



**CALIFORNIA  
NATIVE PLANT SOCIETY**  
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Re: Mendocino Redwood Co. (MRC) Draft EIS-PTEIR HCP/NCCP

Gentlemen:

The following comments are submitted on behalf of the Dorothy King Young Chapter of the California Native Plant Society (CNPS) regarding the MRC Habitat Conservation Plan (HCP) / Natural Communities Conservation Plan (NCCP), hereinafter referred to as "the Plan." CNPS requests that the agencies make this comment letter part of the administrative record for the Plan, and that each agency and MRC add CNPS to all mailing lists for notices regarding the Plan.

CNPS would like MRC's HCP/NCCP to meet the highest standards, so that it will, to the greatest extent possible:

- Promote biological diversity
- Conserve habitats for rare and keystone species
- Conserve rare plants and vegetation alliances
- Conserve ecosystem processes
- Contribute to humanity's scientific knowledge and
- Become a state and nationwide model for conservation plans on timberlands.

Both Habitat Conservation Plans and Natural Communities Conservation Plans are essentially trade-offs, wherein the applicant receives a long-term, blanket incidental take permit, assurances that the plan may be implemented even if new information reveals likely unforeseen harm resulting from the plan's activities, and transfer of financial burden onto taxpayers should further conservation measures become necessary.

Given these major benefits to the project applicant, it is imperative that the public receive commensurate benefits in terms of actual, long-term conservation of indigenous species and natural communities. HCPs and NCCPs are intended to provide assurances to the resources

agencies and the public that the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of incidental takings and ensure that the takings will not appreciably reduce the likelihood of the survival and recovery of the species in the wild. It is incumbent upon federal and state resources agencies to ensure that HCPs and NCCPs actually do meet their obligation to the public.

These comments focus on the ways in which the MRC Plan can best meet the obligation inherent in the HCP and NCCP Programs.

#### **HCP/NCCP General Design**

#### **Habitat-Based Conservation**

Chapter 13 of the Plan states, "Our HCP/NCCP primarily uses a habitat-based approach to conserve covered species and natural communities in the plan area." This statement summarizes a central conservation tenet of the HCP and NCCP programs.

Habitat-based HCPs and NCCPs protect habitat intended to serve as a surrogate for species that occur within that habitat. For the MRC Plan, which covers over 213,000 acres, the benefits of such an approach are clear: Designating and protecting certain habitats could protect more species than just those that are "covered" under the Plan.

Given the large area of the Plan, MRC's request for an 80-year HCP/NCCP, and the varied, complex conservation issues in and around the Plan area, an actual habitat-based approach would be beneficial. The Plan does not serve as a conservation plan at a multiple species scale because it lacks a geographic component, designated reserves or dispersal corridors.

1. The Plan would be much more effective if it grouped species by the habitats they require. Then lists of species within each habitat guild would be prioritized according to which species are most vulnerable to the land management activities expected under the Plan. Monitoring plans would be established accordingly.

The Science Advisory Panel convened to review the first Draft MRC HCP/NCCP in 2003 had some excellent suggestions that are still very appropriate to the latest Plan:

"This habitat-based approach can be further refined to a "focal species approach" as described by Lambeck (1997). Lambeck suggested that managers identify, for each major habitat type, groups of species whose vulnerability can be attributed to a common cause, such as loss of area or fragmentation of a particular habitat type or alteration of a disturbance regime. Species in each group then can be ranked in terms of their vulnerability to those threats. Lambeck identified area-limited species, dispersal-limited species, resource-limited species, and process-limited species as vulnerability groups. For each group the focal species are the ones most demanding for the attribute that defines that group. They serve as the umbrella species for that group. Two or more species might be selected within a group, and a single species may occur in more than one group.

Together, these species tell us what patterns and processes in the landscape must be sustained in order to sustain biodiversity. Their needs define the thresholds—patch size, isolation, fire frequency, etc.—that must be exceeded if the native biota is to be maintained (Lambeck 1997). In many cases (but probably not all) listed or candidate species would

include species most affected by land management activities. Some of the vulnerable species (e.g., the tailed frog and Pacific giant salamander, as discussed above) would also serve as bio-indicators by representing the health of the ecosystem. They would be early indicators of any negative changes to the habitat or community they are associated with. Two species come to mind that could be used as negative indicators of early problems for a community and/or species; the bullfrog (*Rana catesbeiana*) and barred owl (*Strix varia*). The non-native (to the West) bullfrog often feeds on the larvae and adults of other amphibian species. The barred owl, which has recently expanded its range in the West, is a known competitor of the spotted owl.

This approach takes into account the habitat-based approach of the NCCP/HCP, the concept of using guilds, the concept of using vulnerability to human disturbance as a way to identify focal species, and the concepts of bio-indicator and umbrella species. An additional category of species which might be considered is keystone species, which are defined as highly interactive species that play roles in their ecosystems that are disproportionately large for their abundance (Power et al. 1996)."

2. Large-scale HCPs and NCCPs usually designate reserves, and there are good reasons for doing so. A network of reserves serves multiple conservation purposes. It facilitates conservation of plants and animals beyond those "covered" in the Plan, provides a buffer against the impacts of global climate change and establishes a living laboratory for data collecting and research. A reserve network can also help in alleviating some of the regulatory burden on citizens for mitigating impacts of activities under an HCP/NCCP, and when changed conditions require resources agencies to take further actions to protect species. A network of reserves is a core element in habitat-based conservation planning.

The Plan provides an ideal opportunity to establish reserves for tanoak (*Notholithocarpus densiflorus*). This "weed tree" is now imperiled due to Sudden Oak Death (SOD), and is a critical source of food and shelter for woodrats and other rodents that form the prey base for the Northern spotted owl. Reserves for tanoak would help conserve genetic diversity and conserve habitat for rodents. These reserves should be appropriately located to serve those goals. For example, tanoak reserves should be cited far from stands of California bay laurel (*Umbellularia californica*), which is a major vector for the SOD pathogen.

Note that reserves should not be "representative samples" of a natural communities cited in the Plan, but areas large enough to support complex ecosystem relationships and have the potential to be reservoirs for disease-resistant genotypes.

### **Natural Communities**

The communities cited in the Plan include: Closed-cone forest, some permanent wetlands, rocky outcrops, and oak woodlands, true chaparral and serpentine-influenced communities. These are rather general categories, the use of which may obfuscate important, conservation-related details.

In Chapter 6 where habitat is identified for covered plant species, the descriptions are very general. Often lacking are detailed descriptions of those species' habitats actually found on MRC lands covered by the Plan.

CNPS asks the agency staff reviewing the Plan to remember that the Plum Creek Timber HCP “covered” 285 species over 68,000 hectares, but split the species into only nine “habitat types” for which there was no scientific agreement concerning validity.

CNPS appreciates the mention of vegetation alliances from the vegetation classification system established by the California Department of Fish and Wildlife (formerly DFG). However, we are concerned that on-the-ground decisions will be made not on the basis of this science-based system, but on the very broad, general categories cited in the Plan.

In 11.4.2.3 Roads and Landings, the Plan states that “5-10 years is long enough for habitat recovery to occur...” – a very general and arbitrary statement. Since habitats for different species vary so widely, so must recovery times for different habitats. What is the standard for “recovery?” How can the public be assured that habitats for species of concern are being protected with this very general, one-size-fits-all approach?

### **Climate Change**

Climate change is expected to bring drastic changes to California’s native animal and plant life. Biologists agree that the situation calls for entirely new types of conservation planning. California’s Natural Communities Conservation Program Act was designed to promote the incorporation of conservation measures to respond to climate change.

That intent is not much in evidence in MRC’s HCP/NCCP. The focus of the PEIR/PTEIR is mainly on climate change in terms of carbon sequestration and impacts to timber tree species. CNPS would like to know why the Plan does not address the conservation implications of climate change.

For this 80-year plan, we are told that “Conservation measures described under the Proposed Action would apply for a shorter term of 40 years.”

The impacts of climate change are expected to be quite significant, to say the least, and some anticipated impacts are happening more rapidly than predicted. Thus, it seems reasonable to say that 40 years is far too long for the Plan to remain in effect without directly addressing climate change in terms of conservation of species and habitats. Climate change is expected to have predominantly adverse impacts on ecosystems and the ecosystem services that are essential for our own well being.

Below are some brief excerpts from research papers:

*California Planning and Development Report* Vol. 23, No. 8 – August 2008

U.C. Davis *Environment Watch – Climate Change May Compel Reconsideration of Habitat Plans*  
By Paul Shigley

“The majority of California’s unique plant species could lose most of their geographic ranges during the next 100 years because of climate change, according to a newly released report by biologists at several universities.

The first-of-its-kind study projects that up to two-thirds of endemic plant species (plants that grow nowhere except California) will experience geographic range reductions of up to 80% within a century because of changing weather patterns.”

Excerpts from *Climate Change and the Future of California's Endemic Flora* by David Ackerly of UC Berkeley Dept. of Integrative Biology – pub. June 25 2008 on PLoS One.

“The results of this study present a dilemma for conservation planning in the face of climate change. Future diversity will likely peak along the coast and to the north of its present concentrations. These areas are sensible priorities for conservation.”

“Some of the recently adopted conservation plans serve as both HCPs and NCCPs and cover broad areas. The plans typically are intended to guide conservation practices – as well as urban development – for 50 to 100 years.

However, Michael Beck, who heads the Endangered Habitats League's San Diego office, said he knows of no HCP or NCCP that accounts for climate change.”

The impacts of climate change are expected to be sufficiently drastic and on such a large scale, that Adaptive Management, dealing with impacts as they occur, would be ineffective.

From *Climate Change, Ecological Impacts and Managing Biodiversity* – Presentation by Mark W. Schwartz, University of California, Davis:

“We know these changes will disrupt communities and ecosystems. We need robust plans to buffer these changes.”

“Retain reserves, expand representation, manage for resilience, create corridors, implement ex situ strategies”

Please explain why the Plan does not address the species and habitat conservation impacts of climate change directly at the outset, working with the resources agencies and academic institutions to restore and sustain maximum resiliency of species and habitats to climate change.

## **Specific Plant-related Issues**

### **Plant Surveys**

Plant surveys are a critical element in conservation planning for plant species of concern. Chapter 11 of the Plan states:

“Surveys must be floristic in nature, which requires that plants observed during the rare plant survey be identified to the taxonomic category (e.g., species, genus, or family) necessary to determine whether they are rare plants. An acceptable floristic survey may include a plant list containing some plants that are identified only to genus, if those plants are in genera or families that do not include any covered rare plants. The wildlife agencies will consider floristic surveys acceptable even if they do not include every non-covered species found in the survey area.”

In fact, the Plan here attempts to redefine and downgrade “floristic survey” to the level of a targeted survey. An actual floristic survey is one that records everything growing in the entire plan area to species level. Floristic surveys are essential for obtaining baseline data for realistic broad-scale planning and for comparison with results of subsequent surveys.

The Plan states that “rare plant surveys” will be conducted prior to PTHPs. With no prior, baseline floristic survey, these “project-by-project” surveys represent what is basically a piecemeal

approach to gathering botanical data. How can the public be assured that plant species of concern are being identified and conserved with this partial, fragmented approach to plant surveys?

### **Mitigation**

1. The EIS/PTEIR: Under the Proposed Alternative, the mitigation for "Effects on non-covered plant species of concern for all activities due to removal of a population or degradation of habitat" is:

"Adopt the CDFG survey protocol and guidance for all covered activities, and for non-PTHP activities that disturb or destroy potential habitat, consult with CDFG to evaluate and mitigate for potential project impacts on all plant species of concern."

The same mitigation is recommended for "Cumulative effects on non-covered plant species of concern due to removal of a population or degradation of habitat."

In other words, the proposed mitigation will occur on a THP-by-THP basis as needed, with the actual mitigation measures as yet unknown. The public is expected to accept that the impacts would be less than significant after unspecified measures were designed and implemented with no public review.

2. Effects on California Natural Diversity Database Special Community Types, Habitat Elements and non-covered plant species of concern due to application of herbicides: The mitigation is:

"Perform surveys, according to CDFG's guidelines and protocols: for all of the above "in the management area prior to herbicide application."

While the Plan outlines some protection measures, like flagging or otherwise delineating species or plant communities to be avoided during THP-related activities, the implication is that plant surveys themselves constitute mitigation for impacts from herbicide application. However, many plant taxa are small, easily missed, difficult to identify or may not be blooming when these project-by-project surveys occur.

Wouldn't prior floristic survey and mapping of the entire Plan area be the best way to assure the public that mitigation measures will lead to plant conservation?

3. For Pygmy forest, the EIS/PTEIR states:

"Closed-cone Pine-Cypress habitat type would not be included in MRC's timber harvest operations; however, some of these stands are adjacent to forests that would be managed for timber production. Therefore, MRC is seeking HCP/NCCP coverage for limited harvest-associated activities (i.e., roads) in the Closed-cone Pine-Cypress habitat type."

The management strategy under the Proposed Action is:

"No harvest; management limited to existing infrastructure; a maximum of 5% of the total acreage can be impacted by new roads; and decommission and revegetate historical roads."

The building of new roads and the continued use of existing roads in pygmy forest is very damaging to the plants and the vegetation community, because the soil structure, soil composition and hydrology are negatively impacted. The fact that there is no protocol for dealing with this forest type under the Forest Practice Rules does not preclude MRC from adopting its own management plan for Mendocino Pygmy Cypress Woodland.

Such a plan would include the timelines for decommissioning roads in the pygmy forest, as well as detailed strategy for revegetation. Without such an overall, detailed management plan, how can the public be assured that the impacts to pygmy forest would be less than significant?

### **Tanoak**

1. CNPS considers tanoak conservation to be a priority due to: The threat from SOD, its value to scientific research, the need for measures to conserve disease-resistant genotypes and its importance to wildlife.

Tanoak or tanbark (*Notholithocarpus densiflorus*) is the primary hardwood tree that MRC seeks to drastically reduce in the Plan area. It is viewed as a “weed tree” by timber professionals, but multiple computer models generated by plant pathologists indicate that tanoak in Northern California is at high risk from extensive die-off from Sudden Oak Death in the near future. (Bowcutt 2013).

Tanoak is a tree with cultural, ecological and economic value, and many scientists are increasingly concerned about tanoak conservation. As proof, the next issue of *Madrono*, the journal of the California Botanical Society, is entirely devoted to tanoak. The forthcoming issue includes articles by botanists, plant pathologists, conservation biologists, forest researchers, and others.

Incredibly, the Draft EIS-PTEIR for the MRC HCP/NCCP does not mention Sudden Oak Death. Appendix X in the HCP/NCCP is titled “Pathogen Transfer” but it also fails to mention SOD. While it may be understandable that MRC would not be concerned with SOD, the resources agencies were remiss in not requiring this issue to be dealt with in this planning document.

With respect to tanoak, current scientific data would indicate that it is premature to grant an 80-year HCP/NCCP to Mendocino Redwood Company.

Conserving tanoak can be seen as a social justice issue. Cultural bias underlies the assumptions implicit in MRC’s HCP/NCCP. Note that virtually all the mature tanoak trees on the Kashia Pomo Reservation in Sonoma County have been killed off by SOD. Tanoak is a sacred tree for the Pomo people, for whom the acorns are an important, traditional food source. Other Northern California tribes relied heavily on tanoak and still gather the nutritious nuts (Bowcutt 2013).

From the perspective of those who rely on tanoak acorns as a staple food, tanoak is a desirable tree, while Douglas-fir is the weed. According to the work of tanoak scholar Frederica Bowcutt, ethnographic, historical and paleobotanical records indicate that conifers did not originally dominate as much of the California landscape as they do today. In her forthcoming article in *Madrono* she states, “Willis Linn Jepson, a University of California botany professor from 1899 to 1937, noted in 1910 that coniferous forests dominated more acreage in the west than when whites first began arriving” (Bowcutt 2013). Quoting a 1909 source, she also states, “Jepson concluded that, based on their skillful use of fire as a management tool, ‘some credit must be given to the native tribes as foresters’.”

MRC has its own, timber-focused interpretation of “natural conditions” with respect to tree species composition in the forests. Give the long-time management of these forests by native people (see above), it is probably pointless to speculate about what the “natural” relative proportions of tree species might be.

Historical records indicate that the inland portions of the Plan were largely managed by native people to favor oak and tanoak. Euro-American settlement heralded massive tree cutting and drastic alteration of the forested landscape. By the mid-20<sup>th</sup> Century, foresters on the west coast managed forests to favor conifers for lumber, using pesticides – an affront to the native people. For a history of the rise of herbicide use on tanoak to favor conifers, see Bowcutt 2011.

**2.** Research on SOD is ongoing and intensive, and often focuses on tanoak, which is highly susceptible to the pathogen, with a high mortality rate. That this tree has so quickly become imperiled illustrates the fact that species do not decline in a gradual, linear fashion. We now have a once-common tree in the process of becoming threatened, particularly the largest, most productive trees.

One reason CNPS advocates for conservation of native plants, and not just rare or listed taxa, is their importance to wildlife. Tanoak provides food for various insects. Numerous vertebrates, large and small, from bears and acorn woodpeckers eat its acorns.

Northern spotted owls (NSO) eat dusky-footed woodrats and other small rodents that form the owl's prey base. In Northern California, woodrats are one of the most important prey species of NSO. They eat acorns and often build stick nests around old tanoak trunks (mature tanoaks develop structural diversity that provides nooks and crannies, for food caching, hollows and twigs for rodent nests). Their stick nests have been found to be full of tanoak acorns.

How can the resources agencies justify the incidental take permit implicit in the Plan unless the HCP/NCCP includes goals for mature tanoaks in NSO habitats? The Endangered Species Act would seem to mandate that the Plan be designed to sustain productivity of woodrats as a major component of the NSO prey base.

**3.** CNPS requests that the resources agencies involved with the MRC Plan collaborate with tribal leadership, plant pathologists, wildlife biologists, fire ecologists, and tanoak experts to craft a tanoak conservation plan before approving the MRC Plan as currently written with its plans for widespread extermination of tanoak.

The Plan also needs to better integrate fire ecology along with what we currently know about Sudden Oak Death. There is also a great need for more research on the effects of ground fires on SOD and other potential ways to prevent and reduce SOD infection, particularly in forests with mature tanoaks. Plant pathologists are finding that older tanoak individuals are more vulnerable to SOD. For a summary of the SOD threat to tanoak, see Bowcutt 2013 cited below.

An ideal conservation strategy for the Plan would be a network of reserves designed to conserve disease-resistant tanoak genotypes, if discovered. The MRC Plan presents an ideal opportunity to establish statewide tanoak reserves. In collaboration with plant pathologists and other scientists, these reserves would also use vegetation manipulation including manual thinning and low intensity, prescribed burning to foster the health of mature tanoaks.

Experiments are needed to test whether this vegetation management strategy can reduce the risk of Sudden Oak Death infection. These cultural landscapes would mimic the tanoak savannah vegetation fostered by native peoples. By conserving the most productive trees, we can foster and sustain the NSO prey base. With additional surveys, it may be possible to create reserves while

still maintaining and enhancing the conifer stands that are MRC's primary interest. See the section on **Habitat-based Conservation** above.

### **Sudden Oak Death**

There is very little coverage of the Sudden Oak Death issue in the Plan..Below are excerpts from the HCP/NCCP, Section 14:

#### 14.9.2 Changed and unforeseen circumstances for pathogens and pests

##### 14.9.2.1 Changed circumstance

"Pathogens or pest outbreaks constitute a changed circumstance if one or more of the following conditions apply, i.e. the outbreak Covers more than 100 ac, in total, within a plan area watershed where MRC owns 10% or more of the land—for causes not related to SOD.

Covers more than 1000 ac, in total, within a plan area watershed where MRC owns 10% or more of the land—for causes related to SOD. Covers more than 10 ac in Lower Alder Creek Management Area.

Reduces more than 150 ac of suitable habitat per territory for up to 4 northern spotted owl territories receiving high or moderate protection—for causes not related to SOD.

Reduces more than 300 ac of suitable habitat per territory for up to 4 northern spotted owl territories receiving high or moderate protection—for causes related to SOD. Results in the direct mortality of up to 4 northern spotted owls whose territories received high or moderate protection."

##### 14.9.2.2 Unforeseen circumstance

"Pathogens or pest outbreaks constitute an unforeseen circumstance if one or more of the following conditions apply, i.e. the outbreak: Covers more than 500 ac, in total, within a plan area watershed—for causes not related to SOD.

Covers more than 2,000 ac, in total, within a plan area watershed—for causes related to SOD."

SOD is known to be a rapidly expanding pathogen that, in addition to infecting tanoaks and oaks (*Quercus* species) impacts a huge number of indigenous plant species. It affects different plants in different ways and with differing levels of severity.

SOD has been found at Hendy Woods and Montgomery Woods State Parks, adjacent or close to MRC lands. It is certainly likely to be spread by silvicultural activities and by foot traffic where recreational hiking is allowed.

California bay laurel (*Umbellularia californica*) is a major vector for SOD, and currently the subject of a U.C. Berkeley survey that includes the Mendocino coastal belt. An effective plan for minimizing the spread of SOD would take into account the ability of this tree to act as a vector.

CNPS finds the Plan's prescription for addressing SOD, as outlined in Section 14 to be ineffective and bewildering in its approach.

Please explain why SOD is covered only under the headings of "Changed and unforeseen circumstances" when it is a known threat, predicted to cause major damage to hardwoods in the Northern California coastal belt.

Why, when it is imperative that SOD be stopped and contained to the greatest extent possible, are the thresholds that trigger action so large?

What is the rationale for delaying action until over 1,000 acres are impacted by causes related to SOD within a plan area watershed where MRC owns 10% or more of the land? Since this implies adjacent landownership by other entities, why wouldn't MRC and the resources agencies work cooperatively with those landowners to contain the spread of SOD?

What is the rationale for waiting to act until SOD related causes have reduced more than 300 acres of suitable habitat per territory for up to four Northern Spotted Owl territories receiving high or moderate protection? 300 acres is a large area for a listed animal's habitat to be "reduced" when that animal is also the subject of an incidental take permit. CNPS is concerned because the "habitat" in question is likely to be tanoak.

What is the rationale for delaying action until SOD-related causes have impacted over 2,000 acres within a Plan area watershed? This would be a very large "changed circumstance" indeed, but MRC should be taking measures to prevent impacts over such large areas before they happen.

Why is the threshold so much less in the Alder Creek Management Area, when SOD also occurs elsewhere in or close to the Plan area?

In the Plan's response in 14.9.3 to pathogens and pests, The actions outlined are commendable, but are unlikely to be very effective in reducing the spread and impacts of SOD if not triggered until the thresholds cited above are reached.

As explained elsewhere in this letter, a network of reserves should be central to MRC's strategy for addressing SOD. This disease should be addressed directly from the outset, with aggressive measures to contain it, not relegated to the category of "unforeseen circumstances."

CNPS refers the resources agencies to the Proceedings of the University of California's Sudden Oak Death Science Symposia, the fifth of which is scheduled for June, 2013. Tanoak has been the subject of a number of presentations at these symposia, including this year's. Scientists are endeavoring to understand SOD, curb its spread and save vulnerable plant species. Tanoak is central to those efforts, and CNPS believes the resources agencies should grant this tree the value and importance that it merits.

### **Oaks**

The Plan states: "One way that MRC will protect these natural communities is by keeping our working forest intact. The biggest threat to natural communities in California has been urban development. Often government regulations have only managed to save pockets of these ecosystems surrounded by shopping malls and office buildings. MRC, on the other hand, is not proposing to convert any of our natural communities to other land use."

This is a specious argument in favor of the Plan's approach to conservation of hardwoods, including oaks (*Quercus* species). In Mendocino County, timber harvesting has had a much greater negative impact on natural communities than urban development. The natural communities here are under no great threat by pending urban development, and the only other use to which MRC lands might be put would be as parks or preserves, or (excluding lands on the immediate coast) vineyard development.

In other words, keeping MRC's working forest intact may or may not help to preserve natural communities. In the case of oaks, CNPS would like to see stronger conservation measures in place, for the same reasons given for tanoak.

P. 3-451 states that herbicide applications to "undesirable plant species" will include canyon live oak (*Quercus chrysolepis*). Is the Plan assigning a lower conservation rank to this oak species than to the mysterious "coast oak" and blue oak (*Q. douglasii*) for wildlife value? If so, what is the rationale? If not, please explain the confusing wording in this section.

Section P goes on to state that:

"MRC would retain oak woodlands, true oak stands, and oak stands that are a result of natural processes rather than intensive harvest."

CNPS wonders if MRC staff are always able to determine whether an oak woodland is "natural" or not. Whatever the origin of an oak stand or oak woodland, should not the criteria for determining its fate include value to wildlife other than the bald eagle?

The Plan proposes to retain oaks on the basis of size, or make decisions to retain oaks that are found during THP surveys to enhance wildlife habitat. In addition to these measures, the Plan should establish a network of reserves for oak woodlands, with particular focus on oak species that are especially susceptible to SOD.

In addition to the threat of SOD, oaks in Northern California are under threat from type conversion to vineyards, poorly managed livestock grazing that inhibits recruitment of young trees, unregulated firewood cutting, private landowner activities that do not trigger permits, and ministerial permits for residential development. CNPS asks the resources agencies to take these threats into account when evaluating the Plan's treatment of oak woodlands.

Additionally, researchers are working on predictive models for impacts of global climate change on plant species, including California's oaks. Below is an abstract from one research paper, indicating that climate change should be included in the threats to California oak species, *Modeled regional climate change and California endemic oak ranges* by Lara M. Kueppers et al:

"In the coming century, anthropogenic climate change will threaten the persistence of restricted endemic species, complicating conservation planning. Although most efforts to quantify potential shifts in species' ranges use global climate model (GCM) output, regional climate model (RCM) output may be better suited to predicting shifts by restricted species, particularly in regions with complex topography or other regionally important climate-forcing factors.

Using a RCM-based future climate scenario, we found that potential ranges of two California endemic oaks, *Quercus douglasii* and *Quercus lobata*, shrink considerably (to 59% and 54% of modern potential range sizes, respectively) and shift northward. This result is markedly different from that obtained by using a comparable GCM-based scenario, under which these species retain 81% and 73% of their modern potential range sizes, respectively. The difference between RCM- and GCM-based scenarios is due to greater warming and larger precipitation decreases during the growing season predicted by the RCM in these species' potential ranges. Based on the modeled regional climate change, <50% of protected land

area currently containing these species is expected to contain them under a future midrange “business-as-usual” path of greenhouse gas emissions.”

Oaks and oak woodlands are of critical importance to maintaining biodiversity in California’s wildlands. Some 2,000 plant species and as many as 5,000 insect species can be found in oak woodland habitats. It is well accepted by wildlife biologists that oaks are fed upon by more species of wildlife than any other tree species. Many species of birds feed on insects found on oaks, while others use oak branches as launching pads in catching prey. Oak woodlands are vital to the life cycles of many animals, either listed or species of concern.

Again, these factors argue strongly for including a network of oak reserves in the Plan. Does the Draft EIS/PTEIR actually identify all the special status species that inhabit oak woodlands? If not then how can it be said to assess the potential impacts to these species?

#### **Plant surveys and monitoring:**

The MRC plan redefines “floristic survey” to be what is actually a targeted survey. A true floristic survey is one that records everything growing in the entire plan area – essential for wide-scale planning and baseline data for comparison with results of subsequent surveys.

MRC seems to have no plans for survey and monitoring for Sudden Oak, even though on such a large swath of land, results of such efforts would contribute greatly to the scientific data on this serious plant disease.

#### **Integrity of forest floor**

A forest floor is, in itself, a rich habitat element, composed of layers that can include grasses, forbs, duff, litter and fungi. Small animals – both vertebrates and invertebrates live in and feed from this matrix of species. It is vital to the preservation of biodiversity that this forest floor richness be preserved.

It is the understanding of CNPS that this matrix is slow to re-establish itself, due to soil damage and use of Imazapyr, which persists in the soil for two years. When species other than a few common, pioneer species come up, they are often devoured by hungry young deer, preventing re-establishment of those species.

Given the importance of a rich and healthy forest floor biota to overall conservation, what is the rationale for this issue not being given attention in the HCP/NCCP?

#### **Covered plant species**

Most HCPs and NCCPs designate covered species as “umbrella species” for additional species, wherein conserving the covered species is also thought to conserve those other species.

There is a valid presumption that this is standard for these plans: A plan presents guilds of species with the same ecosystem requirements as the basis for umbrella coverage. This approach could allow the Plan to provide conservation for more species than those currently designated as covered. Without this approach, isn’t MRC relegating itself to single-species management, despite its stated intentions? One of the major goals of an HCP or NCCP is to avoid that approach.

MRC in Section 1 cites the advantages of “conserving and managing covered species on a landscape scale rather than a project scale.” How can the Plan benefit these species on a landscape scale, when the surveys are to be done on a project-by-project basis?

CNPS believes the species chosen as “covered” must include those that are important to science in some way. This would include manzanitas, like Raiche’s manzanita, since *Arctostaphylos* is a still-evolving genus, and is important to researchers seeking to understand plant speciation dynamics. It is not clear from the Plan to what extent these taxa would be impacted by THP activities.

In fact, the majority of the species chosen as “covered” under the Plan have not been found to occur on the MRC lands included in the Plan. It is well known that absence of evidence is not evidence of absence. How can the public be assured that these plants will be adequately protected under the plan, without baseline floristic surveys that would locate any occurrences of these plant taxa?

CNPS notes that 20 of the Plan’s 31 covered plant taxa have not been found in the Plan area. Of these there are four sedges and one rush (*Carex* and *Juncus*) – all monocots that can be very difficult to identify. These plants are especially hard to key out for people who have not studied and identified many plants in those genera over a long period of time.

The Plan states that surveys for these plants will be conducted by botanists or foresters. Even with special training and consulting herbarium specimens, plants in these genera are frequently missed or misidentified in surveys, even by professional botanists. How can the public be assured that the surveyors will correctly identify these monocots?

Of those covered plants that have not been found within the Plan area, Mendocino bush mallow has not been found anywhere for many years, and is likely extinct. Coast fawn lily was only recently re-discovered as a single population on private land in Mendocino County. It is also rumored to occur around Comptche, but is clearly still very rare in this county.

Only four of the 31 covered plants are state or federally listed. MRC has chosen to cover 20 plant taxa that may never be found in the Plan area, but that, if found, would be managed in ways that avoid triggering listing. Additional listings would be disadvantageous to MRC.

Would it not be in the public’s best interest to design conservation measures for rare plant taxa that are under extreme threat, are important to science or have other vulnerability factors such as distribution, rather than simply MRC’s convenience?

#### Chapter 6

Ground cone– did MRC actually do additional surveys for this plant, or is it relying on previously known occurrences? Please explain the actual community and habitat in which this species was found, given that there is no such thing as “pygmy transition forest.” Perhaps it occurs in Northern Maritime Chaparral? How is the public to assess the effectiveness of the Plan when employs false or misleading information?

Coast lily – MRC’s description of damage caused by the lightning-caused fires is confusing:

#### 6.19.7 Mendocino lightning complex (2008)

“Lightning fires impacted 2 of the 4 known sites on MRC property with coast lilies. Both sites were in bishop pine/pygmy habitat in the vicinity of —brushy openings on the South Coast inventory block; the Mallo Pass fire burned approximately 6 coast lily plants. There were no direct impacts from suppression efforts, like fire line construction. The 2 impacted sites

represent 100 % of the known coast lilies on the South Coast and 67% of the known coast lilies on MRC property. “

Does this mean that all the coast lilies on MRC's South Coast were lost?

#### Bolander pine-

##### 6.24.4 Habitat requirements

“Bolander's beach pine is restricted to podzolized soils within closed-cone coniferous forest at elevations from 225-750 ft (75-250 m) (CNPS 2002). This tree is often associated with pygmy cypress and bishop pine within Mendocino Pygmy Forest (Holland 1986). Bolander's beach pine is a facultative (FAC) plant species.”

Note that Bolander pine is not “often associated” with pygmy cypress. Instead, it is virtually always found with pygmy cypress.

Population trend unknown? Given the decline of pygmy forest from an original 4,000 acres to approximately 2,000 acres, and given the lack of protection for most occurrences of this species, shouldn't it be safe to say that the species has declined considerably, and continues to decline?

#### **Mendocino Cypress “Pygmy” Forest**

The Mendocino Cypress Woodland Alliance is scarcer and far more imperiled than is indicated in the Plan. Therefore it warrants the highest level of protection.

Chapter 11 states:

“Type 2 – These species (a) are found in communities and habitats in the plan area where covered activities will occur rarely; (b) are relatively common within these communities and habitats; and (c) have sizeable protected populations elsewhere on land whose management goals include the protection of natural resources such as rare plants (e.g., state parks, county parks, and public and private preserves). Examples of this second type are pygmy cypress (*Callitropsis pygmaea*) and Bolander's beach pine (*Pinus contorta ssp. bolanderi*). These covered species are relatively common within the pygmy forest community where, in the plan area, there are no timber harvests and minimal road construction. In addition, these species are protected in several locations on land where natural resource conservation is a priority, such as Jug Handle State Reserve, Van Damme State Park, Salt Point State Park, and the Hans Jenny Pygmy Forest Reserve (managed by The Nature Conservancy and the University of California). MRC will protect species such as pygmy cypress and Bolander's beach pine primarily through community-based conservation measures, following the stated goals of the NCCPA.”

The examples given in the above paragraph are very misleading, and CNPS hopes the resources agencies will not assume these statements are accurate. Pygmy cypress (*Hesperocyparis pygmaea*) and Bolander pine (*Pinus contorta ssp. bolanderi*) may be common in Mendocino Cypress Woodland (i.e., “pygmy forest”) but that vegetation alliance itself is very rare. Protection measures for this rare forest are poorly implemented on public lands like Jackson Demonstration State Forest and State Parks. Thus, the two tree species that together define this vegetation alliance are also poorly protected on public lands.

Within State Parks lands, the pygmy forest at Jug Handle State Reserve is quite degraded and subject to ongoing threats. Mendocino Cypress Woodland Alliance does not actually occur at Salt

Point State Park, where Bolander pine is not found. The plant community at Salt Point is actually Northern Maritime Chaparral, also rare.

The Hans Jenny Pygmy Forest Reserve is fairly small, and most pygmy forest occurs on private lands, outside the California Coastal Zone, where the degradation and destruction happen either without triggering any permit process, or under county ministerial permits

6.2 states:

“Even if a plant shows no damage from a mechanical device, resultant changes in the adjacent habitat may reduce the plant’s ability to persist and, therefore, be a direct impact on the individual plant.”

Pygmy forest is damaged by road building, trenching, alteration of soil grade level and any activities resulting in altered hydrology. CNPS urges the resources agencies to regard this as another reason to require stricter conservation measures for pygmy forest within the Plan area.

A conservation method from the HCP/NCCP Section 11:

“Avoid all activities, including those outside the core occurrence and buffer areas, which result in significant alterations in surface water hydrologic conditions within the core occurrence area and adversely affect covered rare plants.”

The phrase, “within the core occurrence area” indicates a problem with pygmy forest. Any disturbance to soil or hydrology in or adjacent to pygmy forest is will cause damage that could be severe or result, over time in severe damage from erosion or altered water flow.

6.5.4 Habitat requirements:

“Pygmy cypress occurs in podzolized soils within closed-cone coniferous forest at elevations from 90-1500 ft (30-500 m) (CNPS 2006). This tree is often found associated with Bolander’s pine and bishop pine within Mendocino Pygmy Forest. Pygmy cypress is also found in North Coast coniferous forest habitats that are adjacent to and integrate with pygmy forest, locally called transitional pygmy forest.”

This description is also misleading. Pygmy cypress and Bolander pine, growing together, are the dominant and defining species of Mendocino Cypress Woodland (“pygmy forest”). Bishop pine is sometimes found at the edges of pygmy forest, but is not a dominant or defining species. Pygmy cypress, unlike Bolander pine, can grow on soils other than the highly acidic, nutrient-poor soils of the pygmy forest. There is, however, no such thing as “transitional pygmy forest.”

Likewise, the Draft PTEIR contains errors with respect to Mendocino Cypress Forest. It states that:

“Several smaller areas of Mendocino Pygmy Cypress Forest occur south of Point Arena, including Roseman Creek, Slick Rock Creek, and Galloway Creek. Additional occurrences are found along the central Sonoma County coast (Mayer and Laudenslayer 1988).”

Contrary to the above claims, true “pygmy forest” is not found on Mendocino County’s south coast. Mendocino cypress does occur in the south coast area, but not as part of the Mendocino Cypress Woodland Alliance, given the lack of Bolander Pine. The cypress occurs on the south coast as a sometime component of Northern Maritime Chaparral, but not as a dominant tree in a formally recognized vegetation alliance.

As noted earlier in these comments, there is no Mendocino Cypress Forest in Sonoma County. Bolander pine was cited as occurring in Salt Point State Park in *A Flora of Sonoma County* by Best, Howell, Knight, Knight and Wells (1996), but no voucher data was provided. There are no actual herbarium vouchers for this taxon from Sonoma County. Further, the terrain in the Salt Point "Pygmy Forest" is hilly and uneven, quite unlike the very flat terrain needed to produce the vegetation assemblage classified as Mendocino Cypress Woodland Alliance.

Thus, the Plan's rationale for downgrading pygmy forest rare plants to MC Category 4 is not justified. These plants are not as common or as well protected as indicated in the Plan.

#### **Additional Rare Vegetation Types?**

The Plan's confused information regarding Mendocino Cypress gives rise to the suspicion that Northern Maritime Chaparral may exist in the Plan area, unrecognized and undocumented. This rare vegetation type is dominated by manzanitas (*Arctostaphylos nummularia*, *A. glandulosa* and *A. columbiana*) and Ceanothus (*C. foliosus* and *C. gloriosus*). Mendocino cypress and shrub oaks may also be present. It occurs on hilly, rocky terrain, with soils that are very acidic, though less so than the Aborigine and Blacklock soils of true Mendocino pygmy forest.

How will MRC assure the public that either a) this vegetation type is absent, or b) this vegetation type is present and will be subject to appropriate conservation measures?

#### **Lichens**

The rare longbeard lichen (*Usnea longissima*) is vulnerable to blow-down because it is a very long species, hanging from high (often) tree branches with no mechanism for adhering to the branches. On timberlands the species leads a precarious existence, with abundance and risk factors rising and falling.

From the website of the California Lichen Society (CALs):

"During a CALs field trip on 20 March 2004 to assess the species on Pacific Lumber Company lands in Humboldt County, fine-scale population patterns were observed that suggested many understory occurrences of the species may be transient, sink populations, blown out of a source population in overstory conifers. A study in Swedish spruce forests (Rolstad & Rolstad 1999) found that numbers of thalli corresponded to tree size (though not necessarily tree age), which may agree with the CALs observation that source populations are on large, overstory trees. Further study would be useful to investigate dispersal from source to sink populations and the distance involved; is it possible that a single source population may produce multiple sink populations during high-wind events which are mapped as separate occurrences by CNDDDB standards?"

CNPS appreciates that consideration of this lichen species was included in the PLAN. Long term conservation of this and any other rare lichen species on MRC lands would be greatly served by inclusion in reserves that would contribute to a stable, robust population of this lichen.

#### **Conclusion**

CNPS would like to see this HCP/NCCP be exemplary of the positive intent behind the HCP and NCCP programs. We also hope the Plan will become a model for sustainable forestry, which, in a conservation context, means retaining a full complement of native species and ecosystem functions, while allowing compatible human utilization of resources.

Sincerely,



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## References

The Following documents were consulted in the preparation of this letter, and are incorporated herein by reference:

*Draft 3.2 11/28/2006 Variation in Tanoak Resistance to Phytophthora ramorum*

Sniezko, Richard; Garbelotto, Matteo; Hayden, Katy; Dodd, Richard; Wright, Jessica; Roessler, Cindy ; Rodgers, Jane.

2013. *Tanoak Landscapes: Tending to a Native American Nut Tree – Madrono* 60 (2): in press. Bowcutt, Frederica.

2011. *Tanoak Target: The Rise and Fall of Herbicide Use on a Common Native Tree - Environmental History* 16: 197-225. Bowcutt, Frederica.

*Proceedings: Sudden Oak Death Second Symposium – The state of our knowledge*

January 2004 J.T. Kliejunas, K.M. Palmieri, S.J. Frankel: Technical Coordinators

U.S. Dept. of Agriculture, Forest Service Pacific Southwest Research Station

[http://www.fs.fed.us/psw/publications/documents/psw\\_gtr196/](http://www.fs.fed.us/psw/publications/documents/psw_gtr196/)

*Proceedings of the Sudden Oak Death Third Science Symposium*

2008 J.T. Kliejunas, K.M. Palmieri, S.J. Frankel: Technical Coordinators

[http://www.fs.fed.us/psw/publications/documents/psw\\_gtr214/](http://www.fs.fed.us/psw/publications/documents/psw_gtr214/)

*Proceedings of the Sudden Oak Death Fourth Science Symposium*

June 2009 J.T. Kliejunas, K.M. Palmieri, S.J. Frankel: Technical Coordinators

[www.fs.fed.us/psw/publications/documents/psw\\_gtr229/psw\\_gtr229.pdf](http://www.fs.fed.us/psw/publications/documents/psw_gtr229/psw_gtr229.pdf)

*California Planning and Development Report* Vol. 23, No. 8 – August 2008

U.C. Davis *Environment Watch – Climate Change May Compel Reconsideration of Habitat Plans*  
Shigley, Paul

*Climate Change and the Future of California's Endemic Flora* pub. June 25 2008 on *PLoS One*.

David Ackerly of UC Berkeley Dept. of Integrative Biology

*Climate Change, Ecological Impacts and Managing Biodiversity* – Presentation

Schwartz, Mark W. University of California, Davis

*Modeled regional climate change and California endemic oak ranges*

*Proceedings of the National Academy of Sciences*

Kueppers , Lara M., Snyder Mark A., Sloan Lisa C., Zavaleta Erika S., Fulfroost, Brian

2006 *Mendocino Pygmy Cypress Forest* – Fact Sheet -

California Native Plant Society

Golec, Clare