Monday, December 15, 2014

Chairman Mary Nichols and ARB Staff
Air Resources Board, California Environmental Protection Agency
1001 I Street
Sacramento, CA 95812

RE: Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms

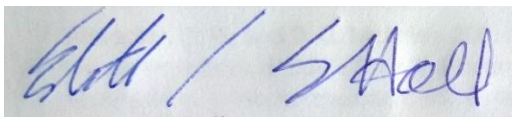
Dear Chairman Nichols:

Weyerhaeuser appreciates the opportunity to comment on the proposed amendments to the Compliance Offset Protocol: U.S. Forest Projects. Weyerhaeuser has been actively participating in the development of what is now the ARB Forest Protocol for the last decade. Weyerhaeuser participated in the California Commission's May 2004 workshop on the early efforts to establish forest protocols. Since then we have responded to multiple Climate Action Reserve requests for comments on various versions of the Forest Sector Protocol (including Version 2.0 in September 2007, Version 3.0 in January 2009, version 3.1 in May 2009, the CAR Forest Project Protocol white papers in May 2011, and draft Version 3.3 in July 2012).

Weyerhaeuser Company, one of the world's largest forest products companies, was incorporated in 1900. In 2013, sales were $8.5 billion. Weyerhaeuser grows and harvests trees; and manufactures and distributes a variety of forest products. In the U.S., Weyerhaeuser owns or manages over 6.6 million acres of forestland, and it is in this context that we comment on this protocol.

Below you will find several comments we hope the Air Resources Board will take into consideration. We are available to answer any questions you may have, and look forward to an opportunity to make further contributions to your efforts as you seek to improve the forest carbon offset protocol.

Sincerely



Edie Sonne Hall

Comments on proposed changes

Section 3.1.A.4.B.

B) Open Canopy harvest units, harvest units with an area of 3 acres or greater that have less than 50 square feet of basal area retention, must have a buffer area of forest vegetation containing at least 50 square feet of basal area retention must surround the harvest unit. The width of the buffer area must be a minimum of the area of the harvest unit, rounded up to the nearest acre, multiplied by 40.

This requirement is excessive. The protocol previously required "Stands adjacent to recently harvested stands must not be harvested using an even-aged harvest until the average age of the adjacent stand is at least 5- years old, or the average height in the adjacent stand is at least 5 feet."[1] California Forest Practices rules require harvest units to be restocked for 5 years or have stocking at least 3 years old and 5' tall before adjacent units can be harvested. The proposed change appears to require a buffer width 40x the area of the harvest unit (or the equivalent of 1600 acres wide) until the clearcut unit reaches 50 square feet of basal area retention, which can be up to 15 years old[2]. There is no regulatory precedent or environmental justification for the proposed change.

The current ARB Compliance Offset protocol already contains strong safeguards ensuring environmental integrity associated with harvest units. For example, the Natural Forest Management Criteria gives forest owners the option of choosing to participate in a third-party forest certification program under the Sustainable Forestry Initiative[3], Forest Stewardship Council[4], or American Tree Farm programs, and these programs have detailed green-up requirements to address aesthetics and wildlife habitat. In addition, many state forest practices acts have specific green-up requirements to environmental integrity.[5]

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[1] Section 3.8.4 Balancing Age and Habitat Classes. Compliance Offset Protocol: US Forest Projects. Adopted by California Environmental Protection Agency Air Resources Board, October 2011. pg. 24

[2] 7 to 10 years in loblolly pine; 15-18 years in Douglas Fir

[3] Objective 5, Performance Measure 5.3 Program Participants shall adopt a green-up requirement or alternative methods that provide for visual quality. http://www.sfiprogram.org/files/pdf/section2sfirequirements2010-2014pdf/.

[4] Indicator 10.2.e, Forest Stewardship Council USA Natural and Plantations Standard (FSC-STD-01-2010).

[5] See, for example, Washington State WAC 222-30-025 - Even-aged harvest size and timing.

In addition to documenting our opposition to the proposed change regarding open canopy requirements, we'd like to take the opportunity to reiterate our comments submitted to the Climate Action Reserve on Draft Version 3.3. CAR Forest Protocol.[6] We feel that the requirement of limiting clearcut size to 40 acres is arbitrary from a climate perspective and significantly undermines potential participation in the California offset market. This size limitation is inconsistent both with standard environmental mitigation measures and the economics of harvesting in many regions of the United States. Additionally, this restriction has no impact in how carbon in forests is accounted for in forestry operations.

Even the "Carbon Dynamics Associated with Even-Age Forest Management" white paper, commissioned by the Climate Action Reserve in regards to the Forest Project Protocol, does not support one "optimal" way to manage for carbon sequestration. As we note in our stakeholder comments, the white paper itself explains that different silvicultural treatments are appropriate for different parts of the country.[7] The studies that support the concept that the quantity of live tree retention significantly determines forest carbon are in the intermediate to shade tolerant angiosperm forests species in a northern hardwood forest. Not surprisingly, these are the forest types that typically use retention harvests. The white paper draws the wrong conclusions from too limited data on shade-intolerant species. It states that "modeling results of intermediate to intolerant (shade) Douglas-fir showed no impact of silvicultural retention treatment."[8] The study cited, however, excluded a no-retention scenario. Other studies, not included in the white paper, demonstrates the vastly superior regeneration growth (which corresponds with carbon sequestration) of Douglas-fir (and to a lesser extent other species) under a clearcut scenario compared to retention scenarios. See, for example, the following chart from a study in Oregon:[9]

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[6] http://www.climateactionreserve.org/wp-content/uploads/2012/08/FPP-V3.3-Public-Comment-Weyerhaeuser.pdf.

[7] http://www.climateactionreserve.org/wp-content/uploads/2011/04/Weyerhaeuser_Forest_White_Paper_Comment.pdf.

[8] Foster, B.C, T. A. Robards, and W.S. Keeton. 2010. Carbon Dynamics Associated with Even-Aged Forest Management. Researched and written for Climate Action Reserve (CAR). Dec. 12. 2010.

[9] Oregon Forest Resources Institute. 1999. *Harvest and Regeneration in Oregon's Commercial Forests: silvicultural options and outcomes in forests managed for wood production.* A background paper commissioned by the Oregon Forest Resources Institute.

Fourth-year data combined from two experiments showing how western Oregon conifers grow under various light conditions. (Growth is in cubic centimeters per tree.) *Source: Mike Newton, Oregon State University.*

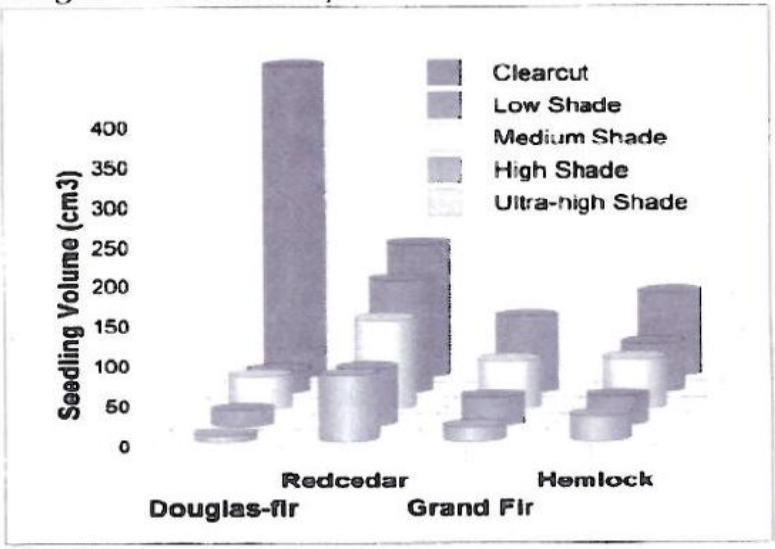

Figure 2. Western Oregon conifers grown under various light conditions.

Clearcutting as a harvest and regeneration method has sound silvicultural and ecological bases:

- It allows sunlight to reach the ground so newly planted seedlings quickly take root and regenerate the forest. As such, it's the system best suited to commercially important shade-intolerant species, including Douglas-fir in the western United States and loblolly pine in the southern United States. These tree species reach their full growth and yield potential only when grown in full sunlight.
- It provides habitat for animal species, some of which are of high conservation priority, that are associated with early successional plant communities[10]. Some plant species in these communities also are of high priority.
- It results in stands of even-aged trees that produce wood products with more uniform qualities.
- It requires fewer roads and entries into the stand than partial harvesting systems, thus reducing the risk of sedimentation in streams.
- It is often more efficient, cost-effective and safer than partial harvesting systems.

[10] Dessecker, D. R., and D. G. McAuley. 2001. Importance of early successional habitat to ruffed grouse and American woodcock. *Wildlife Society Bulletin* 29(2):456-465; Dettmers, R. 2003. Status and conservation of shrubland birds in the northeastern US. *Forest Ecology and Management* 185: 81-93; Fuller, T. K., and S. DeStefano. 2003. Relative importance of early-successional forests and shrubland habitats to mammals in the northeastern United States. *Forest Ecology and Management* 185:75-79; Litvaitis, J. A. 2001. Importance of early successional habitats to mammals in eastern forests. Wildlife Society Bulletin 29(2):466-473; Litvaitis, J. A. 2003. Shrublands and early-successional forests: critical habitats dependent on disturbance in the northeastern United States. Forest Ecology and Management 185:1-4.

We recognize that appropriate limits to clearcut size do provide environmental benefits as recognized by leading certification programs. Presumably this is one of the reasons that the ARB Protocol encourages participation in a forest certification program in section 3.1. As part of their criteria, these programs all provide reasonable limits on clearcut size based on sound silvicultural and sustainability principles. Furthermore, some states also regulate clearcut size based on their own silvicultural realities in their specific states, which are designed to ensure harvest activities will not negatively impact other environmental variables.[11] There is little likelihood of a landowner engaging in the added expense of certification and then compounding that expense with this artificial limit on clearcut size. This also applies to the green-up requirements, which are addressed above.

Overall, the smaller the allowable clearcut size, the more roads need to be built and the more costly the silvicultural operation becomes. This arbitrary limitation discourages landowner participation, offers no additional environmental benefit, and adds nothing to the proper accounting of carbon stored as part of the protocol.

Suggestion: We recommend removing the open canopy harvest requirements by eliminating Section 3.1.A.4.B. Further, we recommend allowing the clearcut size limit to be determined by the specific state forest practice rule, BMP, or certification system that governs the particular project area.

Sections 5.1.1(d)(1); 5.2.1(h)(1); 5.2.2(e)(1); and 5.3.1(d)(1)

(1) If correctable errors to the baseline are detected in subsequent verifications, the baseline must be adjusted prior to a verification statement being issued. The corrected baseline would then supersede the originally verified baseline for the purpose of determining GHG emission reductions and GHG removal enhancements going forward.

> (A) Previously issues ARB offset credits will be subject to the invalidation provisions in section 95985 of the Regulation.
>
> (B) In no case will additional ARB offset credit be issued

There should be consistency in how corrections apply in the case of over-stating the baseline or understating the baseline. Currently the protocol requires invalidation of credits if the baseline had been under-represented but does not reward additional credits if the baseline is found to

[11] See, for example, Washington State WAC 222-30-025 - Even-aged harvest size and timing

be over-represented. We believe that the protocol should rightly invalidate credits if a mistake is found in the baseline; and likewise reward additional credits if that baseline had been overstated. There should be consistency in how an error is corrected.

Suggestion: change **5.1.1(d)(1)(B), 5.2.1(h)(1)(B), 5.2.2(a)(1)(B), and 5.3.1(d)(1)(B)** to the following:
(B) Any additional ARB offset credits that accrue from correcting the baseline should be issued to the landowner.

Section 5.2.1(d)(1) and 5.2.1(d)(3)

Equation 5.5. Determining the Minimum Baseline Level Where Initial Carbon Stocks Are Above Common Practice MBL = MAX(CP, MIN(ICS, CP + ICS - WCS))

The proposed change requires that projects with an initial carbon stocking (ICS) above common practice now must assess stocking levels on properties held by the landowner outside the project area, but within the same logical management unit (LMU). It is unclear the purpose of this change other than to add cost and time to an already expensive process. Costs will increase due to: additional inventory in the LMU, verification of additional inventory in the LMU, time and expense in assessing the viability of a project because both projects and LMU will need to be mapped out and assessed. The process will now be biased against lands with high carbon stockings, which often are the most vulnerable to future lowering of carbon stocks.

Suggestion: Keep the same definition of Minimum Baseline Level as is found in the current compliance offset protocol.[12]

[12] Equation 6.5 in Compliance Offset Protocol: US Forest Projects. Adopted by California Environmental Protection Agency Air Resources Board, October 2011. P.26.