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Re: **Comments on Draft EA and the Proposed Short-Lived Climate Pollutant Strategy:**
<http://www.arb.ca.gov/lispub/comm/bclist.php>

From: **County of Plumas**
May 25, 2016

Dear Air Resources Board Members and Staff:

Plumas County appreciates the opportunity to comment on the Forest Black Carbon sections of the Proposed Short-Lived Climate Pollutant (SLCP) Strategy (Strategy)

General comments:

As Planning Director for Plumas County, I am responsible for land use issues over a landscape that is 72% forested and which averages eight (8) people per square mile.

There are over 11 disadvantaged and severely disadvantaged communities (DACs) within a Plumas County population of 18,000 residents.

It is from the perspective of seeking real remedies for two intertwined problems, rural poverty and unhealthy forests, that I offer suggestions for achieving the goals and outcomes described in the "Forest Black Carbon" component of the SLCP Strategy.

Plumas County enthusiastically supports the one billion dollar investment target for forest fuels and greenhouse gas emissions reductions on forestlands in California (Pg. 53).

On the ground, this annual funding target translates into approximately 500,000 acres of fuel reduction treatments on public forests and a comparable 500,000 acres on private forestlands per year. As national forests comprise nearly 60% of California's forestlands, the \$300,000,000/year needed by public forest managers to reduce the GHG emissions on public lands should be considered the minimum annual baseline public lands target for the SLCP program. A comparable investment baseline of \$300,000,000/year for the 40% of California's private forests would include funding for forest conservation easements, which are applicable on private forestlands.

As we discuss in more detail below, catastrophic wildfire and increasing forest drought stress know no ownership boundaries. All of California's forestlands need the increased rate of "fuel reductions to reduce wildfire risk" that is recommended on pages 53-57, although implementation strategies would be different.

Across a topographical continuum, prescribed fire at a landscape scale could work downslope from ridgelines to reduce fuels in remote, steep and un-roaded areas. More mechanical fuels treatments

combined with aggressive development of biomass utilization facilities in less steep and more road-accessible forest areas will provide needed revenues for fire hazard and fuels reduction projects located closer to settlements. (Uplands and Forest Workgroup Resource Management Strategies for the Upper Feather River Integrated Regional Water Management UFR IRWM Plan)

Fuel reductions should include prescribed burning for ecosystem purposes and to maintain fuels treatments after 9-30 years, which is the historic fire return interval for forests in the UFR region (UFR IRWM Plan). Although there is scientific consensus that one million acres of forest fuels reduction treatments per year, over time, will lessen the magnitude of the forest black carbon and mature tree mortality crises that we face; there are significant institutional barriers to timely implementation of the forest Strategy. Without addressing these institutional barriers, the forest Strategy could become a theoretical exercise.

The first challenge for ARB is the “wicked problem” of aligning biomass capacity investments with investments in sustainable forest management. The biomass development program cannot put the “cart before the horse” by investing in biomass development at scales that are significantly larger than community scales without agreements on the pace and scale of forest thinning treatments that generate the biomass supplies that larger regional scale biomass facilities will need for sustained operations.

Renewable energy portfolio support for biomass facility development and operation is squarely within the purview of ARB’s responsibilities under the Climate Scoping Plan. Hammering out the sustainable and “all lands” landscape scale forest management and protection agreements that are necessary for a sustainable flow of biomass feedstock supplies are, as the forest Strategy notes, the responsibilities of other entities. But the “wicked problem” of the mismatch between feedstock for biomass operations and sustainable forestry plagues these other entities as well. For example, USFS Collaborative Forest Restoration Lands Program (CFRLP) requires that existing biomass processing capacity is operating in the region in order for CFRLP federal funding to flow into more California federal forests.

Another significant challenge for ARB is moving from point-source pollution and technology-based approaches for reducing black carbon in the non-forest sector. Grappling with the “messy” world of non-point source pollution control that characterizes the forest sector is essential for broad implementation of the forest Strategy.

The third challenge for ARB is measurably improving public health and economic opportunities in DAC communities in and around forests. Targeting benefits to DACs is squarely within the purview of ARB’s responsibilities under the Climate Scoping Plan. Developing performance and accountability metrics in addition to “CalEnviroScreen”, which is generally inappropriate for rural headwaters communities, is a significant challenge for ARB. It needs to be recognized that ARB’s current DAC assessment procedures are actually disincentives for retooling industrial scale biomass facilities now idle in DAC communities and for developing new community scale biomass utilization facilities in DAC communities.

Given these challenges, it is not surprising that the forest Strategy fails to identify targets, milestones, and short-term and longer-term investment strategies. Instead, the forest Strategy relies on existing state and federal efforts that are being accomplished with very limited and sporadic support through existing bond and budget funds to reduce the biggest source of black carbon emissions in California - the 66% of black carbon emissions that are released by burning forests.

The forest Strategy just doesn't walk its talk. The **“Recommended Actions”** (Pp. 53-57) really offer nothing new to DACs and to forest landowners in California except to “wait and see beyond a reasonable doubt” while DACs and forest ecosystems continue to suffer from the accelerating global harms that are documented so eloquently in the Strategy.

We recognize that the ARB has limited authorities to “command and control” SLCP outcomes on forestlands. But the ARB needs to recognize the essential role of existing partnerships for overcoming its institutional challenges. The ARB needs to find innovative ways to overcome institutional barriers in order to achieve the real potential of implementing the forest Strategy and thereby, providing global climate black carbon reduction leadership for the world's forests. The SLCP Strategy for forest GHG begins a discussion in the Recommended Actions section (Pp. 53-57) by identifying initial steps for moving towards a “non-point source” pollution control strategy across 33 million forested acres. However, the integration between the recommended actions is missing and the forest Strategy is, at this point, a list of moving parts without a common destination.

In summary, absent thoughtful analysis about opportunities for integrated partnership and investment opportunities, implementation of the forest Strategy based on CALFIRE solving the forest black carbon problem without partners and by using existing funds is no solution. CALFIRE is not equipped or authorized to address fuels reduction projects on federal lands. Nor is CALFIRE oriented to ensuring tangible benefits to forest DAC communities.

As emergency responders, CALFIRE's leadership and employees will always valiantly attempt to rise to impossible challenges. But institutional courage is a poor substitute for an ARB commitment to make the institutional changes that are necessary to overcome what we see as self-imposed barriers to an effective forest Strategy. It is the DACs in forest communities and the world's climate options that really lose if institutional hurdles are not overcome by ARB and if the forest Strategy does not achieve real solutions to the intertwined problems of rural poverty and unhealthy forests.

Implementation partnerships may be a new undertaking for the ARB, but other non-point source pollution control programs in California have learned to invest in effective partnerships with some or all of the following attributes:

- Shared goals.
- Collaborative engagement at all policy and implementation levels, with ongoing communication between all levels.
- Applied science frameworks that are developed in collaboration with those who will fund, evaluate, and implement integrated programs, and that ensure accountability through periodic outside reviews.
- Strategic pilot project development, implementation, and evaluation throughout California in recognition of California's ecological and cultural diversity.
- Targets, metrics, and adaptive management triggers and thresholds that integrate the best available science with ground-based knowledge and experience and that “roll up” from the ground into state and federal assessments (like FRAPP and FIA).
- Shared and durable commitments to adapt strategies over time based on new information and based on cumulative and collective partner experience.

- Shared program values and outcomes that are expressed and actualized through multi-year public/private investment portfolios and strategies.

This partnership implementation approach involves a significant institutional mindset shift from most of the SLCP non-forest black carbon strategies. Therefore, the central challenge for further SLCP Strategy development for forests is defining the pathway forward from the current approach of identifying the problem and punting on the solution. An accountable and integrated implementation program for one million acres per year of forest fuels treatments with tangible benefits to disadvantaged communities (DACs) over the next 20 years that is based on real investments, targets, and milestones is the solution. The challenge is how to get there from here.

Specifically, we recommend that further forest Strategy development prioritize developing a partnership-based approach for four (4) near-term priorities that were developed by the Uplands and Forests Workgroup for the UFR IRWM Plan:

- Moving outward from the wildland urban interface (WUI) fuels reduction programs currently administered by CALFIRE, the USDA, and the US Forest Service, and supporting the expansion of these efforts to watershed and fireshed scale through existing local and regional firesafe councils and through existing and emerging watershed and forest collaboratives - with new and additional funds.
- Moving outward from site-specific catastrophic wildfire and drought stress protection strategies for critical habitat areas and species conservation, to landscape scale conservation and connectivity through landscape scale fuels reduction and forest health treatments - using new and additional funds.
- Moving deeper into the reintroduction of prescribed fire through tribal collaborations that range from species-specific burning for critical ecosystem recovery and conservation, to landscape-scale managed burning for reducing forest scale wildfire risks and black carbon emissions. A voluntary tribal partnership program would encompass all California forestlands but would be initially targeted towards National Forest, National Park, and National Monument lands, state lands, conservancy and trust lands, and tribal lands where strong tribal-agency partnerships already exist or are under advanced development - through an infusion of new funds and additional policy support.
- Actively integrating DAC benefits into concurrent forest stewardship activities and biomass development through supporting the expansion of collaborative landscape planning and implementation by the USFS, the USDA, ARB, CALFIRE, FRAPP, CNRA, the State Conservancies and tribes; and through the ARB's commitment to developing appropriate assessment and performance measures for achieving real benefits for forest-dependent DACs.

Recommended Actions to Reduce Wildfire Risk and Black Carbon Emissions: Specific comments on integrating the following actions for effective and timely implementation of the forest Strategy.

Increase investment in forest health programs:

Next steps in the forest Strategy development process could include the development of a series of listening sessions on implementing the forest SLCP and Forest carbon strategy with forest and watershed collaboratives from around the state. ARB, CALFIRE, and the federal forest managers could partner with the state conservancies and the state resource agencies to host these sessions.

Next steps in the forest Strategy development process could include the development of a white paper that identifies pathways for the coordinated implementation of the FCAT Forest Carbon Plan, the Region five, national forest land and resource management plans, and the ARB's Climate Plan update.

Next steps in the forest Strategy development process could include addressing co-benefits and additionality in the Climate Plan update by revising the analysis of co-benefits and additionality based on the significant volume of new scientific information that is now available on forest wildfire dynamics and other climate threats to forests, such as increasing forest moisture stress and the extensive drought mortality of mature forest carbon stocks.

Next steps in the forest Strategy development process could include the development of a white paper that links landscape scale science as described in GTR-220 and GTR-237 and other federal forest research publications with the FIA and the FRAPP inventories to begin quantifying sustainable biomass feedstock projections from mechanical and hand thinning programs for suitable forest lands.

MOUs between California's forest agencies and the state conservancies that begin to lay out institutional partnership authorities and opportunities for integrated investment and implementation of black carbon GHG reductions and forest conservation could be another early action.

Foster private sector investment:

Relying on conservation easements as the primary GHG emissions reduction strategy for private forestlands in California does not in and of itself provide any long-term guarantees for GHG emissions reductions and DAC community benefits that the forest Strategy aspires to achieve. Private investments into biomass development need renewable energy support and sustainable feedstock supplies as discussed previously and below, along with targeted and early program support for facilities that provide direct employment opportunities and public health benefits to DACs.

Implement Governor Brown's proclamation on prescribed fire:

The missing voice and opportunity in the discussion is the tribes. Finding mutually beneficial ways between agencies and tribes for including tribal knowledge and expertise on fire as a forest restoration and conservation tool is essential for effectively integrating prescribed fire with forest conservation. It is important to note that tribes without federal recognition, without a tribal land base, and without Indian casino revenues, face poverty barriers and public health risks that are comparable to the challenges for other forest DACs.

Collaborate with federal and private landowners:

In addition to the many Firesafe Council fuels reduction programs (where CALFIRE already has programs of work and unmet needs identified), the U.S. Forest Service has invested in the development of a dozen or so collaborative forest and watershed stewardship partnerships across major portions of National Forests in California.

The Sierra Nevada Conservancy (SNC) is actively coordinating with the California Natural Resources agencies, federal forest managers, and local partnership groups to identify and fund ecologically important projects through the Watershed Improvement Program through funding under Proposition 1, and through other SNC programs.

The forest Strategy should explore active partnerships with the SNC and other state conservancies as one way to expand the ARB's leveraging opportunities to benefit DACs and forests by building on the extensive networks and needs assessments already developed by California's conservancies and federal forest partnerships.

Align Financial Incentives with Beneficial Use of Woody Waste:

The Uplands and Forest Workgroup for the update of our Upper Feather River Integrated Water Management (IRWM) Plan has determined that public and private forest managers can reduce mechanical and hand fuels thinning costs by up to \$500/acre if biomass processing facilities are operating within a 50-mile radius of forest treatment projects. With biomass processing, more forest fuels thinning projects can be accomplished with forest managers' budgets and forest thinning projects become net GHG reduction projects. For example in one forest fuels thinning project identified for IRWM funding, the difference between 3436 MTCO_{2e} and -2636 MTCO_{2e} is the GHG emissions associated with open burning of thinned forest materials instead of processing thinned materials in a biomass electrical generating facility. The difference of 800MTCO_{2e} is the project GHG emission calculation with and without biomass utilization capacity and GHG calculation methodology differences.

The workgroup also found that the period for historic fire return intervals is also useful for understanding the project level GHG emissions that are associated with transporting fuels to biomass facilities and converting those fuels to electricity and for heat for co-located wood products manufacturing such as kiln drying. The average 20-year fire interval time frame for historic fire return intervals in the UFR region was helpful for comparing climate impacts between fuels treatments using comparable treatment lifecycles.

We also recommend that the forest Strategy carefully distinguish between market scales and production scales in developing investment strategies that do not discriminate against locating small-scale biomass facilities in rural areas-especially in disadvantaged regions and communities. For example rural biomass collaboratives such as the Trinity Watershed Research and Training Center, Calaveras Healthy Impact Product Solutions (CHIPS), and The Sierra Institute's Crescent Mills Biomass Utilization Project are exploring rural marketing cooperatives to bridge the gap between the export market scale of 300,000 to 500,000 tons of wood pellets and a sustainable community scale wood pellet production capacity of 50,000 tons. Existing authorities within the California Energy Commission and the California Public Utilities Commission allow investments in pilot projects. These authorities could be integrated with the

Governor's Emergency Proclamation and the ARB's commitment to target benefits to disadvantaged communities in order to overcome the disconnect between market scales and environmentally sustainable production scales for biomass utilization in rural DACs and rural economically distressed regions.

We recommend implementing the Governor's Emergency Declaration with some urgency by piloting the acceleration of biomass utilization in disadvantaged communities and regions in other ways. For example, utilize third party verification of Investor Owned Utilities system impact studies to streamline the BIOMAT process. For example, begin with a more generous/realistic BIOMAT price of between 16.7 cents/kwh and 18cents/kwh, require no more than three bidders in the BIOMAT queue, and maintain the Power Purchase Agreement over at least the first year of BIOMAT implementation. Pilot projects in disadvantaged communities and regions could also demonstrate the effectiveness of co-location of small and medium scale biomass electrical energy facilities and utilization of waste heat for wood product development or diversification (e.g.) pellets, posts, poles, biochar, biofuels, greenwaste soil amendments, etc.). Again third party verification and siting pilot projects in DAC communities can yield multiple benefits.

Finally, it is important to recognize that DAC communities can provide a workforce for a broad array of forest stewardship activities including prescribed burning and hand thinning of forest thickets, as well as providing a worker pool for biomass utilization facilities. The Governor's Emergency Proclamation offers opportunities for ARB to partner with entities outside of ARB who enable the ARB to pilot and evaluate the aggressive redevelopment, development, and deployment of distributed and smaller scale biomass facilities and the expanded fuels reduction programs that they indirectly support across California's forestlands.

Demonstrate and prioritize integrated community based models:

Where Firesafe Councils, forest collaboratives, and regional watershed programs are active, there is no practical reason to do nothing while waiting for the National Disaster Resilience Competition Project to start achieving and documenting tangible benefits.

Where the institutional capacity currently exists at local and regional levels to integrate DAC benefits with forest fuels reduction and forest ecosystem conservation, we urge the Strategy to develop specific targets and to dedicate funding to existing partnership work for black carbon reduction and DAC benefits, including funding the quantification, documentation, and accountability that the ARB needs to have to proceed with proper haste and caution to a larger California-wide forest black carbon reduction and DAC benefit program.

Thank you for encouraging local governments to work with the ARB on the nexus between rural poverty and rural health issues and the global threats that we all face by not aggressively reducing forest wildfire risks, improving forest sustainability, and improving biomass utilization across California's forestlands.

Plumas County looks forward to the further development of the forest Strategy for reducing SLCP pollution in our region.



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