



Comments on the Inter-Agency Forestry Working Group Draft Work Plans for Tasks 1 and 3

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December 17, 2009

Thank you for the opportunity to comment on the proposed IFWG Draft Work Plans for Tasks 1 and 3. We recognize and appreciate the extensive work that Working Group members have put into this process.

Working from the draft Work Plans, below we have proposed certain language additions and revisions and provided explanations regarding those suggested changes.

D) Specific Comments on Task 1

Our primary concern about Task 1 is that the Working Group develop full cycle estimates. This entails two primary requirements. First, because ecosystems are dynamic, for any scenario, including business as usual, carbon must be assessed over time, considering both averages over meaningful time periods and peaks, especially peaks that occur in the next 20-40 years while fossil fuel emissions remain necessarily high. Second, the Air Resources Board must have access either to comprehensive estimates/measurements of carbon stocks or to the full spectrum of carbon fluxes into and out of each ecosystem of interest.

Changes in all pools of carbon (over time) have to be considered or inventories will have little value. In particular, it would be seriously misleading to include increases in a carbon pool but not decreases, or to estimate total storage for a scenario by looking at increasing pools but not decreasing ones, or vice versa. For instance, while heterotrophic respiration from tree decay is relevant, it is equally essential also to measure or robustly model concurrent removals from the atmosphere attributable to ecosystem productivity over the same time period. Similarly, if carbon stored in finished wood products is considered, concurrent release of carbon from decay and combustion of wood products will have to be factored in as well.

In this regard, the emphasis in the draft Workplan on emissions data needs careful attention. In the land use context, carbon emissions come from terrestrial sources. If an inventory adequately measures storage, emitted carbon will be reflected in reduced storage. Separately assessing emissions, or changes in emissions, would then be double counting.

Conversely, if storage is not adequately and comprehensively measured or modeled, adding emissions data or projections to the picture will not cure the problem. In fact, emissions by themselves are irrelevant. They are only useful to look at as part of the total flux of carbon in and out of a terrestrial ecosystem, and only if storage is not separately and accurately calculated. Thus, combining estimates of the most readily measured or modeled growth components in, for instance, a forest with estimates of the most readily measured or modeled emissions, say large wildfires and decay of above ground wood, really will not provide useful information. Both all associated emissions to and all removals from the atmosphere must be included if the Working Group is to develop useful information bearing on regulatory and management choices.

As a case in point, a great deal is made of the potential to reduce large fires through thinning. Putting aside uncertainty about the efficacy of thinning (but see Section II(d) below), full accounting of changes in fire emissions has to look over multiple fire return intervals and include the emissions attributable to less intense but much more frequent fires that will replace occasional intense ones if the thinning meets its objectives. And while long term decay of fire-killed trees over time is a relevant component of the carbon change (net of mortality and decay that would have occurred in the absence of lethal fire), so too is the delta in growth of residual live trees and in understory productivity post-fire (compared to productivity in the absence of fire).

II) Specific Comments on Task 3: Development of Sustainable Forest Biomass Provisions for Energy Project Development and Greenhouse Gas Reductions

As California implements various programs that promote increased biofuel use and biomass-based electricity production (hereafter referred to collectively as bioenergy), it is critical that we develop clear sustainability criteria for such programs. The California Air Resources Board and its staff, as well as the Energy Commission and its staff, have both recognized the potential risks associated with expanding bioenergy use in California -- specifically that the volume of biomass needed in California to substantially reduce petroleum use and greenhouse gas emissions, carries the risk of increasing emissions and encouraging or promoting environmentally and socially destructive production practices in California, the United States, and globally. We agree. We also agree that California's size and market clout, as well as its recognized environmental leadership, provide an opportunity to drive the bioenergy market toward production of sustainable fuels and electricity. We appreciate the Working Group's commitment to leading the way in developing a program focused on identifying truly sustainable woody biomass feedstocks that concurrently deliver significant greenhouse gas reductions.

a. Objective

We broadly agree with the objective to identify scientific, empirically-based sustainability provisions or guidelines for energy projects using forest woody biomass. We strongly believe

that these projects must also demonstrably produce greenhouse gas benefits if they are to deliver reductions in greenhouse gas emissions and avoid environmentally destructive production practices in California and elsewhere.

With that said however, we do not agree that sustainability provisions or guidelines should be used consistently by all state and federal agencies across their respective jurisdictions. National forests are public lands that belong to all Americans and are held in trust by the federal government for the benefit of the public. Management of these lands are governed by unique legal and procedural issues, and bear a higher burden of responsibility to protect public trust values - such as clean water, biodiversity and recreation - as distinct from privately held lands, that are generally managed with the primary purpose of timber production and other commodity uses. As such, the sustainability provisions that one might apply on National forests should reflect the required procedural and legal issues as well as a higher threshold for preserving these particular values.

In addition, we believe that limiting the reach of the guidelines to those that can only be applied to state and federal agencies ignores the potential outsourcing of negative impacts – as these programs expand – to other states, or other countries. It is imperative that California adopt a sustainability framework that can be credibly applied to other sourcing regions in order to minimize the risks associated with market leakage and to insure that a level playing field is established for sustainability performance in the marketplace.

b. Proposed Approach

This section leads with the statement “The Technical Team for Task 3 will evaluate how existing State and Federal regulatory programs governing forest management assure ecological sustainability in the production and utilization of forest biomass in order to adopt or develop sustainability definitions and goals for the implementation of the Energy Commission’s AB118 Alternative and Renewable Fuels and Technologies funding program, and for use by other climate change and energy programs involving forest biomass energy production or forest sector carbon accounting”. We would make two points here. First as mentioned above, limiting the evaluation to State and Federal regulatory programs ignores the potential outsourcing of negative impacts. We would recommend that the IFWG adopt an overarching sustainability framework for forest biomass sustainability that can be applied in different sourcing regions. The use of an international framework, such as the Forest Stewardship Council’s standards, will provide a broadly consistent approach to evaluating sustainability on private and state lands that can be applied to specific regional conditions. Second, the Energy Commission’s own Sustainability Goals and Standards acknowledge that high standards must be set and that this assumes environmental performance beyond regulatory standards. We agree. Existing regulatory standards form the foundation, but alone do not assure sustainability – which address requirements that are not typically or adequately addressed in regulations. This approach is reflected in all of the credible 3rd party certification systems available in the marketplace today – including, but not limited to, the Roundtable on Sustainable Biofuels and the Forest Stewardship Council.

c. Work Plan to Accomplish Task 3

Below are specific comments on each of the work plan components.

- 1) Work plan item #1. The multi-stakeholder IFWG Technical Team should be balanced in its composition of stakeholders, including industry, agency, environmental NGOs, social NGOs, and scientific/technical experts. The draft work products, including meeting minutes, should be made available to the public on the documents page of the IFWG website in a timely fashion.
- 2) Work plan item #2. We agree that it is critical that the Public Involvement Process provide stakeholders with a meaningful opportunity to participate in achieving the goals of the IFWG. Additional clarity is needed to define “meaningful”, for example what is the process for providing input and how will that input be considered by the Technical Team. Transparency and providing timely public access to all working documents will be a critical factor.
- 3) Work plan item #3. It is unclear how the timing of Task 2 and 3 will dovetail. Given the early timeframe for the review of existing regulations in Task 3, it would seem most efficient for Task 2 to proceed first. Specifically, Tasks 3(a), (b) and (c) appear to duplicate the objectives of Task 2.
- 4) Work plan item #6. We are assuming that the tasks as listed in the work plan run somewhat sequentially. If so, then Task #6 seems out of sequence as it would be difficult to make decisions regarding funding opportunities for projects that integrate sustainable forest biomass harvest prescriptions in advance of the completion of the sustainability provisions themselves. We also note that work plan item #9 appears to address this same question. We suggest deleting #6.
- 5) Work plan item #7. This item should be informed by Work plan item #4. We would suggest that a final list of questions needing additional research be generated as a byproduct of the workshops. Furthermore, some of the questions listed seem to overlap with Task #1 – Inventory. Specifically, 7(c) and (d). The objective of question 7 (b) should be clarified – is this intended to identify emerging technologies with the potential of increasing the efficiency of biomass utilization in the fuel production process? Finally, question 7(e)(vi) should explicitly include a comprehensive assessment of how aggregate policy incentives (for both liquid fuel and electricity production) could drive cumulative demand and exceed the State’s limited, sustainably produced, woody biomass resources over time.

d. Assumptions for Draft Task 3 Work Plan

We hope the following observations on the Draft Task 3 assumptions will prove helpful.

- 1) Assumption #1. That fuel structure in many California forests has been altered since the advent of European settlement is a safe assumption. Also safe is the assumption that in places this is associated with altered fire regimes (though current fire patterns in much of the Sierra Nevada may not represent significant change¹). Where and how much this has resulted in increased risk of extreme fires remains controversial and should not be assumed.

¹ See Collins, B.M. and S. L. Stephens. 2007. Managing natural wildfires in Sierra Nevada wilderness areas. *Frontiers in Ecology and the Environment* 5:523-527. p. 526.

To the extent it is a relevant question for this work plan, it needs careful review, particularly in comparison to pre-settlement patterns. For the same reason, the degree to which public trust values of these forests are at unacceptable risk is at least partly a function of how much they and their associated species evolved in fire regimes that included substantial episodes of moderate to intense fire. It is also unclear how much of the current condition of California forests can be attributed to climate change (and how relevant this issue is to the Working Group is debatable). Finally, any complete list of factors that have altered fuels structure and forest fire regimes in the State needs to include roads, grazing, and logging.

- 2) Assumption #2. It is quite correct that federal and state agencies recommend thinning and other active management to reduce fuel loads. Two points are important to bear in mind in this connection. First, it does not follow that thinning is broadly appropriate. Where thinning has been used in the Sierra Nevada to reduce fire risks, the results have been mixed at best, particularly when conducted as commercial activity.² The best available research indicates that where it is desirable to alter fuels loading and structure away from communities and built infrastructure, especially in broadly distributed mixed conifer forests in California, prescribed fire is effective.³ This is relevant because, while prescribed fire has emissions, thinning without prescribed fire is often associated with increased risk of subsequent hot burning, and necessarily reduces sequestered carbon more than prescribe fire alone. Second, to the extent that thinning proves ecologically necessary for the sustainability of California forests, and is therefore considered background activity, the real business as usual sequestration of those forests will decline more than currently understood, and the forestry sector will have more than its allotted 5 mm tons to produce, to make the projected contribution to achieving AB 32's goals.
- 3) Assumption #3. Part (b) should be rephrased to clarify that what is meant is that where timber is extracted from federal forests it must be done on a sustained yield basis. National forests are not required to produce timber, as the assumption's current phrasing could be misread to imply. And while federal authority exists to reduce risks from fires, insects, and pests, and most would agree that good stewardship needs to consider such actions, it is not the case that those risks necessarily need to be reduced, nor that federal agencies have an obligation to do so.
- 4) Assumption #5. While as stated, this is correct, it is important, when considering regulatory action that would incentivize forestry management, to bear in mind the potential for such activities also to result in detriments to all three listed sectors. To the extent there is a "forest health crisis" in California forests, it is highly likely attributable to past forest management decisions. And while those decisions are sometimes characterized as well-intended, that would not lessen the need to consider the risk of unintended consequences from renewed intensive manipulation of forest structure. Nor does it square with the facts. As early as 1930, fire suppression, for instance, was identified as inevitably leading to subsequently

² See, for example, Hanson, C.T. and D.C. Odion. 2006. Fire Severity in mechanically thinned versus unthinned forests of the Sierra Nevada, California. In: Proceedings of the 3rd International Fire Ecology and Management Congress, November 13-17, 2006, San Diego, CA. Online at: www.emmps.wsu.edu/2006firecongressproceedings/Extended%20Abstracts%20PDF%20Files/Poster/hanson.pdf.

³ See Stephens, S.L. and Jason J. Moghaddas. 2005. Experimental fuel treatment impacts on forest structure, potential fire behavior, and predicted tree mortality in a California mixed conifer forest. *Forest Ecology and Management* 215: 21-36; Stephens, S.L. 1998. Evaluation of the effects of silvicultural and fuels treatments on potential fire behavior in Sierra Nevada mixed-conifer forests. *Forest Ecology and Management* 105: 21-35.

heightened fire risk, by U.S. Forest Service managers.⁴ And as those consequences have become increasingly evident, the fire suppression on national forest lands has nonetheless continued apace. The relevant point for the Working Group is that large scale human alteration of forest ecosystems cannot be assumed to function as advertised (or modeled).

⁴ Benedict, M.A. [Supervisor of the Sierra National Forest]. 1930. Twenty-one years of Fire Protection in the National Forests of California. *Journal of Forestry* 28:707-710.