



The Watershed Research and Training Center

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June 24, 2022

California Air Resources Board
1001 I Street
Sacramento CA 95814

RE: Comments on 2022 Draft Scoping Plan

Dear Chair Randolph and other Board Members,

The Watershed Research and Training Center (WRTC) appreciates this opportunity to provide comments on the 2022 Draft Scoping Plan. The Watershed Center is a 501(c)(3) non-profit located in the heart of Trinity County, California. We conduct the full gamut of land and watershed management services, lead State forest biomass and wildfire resilience partnerships, and through partnerships with communities, organizations, and public agencies we steward our landscape, create and sustain quality jobs, and connect people to the land and each other.

Our local programs are focused on outcomes: vibrant communities, healthy landscapes, and sustainable economies. Throughout the State of California, we are leaders in wildfire mitigation, forest management, as well as wood products and forest biomass utilization. Working with natural resource managers, government agency leadership, and community leaders, we run California's ad hoc Forest Biomass Working Group and lead capacity building efforts for forest and fire management across California.

The WRTC is encouraged to see that CARB has recognized the importance of forest health and management as it relates to wildfire reductions and public health improvement. We strongly agree that such reductions are needed for the Natural Working Lands that provide important air and water quality benefits to all Californians, recreational opportunities, and wood products, as well as for the State to reach its climate change goals.

State law requires forest thinning for wildfire hazard reduction and forest restoration, and the vast majority of the resulting material is currently piled and burned or left to decay, both of which release powerful Short-lived Climate Pollutants. The State's Forest Biomass Utilization Plan recommends to convert more of that waste biomass to beneficial end uses such as bioenergy and innovative wood products. Doing so will reduce negative climate impacts and air pollution while fostering jobs, economic development, and community resilience across many forested regions of the State.

According to the California State Board of Forestry and Fire Protection, State requirements to remove excess woody biomass on one million acres per year will lead to 10 to 15 million bone dry tons of forest biomass annually. The most common practice of pile-and-burn or pile-and-decay of that material emits powerful climate pollutants, primarily methane and/or black carbon, and other air pollutants. It also wastes a valuable resource that can provide critical dispatchable renewable energy and low carbon transportation fuels, wood products such as advanced building materials and soil amendments, and more. According to CalEPA and the California Natural Resources Agency, converting that forest waste biomass to energy cuts black carbon and methane by 98 percent compared to open burning. And according to the 2020 report *Getting to Neutral* by the Lawrence Livermore National Laboratory (LLNL), converting that waste biomass to energy in combination with carbon capture and storage can provide carbon negative emissions needed to reach carbon neutrality, while providing important benefits as the State works towards outcomes that address climate change, reduce high-severity wildfire risk, increase the resiliency of communities and working landscapes, and the conservation of ecosystem services.

As such, we strongly support the use of bioenergy with carbon capture and storage (BECCS) and agree that using this methodology is the only way that California can meet its 2045 Carbon Neutrality goals. As a relatively low-cost option, CARB should target forest BECCS for the significant carbon dioxide removal (CDR) opportunity it provides. BECCS is routinely shown as the main CDR option by the IPCC, and California is well-placed to advance this technology for global benefit. The *Getting to Neutral* report provides a well-founded starting point.

In the Scoping Plan CARB correctly states that “Climate smart management can help make forests more resilient to climate change and less prone to catastrophic wildfire” and in the modeling approach for its screen of Social Costs assumes that only a small volume of forest biomass is recovered – on average, 2 tons per acre – into hydrogen with carbon capture and storage. This deviates significantly from estimates of 10-15 tons per acre treated in LLNL’s *Getting to Neutral* report, and seems due to the fact that only a portion of the residues deemed “mobilizable” would be collected, based on the “social cost” of open burning or leaving the residues to decay.

This approach however, omits the Social Opportunity Cost of open burning or leaving residues to decay. Utilizing wood from harvested trees provides utility that is not measured in units of reduced emissions, but benefits Californians nonetheless.

Sincerely,



Martin Twer, Biomass Program Director, The Watershed Research and Training Center