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**To:** CARB Staff  
**From:** Peter Miller and Debbie Hammel, NRDC  
([p.miller@earthlink.net](mailto:p.miller@earthlink.net))  
**Re:** Comments on Forests in Draft Scoping Plan  
**Date:** August 8, 2008  
**Via:** Electronic submission at  
<http://www.arb.ca.gov/cc/scopingplan/spcomment.htm>

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## **I. Overview**

NRDC has a number of serious concerns with the proposed strategy for the forest sector in the Draft Scoping Plan.

First, the assertion that mechanical fuels treatment (as distinct from forest biomass production in the energy sector) is a viable emission reduction measure is speculative and unfounded. This measure should be omitted from the Scoping Plan. Moreover, the proposal to defer the carbon accounting for fuels management practices until after implementing the strategy violates common sense and the requirements of AB32, and underscores the speculative nature of fuels management benefits.

Second, the emphasis placed on near-term opportunities from using residual forest wood waste from fuels management to displace fossil fuel in energy generation ignores the environmental safeguards critical to insuring that biomass fuels actually deliver a climate benefit and do not degrade California's important and unique forest ecosystems.

Third, the proposal to rely on the Board of Forestry and Fire Protection (BOF) to carry out primary leadership responsibilities under AB 32 raises significant questions of conflict of interest, and should be rejected. The role of the BOF should be limited to an advisory capacity.

Fourth, there is no clear statement of how each of the measures and funding resources would be employed and would contribute to the target emissions reductions.

Finally, the Proposed Scoping Plan should be expanded to include measures that address consumption of forest products, such as recycling and wood use efficiency, and should include a Public Goods Charge on forest products.

## **II. Fuels Management is Speculative, Unproven, and Costly and Should Not be Included in the Plan**

Both the Draft Scoping Plan and the Appendix refer to fuels management as a measure that can (i) provide emission reductions by reducing fire risks through mechanical fuels treatment, and also (ii) produce biomass to substitute for petroleum-based transportation fuels and electricity generation. These two objectives are dealt with separately below.

### ***A. Emission Reductions Through Mechanical Fuels Treatment***

The Draft Scoping Plan assumes that mechanical fuels treatment can provide emission reductions by reducing the risk of severe fires. The Appendix claims that “it is commonly accepted” that fuels treatment has “a positive effect on the ability of fire suppression forces to control a fire” and presumably to reduce carbon emissions. (p. C-135) We reject this premise and believe that mechanical fuels treatment should not be accepted as a viable, proven emission reduction strategy.

The assumption that fuels management reduces the frequency and severity of fires (and therefore reduces carbon emissions) is unproven and speculative at best. For example, as detailed in the attached study, over the past decades forest thinning has

resulted in *increased* fire severity in the Sierra Nevada mountains.<sup>1</sup> This study as well as others clearly demonstrate that carbon reduction benefits of fuels treatment and thinning are not “commonly accepted,” remain highly debatable, and should not be relied upon as a proven carbon reduction measure in the forestry sector.

Underscoring the uncertainty surrounding fuels management, at present fuels management is the only forest sector measure for which no measurement protocol has been adopted by CARB or is under development by CCAR. The Draft Scoping Plan instead cryptically states that “accounting [for fuels management strategies] will be done following implementation.” (p.27) This approach suggests that CARB will accept a simple assertion of purported benefits to be an adequate basis for the measure. These measures have not been shown to provide real, additional, permanent, and verifiable benefits and should be categorically rejected by CARB. The agency should instead rely upon those measures with adopted measurement protocols such as afforestation/reforestation, urban forestry, forest conservation, and forest management measures such as expanded riparian buffers and no-harvest areas.

Even if one accepts the unsubstantiated claim that fuels treatments can reduce fire occurrence by 50% (as assumed in the CAT Report), a more complete accounting shows that fuels treatments would provide much lower benefits and higher costs than estimated in the CAT report. As described in the attached memo<sup>2</sup>, the GHG emissions reductions benefits would total only 0.15 TCO<sub>2</sub>E/acre/year (less than the savings from replacing two incandescent lightbulbs with compact fluorescents) with a net economic benefit of only

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1 Hanson, C.T., Odion, D.C. 2006. Fire severity in mechanically thinned versus unthinned forests of the Sierra Nevada, California. Proceedings of the 3rd International Fire Ecology and Management Congress, November 13-17, 2006, San Diego, CA.

<sup>2</sup> “Issues with Proposed CDF Fuels Management/Biomass Strategy.” Peter Miller, NRDC. February 24, 2008

\$46/acre<sup>3</sup>. An equipment-intensive fuels treatment approach will result in high-cost, uneconomic programs, particularly after accounting for program-related emissions.

In general, given the substantial uncertainties and the significant potential for harm, we believe that fuels management measures should not be accepted as a viable emission reduction strategy at present. Future research may clarify existing contradictions and uncertainties and show that there are a specific set of fuels treatments that can reliably reduce emissions and provide real benefits through compliance with adopted measurement and verification protocols, but until then, the Scoping Plan should not rely on this unproven and risky measure.

***B. Forest biomass for use in bio-power and bio-fuel production***

The Appendix states that this strategy supports the goals of the Bioenergy Action Plan by satisfying the growing demand for renewable energy sources, and helps the state meet its bio-power objectives, including the Renewable Portfolio Standard. Specifically, the strategy focuses on the “untapped biomass resources to produce transportation fuels, electricity generation, and biogas including enhancement of the supply of biomass through fuel hazard reduction.” (pg. C-134)

While we reject the proposition that mechanical fuels treatment provides a carbon benefit by reducing the risk of fire (above), we do believe that limited extraction of slash and pre-commercial thinnings from forests for biofuels can provide a small carbon benefit. It is critical, however, that the forest sector Bioenergy strategy explicitly incorporate environmental safeguards essential for insuring that the target is not achieved at the expense of California’s state, federal and private forest ecosystems and that it is fully consistent with the Renewable Fuels Standard (RFS) of the 2007 Energy Bill (the Energy Independence and Security Act of 2007, or EISA). EISA’s Renewable Fuels Standard (RFS) program was carefully designed to ensure that federal biofuels policies

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<sup>3</sup> NPV discounted at 5%.

result in renewable energy that mitigates dangerous climate change, while avoiding costly and harmful unintended consequences to wildlife and the environment.

California must adopt similar safeguards, to ensure that biomass resources for biofuels and electricity generation don't become just another dirty fuel. For example, proposals to use "thinnings" from national forests do not make economic or ecologic sense. At best, only a small amount of biomass from fuel treatments would be available from national forests, roughly the equivalent of 600 million gallons of biofuels. This drop in the bucket, if feasible at all, could come at the expense of degraded forests and would establish an unsustainable industrial demand for continued commercial exploitation of public resources.

While natural forests on private lands can provide some biomass to support the state's bio-power objectives, they must be protected from conversion to bioenergy plantations, and some - such as old growth forests and other critically imperiled, imperiled, and rare wildlife habitat - are simply not appropriate for any biomass production. These ecosystems are home to our most rare, threatened, and imperiled wildlife. While plantations and young forests are increasing in parts of the United States, older forests that provide critical wildlife habitat are disappearing faster than they are being re-grown, both nationally and globally, and loss of native habitat is the greatest threat to biodiversity here and abroad. Moreover, as global warming escalates, wildlife is increasingly threatened by loss of safe harbors and migration routes, making habitat protection even more important.

### **III. The Role of the Board of Forestry and Fire Protection Must be Limited to an Advisory Capacity**

The Draft Scoping Plan includes a proposal to task the Board of Forestry and Fire Protection (BOF) with "developing a monitoring program, improving greenhouse gas inventories, and *determining what actions are needed to meet the 2020 target for the*

*Forest sector.”* (p.27, emphasis added) This proposal should be rejected. Instead, the role of the BOF should be limited to an advisory capacity.

***B. The conflict of interest for BOF boardmembers must be addressed***

The BOF proposal raises significant issues of conflict of interest. In particular, four of the nine board members are required by state law to “represent and further the interests” of the forest products and range livestock industries.<sup>4</sup> This clear conflict of interest between the regulator’s duty to regulate these industries and simultaneously represent the regulated industries’ interests renders any proposal to assign regulatory responsibilities to BOF under AB 32 unworkable. As far as we are aware, the Draft Scoping Plan does not propose to assign regulatory responsibility to industry representatives for any other sector and we are at a loss as to why it might be seen as appropriate for the forest sector. For this reason as well as those articulated above, CARB must limit the role of the BOF to an advisory capacity in a way that is consistent with the requirements of AB 32.

***B.Need to clarify roles and responsibilities for forest inventory and monitoring***

CARB has assumed responsibility for supporting and developing the statewide inventory of greenhouse gases. This inventory is critical because it is used to determine the statewide target and because it will be used to help determine progress and eventual compliance with that target. There is relatively little data and a great deal of uncertainty with regard to forest sector emissions. As a result, CARB should welcome the support

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<sup>4</sup> CALIFORNIA PUBLIC RESOURCES CODE § 731.1

and participation of the BOF – and of all parties with information and resources to contribute – in improving the existing inventory.

However, the proposal in the Draft Scoping Plan appears to contemplate more of a leadership role for the Board of Forestry in these efforts. Given the potential for confusion and the need for coordination, the Proposed Scoping Plan should clarify the roles and responsibilities of the BOF regarding monitoring and inventories and describe how the BOF activities will interact with CARB’s ongoing inventory effort.

#### **IV. Sustainable Forest Targets are Ambiguous, Unclear, and Poorly Defined**

The Draft Scoping Plan Appendix presents both a “Sustainable Forest Target” with a cost estimate of \$50 million/year and a set of “Additional Forest Management Strategies” with the same emissions target, no cost estimate, and a different lead agency. The Sustainable Forest Management Target appears to include 2.2 MMT of emission reductions from regulatory changes that have already been adopted and should be included in the baseline. No costs are attributed to the “Additional Forest Management Strategies” in the Draft Scoping Plan and there is considerable overlap with the Sustainable Forest Target strategies. While a number of potential forest measures are described, little or no information is given on how each of these measures and mechanisms relate to the proposed target or cost estimate.<sup>5</sup>

We believe the Proposed Scoping Plan should include a clear description of the measures that will be used to achieve the forest sector target that includes the cost, emission reduction estimates, and funding sources for each measure. The Proposed

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<sup>5</sup> The Appendix claims that the fuels management offers the largest opportunity for near term emission reductions (p. C-131), but the Draft Scoping Plan states that no reductions are attributed to fuels management strategies. (p. 27) The estimated emission reductions from the other strategies identified in the Appendix total considerably less than the target of 5 MMT.

Scoping Plan should also include a clear description of the process and timeline that will be used to develop and implement CARB's forest sector strategy.

In addition, NRDC has concerns over several of the timber stand improvement measures proposed under the Forest Management Strategy, identified below.

***A. Removing hardwoods and increasing conifer stocking***

This recommendation encourages forest type conversion from hardwood to conifer which carries with it demonstrated negative impacts on forest and ecosystem health including: soil erosion, destruction of critical wildlife habitat (hardwood plant communities have the richest wildlife species abundance of any habitat in California.<sup>6</sup>), loss of ecosystem diversity , and arguably increased carbon emissions. This recommendation is also inconsistent with the Forest Project Protocol which requires registered forest projects to display the following characteristics:

- “Native forests: All forest projects are required to promote and maintain forest types that are native to the project area.”
- “Natural forest management: These management practices must promote and maintain native forests that are comprised of multiple ages and mixed native species in the forest overstory and understory .” (Forest Project Protocol, p.17)

***B. Optimizing rotation age from a carbon life cycle perspective***

Use of the word “optimizing” is imprecise, misleading, and potentially counter productive. In general, lengthening rotation age will increase for the average level of carbon sequestered on forestlands, while shortening rotation age will have the opposite effect.

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<sup>6</sup><https://r1.dfg.ca.gov/Portal/Wildlife/PriorityWildlifeHabitats/HardwoodCommunities/tabid/625/Default.aspx>



## **V. Measures to address forest product consumption should be included in the Scoping Plan**

The forest sector strategy in the Draft Scoping Plan focuses entirely on emissions related to California forestlands. Both the Draft Scoping Plan and Appendix fail to identify the significance of emissions associated with imported wood products and their subsequent disposal and decomposition, or to propose any measures that affect the demand for wood products. This limited approach to the forest sector is as flawed as an electricity sector strategy that only accounted for emissions from in-state power plants. The failure to account for all of the emissions associated with our consumption of forest products will not only thwart our efforts to reduce forest sector emissions, it will do so in a way that disadvantages the California economy.

The CARB inventory shows that the only significant growth in forest sector emissions over the past 15 years has been from the decomposition of wood products, identified in the inventory as “landfilled wood waste” and “composting of wood waste materials.”<sup>7</sup> These emissions are largely the result of the purchase, use, and eventual disposal of 20-35 MMTCO<sub>2</sub>e worth of wood products – from tissues to 2x4s – by California’s citizens and businesses. Most of these products are imported and the emissions associated with their consumption is underestimated, since the inventory does not include any of the upstream emissions from their harvest and production. Yet the Draft Scoping Plan fails to identify any measures to address these emissions sources.

Given that approximately 80% of California’s consumption of wood products is from out-of-state imports, any credited emission reductions from CARB's proposed measures related to California's forestlands are likely to be more than offset by increased emissions from imported wood products. The limited set of measures in the plan that

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<sup>7</sup> See: “Land Use Change & Forestry (Biodegradable Carbon Emissions & Sinks),” posted online by CARB (file titled: net\_co2\_flux\_2007-11-19.pdf)

focus on California forestlands exclusively won't affect total levels of consumption or disposal. In addition, the failure to account for total forest sector emissions facilitates development of a forest sector strategy that results in illusory and inadequate emission reductions. By ignoring emissions from wood products, the Draft Scoping Plan suggests that the focus of a monitoring and inventory initiatives should only be on policies that affect California forestlands.

As NRDC recommended in our Oct. 1, 2007 proposal to the Scoping Plan process, the forest sector strategy in the Scoping Plan should focus on total emissions from the forest sector, including emissions from imported products, and should include measures to reduce emissions from consumption such as improvements in wood use efficiency and recycling.

#### **VI. The Proposed Scoping Plan should propose adoption of a forest product public goods charge**

The Draft Scoping Plan discusses the use of targeted fees, similar to the public goods charge (PGC) on electricity as a promising potential funding source. However, while the Draft Scoping Plan proposes adoption of a PGC on water (which we enthusiastically support) (p. 28), it fails to include adoption of a PGC on forest products.

As described in our Oct. 1, 2007 proposal to CARB, a PGC on forest products could generate revenue of approximately \$500 million/year to invest in emission reductions, increased sequestration and forest sector R&D. Without an independent funding source such as a PGC, there is no clear source of funding to achieve the proposed forest sector target and CARB will miss the opportunity to achieve substantially greater emissions reductions from the forest sector. We strongly urge the ARB to include adoption of a forest product PGC as recommendation in the Proposed Scoping Plan.