

- Spatial extent;
- Duration of the impact;
- Intensity or severity of the impact;
- Status of the impact (i.e., either positive (a benefit) or negative (a cost), or neutral);

- Reversibility (i.e., reversible or permanent);
- Degree of certainty; and
- Mitigatory potential.

A Work in Progress—Web-Based Technology

Technology is allowing scientist and non-scientists to collect scientific data and disseminate the results broadly. For example, an interactive Web-based program is already an important component in the detection and tracking of Sudden Oak Death (www.suddenoakdeath.org) in California. The ability for people to communicate via e-mail and similar technologies provides a readily available tool for planners to exchange questions, ideas and sources of information if an organization or institution is willing to serve as the catalyst to support the system. Part of the grant agreement with WCB is to have the IHRMP develop and support an interactive, Web-based communication tool for planners. The design is to use the IHRMP home page as a portal allowing planner's access to:

1. A bulletin board to post pertinent oak-related planning questions and or information for broad dissemination to a non-specified audience seeking reference materials, sources of information, contact information, etc.
2. A collaborative tool system wherein planners who register can participate in a "working group" Web experience allowing for oak-related discussions among resource professionals, planners, agency personnel, who are struggling with oak/planning specific situations.
3. Easy access to FRAP-generated county oak woodland maps,
4. Links to species accounts for common California oaks,
5. Power Point presentation providing background information and explanations to a planner's obligations under SB 1334.

Field and Office Decision Tools

Ecological resource decisions should be derived from field observations, literature research and data collection. The challenge for planners is to meld the instructions and guidance provided for by science with the intensity of the politically driven planning process. The determination of "significance" as defined in CEQA is at the core of implementing SB 1334. That decision will guide both the financial costs and the political intensity associated with the project. Providing sound, science-based information into the decision-making process is crucial for the well-being of both the individuals and the oak woodlands involved in the discussion. A decision matrix has been drafted that should ultimately assist planners in classifying the condition of the oak woodlands under discussion.

The matrix relies on using a set of criteria as a means to qualitatively establish rudimentary thresholds of significance to first broadly define impacts in simple terms. These criteria simply apply subjective reasoning to first determine the level of impact being proposed (*table 1*).

Table 1—*Categories for the rating of impact magnitude and significance (adapted from Rossouw 2003).*

Impact Magnitude and Significance Rating	
High	Of the highest order possible within the bounds of impacts that could occur. In the case of adverse impacts, there is no possible mitigation that could offset the impact, or mitigation is difficult, expensive, time consuming or some combination of these. Examples include conversion of oak woodlands; large-scale projects impacting a large number of trees or acres; projects that result in causing or exasperating fragmentation issues.
Medium	Impact is real but not substantial in relation to other impacts that might take effect within the bounds of those that could occur. In the case of adverse impacts, mitigation is both feasible and fairly easily possible. Examples include oak trees or acreage already within the boundaries of an existing development; projects that can be adjusted to easily minimize the negative impacts to oak resources.
Low	Impact is of a low order and therefore likely to have little real ecological effect. In the case of adverse impacts, mitigation is either easily achieved or little will be required, or both. Examples include removal of a few number of trees from a residence; pruning or shaping activities on existing oaks.
No impact	Zero impact

This approach allows both the planner and the applicant to make a relatively straight-forward and economically cost-effective assessment of where the project may lie in regards to environmental impacts and potential mitigatory actions and associated costs.

Furthermore, a rating system for impacts recognizes that each project site has a peculiar history and situation whereby the history of land-use practices at any particular site may offer a different set of variable planning scenarios from which to start the discussion. It further recognizes the variability between properties whose qualities can range from a wildland state to properties whose oak characteristics have been obliterated. The rating system strives to establish a baseline from which to initiate the decision-making process.

To further assist in the evaluation process, the matrix is designed to guide a planner through a series of conditions to ascertain if the site represents an oak woodland whose ecological functions are still relatively “intact,” “moderately degraded,” or “severely degraded.” This relative comparison is intended to classify the current state of the site in order to establish a baseline from which to determine both significance and appropriate mitigation considerations.

Inherent in this approach is the realization that some core oak woodland acres are considered more ecologically important than others and attempts to have the planning process recognize this condition. Once the site condition has been determined, then the proposed project impacts can be fully gauged and the potential impacts determined. The condition description accepts that any evaluation must address more than simply the impacts to the trees; the planner should consider the potential impacts to the other tangible aspects of the woodland.

The second step, following the initial qualitative assessment of thresholds previously described, in the matrix poses the question; is the site?

Intact?

An “intact” woodland is a site is currently in a “wild state” being managed for grazing, open space, recreation, etc., wherein all of the ecological services are still being provided (i.e., shade, groundwater filtration, wildlife/fish habitat, nutrient cycling, wind/noise/dust abatement, etc). In this condition, roads and stream crossings are absent or minimal over vast portions of the site. Trees, both dead and alive, dominate the landscape and the site is capable of natural regeneration of oaks and other plant species. The site is absent of any development that would inhibit the movement of wildlife, and the existing development is limited to a small number of residences with service buildings or barns. This site is recognized as *Intact Woodland wherein alterations to the existing condition should be considered significant and unavoidable*. Examples include large- to moderate-sized (>1,000 acres) private ranches, expansive oak woodlands, zones for agriculture, open space, scenic corridors.

Moderately Degraded?

A “moderately degraded” site has obviously been altered from a pristine or wild state condition. It is currently a state in which oak trees are present; natural regeneration is capable of occurring; limited ecological services are still being provided; and the site still provides for utilization by wildlife and possibility fish. Roads and stream crossings are present but limited or clustered. Developed areas are centralized and concentrated over a small percentage of the site. The site is recognized as a *Moderately Degraded Woodland wherein alterations to the existing condition should be considered significant but mitigable*. Mitigation measures may diminish the environmental impacts to achieve no further degradation of the site. Examples may include some golf courses; large ranches that have been subdivided into large parcels (>100 acres); and oak woodland subdivisions that share “common grounds” of intact woodland acres.

Severely Degraded?

A “severely degraded” site has been dramatically altered from a pristine state and is currently in a condition that has no trees or very few old decadent residuals. It is being managed in such a way that natural regeneration is not possible or impractical; the soil is compacted or contaminated; and/or has been developed for residential, commercial or industrial purposes. Roads and stream crossings are commonplace, and fencing and other obstructions limit wildlife access and movement. Alternations to this site description may be considered *less than significant* if the loss of a single or a few number of trees does not dramatically alter the surrounding condition.

Once the threshold impacts and site class have been determined, a paired comparison allows for a more certain assessment of the proposed project and its relevance to the issue of significance. For instance, a project of likely “high impact” proposed for an “intact” woodland would be viewed as significant under CEQA; or, a project of likely high or moderate impact on a “slightly altered” oak woodland may well be considered “significant” under CEQA guidelines. Conversely, a project proposing to remove one or very few trees from a highly urbanized site may indeed

not be determined significant. This assessment must address more than simply the impacts to the trees; the planner should consider the potential impacts to the other tangible aspects of the woodland.

To further support the decision-making process, a field assessment tool is being developed to quickly determine 1) the condition of the site, 2) the ecological functions that may be impacted by the proposed project, and 3) the criteria and elements that should be considered for mitigation.

Educational Support and Outreach

The UC IHRMP has provided educational leadership in the subject of oak woodlands since 1985. That role will only be enhanced through this new initiative as the program strives to develop progressive and innovative approaches to problem solving. Coupled with the newly developed materials and delivery methods, the program has recently updated the *Planner's Guide to Oak Woodlands* (Giusti and others 2005) which delivers a broad array of subject matter useful as a reference tool for the ecology and conservation of oaks. Additionally, the program has developed a planning White Paper (Giusti and others 2004) designed to assist broad audiences with the challenges facing California regarding the conservation of oaks and biological diversity.

Concurrent with these visual resources, the program continues to organize regional workshops and the Oak Research Science Symposium to convey new information and technologies.

Discussion

SB 1334 is serving as a catalyst to prompt new and innovative approaches to determining significance within CEQA in ways never before attempted. The Bill maintains the state's long-held attitude that local governments should implement oak conservation policies.

There is little controversy that land-use practices can have various impacts on oak ecosystems, their habitats and dependent species (Merenlender and others 2005). The combined affects of land use practices can have long-term impacts on the functions and processes necessary to sustain oak ecosystems over time. The ability of the planning process and the importance that planners play in recognizing and minimizing the ecological effects of fragmentation in a rapidly urbanizing state can not be overstated.

This newly introduced program represents an innovative and unprecedented approach to environmental assessment and impact determination, based on the most current scientific literature that addresses the role of planning in the conservation of trees and biological diversity of forest systems (Foley and others 2005, Lee and others 2006, Manning and others 2006, Seiver and Hatfield 2001, Rossouw 2003). Further, it represents a divergence from past, prescriptive regulatory approaches legislated to other forest types and scenarios. This approach attempts to guide a planner and project applicant through a process by which significance can be determined on the basis of the relative starting condition of the site. Furthermore, it attempts to establish a performance-based approach to a highly charged political

planning system that is adverse to the precedent established under the current timberland regulatory system.

The strategy described here is designed to be used in combination with other planning tools and programs to support a county's desire to conserve oak resources. In addition, resource maps will always be necessary to examine the extent and ownership patterns of oak woodlands. Other policies that provide guidance and leadership within a county's jurisdiction may also affect the decision-making process; such as, general plans and county oak management plans. This system is designed to be a component of a comprehensive, county-wide oak management plan, or policy that is included in the appropriate planning document (e.g., General Plan). The combination of such tools is vital if a professional is to have the necessary tools available to transform their traditional planning approaches into progressive, ecologically based conservation tools (Environ. Law Institute 2003).

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