

*Andrea Tuttle*  
*Forest and Climate Policy*  
*1215 Union St.*  
*Arcata, California 95521*  
[\*andreatuttle1@gmail.com\*](mailto:andreatuttle1@gmail.com)

To: Forest Climate Action Team (FCAT) [fcacal@fire.ca.gov](mailto:fcacal@fire.ca.gov)

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RE: **Comments on California Forest Carbon Plan Concept Paper: March 9, 2016 (Draft)**

Dear Members of the FCAT Team,

Thank you for the opportunity to comment on the March 9 review draft of the Forest Carbon Plan Concept Paper. By including forest carbon in its climate strategy California sends an important signal to national and international audiences on the critical role that forests play in affecting climate change. The state's 2030 and 2050 emission reduction goals cannot be met unless the forest sector is fully included in GHG accounting, both on the emission and sequestration sides of the ledger.

The concept paper provides an excellent overview of current forest carbon information and a vision for forests under changing climate conditions. A few additions are suggested however to improve its usefulness in developing the Forest Carbon Plan. Some of these comments may drift into the space between Concept Paper and Plan but I think they are worth raising now. These include:

1. **Expand cross-sector thinking: Add a section listing actions by non-forest agencies**

The challenge of the ARB Scoping Plan is not just to assess each emission sector in isolation but also to break out of the silo-responsibility of each state agency and highlight where policies and recommendations of one agency dovetail with those of another. Specifically:

- **Wood Products, the California Building Code, Building Efficiency, and Seismic standards:**

Although references are sprinkled throughout the draft regarding the need to enhance the use of wood products, the draft does not describe how this can be made operational nor identify where bottlenecks exist. Specific reference should be made to working cooperatively with, e.g., GSA and the Building Standards Commission, CEC and the Building Energy Efficiency Program, the Seismic Safety Commission and the Division of the State Architect among others.

**CLT and Mass Timber:** For example, cross-laminated timber (CLT) offers a tremendous opportunity to develop a desperately-needed market for low-value wood coming from forest thinnings and mortality. This mass timber product sequesters large amounts of carbon in long-term use and substitutes for high GHG concrete and steel in buildings. Attention has been drawn to CLT through the USDA Tall Building design competition but the most practical application appears to be in 6-8 story office and multi-family buildings. The shorter construction time and clean construction site means it is useful for buildings in urban in-fill locations. CLT may also be appropriate for some seismic retrofit, such as the hundreds of thousands of existing buildings needing earthquake upgrades in the Los Angeles basin, not to mention the beautiful design option it offers to architects.

Key to stimulating a CLT market is coordination to unlock the building codes to allow the

material to be used. Oregon, Canada and Europe have already stimulated demand by providing a regulatory path, which in turn incentivizes producers to invest in the equipment to manufacture the panels. London alone has 600 CLT tall office buildings, and in the past year Portland, Oregon has at least 6 CLT office buildings under construction with more in the queue. The non-profit WoodWorks offers free design consulting to show developers of non-residential projects how mass wood can be used in place of their original proposal in concrete.

Thus the FCAT draft should not just *mention* the term CLT, but should actively identify all the pathways needed to allow it to be used, and raise the attention of sister agencies for actions needed on their side. The concept paper/Plan should:

- Lay out the code requirements needed to use the material in California, and report on the status of code amendments incorporating the 2015 International Building Code which permits CLT.
- All state agencies charged with “green building” and energy-efficiency (as well as cities), should be fully cognizant of the multiple GHG, energy efficiency, rural development and affordability aspects of wood products. So far I do not see the benefits of wood called out in their webpages, nor being promoted or incentivized as part of their own agency obligations to help meet state climate goals.
- Training of architects, project developers and construction crews in the use of CLT can be provided by professional organizations but should also be actively promoted by involved agencies.
- Suggest a requirement that CLT/mass wood construction be considered in all new and retrofit state building projects.

## **2. Include a sample “Ledger” illustrating the desired accounting format to track forest carbon emissions and sequestration over time.**

The draft provides carbon stock information from FIA and other models but does not offer a sample template of what the *preferred* rows and columns *ought* to include for a spreadsheet that tracks statewide forest emissions and sequestration over time.

Forest carbon accounting is more complex than automobile tailpipes and fuel use but the need for a balance sheet is the same as any other sector. The ledger should capture, for example:

- the various emission sources (including, for example, wildfire and prescribed burns, pest mortality, land conversion, biomass combustion and decay, removals from thinnings and their fate through either a wood product, decay or combustion path, etc.);
- avoided fossil fuel combustion provided by the biomass-to-energy path;
- sequestration gains (growth on existing, reforestation, and afforestation sites)

This will allow forest sector data to be rolled up with other sectors to show the entire statewide GHG picture. Although it may not yet be possible to fill in all the cells due to lack of data, having a preferred accounting format laid out ahead of time will direct effort and research, especially as new monitoring techniques become available.

### 3. Look forward, not just back in projecting forest conversion trends: Temperature refugees

The draft addresses conversion and fragmentation of private forest lands and the need to support incentive programs to keep forest land in forest use.

Specific concerns:

- That findings from the 2015 FRAP assessment will be projected forward and assume that forest conversion of private lands is “not a problem”.

The FRAP summary states: “...The amount of forestland has not changed over the past decade or more i.e., land conversion is relatively minor” (<http://ucanr.edu/sites/forestry/files/233351.pdf> Slide 15 of 40).

However, this report should also assess increasing development pressure on private forest land as climate change becomes real. As temperatures rise and Davis, for example, becomes the new Phoenix, urban residents will increasingly seek relief in the forests of the Sierra, Klamath/Cascades and north coast. Existing forest communities will need to examine their development limit lines, infrastructure areas of influence and expansion of the WUI into private forest lands.

This is another example where cross-agency coordination should be highlighted between the forest and resources agencies, the Smart Growth (SB375) communities and rural planning departments to reduce the impacts of population growth on forests.

- **Forest Legacy and easement holders:** A tangible measure to reduce fragmentation and conversion would be endorsement by the State Forester (i.e. the Director of the Department of Forestry and Fire Protection) to allow accredited Land Trusts to hold easements when federal Forest Legacy money is used in the funding package. This apparently is not currently endorsed by the Department.

As evidenced by recent easement negotiations, many private landowners reject Legacy funding because 1) it places CDF in the conflicting position of holding and monitoring the easement while at the same time wearing a regulatory hat to enforce Forest Practice regulations, and 2) landowners often prefer working with a familiar land trust rather than a governmental agency for instruments that bind them into the future. Standards to ensure land-trust integrity and successor processes for the easement are already available. If the intent is truly to discourage fragmentation, then all tools should be made available and not artificially constrained.

**4. Ensure Transparency:** The ARB has set a high standard of integrity in designing and implementing the many components of the climate change program. Transparency and clear communication are key to retaining public confidence and support.

Forest carbon accounting is complex, and emissions and sequestration do not always balance out on a yearly basis. As with any bank account, the gains and losses need to be tracked, and then explained as to why policy decisions are made. Specifically:

- **GGRF expenditures:** The primary example concerns expenditures from the Greenhouse Gas Reduction Fund (GGRF), where funding tree-thinning projects to reduce fuels may *increase* emissions in the short term, but result in climate benefit on the long term. A decision to use GGRF and incur the short-term emission may be a rational policy choice, but it needs to be legally defensible, and a clear emission tracking process will be essential for making the case. It does not seem appropriate to subsidize forest operations on private lands using public funds unless the climate benefits are tracked and documented. GGRF project expenditures for the purpose of fuel management should be accompanied by a requirement for forest carbon accounting to quantify emissions and long-term benefits as they accrue. Transparency is the best defense in explaining policy choices.

In sum, FCAT has been tasked to provide the best science and professional expertise on forest carbon and forest carbon accounting for the purpose of meeting the state's climate goals. It is incumbent on FCAT to offer the most complete, informed and transparent picture of a complicated topic. I wish you well in the process and thank you for the opportunity to comment.

Sincerely,  
s/

Andrea Tuttle