

Peter R. Baye, Ph.D.
Coastal Plant Ecologist
33660 Annapolis Road
Annapolis, CA 95412
(415) 310-5109
baye@earthlink.net

Forest Practices
California Department of Forestry
135 Ridgeway
Santa Rosa, CA 95401

**COMMENTS - THP 1-04-059 SON Martin (Sleepy Hollow) Timber Conversion
Permit/Timber Harvest Plan (Brushy Ridge, Annapolis, Sonoma County)**

May 19, 2004

To the California Department of Forestry:

Please consider the following comments on THP 1-03-059 SON (Martin Conversion, Sleepy Hollow, Annapolis, Sonoma County TCP/THP).

I am a professional plant ecologist and botanist, specializing in coastal plant communities and species for over 25 years. My professional experience and qualification includes over 12 years experience in preparation, management, and review of joint NEPA/CEQA documents (EIR/EIS, environmental assessment/initial study) for U.S. Army Corps of Engineers (San Francisco District), and as a private consultant for the California Coastal Conservancy. I also have over 12 years experience in coordination and preparation of Endangered Species Act Section 7 consultations for the Corps and U.S. Fish and Wildlife Service, and over 5 years of experience preparing endangered species recovery plans for the Service. Much of my regulatory and environmental planning work has emphasized critical review or preparation of mitigation and restoration plans for endangered species and wetlands.

I have reviewed the Timber Conversion Permit/Timber Harvest Plan (TCP/THP) the proposed vineyard conversion and development. A summary of my comments is presented below, followed by more detailed explanation.

(1) *The TCP/THP fails to identify, or grossly underestimates, significant cumulative impacts of escalating agricultural conversion on wildlife habitat (including endangered species), plant communities, biological diversity, wetlands, and water quality of the assessment area.* It similarly fails to include necessary, appropriate, and feasible mitigation measures to address potentially significant cumulative, indirect, and direct impacts of the proposed action.

(2) *The alternatives analysis does not comply with CEQA requirements for meaningful comparison of alternatives:* it fails to identify a project purpose that is not a circular re-statement of the project description, and fails to consider a reasonable geographic scope for offsite alternatives with less environmental impact, but satisfy the basic project

purpose. It also includes diversionary “straw man” alternatives outside a reasonable range of alternatives compatible with the project purpose. As such, the alternatives analysis serves as a rationalization of the applicant’s proposed project and site selection, rather than a meaningful comparison of alternatives under CEQA.

(3) The TCP/THP uses *arbitrary and unsupported criteria for significance of impacts*, particularly cumulative impacts, that rely on the invalid “ratio approach” that has been ruled invalid in CEQA case law.

(4) The TCP/THP *underestimates significant cumulative adverse impacts to the recovery of federally listed northern spotted owls, providing a substantially inadequate analysis of the cumulative effect of agricultural conversions on NSO predator populations, availability of NSO refugial habitat from predation, and loss of foraging habitat due to direct effects of conversion, and more significant indirect of increased predator activity over more extensive areas beyond the project boundary.*

(5) The TCP/THP *includes no actual botanical report with site-specific, appropriateseasonally timed searches or descriptions of potentially sensitive vegetation, such as wet meadows, wetlands, seeps, relict stands of regionally rare forest herbs associated with old growth and persisting locally in logged forests, or sandy grassland species. The preliminary botanical report contains almost entirely programmatic, general information, and defers survey work until after the TCP. It therefore provides no meaningful, substantive site-specific information for CEQA-equivalent review, including assessment of impacts and alternatives. A perfunctory database search (CNDDDB) on previously unsurveyed private lands is an inadequate and infeasible method of assessing impacts to vegetation or plant populations.*

(6) The TCP/THP *relies wholly on programmatic erosion control measures that are likely to be inadequate to prevent gulying of unconsolidated, disturbed, fine sandy sediments of the Ohlson Ranch formation on during the vulnerable first several years before buffer/erosion control vegetation establishes. Significant gully, rill, and sheet erosion has in fact occurred on recently developed vineyards in Annapolis during major storms, but substantive locale-specific evidence of erosion hazards were not considered in the TCP/THP.*

(7) The TCP/THP *fails to evaluate the long-term cumulative impact of fertilizer transport through groundwater to seeps and springs that drain to Little Creek, where small increases in available nitrate or phosphate during the low-flow growing season may cause significant increases in production of filamentous algae (and necromass causing excessive or lethal biological oxygen demand) in pools that provide habitat for juvenile steelhead.*

(8) The TCP/THP *grossly underestimates the sensitivity of noise and esthetic receptors in context of cumulative impacts, including impacts of multiple vineyard conversions within 5 miles of the project site, and newly instated timber operations within conservation easements.*

(9) The mitigation measures include *no monitoring or reporting requirements for key potential individual, cumulative, and indirect project impacts, including sedimentation and erosion (gully size and frequency, net volume transported, post-storm stream turbidity comparisons with upstream reference sites), groundwater depletion, stream*

temperature changes related to forest canopy loss and associated net annual increase in soil and air temperatures, stream baseflow reduction, and nutrient augmentation/eutrophication of summer baseflow (N, P enrichment of groundwater discharges to streams derived from gradual leaching of previous agricultural amendments through transmissive sandy Goldridge soils).

Cumulative impacts of agricultural conversion in the project vicinity.

The TCP/THP lacks the most basic analysis of cumulative impacts of agricultural conversion within a landscape. The TCP/THP fails to cite or provide a quantitative GIS-based analysis of vegetation and land use cover-type change over time within the watershed, biological assessment area, or soil series considered. Therefore, no information regarding pattern, area, type, or rate of vegetation/habitat change can be detected, reported, or assessed for meaningful cumulative impact analysis. Crude acreage tallies do not provide biologically informative data for cumulative impact analysis. The cumulative significance of notorious unauthorized landclearing (forest removal) in the Brushy Ridge, Annapolis area, is omitted in the absence of such a landscape-level analysis.

The abuse of the “ratio approach” to cumulative impact analysis in the THP (trivialization of an impact by comparison of its magnitude to an inflated geographic scope of analysis, rather than focus on its incremental contribution to other impacts within the geographic scale of related projects or sensitive receptors) is inconsistent with professional standards of CEQA, and is unacceptable with use in a CEQA-equivalent document. The TCP/THP’s analysis of forest change based on net decrease in percentage of Sonoma County or North Coast forest resources as a whole (p. 31) is arbitrary and misleading. No justification for the geographic scope of analysis (county or North Coast) was provided, despite acknowledgement that some “main issues” are “local” because of concentrations of vineyard conversions in the Brushy Ridge/Sleepy Hollow area (p. 3, RFP responses to PHI report, April 20, 2004). The effect of comparing the project conversion area to the county’s total forestland resources is a red herring: the relevant scope of analysis is the local watershed and soils series where the rates of vineyard conversions are escalating, and habitat fragmentation and deforestation are proliferating. The cumulative impact analysis must focus on the cumulative increase in agricultural conversion area, the rate of increase, and forecast of likely long-term future conversions based on currently observed land use trends, current regulatory practices, and economic factors. The geographic scope of analysis properly must follow the distribution of topography, soils, and microclimate that the alternatives analysis acknowledges as the basic reason for selecting viticulture sites in the outer coast ranges of Sonoma County, and Annapolis in particular.

Seminal CEQA case law (*Kings County Farm Bureau v. City of Hanford*, 5th District 1990, 221 Cal.App.3d 692 [270 Cal.Rptr. 650]) has established that the “ratio theory” or “ratio approach” of cumulative impact assessment is invalid. The ratio approach focuses on the proportional contribution of an individual project to a larger general impact, such as an individual project’s contribution to the overall loss of a resource over a wide geographic area. This approach inevitably understates the severity of real, additive, incremental cumulative impacts, and instead quantifies a pseudo-cumulative “impact” that an individual project may cause, especially if the geographic scope of analysis of the area or resource compared with the project is arbitrarily enlarged (e.g. comparing local project impacts to those covering arbitrarily large geographic areas, such as counties or regions). CEQA requires instead an assessment of the incremental, collective, or combined effect of both the project at issue, past projects, contemporary projects, and reasonably foreseeable actions, within a scope of analysis relevant to the project’s impact.

Citizens to Preserve the Ojai v. Board of Supervisors (2nd Dist. 1985) 176 Cal.App.3d 421, 431-432 [222 Cal.Rptr. 247] ruled that it is :

...vitaly important that an EIR avoid minimizing the cumulative impacts. Rather it must reflect a conscientious effort to provide public agencies and the general public with adequate and relevant detailed information about them...A cumulative impact analysis which understates information concerning the severity and significance of cumulative impacts impedes meaningful public discussion and skews the decisionmakers perspective concerning the environmental consequences of a project, the necessity for mitigation measures, and the appropriateness of project approval.

All cumulative impact assessments in the TCP/THP should be revised to comply with CEQA standards.

Invalid statement of project purpose, scope and reasoning of CEQA alternatives analysis

The Alternatives analysis for the project essentially fails all CEQA standards, providing inadequate and invalid statements of project purpose, no geographic scope of analysis or justification for it, and focuses on spurious “alternatives” that do not meet the basic project purpose. The effect of these flaws is to preclude a meaningful comparison of alternatives, and prevent assessment of potential alternative sites that may satisfy the project purpose and decrease significant impacts.

The stated “project purpose” is essentially circular, importing a narrow description of the proposed project linked to an incomplete statement of the basic project purpose (TCP/THP p. 29): “The purpose of the project *is to convert 25 acres of timberland to vineyard and to achieve the landowner’s goal of producing high quality wine grapes....[with an] economic return.*” (*emphasis added*). This statement, defining timber as part of its purpose, unreasonably precludes any alternative that does not involve timber conversion, which is the cause of many or most project impacts. This vicious circularity defeats the intent of the CEQA guidelines, and is inconsistent with professional standards of CEQA practice, in addition to CEQA guidelines themselves. The actual basic project purpose is in fact the clause “landowner’s goal...”: “producing high-quality wine grapes” in a commercially feasible way. This basic purpose cannot arbitrarily assume a particular site if many potentially feasible alternative sites, with less sensitive environmental resources, may be available within a reasonable geographic scope of analysis. No discussion of a reasonable geographic scope of off-site alternatives is included. No objective information (edaphic or other physical factors) on where “high quality wine grapes” may be grown in the county or North Coast, or land availability is included. No information on the financial or practical feasibility of land resale and new site acquisition is included.

If other potential “high quality wine grape” vineyard sites are potentially available on former or current lands with previous agricultural, then clearly environmental impacts associated with deforestation and agricultural conversion may be avoided, not merely “shifted to another location”, as the analysis blithely asserts (p. 29). The analysis rather outrageously argues that “the landowner has no desire nor does he own other property suitable for vineyard (p. 29), since “desire” and prior ownership of offsite alternatives are irrelevant to comparisons of feasible alternatives: no project proponent desires, by definition, an alternative to what is stated as the preferred alternative, and it would be irrational to expect prior ownership of potentially feasible alternative sites with less potential impact. Therefore, the argument is entirely irrelevant to CEQA analysis.

Similarly invalid is the arbitrary alternatives criterion proposed, “the project does not include any special features or unique sites that would distinguish it from any other timberland in Sonoma County” (p. 29). The only criteria of interest to CEQA are environmental superiority (reduction of significant impacts), and feasibility. Even so, in the absence of an adequate site-specific botanical survey (i.e. one that actually includes a plant species list), an accurate assessment of wetland types and distributions, and evaluation of suitable alternative sites that do not require deforestation and agricultural conversion, this additional proposed “unique or special” criterion cannot be justified on its own terms.

This spurious “alternatives analysis” is therefore a mere rationalization of the selection of the project site and the proposed project. It is overtly prejudiced towards selection of the project site, misdirects the basic CEQA objective of seeking feasible environmentally superior alternatives, and fails to comply with CEQA standards for alternatives analyses. CDF is obliged to provide CEQA-equivalent review in its TCP/THP documents, and comparison with CEQA documents produced by any other CEQA lead agency in Sonoma County, would confirm that it has failed to do so in this (and other) TCP/THPs.

Direct, indirect, and cumulative impacts to the endangered Northern Spotted Owl:

The introduction of large patches of agricultural and residential, open habitats in maturing second-growth coastal redwood/douglas fir/hardwood forest has indirect and cumulative effects on the distribution and abundance of predators of the federally listed Northern Spotted Owl (NSO), particularly great horned (and possibly barred) owls. In addition to the direct loss of NSO foraging habitat in agricultural conversion areas, larger areas of potentially suitable foraging habitat are likely to become unavailable, or an attractive nuisance (and potential cause of increased adult mortality of NSO), if great horned owl densities increase in response to a cumulative increase in agriculturally converted forestland. This impact would also be affected by the distribution as well as size of agriculturally converted forest patches, in relation to pre-existing suitable great horned owl and NSO habitat. This highly significant, landscape-level, cumulative and indirect impact of forest conversion is nowhere indicated or addressed, or mitigated, in the TCP/THP. The TCP/THP for the highly similar, proximate Roessler TCP (1-04-055 SON) states “the removal of the remaining trees and planting of vineyard may attract great horned owls to the area” (p. 146), and does not assess the direct, indirect, or cumulative impact to the long-term viability of NSO populations, or its significance. No disclosure of NSO predator attraction impacts appears at all in the Martin TCP/THP. The primary importance of great horned owl predation in the assessment of NSO habitat suitability and population viability is well-established in the scientific literature (Zabel, Cynthia J, J.R. Dunk, H.B. Stauffer, L.M. Roberts, B.S. Mulder, and A. Wright. 2003. Northern spotted owl habitat models for research and management application in California (USA). *Ecological Applications* 13: 1027-1040).

The proposed terms of the Martin “conservation easement” with Sonoma Land Trust, obviate any significant potential mitigation value for the retained forest on the site. The site manager named in the Sonoma Land Trust conservation easement for the Martin Conversion, Old Growth Again, harvests old-growth large downed wood for milling into old-growth wood used as patio furniture, removes redwood “thinings” for sale as “poles”, and removes most hardwood for firewood – severely simplifying the understory and ground layer structure, and thus degrades habitat conditions for woodrats, the principal prey of NSO. The PHI inspection team’s recommendation that “there was a moderate amount of LWD including some large diameter redwood logs that can be retained as wildlife habitat” was apparently made without information regarding OGA’s peculiar “restoration forestry” practice of removing all commercially valuable downed redwood

logs, regardless of habitat value for woodrats and other wildlife. Given that CDF has previously abused its discretion in failing to assert Forest Practice Rules jurisdiction over OGA's commercial harvest of "redwood poles" and "salvage" of commercial downed redwood logs (see www.oldgrowthagain.org for commercial listing of these forest products harvested from Annapolis timber holdings of OGA; CDF has not required THPs for any of OGA's regulated timber harvest activities), it is particularly inappropriate and arbitrary for it to accept OGA timber management practices (that are less protective of wildlife habitat than existing FPRs require) as mitigation for agricultural conversion of timberland. The terms of the proposed SLT conservation easement allow for further forest habitat degradation by road use and construction, installation of infrastructure, irrigation pond construction. There is no evidence that OGA forest management, unregulated by FPRs, would have anything but additional impacts to recovery of NSO, compared with "no action" environmental baseline. Moreover, merely setting aside existing forest cannot in itself compensate for the net permanent loss of forest and NSO habitat degradation or loss, and is inadequate as mitigation. Thus, the proposed mitigation by conservation easement of unconverted forestland on the site is inadequate.

The definition of "take" includes "harm, harrassment..." , which includes substantial injury or interference with essential behaviors such as predator evasion and foraging. Avoiding direct mortality of individual adult NSO does not avoid "take" within the meaning of the Endangered Species Act regulations and case law.

For both these endangered species, the THP should disclose the status of Habitat Conservation Plans for the project area, necessary to authorize incidental take of endangered species (including, by law, essential behaviors such as foraging and nesting) and protect viability of their populations. Technical Assistance from the U.S. Fish and Wildlife Service for incremental plans does not provide for species conservation or authorization of incidental take of essential habitat.

The TCP provides no feasible mitigation for significant cumulative adverse impacts to NSO. Purely procedural pseudo-mitigation actions, such as promises to acquire a "no take certificate" (*sic*) from USFWS, are not a substantive mitigation, and are unacceptable under CEQA (*Sundstrom v. County of Mendocino* (1st Dist. 1988) 202 Cal.App.3d 296 [248 Cal.Rptr. 352]). The analysis of NSO impacts and mitigation is wholly inadequate.

Invalid environmental baseline for assessment of impacts to biological diversity

The Botanical Report for the TCP/THP is only preliminary, and includes no floristic or vegetation data specific to the site. It provides no specific information (such as lists of wetland indicator plant species, or species associated with sensitive species) on the potential for wetlands and habitat for *Campanula californica*, a sensitive species. The RPF's response to PHI comments incorrectly states that "consulting botanist...surveyed the plan area for listed plant species on July and August 2003"; this is contradicted by the actual preliminary botanical report, which included no plant species lists, and claimed mid-summer survey dates that are not conducted at the proper time of year for detection and identification of *Campanula californica* at this inland locality.

I have surveyed a parcel adjacent to the Martin parcel, at the request of its property owner, and found widespread seasonal wetlands (surface seeps, swales, saturated or inundated during winter-spring months) on similar, adjacent topography and the same soil series, including areas outside of defined drainages and channels. This provides substantial evidence of a likelihood that similar conditions may occur in the TCP area, which shares the same essential topography, hydrology, soils, and vegetation. Forest gap wetlands may indeed support special status species such as *Campanula californica*, and plant species of concern for conservation of biological diversity in

the region (Appendix 1, this letter). Thus, the proposed project has the potential to cause significant impacts to wetlands and rare species. No mitigation has been proposed to address these potential impacts. Moreover, restructuring of the site's drainage for agriculture and groundwater pumping and irrigation pond use, may indirectly degrade or dewater existing wetlands that are not directly converted to vineyard.

The RPF's response to PHI comments (April 20, 2004, p. 9) that standard WLPZ practices prohibit construction or use of tractor roads or landings in marshes, wet meadows, and other wet areas. Presumably, the more extreme destruction of wetlands caused by deep ripping and drainage of soil, and cultivation of grapes, would also defeat the purpose of this prohibition. The conversion of jurisdictional wetlands to non-wetlands by deep ripping and grading would require authorization by the U.S. Army Corps of Engineers and certification from the North Coast Regional Water Quality Control Board. The THP needs to supply substantial information on the nature, distribution, and extent of wetlands on the proposed TCP site, submitted by qualified professionals using accepted methods for identification of wetlands.

The THP cannot properly defer properly timed plant surveys for sensitive species until after the TCP/THP has been authorized or denied, and comply with CEQA. In the absence of a substantive, site-specific survey of project wetland indicator plant species, rare plants, and comprehensive floristic surveys (species richness, one index of biological diversity), the basic CEQA procedures of conducting a meaningful alternatives analysis or impact assessment are infeasible. An adequate environmental baseline is required for these CEQA procedures, and the environmental baseline for a Timber Conversion Plan must include a substantial assessment of existing forest vegetation and plant communities. A post-permit botanical survey would essentially circumvent CEQA review, and defeat its basic statutory aims.

A key premise of the preliminary botanical report is that search of California Native Diversity Database for "hits" of special-status species, and out-of-season surveys for such species, is sufficient to make a reasonable conclusion about the presence/absence of special status species. This is incorrect, and misrepresents the nature of the CNDDDB, which is not a systematic survey or inventory of private lands in the state; it is an opportunistic collection of contributed data, inherently biased by variable survey coverage and intensity it does not control. A "no hit" finding, with no information on past survey coverage or intensity, is scientifically meaningless. It is unreasonable to expect that the CNDDDB would provide relevant coverage of a privately owned parcel with no known history of botanical surveys (none disclosed). The reference to CNDDDB in this case provides only a false appearance of due diligence, not a meaningful search effort, particularly in view of the out-of-season "preliminary" botanical survey date. Moreover, it is unreasonable to equate presence/absence of special-status species with potential for impacts to biological diversity. Biological diversity includes species diversity, variation among populations within species, and community-level diversity. The report's definition of "sensitive species" omits reference to federal category "species of concern" which includes taxa in local or regional decline, including former "candidate" species for listing. The report failed to identify *Horkelia tenuiloba* as a species of concern, even though the THP for the withdrawn Artesa/Fairfax THP/TCP (THP 1-00- 171 SON) on a site less than a mile away specifically proposed mitigation for impacts to this species. It also omits any reference to regional rarity (Appendix 1, this letter). Overall, the report is skewed to understate potentially significant impacts to biological diversity caused by the TCP.

Inadequate assessment and mitigation for erosion and sedimentation impacts on Little Creek.

The erosion control and mitigation plan does not adequately consider the potential for significant erosion and sedimentation during major storm events in the year following ripping and grading, prior to establishment of stabilizing vegetation cover. The inadequacy of straw mulch as a surface stabilizer was indicated in the past two winters at one new vineyard on Annapolis Road, on the same Goldridge soil series: large rills and gullies deposited sediment from the vineyard on Annapolis Road, and in a tributary of Fuller Creek. The erosion control plan for Martin does not refer to any actual results of the standardized methods applied to comparable slopes and soils in the same rainfall climate. It also proposes no monitoring or reporting of actual erosion and sedimentation after installation to verify or falsify its charitable assumptions regarding the adequacy of its mitigation measures. At a minimum, winter rain season inspections for rills, gullies, and sheetwash, with adaptive management required as mitigation, should be conditions for approval. In the absence of monitoring and reporting, the same untested assumptions may be applied to other conversions and contribute to significant cumulative impacts on erosion and sedimentation if they are inaccurate. CDF is responsible for requiring monitoring.

Inadequate cumulative impact assessment of deforestation and agricultural fertilizer impacts on water quality of Little Creek.

The fine sandy acidic loams of Goldridge soils have low moisture-holding capacity, and low cation-exchange capacity (nutrient-holding capacity), particularly horizons below the A horizon, which would predominate after grading. Such sandy loams would be highly unproductive in the absence of fertilizer amendments and supplemental irrigation. Applied fertilizer, in the absence of a dense forest root-mycorrhizal mat that would efficiently assimilate applied nutrients, will gradually leach through the transmissive sandy loam subsoils, and load shallow groundwater with augmented nitrate and (to a lesser extent) less mobile dissolved phosphates. As in most agricultural watersheds, accumulated nutrients would be chronically released from shallow groundwater to summer baseflows of Little Creek, where even low-level chronic increases in free nitrates would likely stimulate algal production significantly (particularly *Cladophora* [filamentous green alga] blooms attached to channel beds). Cropland watersheds and post-clearcut, unregenerated forestlands are inherently more “leaky” of mobile nutrients than regenerated forests. Excessive algal biomass in summer pools of creeks may significantly degrade water quality (high biological oxygen demand), reducing refugial habitat for steelhead, and breeding habitat for amphibians. There is a particularly significant interactive, cumulative impact potential for nuisance algal growth where chronic nitrate inputs coincide with incomplete or sparse riparian canopy cover, reducing limiting factors of nutrients and light. The long-term, cumulative significance of this permanent impact must be evaluated in the context of past, currently proposed, and foreseeable future agricultural conversions in the Little Creek watershed. This has not been done in the Martin TCP. No feasible mitigation measures have been identified or proposed for this potentially significant cumulative impact.

The TCP/THP provides no data or analysis to support its conclusion that the proposed withdrawal of groundwater would not cause depression of groundwater elevations in summer, or induce long-term depletion of local groundwater resources. It relies instead on an untested assumption that vineyard requirements are “about equal to forest” in terms of evapotranspiration demand. The premise that forest evapotranspiration on the proposed conversion site substantially exploits groundwater is unjustified in the TCP/THP, and is almost certainly incorrect. Groundwater pumping would be an entirely new impact, not equivalent to forest tree evapotranspiration, which draws soil moisture from the well-drained root zone, above the summer groundwater surface. Only flood-tolerant wetland trees in alluvial areas or seeps (willow, alder, redwood) are likely to be able to exploit groundwater to any significant extent. Thus, this analysis (p. 38-40) is flawed. No mitigation has been proposed to detect such potential impacts (like groundwater monitoring

under actual usage conditions), and minimize their impacts by setting limits to groundwater extraction if impacts are reported.

Landscape-level cumulative impacts of deforestation and vineyard conversion on habitat fragmentation, spread of invasive species, changes in predator populations, and microclimate are not addressed at all by the TCP/THP. These cumulative impacts are more ecologically significant than individual site impacts. They should be addressed by GIS-based methods that quantify the distribution, abundance, and patterns of habitat conversion in the project vicinity.

Inadequate assessment of noise, traffic, and disturbance in rural residential subdivision.

The TCP/THP woefully underestimates the nuisance aspects of vineyard construction impacts on noise and traffic in the project vicinity. It fails to consider the cumulative effect of the project, other currently proposed vineyard conversion projects, and reasonably foreseeable vineyard conversion projects in the vicinity of Goldridge soils in Annapolis, over a reasonable time-frame. The context of an otherwise low-noise, rural residential area is not given adequate consideration. The sound of heavy equipment operation carries for miles across the coastal mountains, flats, and canyons of Annapolis. The small unpaved roads that lead to the Martin parcel cannot allow large and small vehicles to pass. The duration and overlap of vineyard projects in the area may result in prolonged (years) of construction traffic and noise. These basic consideration are expected in any CEQA impact assessment of residential areas, and the TCP/THP should be no exception.

Conclusion

In conclusion, the Martin TCP/THP fails to meet basic CEQA standards for alternatives analysis, establishment of an environmental baseline for alternatives and impact assessment, cumulative impact assessment, and mitigation. The most appropriate CEQA remedy for these basic deficiencies would be to prepare a programmatic EIR for vineyard conversions in the general area, to address criteria for alternatives analyses, develop comprehensive landscape-scale site alternative configurations to minimize agricultural conversion impacts, develop appropriate mitigation and monitoring, and conduct adequate cumulative impact assessments. To do otherwise would be piecemealing of obvious progressive forestland conversion in a confined geographic area, which would constitute an abuse of CDF's discretion over its CEQA-equivalent THP program. The current Martin TCP/THP proposal should be either withdrawn and resubmitted following completion of a program EIR, or denied.

Respectfully submitted,

Peter R. Baye

Peter R. Baye, Ph.D.
Coastal Plant Ecologist,

Copies furnished:
Friends of the Gualala River
California Department of Fish and Game
Interested parties

Appendix 1: Timber Harvest Plan Plant Species of Concern: Plantation-Cazadero-Annapolis-Gualala (NW Sonoma/SW Mendocino) Subregion

The purpose of the following list of plant species is to provide a relatively comprehensive, floristic review of plants with contemporary conservation significance, specific to the forested areas of northwestern Sonoma County. The context for conservation significance in this list is regional rarity, substantial regional population decline, or biogeographic distinctiveness. Geographic range limits, disjunct populations (outliers), relict populations, severely reduced populations, are all considered significant in this context. These criteria for conservation significance are not narrowly focused on global taxonomic rarity or legal protective status. They address contemporary concerns in conservation biology about range collapse and community-level conservation of biodiversity. The list is proposed as a preliminary evaluation tool for identifying sensitive botanical resources reviewed in timber harvest plans.

The following subregional conservation list of vascular plants was derived from a combination of literature sources and field observations. The primary floristic review was based on Best *et al.* 1996. [A Flora of Sonoma County](#), California Native Plant Society, Sacramento, California, and CALFLORA, an on-line database synthesizing multiple herbaria and literature sources. Nomenclature follows Hickman *et al.* 1993. [The Jepson Manual: Higher Plants of California](#), University of California Press. Distribution comments (in quotations) are cited from Best *et al.* 1996 unless otherwise indicated. California Native Plant Society rankings follow the Rare Plant Scientific Advisory Committee, CNPS, in: Tibor, D.P., ed. 2001. [Inventory of Rare and Endangered Plants of California](#), 6th edition, California Native Plant Society, Sacramento, California. Incidental field observations and directed surveys within the subregion were conducted Peter Baye, Ph.D., Annapolis Field Station, from 1995 to present. CNPS rankings are based on statewide and continental distributions. The Flora of Sonoma County evaluations of distribution are based on Sonoma County alone.

The general geographic and ecological scope of this review focuses on mixed coniferous forest and woodland habitats in the coastal belt, including secondary successional grassland and woodland, inland from the first coastal ridge between Gualala and Timber Cove. The review considers plant species either historically reported, collected, or likely to occur in habitat types within this subregion where potential timber harvest plans or land use conversions in timber lands may occur. The list is not exhaustive, and may omit species with erratic significant disjunct populations. The list does not cover “serpentine endemic” species (species rarely found outside of serpentine soils), or species very narrowly associated with specialized soil or climate conditions in the region (bogs, fens, dunes, beaches, coastal bluffs and terraces, vernal pools, and acidic, poorly drained sandstones). Presence of these distinctive soil and climate-conditioned habitats would require intensive site-specific plant surveys and historical documentation, but are seldom associated with timber harvest plans.

Categories of conservation significance:

Special Regulatory or Policy status

FT – Federally listed as threatened

FE – Federally listed as endangered

CT – State-listed as threatened

CE – State-listed as endangered

CR – State-listed as rare

CNPS 1B – listed by California Native Plant Society as rare, threatened or endangered in California and elsewhere, based on statewide review by CNPS botanical experts and network of field observers.

CNPS 2 – listed by CNPS as rare/threatened/endangered in California, but more abundant elsewhere.

CNPS 3 – CNPS “need more information” category: unresolved taxonomic and distribution data on plants apparently in decline.

CNPS 4 – CNPS “watch list” of plants with limited distribution, vulnerable to decline.

Biogeographic, biological status, inferred from literature and survey information.

RR – regionally rare, globally more widespread or abundant
RL – at or near geographic range limit, uncommon to rare
DP – distinctive or atypical populations but consistent with type
including stabilized hybrid/introgressant populations)
TL – type locality (botanical historic significance)
AT – ambiguous or anomalous taxonomy (potential cryptic taxa, new taxa)

FERNS AND FERN ALLIES

Dryopteris expansa (Presl) Fraser-Jenkins & Jermy

Spreading wood-fern

“Rare, coastal woods: Hwy 1 four mi. s. of Stewarts Point acc. Baker...”

RR

Polystichum dudleyi Maxon

Dudley shield fern

“Rare, deep canyons: near bridge on Gualala River near Annapolis acc. Baker...”

RR

Polystichum imbricans (D.C. Eaton) D. H. Wagner

Rock sword fern

“Rarely detected or reported, rocky ground...” Records E. Sonoma Co.

RR

Marsilea vestita Hooker & Greville

“rare, buddy banks, edges of ponds, vernal areas, swale bottoms”

Pilularis americana A. Braun

Clover-fern

“Rare, heavy soils, vernal pools”

RR

Botrychium multifidum (S. Gmelin) Ruprecht

Grape-fern

“rare, wet meadows, brushy flats”

RR

Adiantum aleuticum (Ruprecht) C.A. Paris

Five-finger fern

“Rare, deep shaded ravines”, stream banks, forest seeps, springs

RR

Aspidotis californica (Hooker) Copeland

California lace-fern

“Rare, rocky places” (primarily E Sonoma Co.)

RR

CONIFERS

Taxus brevifolia Nuttall

Pacific yew

“Very rare or rarely detected open coastal slopes in wooded shaded canyons; the only Sonoma County record is that of Baker: ‘Gualala Canyon near Annapolis Bridge’...” . Populations recently confirmed on Fuller Creek, Grasshopper Creek, Gualala River Wheatfield Fork, and on moist north-facing slopes of their canyons.

RR

Tsuga heterophylla (Rafinesque) Sargent

Western hemlock

"Rare, Gualala River drainage in coastal woods, probably the southernmost distributional limits; 3 1/2 miles se. of Gualala...valley crossing at Gualala River....between Cazadero and Plantation acc. Baker."

RR, RL

FLOWERING PLANTS

Aralia californica S. Watson Apiaceae

Elk clover, spikenard

"Infrequent, somewhat shaded and moist spots". Forest seeps, springs, shaded moist creek banks.

Erigeron supplex A. Gray Asteraceae

Supple daisy

"Rare, near coast.."

RR, CNPS 1B

Vancouveria hexandra (Hooker) Morren & Decaisne Berberidaceae

Northern vancouveria

"Rare, deep shade, coniferous woods: Plantation road near Hwy 1, acc. Baker, the only record known from Sonoma County, probably the southernmost distributional limit".

RR, RL

Cornus nuttallii Audubon Cornaceae

Mountain dogwood

"Occasional, mountain woods". Poor regeneration following timber harvest; apparently in decline.

Allotropa virgata A. Gray Ericaceae

Sugar stick

"Occasional, thick humus". Rare outside of mature forest soils.

RR

Arctostaphylos manzanita x *A. stanfordiana* Ericaceae

Local, Annapolis: "The population needs more study. Maybe it needs a name!"

Limited distribution, eastern Annapolis

RR, DP, AT

Chimaphila menziesii (D. Don) Sprengel Ericaceae

Pipsissewa

"Rare, shady woods: Stewarts Point quad..."

RR

Chimaphila umbellata (Linnaeus) Bartram Ericaceae

Prince's pine

"Rare, dry forest edges"

RR

Hemitomes congestum A. Gray Ericaceae

Gnome plant

"Uncommon, in humus..." . Rare outside of mature forest soils.

RR

Pityopus californicus (Eastwood) H. Copeland Ericaceae

California pinefoot

"Uncommon, deep shade..."

RR

Pyrola picta Smith Ericaceae

Shinleaf, white-veined wintergreen
“Occasional, wooded slopes...Annapolis quad...”

Lotus aboriginus Jepson Fabaceae
“Uncommon, borders of woods: near Kasha school on Stewarts Point-Skaggs Springs Road...”

Trifolium buckwestiorum Isely Fabaceae
“Rare, known only from Sonoma and Santa Cruz counties, waste or grassy areas: n. of Cazadero....”

Romanzoffia californica E. Greene
“Occasional, shaded or open, damp, rocky areas: n.-facing rocky roadcuts on Stewarts Point-Skaggs Springs Road just e. of Annapolis Bridge...”

Circaea alpina Linnaeus ssp. *pacifica* (Ascherson & Magnus) Raven Onagraceae
Enchanter’s nightshade
“Rare, deep woods”

Actaea rubra (aiton) Willdenow Baneberry Ranunculaceae
“Occasional, moist woods: Annapolis quad...”. Very local, few records.

Ceanothus incanus Torrey & Gray forma *spinosissimus* Klein
“Uncommon: Kelley Road in flatland few mi. e. of Annapolis...”

Keckiellia corymbosa (Benth) Straw. Scrophulariaceae s.l.
Redwood penstemon
“Uncommon, rocky slopes...” Present on cliffs of Gualala River, Wheatfield Fork, E. Annapolis, disjunct coastal population

Synthyris reniformis (Douglas) Benth var. *reniformis* Scrophulariaceae s.l.
Snow queen
“Uncommon, moist shaded embankment of forests....”
RR

Dirca occidentalis A. Gray Thymelaceae
Western leatherwood
“Very rare, coastal brush area...”
CNPS 1B

GRASSES, SEDGES

Carex hendersonii L. Bailey
Henderson’s sedge
“Uncommon, shaded areas, moist coastal woods...the southernmost collections”
RR, RL

Carex mendocinensis Olney
Mendocino sedge
“Rare, wet soil, springs, marshes...”
RR

Calamagrostis bolanderi Thurber
Bolander’s reed-grass
“Occasional, meadows, openings in coniferous forest...”
RR, CNPS 1B

LILY ALLIES

Erythronium revolutum Smith

“Rare, margins of swamps, bogs, or wooded streams...”

RR, CNPS 2. On Oregon “watch” list, state-listed as “sensitive” in Washington.

Lilium columbianum Baker

Oregon lily, Columbia lily

“Rare, among ferns and brush...”

Lilium maritimum Kellogg

Coast lily

“Occasional, usually sandy soil, woods, brush, occasionally marshy areas...”, primarily Sea Ranch-Plantation-Salt Point area, reduced probability of occurrence with distance inland.

RR, CNPS 1B

Lilium pardalinum Kellogg ssp. *pardalinum*

Leopard lily

“Occasional, springy places, stream banks...” (Gualala River locs.)

Mostly restricted to old riparian vegetation, usually extirpated in disturbed riparian zones.

Lilium rubescens S. Watson

Redwood lily

“Occasional, woody brushy ridges and slopes...”

RR, CNPS 4

Maianthemum dilatatum (Wood) Nelson & J.F. McBride

False lily-of-the-valley

“Uncommon, damp shaded embankments...”

RR

Trillium albidum

white trillium

“Occasional, damp shady areas...”

Veratrum fimbriatum A. Gray

Fringed false hellebore

“Infrequent, wet openings, meadows...”

RR

ORCHIDS

Cephalanthera austinae (A. Gray) A.A. Heller

Phantom orchid

“Uncommon, dry woods...”, associated with thick leaf litter/humus of older forest soils.

RR

Corallorhiza mertensiana Bongard.

Western coralroot

“Uncommon, rich wooded areas”, associated with thick leaf litter/humus of older forest soils. No recent records; northern affinity.

Corallorhiza striata Lindley

Striped coralroot

“Occasional, rich wooded areas...”, associated with thick leaf litter/humus of older forest soils. Most records old; may be in regional decline.

Cypripedium californicum A. Gray

California lady-slipper

“Rare, wet hillsides and rocky ledges...”; few records, one extirpated by logging.
Near southern limit (Marin), RR, CNPS 4.

Cypripedium montanum Lindley

Mountain lady-slipper

“Rare, damp woods...” Only one recent record; possibly modern southern coastal limit.
RR, CNPS 4.

Goodyera oblongifolia Rafinesque

Rattlesnake-plantain

“Uncommon, dry forest floor...”

Piperia candida R. Morgan & J. Ackerman

White-flowered piperia

“Rare, coniferous forest...”

RR, CNPS 4.