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Mr. Chris Browder
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Mr. Eric Shott
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SUBJECT: Comments on draft Program Timberland Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for Authorization of Incidental Take and Implementation of the Mendocino Redwood Company Habitat Conservation Plan, Natural Communities Conservation Plan, and Timber Management Plan

Dear Mr. Browder and Shott:

I would like to submit the following comments on the MRC EIR/EIS for its proposed Habitat Conservation Plan, Natural Communities Conservation Plan, and Timber Management Plan (hereafter "HCP"). I am a professional plant ecologist and botanist (PhD, University of Western Ontario, Canada), specializing in coastal plant communities and species for 34 years. My professional experience includes preparation of Endangered Species Act Section 7 consultations (including Incidental Take Statements) and recovery plans for the U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, and NEPA compliance (EIS and environmental assessments) for the U.S. Army Corps of Engineers, San Francisco District, as well as EIR/S preparation and critical review and analysis as an independent consultant. My current primary professional work consists of preparation and review of conservation, management, and enhancement/protection plans coastal California ecosystems that support multiple special-status species. I am a resident

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of unincorporated rural residential forestland (coastal redwood forest bordering MRC timberland) in northwestern Sonoma County, where I am locally active in coastal forested watershed conservation work. I have reviewed the MRC HCP and EIR/S overall, but with selective emphasis on particular sections due to the extraordinary length and highly formulaic, programmatic nature of the documents.

General comments

I commend MRC for its efforts to commit major time and resources to a long-term conservation plan for its extensive timberland property ownership. Compared with short-term and small-scale Timber Harvest Plans (essentially individual piecemeal projects) long-term forest management plans provide significant *potential* advantages for conservation for the ecosystems on which endangered species depend for survival and recovery – the core purposes of the Endangered Species Act. However, some of these potential advantages are forfeit if the large-scale conservation plan emulates the weaknesses of individual THPs that focus on short-term local timber harvest practices without reference to larger geographic and ecological scales essential to the structure and dynamics of populations and ecosystems. THPs stress formulaic or routine (programmatic) short-term mitigation practices without respect to long-term ecological or population processes and spatial pattern. HCPs, in contrast, must address the larger-scale and longer-term ecological framework in a spatially explicit manner.

The current version of the MRC HCP, despite a high level of detail and documentation (relative to an individual THP), unfortunately does not provide a spatially explicit long-term strategic habitat conservation plan specific to a particular set of listed species in forested coastal watersheds during nearly a century of significant climate change. It merely functions as a programmatic timber management plan with generalized “best management practices” for special-status species and fish and wildlife species predicated on existing/short-term conditions. Invoking “adaptive management” is not a surrogate for a biologically based multi-species conservation plan over 80 years. Adaptive management in itself is not a substitute for a substantive biologically based conservation strategy within a well-defined geographic area.

The HCP avoids the most essential commitment of long-term planning for populations and habitats of species that depend on mature forest and stream habitats: defining a spatially explicit plan for managing a resilient system of refuges or core areas and populations within a matrix of “working forest”. The HCP covers the matrix of working forest relatively well, but skips the essential long-term, large-scale habitat and population planning for listed species. The design of both resilient refugial habitats and new suitable habitats is absolutely essential for any ecosystem/endangered species conservation plan to be implemented during a century in which significant climate forcing of ecosystem change and population distributions is inevitable. It is not feasible to base long-term conservation strategies for coastal redwood forest species on rote prescriptions to

“maintain existing...stable” populations or distributions in standard CEQA-format mitigation language.

The MRC HCP does an exemplary job of prescribing the management of the matrix of “working forest”, but it limits the ecological strategic recovery planning to only one species – coho salmon (appendix Z), and without explanation for the lack of coverage of other listed species. Other than spatially indeterminate protections for small-scale transient “core” areas related to nesting behavior or “occurrences” of certain species, the *HCP lacks a comprehensive geographic foundation for protecting, consolidating, and expanding a network of core areas of mature habitat capable of sustaining resilient populations of target endangered species, and protecting important remnant areas (hotspots) of high species diversity.* In this respect, it is a “natural community conservation” plan in name only.

But more importantly, the omission of a geographically explicit, strategic multi-species conservation plan *fails to meet the essential requirement for an Incidental Take Permit – to minimize and mitigate impacts of taking to the maximum extent practicable.* In my professional opinion, the HCP would achieve this essential requirement if it simply added a comprehensive system of spatially explicit, biologically sound network of resilient core areas (reserves or refuges) for *all* target listed species, as it does individually for coho salmon in Appendix Z, within the matrix of working forest. Without a “backbone” of core habitats or refuges, the ecological perturbations of climate-forced environmental extreme events (drought, flood, windstorm, fire), disease outbreaks, incursions of new predators and competitors (native or non-native species distributions altered by climate), the “best management practices” of the HCP *do not minimize and mitigate the impacts of taking to the maximum extent practicable.* Although the HCP is not required to implement draft recovery plans for listed species, it is essential that the “best available scientific and commercial data” and understanding of recovery planning inform the HCP at all levels. This simply has not been done.

The advance identification and planning of core areas for habitat and population conservation and enhancement (in this case, management and enhancement of mature forest structure and composition, and associated stream and riparian habitats) is a standard feature of Habitat Conservation Plans. The MRC HCP therefore should be amended to include an integrated set of biologically based network of core/refuge habitats or reserves to maintain viable populations of marbled murrelet, northern spotted owl, California red-legged frogs, other listed wildlife and fish, and 31 rare plants (in addition to the one plan for Humboldt milkvetch) during 80 years of climate-forced ecological change in the HCP area. The addition of a meaningful set of ecologically interconnected functional refuges for the target species over the 80 year planning frame, in addition to the programmatic mitigation measures proposed for the matrix of forest, would minimize impacts of incidental take and satisfy the requirements of the ESA for authorization of incidental take.

In a NEPA/CEQA context, the HCP must be compared with an environmental baseline of either “existing conditions” (case-by-case THP authorization and associated levels of incidental take impacts), or (NEPA) ongoing conditions with no federal action (no HCP). If the 80 year future of the project area were reasonably likely to remain stable (similar to “existing conditions”, the MRC HCP would potentially equal or exceed case-by-case THPs (within the same HCP area) in the degree of incidental take minimization and avoidance. However, the best currently available scientific data and analyses (models) indicate that listed species (e.g., marbled murrelet, coho, steelhead) populations are continuing to decline, and habitat suitability is likely to be reduced due to climate-forced ecological change during the HCP period. The foreseeable change in background environmental conditions are likely to increase the sensitivity of listed species to the impacts of incidental take during the next 80 years, as listed species populations suffer increased risk of extirpation in north coast forestlands. In this case, the “no surprises” HCP, with only indeterminate and procedural “adaptive management” provisions that may be effectively unenforceable in future conditions, is likely to increase the risk of increased impact of incidental take, and the risk of “jeopardy” to listed species. An explicit, enforceable HCP provision for a comprehensive network of refuge or core habitats for all listed species within a matrix of managed, harvested MRC timberland would fundamentally minimize risk of incidental take impacts compared with routine case-by-case THPs and their standard, programmatic mitigation measures.

Selected specific comments:

1. Geographic and ecological scope of HCP. The HCP provides no rational biological basis for limiting the HCP to Mendocino County and excluding Sonoma County MRC forested watersheds within its ownership and management. Most of the same listed species occur in MRC’s timberlands in northwest Sonoma County, in the same forest types; indeed, these lands arguably support the same metapopulations of listed species. It is arbitrary to follow a purely political/legal county boundary and ignore the unity of both MRC ownership and ecological communities. If the HCP were approved for Mendocino County only, the same THP activities performed south of the Mendocino County line would not have authorized incidental take. The HCP/EIR/S should either modify the HCP to include Sonoma County, or provide a rational explanation (the legal and biological basis) for excluding it.

2. Temporal scope of HCP and programmatic “adaptive management” approach. As described in my general comments above, the best available scientific data and analyses indicate likely (or inevitable) significant increasing changes in climate (rainfall variability, extreme droughts and deluges, temperature extreme events of greater frequency and duration), during the HCP planning period. The climate-forced environmental changes forecast in all likely climate scenarios for California would inevitably cause significant cascading ecological effects on the HCP area. The “adaptive management” programmatic measures in the HCP are deeply inadequate to address climate-forced ecological changes in MRC forestlands; they are relatively superficial

programmatic measures barely capable (and barely enforceable) for addressing near-term conditions similar to those of the environmental baseline. CEQA and NEPA must reconcile the conflict between a static or retrospective environmental baseline and “projects” which occur over multiple decades in which significant climate-forced environmental change is practically certain. The HCP and CEQA/NEPA analyses should be revised to incorporate models for scenarios of climate change in North Coast forests (as recent studies have done for California agriculture and sea level rise), and relate substantive adaptive management actions to them. Adaptive management language must specify objective thresholds (not subjective judgment thresholds) and prohibit merely vague permissive, deliberative, deferred, or conditional actions (“may...” or “consider...” “will develop...plan” type actions lacking enforceable, objective criteria). The authority and responsibility for review and implementation of all adaptive management actions must be defined and enforceable. The role of agencies or delegated scientific review panels (enforceable commitments and authority) must be made explicit. This is deficient in the HCP and EIR/S in many examples I examined, too numerous to list.

3. Herbicides, tanoak, “brush” and northern spotted owl incidental take. The HCP and EIR/S fail to analyze the potential significant indirect impacts of tanoak management and herbicide use in relation to northern spotted owl (NSO) prey base and foraging efficiency. Tanoak provides both structure and trophic support for the one of the primary prey species for northern spotted owl, dusky footed woodrats. Neither the HCP nor EIR/S assesses the potential impact between tanoak reduction, woodrat population density and dynamics, and northern spotted owl population dynamics (including interactions with barred owls). This is not merely a NEPA/CEQA deficiency; it is essential to minimization of incidental take of NSO. Similarly, the HCP does not prohibit broadcast application of imazapyr or other broad-spectrum herbicides with potential soil persistence and pre-emergent activity that could severely impact soil seed banks or bud banks of listed plants that are not detected during routine surveys (either due to seasonal development or intermittent emergence among years). This may cause significant impacts to plant species diversity (listed species and whole community level) and northern spotted owls that are not mitigated. The HCP and EIR/S must assess the potential significant influence of tanoak abundance (locally in relation to NSO territories/home ranges and forest-wide) in relation to NSO population dynamics and interactions with barred owls, and assess how tanoak management influences NSO populations over 80 years. Otherwise, the HCP is no better than a THP with permanent take authorization and “no surprises”.

Concluding remarks: The burden or detailed review of the oversize HCP and NEPA/CEQA document developed over 10 years exceeds the capacity for meaningful general public comment. This burden demands interdisciplinary scientific expertise and a significant workload beyond voluntary individual public comments. I saw no indication that the original Science Panel was retained to fully review and advise the final HCP and EIR/S. I recommend that lead agencies fund an active independent scientific review and

advisory panel with specific expertise in the listed species covered, forest ecology, aquatic ecology, conservation biology planning, and forestry, and task the panel with comprehensive review of the HCP (and at least a summary of public comments) and preparation of advisory recommendations before lead agencies authorize the HCP and FEIR/S.

It is my sincere hope that an adequate and exemplary revised final MRC HCP, including comprehensive planning of integrated internal refuge/core habitat areas within the matrix of working forest, will be authorized after thorough independent scientific review and recommendation.

Sincerely,

A handwritten signature in black ink that reads "Peter Baye". The signature is written in a cursive, flowing style.

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Copies furnished:
Justin Augustine, Center for Biological Diversity
Linda Perkins, Sierra Club
Kathy Bailey
Andrew Orahoske, EPIC