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Affiliate of Redwood Coast Watersheds Alliance

Forest Carbon Action Team

Subject: Comments on: Forest Carbon Plan - FCAT Concept Paper/Program

PREAMBLE AND BACKGROUND

Coast Action Group is a small conservation minded activist organization that has worked for appropriate management of forest and water quality resources on the north coast of California since 1987. CAG has been active in rule promulgation at Regional and State Water Boards, the Board of Forestry, and other State and Federal Trustee Agencies. CAG's background in forestry includes the participation in the review and comment of hundreds of Timber Harvest Plans and management activities on Conservation Fund owned forest lands on the north coast (where inventory growth and carbon are preferred outcomes in these projects).

GENERAL COMMENTS

First; it is a given that California's forest, and the related management of these forests, have a significant effect on stored carbon and climate effects. And, that the State processes are duty bound, under the law, to address these issues (either through forest management under the Forest Practice Rules, administered by Calfire and the Board of Forestry, or the California Air Resources Board (or combination of all agencies that have a responsibility to address carbon and climate change issues in California).

Commencing with the above paragraph with are immediately delving into issues concerning the efficacy of the Forest Practice Rules, and their administration, in meeting carbon and climate change management mandates – and – who is in charge of the actions necessary to meet these mandates – including the management and development of resilient forests – with increases in inventories that maximize carbon storage while providing other benefits to wildlife and water quality – while providing a viable forest products industry.

Thus, we are provided a large and controversial topic – with numerous interests with varying viewpoints. Adding some confusion and controversy are questions as to what is the mandate if any - regarding the authority and disposition of setting policy for forest management in specific goals of attainment - forest health and resiliency - carbon storage – water quality, fish , and wildlife benefits.

Concerned parties: the Board of Forestry, forest industry representatives, forest advocates have raised numerous questions regarding this process. Thus – added to specific comments made by these groups and individuals - this comment document includes those issues and comments, seeking response to same, with added comment by Coast Action Group (CAG). *Language from the Board of Forestry FCAT comments and the Workshop will be in italics*

CAG SPECIFIC COMMENTS

FCAT

Not all forests are the same, and thus should be managed to accommodate the different conditions resident in the spatially disparate management areas.

- Temperate rain forest of north west California) are different than Sierras - different tree species, climate and hydrology, soils, geology, susceptibility to fire and pests, susceptibility to drought mortality
- Different areas of the Sierra's present a wide degree in variation as well.
- All the areas are different (southern Sierra vs northern Sierra, Coastal Redwood/fir temperate rain forest) and have different issues and outcomes - which makes some FCAT findings overly broad.

FCAT should not lump all the forest types together and generalize on drought mortality issues, disease effects, and management outcomes. We are aware that this is intended by FCAT – clarification is needed in stated policy.

FCAT finds that management can promote resilient and diverse forests and meet carbon storage needs. This statement is true – with caveats. It depends on the type of management applied to a specific forest type and condition. The question(s) arises: Will the type of management applied be likely provide the specific sought after outcomes? How likely are the preferred outcomes to be manifest? What time period is targeted for the preferred outcomes? Related to goal attainment – Is FCAT (or CARB) looking for shorter range outcome (20 to 30 year range) – or – are they willing to accept outcomes in the long term range (100+ years – as per current Forest Practice Rule SYP/LTSY contemplated horizons)? And - are the measurement tools for stored carbon from change in forest stands, inventory increases, or stored carbon in forest products accurate?

Without getting on some firm foundations with the above questions (and more raised in other sections of this paper) the FCAT energies will be misdirected.

Noting the FCAT focus on drought related mortality, disease, and insect vector(s) (which is slightly myopic in that policy is directed at all forests not just these problem areas); the issue of thinning, management from below (removal of small stems and reducing density of overstocked areas) that may provide tree spacing that can help with drought, fire, disease vectors, and may aid increases of overall growth through release: this form of management style does not apply in the

same way to in the different forest types. The FCAT characterization of the problem and need for certain management scenario is overly broad (and may allow for abuse – discussed below in this paper). This can be resolved with more site specific assessment and application of appropriate management requirements.

Does FCAT operate under the stated principal (Board of Forestry/Calfire accounting methodology) that Timber Harvest is carbon neutral? This is based on the claim that stored wood product (from timber harvest) offsets any carbon loss to the forest. There are questions regarding this accounting method that need assessment and answers. The FCAT carbon storage assumptions and numbers (vs live standing trees) with use of the Board of Forestry/Calfire accounting methodology from manufactured wood product may be inaccurate. It has proven difficult to get a complete look at how the Board of Forestry/Calfire methodology is validated or see any of the science on how they get their numbers - carbon saved vs the waste and carbon cost in logging operations, hauling, milling, distribution of finished product, and waste. (see CARB - Below)

CARB/FCAT

CARB should be made aware of the GHG/Carbon Calculation method now used in timber harvest assessment and how Sustained Yield Planning/Long Term Sustained Yield (SYPs and LTSY) – and how it may be misleading and detrimental to attainment of desired outcomes. That is another reason to look hard at how the Board of Forestry/Calfire have reached the conclusion that logging is carbon neutral.

Review the state forest land stats - below.

The amount of forestlands that are privately held in small ownerships - less than 500 (or say less than 1,500 acres) is in the range of 5 to 7 million acres. Those land owners (in reality) can not compete/participate in the carbon market. The rules may allow for aggregation. But, the rules are so complex - and with the need to verify that the storage targets are met - in reality, it is impossible for the smaller landowners to participate.

Considering the amount of acreage involved, it is worth the effort to look at this issue and to find a way to either – to aggregate these lands into a process and be in the market (with a economically feasible way to assure compliance) - or to create incentives for the smaller forest land owners to grow inventories and meet other preferred targets.

Note: NTMPs (currently approx. 300,000 acres of forestlands) - on average (meaning not all) are showing better stocking than industrial owners. However, this can change at any moment (driven by changes in ownership, original owners dying off, changes in the wood market, etc.). There is no real incentive, or method of assurance, to maintain these larger inventories and/or meet preferred targets.

We need to find a way to move the smaller landowners (with that large of a land base) towards these preferred outcomes - where there is benefit for compliance and a penalty for going back on any contractual arrangement. Additionally, there needs to be a way to set a base line that avoids

the practice of logging to lower inventory(s) and then joining the market to take credit for gains in carbon – for all private landowners – industrial and non-industrial.

Non-industrial private lands - 5 or 7 million acres of non-industrial private lands (80% of these ownerships are less than 500 acres) - showing larger inventories (and lower disease and mortality effects than fed and state lands) - need programs that encourage maintenance of these larger inventories (as carbon sinks). Currently - there are about 300,000 of these lands in NTMPs - which allows for lower harvest costs due to the fact that a THP is not needed to allow harvest. These lands cannot participate in any carbon offset program - as they can not be aggregated into a viable plan. That is a lot of acres that can produce more carbon.

Additionally - the industrial lands (approx. 4,000,000 acres) - are showing only small carbon growth (via increased inventories) across the landscape. Note: There is a question as to the validity of these inventory changes that needs assessment.

Finally, and carbon off-set benefits should not be linked to recently diminished inventories (post logging with a smaller base). Benefits should only be accrued (or measured) some pre-logging base line.

The Statistics (below) are from a USFS review (2010).

The stats have interesting implications.

33 million acres of forest(ed) lands in California

Federal ownership is 19 million acres = 57%

State and local agencies (including land trusts) own 3%

Privately owned forest lands are 13.3 million acres = 40%

Industrial private owners are 4.7 million acres = 14%

Remainder private owned forestlands are 9 million acres = 26%

Non-corporate private forestlands are 7.9 million acres

REITs and other investment devices are 344,000 acres

90+% of the non-corporate private ownerships are 500 acres or less

Four million acres are classified as very highly productive lands (capable of producing 165 cu ft of wood product growth per year.

Redwood forests are the highest producing forests.

Approx. 80% of wood product produced in California comes from private lands

BOARD OF FORESTRY & FCAT COMMENTS

In this section of our comments we review arguments and discussion provided by the Board of Forestry (BOF) - at times including pertinent language submitted by the BOF (in italics) - with our response and discussion to that wording. In essence, we are using the thinking and positions provided by the BOF as stimulus for our response and discussion. As you will notice, we often disagree with the BOF –however, there are issues in which we are in agreement. Our overall response is that the BOF, with their oversight in forestry regulation under the Forest Practice Rules has managed to place the value of production of wood products in the near term over the co-values of improvement of forest stands and inventory(s) and other co-values (co-benefits) of carbon sequestration (in the near term - next to 3 or 4 generations), water quality values, and other forest values -including fish and wild life.

As an example of this issue is the case of the Working Forest Management Plan.

The Board of Forestry is mandated (under AB 904) to create a long term management plan for conservation minded ownerships - from 2,500 acres to 15,000 acres. For complying with the goals of applying no even-aged management and increasing inventories, increasing carbon sequestration and providing other water quality, fishery, and wildlife; the conservation minded owner would have an approved plan with once through CEQA and a permit to proceed with management on this basis in perpetuity. See some language from AB 904 - below:

To ensure long-term benefits such as added carbon sequestration, local and regional employment and economic activity sustainable production of timber and other forest products, aesthetics, and the maintenance of ecosystem processes and services, the working forest management plan shall comply with rigorous timber inventory standards that are subject to periodic review and Verification.

A description and discussion of the methods to be used to avoid significant sediment discharge to watercourses from timber operations. This shall include disclosure of active erosion sites from roads, skid trails, crossings, or any other structures or sites that have the potential to discharge sediment attributable to timber operations into waters of the state in an amount deleterious to the beneficial uses of water, an erosion control implementation plan, and a schedule to implement erosion controls that prioritizes major sources of erosion

Upon completion of the first round of approved rules to meet the requirements of AB 904 none of the objectives were met. Under the BOF regulations the standard stocking levels and growth and yield requirements were applied - where the ability to assess short term improvements was impossible and an owner was only to show improvement at the 100 year interval. Nor were the goals of improved carbon sequestration and other co-benefits provided with any credible likelihood of attainment. And to make things really crazy, the BOF changed language to allow aggregation of an unlimited number of ownerships (noncontiguous and under different management regimes) under one Working Forest Management Plan (with the acreage limitation of 2,500 to 15,000). This was not intended by the legislation and if allowed would be a situation that was totally im-

possible to manage. The proposed rule was approved by the BOF and litigated by Coast Action Group and EPIC. The Rule was rescinded - and - awaits further action. FCAT might want to look into this issue - as it is symptomatic of how the BOF sees its role in the management of private lands in this State.

Below is a review of BOF FCAT/Forest Carbon Plan comments with discussion from CAG

Noted - AB 32 requirement to meet 1990 GHG levels by 2020. We may not meet that target. However, planning at the 100 year horizon level (under FPR SYPs and related options) certainly will not achieve reasonable period of time (20 to 30 year time frame)

To meet the mandates of the Global Warming Solutions Act, AB 1504 (Chaptered, 2010) requires that the BOF shall ensure that its rules and regulations that govern the harvesting of commercial tree species, where applicable, consider the capacity of forest resources, including above ground and below ground biomass and soil, to sequester carbon dioxide emissions sufficient to meet or exceed the state's greenhouse gas reduction requirements for the forestry sector, which includes in excess of 30 million acres of federal, state, other public and private lands, as identified in the 2008 Scoping Plan adopted by the California Air Resources Board.

Nor does the above statement, with application of the Board of Forestry/Calfire accounting and long term management measures, meet these required targets.

“The Board of Forestry and Fire Protection is mandated to maintain a vigorous, resilient and healthy forest land base in California, which supports the ecological needs of the forest ecosystem and its human dependencies. The Board recognizes the importance of the sequestration potential for forests, and their benefits in achieving GHG emission reduction targets established by the Global Warming Solutions Act (AB32). At the same time the Board acknowledges that these needs must be considered in conjunction with many other ecological and human benefits that forests provide and for which the Board has responsibility.”

The Board makes a broad claim to consider, balance, and meet said objectives. However, this does not occur. Note: The number of impaired listed rivers in California – with pollutant impacts from forestry operations (See: Coastal Zone Management Act – Re-authorization, or Independent Science Review Panel notation of the Forest Practice Rules failure to protect the beneficial uses of water, or look at the diminished inventories on industrial forestlands).

We concur with the AB 32 objectives to:

Improve forest inventories and monitoring to assure changes will be detected. Industry and the Board of Forestry claims such increases. Are these claims valid – or verified? Over what time frame?

Consideration of statutory and regulatory needs including the review of existing regulations on carbon sequestration. Yes! Please look at regulations that allow for short term inventory decreases and claim increases in the 100 year time frame – and – carbon accounting that does not consider all GHG related issues.

Working with Federal agencies to maintain and increase sequestration levels by: 1) preventing losses of inventory and growth rates; 2) continuing reforestation efforts; and 3) fuels management treatments on federal lands to reduce the risk of catastrophic wildfire. We agree with these objectives. Working with the feds may be problematic under the current administration. It is worth the effort to make progress in this area - since approx. half of the forested area in the State is federal lands (not all these lands are the most productive lands thou).

Reducing barriers and providing additional incentives to encourage voluntary action by private landowners to increase inventory and growth rates while decreasing risk of losses. See our suggestions about finding a way to encourage small forest landowners maintain larger inventories.

Developing sound policies and regulations for CAL FIRE that will contribute to reduction of the risk of catastrophic wildfire. This is an area where Calfire is open to science and suggestion.

Encouraging research related to climate change impacts for the Forestry Sector. We agree. This should be ongoing

Working with other agencies and legislative authorities to ensure development of policies, infrastructure and funding to support fuels reduction and biomass utilization Yes – there are other Trustee Agencies that have a mandate and mission that overlaps the Board of Forestry/Calfire jurisdiction (Regional and State Water Boards, and California Department of Fish and Wildlife). All of these agencies have a mission to protect resources, appurtenant to timber harvest, and, also, a mandate to address carbon and GHG issues.

We agree with the Board on the need for clarification on some issues, creation of definitions, and the need for an explanation of the mission and authority of FCAT.

Policy

We agree with the Board of Forestry that “co-benefits” related to specific management outcomes must be considered with the implementation of any management criteria – or the assessment of any management criteria. It appears that it is assumed that management for attainment of carbon objectives and healthy resilient forests will automatically provide “co-benefits” (improved water quality, fish and wildlife benefits, economic benefits). This cannot always be held to be the case – where management can provide for negatives to those resources (industrial timber management seems to have resulted in species loss, impaired waters, and may be less than carbon neutral).

The authority vested in FCAT (or Forest Carbon Plan) needs clarification. If there is to be attainment of the mandates of AB 32 (and other carbon related legislation) the lines of authority must be clear. In this case it appears that the Board of Forestry is interested in maintaining its authority over Timber Harvest and related rule making. Assessment of the accounting for GHG effects of timber management is mandated under this legislation and an independent and peer reviewed discipline/assessment must be undertaken to make determinations on rules effectiveness in goal attainment (inventory growth, resiliency, co-benefits, and net GHG/carbon effects over different time frames). Leaving such assessment to the Board of Forestry would be a questionable

action. If FCAT (or the Forest Carbon Plan) is to attain the desired goals it may be imperative that either policy and rules are looked at – and – the task of adjusting policy, or creating new policy, may be necessary for goal/outcome attainment. As pointed out, there has been no science based assessment California’s current forest practices and related effects on carbon and or GHG effects – and/or the mentioned “co-benefits’. The Board of Forestry is implying that forest management under their authority has resulted in significant benefits to water quality values, fish, and wildlife (Public Trust Resources) – when in actual fact there is a degree of failure by the Board to adequately manage these resources for Public Trust values.

Forest Carbon Dynamics

The Board of Forestry is correct that the Draft Plan does emphasize the preferred outcome (and importance) of forests as carbon sinks (hopefully with consideration of “co-benefits). We agree with this emphasis by FCAT (and the Forest Carbon Plan). The Board of Forestry goes on to say that the Draft Plan fails to consider management benefits - increased forest growth and carbon sequestered in wood product – with these benefits presumably a result of management under the current Forest Practice Rules.

As stated above in this document, we question the veracity of any claim that the administration of the Forest Practice Act and Rules is achieving the desired outcomes. We request review of the current policy and rules, and related outcomes (in specific time frames), and review of the modeling and accounting process to make determination of efficacy of meeting the State’s Carbon and GHG needs.

Under the application of the Forest Practice Rules - applied silviculture(s), baseline stocking levels, Sustained Yield Plans (and related options) yield greater carbon stocks in reasonable time frames?

Is there science to support that thinning overstocked forests will yield better carbon and resilience outcomes or adaptive capacity?

Does increased harvest and utilization of same as wood product actually increase carbon storage – beyond benefits of retaining a well stocked, spatially appropriate, multi- aged class forest (resilient and adaptive capable forest)?

Will loss of carbon stocks from management, thinning, be replaced in a reasonable time frame (20 or 30 years), Or, would it be more beneficial for shorter term benefits – with the application of a lighter touch approach? This question is based on the fact that the act of thinning to maximize benefits is expensive – thus, there is tendency to “over-thin” to cover costs or increase revenue from a project. There is a balance here that is rarely met. So – how do we drive the appropriate management and outcomes – and how is the activity financially supported?

The carbon storage site potential in living trees in California is not being realized. There is a way to maximize this utility, in individual cases, through management and in some cases with the exclusion and/or alteration of management techniques. In many cases the failure to realize the site

potential is due to mismanagement (low stocking levels, cutting more than growth, clear-cutting or clear-cut equivalent silviculture, and soil loss through mismanagement). Many of these issues on private lands are related to the Forest Practice Rules and their administration by the BOF and Calfire.

Reliance on the Forest Practice Rules to assure carbon neutrality on private lands, without critical assessment is an error that will preclude goal attainment and compliance with cited statute. We are looking for increased carbon sequestration and less GHG production – in reasonable time frames. Only a full assessment of the Forest Practice Rules, management under the rules, and related modeling and validation of outcomes will produce a measurement of effectiveness and likelihood of attainment of desired outcomes. After such analysis, with peer review, FCAT (and the Forest Carbon Plan) should make findings and seek any needed adjustment to policy or rules to will deliver the necessary outcomes.

Figure 8 stresses the importance of protecting the remaining old-growth trees (p. 60, Section 6.3 – Forest Carbon Storage Dynamics). This comment does not adequately address the role of young trees in active carbon sequestration, nor does it fairly represent the current degree of protection for old-growth, which is not defined. It appears that the use of the term old-growth is synonymous with large trees, which is also misleading. Finally, it is not clear what constitutes a “large” tree (i.e. trees > 24” dbh, 30” dbh?).

The statement that “carbon can quickly be recovered to pre-treatment levels if large, fire-tolerant overstory trees are not removed in large quantities,” (p. 61, Section 6.3 – Forest Carbon Storage Dynamics) ignores the fact that forests maintain the ability to recover carbon after tree removal remains, whether large or small trees are retained

Noting the statements – above: The Board has a problem with the ideas of doing what we have suggested, looking at rules and policy that will actually provide the best outcomes. It appears they have decided for themselves (and for you) what works and what is science.

Goals/Proposed Action/Treatments

The BOF states that the goals and actions will be difficult to attain and that there is a lack of description as to the methods of attainment. While more assessment and descriptive language should be forthcoming – assessment of the current effectiveness of the Forest Practice Rules and current Board of Forestry policy will lead you to better decisions.

When the Board asks for proof of low inventories on private lands – for industrial forestry you can look at the current inventories in Mendocino County – which are less than 10% of their original pre-harvest capacity. Stocking in Humboldt County is better – but management under SYPs is not producing inventory increases in the shorter term - 20 to 40 year interval(s). As mentioned, stocking on smaller holdings may be better – but – there is no insurance or incentive to maintain those stocking levels and , under the rules they can disappear at any time (an be approved under Board of Forestry/Calfire GHG analysis format).

Exemption and Emergency treatments – can be beneficial. They also can be problematic (abused)

– it depends. There is no guarantee either way.

The BOF recommends providing estimates within the Forest Carbon Plan on how much funding would be required to achieve each of the stated goals.

Sources of funding are an issue. However, adjustment of the Forest Practice Rules and their administration to attain desired results would not be costly (or would be cost effective). We raised the issue above, how management can be used as an excuse - where inappropriate logging (appurtenant to thinning) can lead to undesired outcomes. This needs to be looked at and addressed.

Again we did mention that there are 5 to 7 million acres of small ownership private forestlands that are in need of some incentive or program that will either promote, or ensure, goal attainment. In part, the Forest Practice Rules (stocking requirements) should be looked at – as one option effective capacity for goal attainment.

Preventing forest land conversions is already a BOF responsibility and relates to local land use planning jurisdictions. The BOF requests clarification regarding how FCAT intends to further this goal.

In regards to the above noted BOF statement – this situation is a mess. First, conversion of forestlands to other use (Ag, vineyards, industrial, etc) is a forever loss. CAG has fought many conversions (some successfully) – with no help from the BOF or Calfire. In fact, Calfire did such a lousy job, as lead agency, in these situations that they threw up their hands and turned such conversions over to the county(s) responsibility as lead agency. In many cases the county(s) did a better job than did Calfire. This subject should be addressed by FCAT and the Forest Carbon Plan.

We agree with the use of conservation easements to protect forestlands and their carbon storing capacity. We have been successful in this effort in participation with the Conservation Fund projects. These projects have, both, easements (riparian – to be managed for old growth development), and managed to increase inventory (with diverse age classes – with fish, wildlife, and water quality benefits) by harvesting less than growth and in a way to encourage growth, diversity, and resiliency. It can be done.

The proposed action to ensure timber operations conducted under the Forest Practice Act and Rules contribute to the achievement of healthy and resilient forests that are net sinks of carbon differs from the direction provided to the BOF by AB 1504, which requires that the BOF assures that its rules and regulations, where applicable, meet the sequestration goal of 5 million metric tons (MMT) of carbon annually from the forestry sector.

As to the above quote – Again – it can be accomplished, but will take review and adjustment of the Forest Practice Rules – including GHG accounting.

Implementation

The BOF agrees with emphasizing a regional implementation approach where feasible. However, the regional approach should coordinate with all stakeholders and take into consideration the

current management regime of forest lands within the targeted region. Although managing by region to achieve Forest Carbon Plan goals maybe appropriate, setting individual carbon goals for specific regions may not be appropriate

Discussion with Stakeholders in plan development is desired and necessary. Individual needs and concerns should be heard – but should not deter a regional, or area specific, plan from being accomplished and meeting the intent of the law and preferred outcomes.

It is appropriate to discuss and disclose factors incorporating regional or site specific actions. It is also important to include all trustee agencies (noted above in this paper) in plan development. They all have (and are on notice) a mandate to address similar issue regarding carbon storage, climate change, and GHG issues – as well as responsibility to address issues related to the resources they are responsible for.

Federal Lands

With the current administration it is not established how the Forest Service will respond to California’s carbon objectives. FCAT (Forest Carbon Plan) staff should approach the Forest Service and seek co-operation with actions that will help with goal attainment.

Changes in carbon levels in federal forestlands should be monitored to determine trends.

Forest Carbon Accounting/Inventory

Several places in this paper we have asked for a review of accounting practices. We have trouble with the BOF/Calfire timber harvest accounting for GHG (and carbon) and ask for a review of the science, standards and methods – with consideration of all aspects related to – living and dead tree contribution, harvest carbon loss from soils during timber harvest, total GHG cost of logging, hauling, milling, distribution, waste in the process, how long wood product provides for sequestration, etc. – with comparison with effects of leaving (or accruing) larger inventories of multi-aged group trees and associated forest types (and related “co-benefits)”. We also agree that outside reviewing sources should be employed – CARB/Lawrence-Berkeley Labs and other Peer reviewing sources.

Reference examples/case studies on how forest carbon is measured elsewhere in the world and what the associated strengths and weaknesses of these methods are. The BOF recommends reviewing and including Intergovernmental Policy on Climate Change (IPCC) accepted methods for carbon stock accounting.

Discuss the strengths and weaknesses of the different inventory methods used in the ARB Scoping Plan and FCP analysis. Be explicit about the limitations of FIA data when used alone, as well as remotely sensed imagery as it relates to forest inventory.

The BOF also emphasizes the need for a single inventory system for a more consistent foundation for analytics

We agree with the above noted suggestions by the BOF. Inappropriate inventory methodology, and/or changing the methodology during the continuum of assessment over the years will compromise analysis and the ability to make determinations.

Harvested Wood Products

The benefits of harvested wood products have not been totally established – especially in consideration of comparison with total harvesting costs (in GHG contributions) and the actual accounting of all losses and gains – compared to growing a managed - well stocked, resilient forest stand exhibiting multi- age class, well distributed stands (with assessment of related co-benefits. Current science does not support such claim that there is advantage to carbon storage from wood product. Additional science might help clarify these relationships. The BOF also requests more study. We agree. However, studies should be independent and peer reviewed.

Co-benefits

The BOF Forestry does not seem to care that much for FCAT(Forest Carbon Plan) consideration of co-benefits (while it is in the mandate for the BOF to consider same) – and – seems to imply that co-benefits have nothing to do with carbon (as not being specified in AB 32 as a goal)..

If FCAT (Forest Carbon Plan) did an accounting of lost carbon and GHG effects of forest miss-management (loss of inventory, forest biomass, loss of soils due to improper yarding and harvesting techniques, and improper road construction), the carbon loss and GHG cost would be astronomical. The recovery of these lost resources is very carbon/GHG intensive. Additionally the opportunity cost (loss of gained carbon sequestered by setting these resources back – and time to recover = what stored carbon may have been accrued during that time period) is substantial. Not to consider co-benefits in carbon accounting would be ludicrous.

Consideration of co-benefits implies balancing the needs of all resources. However, we suggest that the ideal goal of the managed forest – that is increasing in inventory (carbon mass) exhibiting well stocked, multi-age class, well distributed forest type trees, with the natural variation of understory components – by its own nature would produce the desirable co-benefits that the BOF is claiming to be their sole purview. We consider this wrong thinking.

Supporting Science

We agree with the BOF that supporting science should support conclusions on the ability of forest type, mix of tree size, stocking density, management scenario, etc. to support more, or less carbon sequestration and related co-benefits – given different climate response variables.

Putting all of this together is a very large undertaking. Inclusion in the process the other Trustee management agencies and the possible development of peer review team may be of help in developing a good background in science.

We believe that the bibliography included in this document will offer some help with science background.

BELOW ARE SOME NOTES/QUESTIONS on FCAT/FOREST CARBON PLAN from the WORKSHOP

Carbon benefits from inventory Growth

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What kind of inventory do you want (density, volume, understory management, species)?
What time frame are they looking for to attain increases (100 years or 30 years)?

Stated - they want to push this process over the line. What is the hurry? Maybe they might want to have a more comprehensive and polished product if more time is given.

Proposed Action - outcome(s):

- * Increased forest volumes
- * Increased forest resilience
- * Expansion of industry health - and - greater market for wood products
 - This assumes that harvesting timber and related processes are carbon neutral
 - There is a question with the accounting for this and request an open assessment - an explanation of carbon accounting that demonstrates that harvesting and all related activity are accounted for in this assumption.
- * Enhance carbon sequestration (urban and forest)

Other Goals - regarding the framework of getting there (more stored carbon)

- * Regionalize implementation of the plan.
 - Would this take into account species, hydrology, forest type differences?
- * Work on a Landscape/Watershed wide scale
 - More definition is needed to establish how this will work.
 - Cultivate Public Funding
 - Again - how is this going to work?
- * Regulatory & Policy Changes
 - What regulatory frameworks are going to be looked at - forest practices?
 - Are Sustained Yield Plans (Options A, B, C) capable of providing measurable and verifiable results? Are the planning horizon(s) acceptable?
Regional management? Burning?
- * Future Conditions (desired) - Involving Forest Restoration and Carbon sequestration.
 - Some current forest are abused - suffering from low inventories
 - Should be referenced to - historic vs current status
 - Some current forest suffering from drought mortality
 - Regional differences in species, hydrology, forest type, etc. - need to be accounted for.
- * All of above should lead to development of regional (or area) management criteria.

With the consideration of goals and carbon outcomes – there needs to be definitive targets regarding what the forest (what a specific identified forest community) should look like and what the end goals, outcomes for that forest should be and what methods would be used to attain goals and verify movement towards those goals and over what timelines those goals/targets would be accomplished.

Questions from the Audience:

Rob Diperna: *What is this plan? How can we sequester carbon? Does CEQA apply?*

How does this plan fit with SB 605 - establishing measurement and limitation on GHG emissions?

Is soil carbon loss considered ?

Need for more accurate and transparent carbon accounting - cradle to grave

Wood product accounting?

Timber Harvest accounting - what is the real loss from aggressive forest practices? How are SYP and Option A numbers accounted for and verified - with any degree of accuracy? What is the allowable inventory baseline(s)?

Why is wood product superior in carbon sequestration than increases in forest volume and other losses related to harvesting and processing?

Does the accounting in forest practices for carbon retained in forest volume account for the benefits to water quality, species retention, and air quality benefits?

Is FCAT a plan on it's own? Or is CARB certification necessary?

Forest Carbon and Climate Change Effects.

Need regional and temporal assessment and management?

Need assessment of black carbon and fire effects?

Has the history of fire management led to increased understory and larger more devastating fire events?

How has the loss of natural fire regimes changed our forests?

How can fire be used as a management tool?

These effects need assessment for application of future site specific management policy.

The focus on carbon gets lost when you talk about forest health?

Disagreement with above statement - Forest health, and outcomes related to management for attainment of this goal, can be integrally linked to positive carbon outcomes (shorter and long term). Remember - one of the goals is a resilient forest. Can you have larger volumes and resiliency? We think this is possible. Forest health does relate to carbon sequestration. Additionally, do not forget about the other forest values related to water quality, fishery, species, and air quality.

Attributes of Resilient Forest

Variability

Resilience - capacity to respond to disturbance

Gary Rynearson - 4,000,000 acres under Sustained Yield Planning (meeting LTSY)

LTSY - is not really defined.

The LTSY/SYP predicts long term forest volume gains over a 100 year time frame.

Is this what we are looking for? Is this acceptable - when greater gains can be obtained in shorter time frames (20 to 40 year range) - with management for gain (harvesting a % less than inventory growth) This all depends what baseline inventory you start with. Are you looking to start from a just harvested clear-cut (or near clear cut) or low inventory baseline (from near recent history harvesting)?

Does even-aged managed forest inventory provide the outcomes you are looking for?

How are the growth and yield outcomes verified? Have they been verified for the 4,000,000 acres Mr. Rynearson claims to be part of this attainment strategy?

Calfire and other forest mensuration experts need to be consulted in the establishment of a verification process.

Resilience and Protection (issues raised by Paul Mason)

*Is the preferred outcome bigger older trees (for more volume) with increased spacing?
How do we get there? What does the FCAT plan say about this?*

How does develop the short term activities that will lead to the desired outcomes
For the long term and shorter long term? What are the preferred time frames and related outcomes?

It is suggested that only way to get there is via a regulatory (or series of regulatory) program(s) directed at addressing these issues

The Forest Practice Rules need to be looked at for adjustment - as:

They are not producing the desired outcomes.

To produce the desired out comes - changes in regulation must occur.

Forest Carbon Accounting

26% of a round log actually makes it into a wood product that is stored?

What is the waste ratio in production of wood product?

The Forest Carbon Accounting (timber harvest, related operations, soil carbon loss, and all GHG emissions related to harvesting and processing) - must include these items and be transparent.

Current the science and methods are not available for review.

Inventory, growth and yield, and mortality data (some showing the forest as an emitter) needs assessment - with conflicting data - and integrated with the more site specific management policy (e.g some regions of the Southern Sierra vs northern Sierra, Coast Cascade, and Redwood regions).

Again - how is the verification of volume increases working for the SYP and Option A plans?

Are the Forest Practice Rule stocking standards sufficient for goal attainment?"

Thank you for your efforts in this process!

Sincerely;

Alan Levine for Coast Action Group

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