

January 5, 2022

Chair Liane M. Randolph  
California Air Resources Board  
PO Box 2815  
Sacramento, CA 95812

Re: 2022 Scoping Plan Update - Natural and Working Lands Scenarios Technical Workshop

Dear Chair Randolph:

We appreciate your holding in-depth technical workshops, and the opportunity to provide additional comment and input. Modeling how shifts in management of natural and working lands across the state can alter California’s path toward carbon neutrality is a massive undertaking based on multiple assumptions. Those assumptions should be based on strong ecological underpinnings, and bolstered by monitoring to check and refine models for future plan updates.

California is currently engaged in massive projects such as fuel reduction, healthy soils and forests, and restoration and tree planting. This work feeds into models, and is often based on models, but can result in a feedback loop if real-world measurements are not included. CARB has the opportunity to help define how information can be collected to check and improve working models, and involve stakeholders in the creation of goals to improve buy-in on management needs and provide “reality checks” on prospective or proposed work.

Given the brevity of scenarios presented, it is difficult to comment in a more meaningful way. However, several points must be addressed:

* Forests and shrublands are fundamentally different, and should be addressed separately. Oak savanna, where oaks are present at 5-20% cover, “behaves” as grassland ecologically.
* Based on staff presentations during the workshop, there is the impression that “scientific” defensible space is to clear a larger radius around structures than legally mandated. This is the opposite of scientific defensible space recommendations, which show modifications to structures and the immediate 5 surrounding feet being the most meaningful—and that clearance beyond 100 feet does not impact risk to the structure[[1]](#footnote-1).
* Climate, water, disease, and other natural processes are not well incorporated into the model. For example, increased afforestation is likely to lead to overstocked forests, young tree death, increased fire risk and greater emissions.
* Assumptions regarding fuel management and fire risk reduction are present but unstated—how much and on what basis will “defensible space” or “1M acre strategy” remove what percentage of vegetation, and how does that translate into wildfire risk reduction? How often will vegetation reduction work be revisited to ensure it still functions as a fuel break?
* Belowground carbon still appears to be not or poorly included in the models.
* Alternative 1, Minimize disturbances, prioritize conservation, and maximize short-term carbon, should include perennial native grassland restoration to increase belowground carbon storage.
* Alternative 2, Prioritize restoration and climate resilience, should include incentivization of urban plantings (from homeowners to industrial or public plantings) to be locally native plants, as this reduces water and pesticide use as well as greenwaste production.

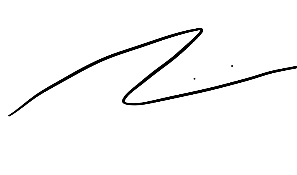
An alternative focused on biodiversity should be presented. Biodiversity, climate resilience, and human health are inextricably linked and an alternative that focuses on natural solutions and an understanding of ecology should be presented. This includes prioritizing restoration of foundation, keystone, and system engineer species such as oak, otter, and beaver; and focused restoration of belowground-carbon-storing grasslands and wetlands. It includes prescribed fire at appropriate intervals for forests, woodlands, and grasslands as the best emissions reduction plan for wildfire[[2]](#footnote-2), as well as helping moderate some natural disease and pest cycles. Incorporating tribal ecological knowledge and preventing largescale harvest of trees with diameters over 24” will also improve forest health. The alternative should include on-farm hedgerow planting, and raptor and bat nesting to maximize ecosystem services; native cover cropping; SGMA land conversion to native plant farms, or mixed pollinator habitat and solar farming. In settlements, the alterative should include urban line limits to prevent land conversion; greenspace for water capture, wildfire risk reduction, and urban heat reduction; mandated native plantings to reduce water use and maintenance needs; wildlife crossings to keep keystone species populations connected and healthy; 30’ defensible space with priority given to Zone 0, the first 5 feet around the structure.

Broad recommendations for land management:

* Incorporate sequestration metrics in protection, restoration, and management. Measures must have transparent, repeatable performance indicators.
* Reduce extreme wildfire in California’s forests by supporting prescribed fire in forested areas and removing barriers to cultural burning.
* Prohibit dangerous new development in high wildfire areas. These developments are often justified as solutions to the housing crisis but are often too expensive for low-income Californians and exchange human safety for lasting, climate-smart housing solutions which prioritize infill and transit-friendly locations.
* Provide solid incentives for use of locally appropriate native plant seed mixes, cover crops, and hedgerows on working lands to support pollinator habitat and halt rapid declines in insect and bird populations.
* Revise models and requirements for urban planting to prioritize locally native trees. Biodiversity is not currently a ranking factor, and carbon sequestration models stop at tree age 40, when many of our native trees begin their best bulking.[[3]](#footnote-3) Native trees survive just as well as nonnatives when saplings are appropriately established.[[4]](#footnote-4)

Given how many unstated but critical assumptions underpin the scenarios presented, CNPS requests a meeting with CARB staff to better understand what is being proposed so we may provide more meaningful and substantive comments. We appreciate the opportunity to comment and look forward to further involvement in this critical work.

Sincerely,



Andrea Williams

Director of Biodiversity Initiatives

California Native Plant Society

1. [Factors Associated with Structure Loss in the 2013–2018 California Wildfires](https://www.mdpi.com/2571-6255/2/3/49/htm), Fire [↑](#footnote-ref-1)
2. [Prescribed fire as a means of reducing forest carbon emissions in the Western United States](http://www.hurteaulab.org/uploads/3/8/7/3/38731639/wiedinmyer_and_hurteau_2010.pdf), Environmental Science and Technology [↑](#footnote-ref-2)
3. [Comparison of methods for estimating carbon dioxide storage by Sacramento's urban forest](https://www.fs.fed.us/psw/publications/mcpherson/psw_2011_mcpherson009.pdf), USFS [↑](#footnote-ref-3)
4. [Stewardship matters: Case studies in establishment success of urban trees](https://canopy.org/wp-content/uploads/Roman-et-al-2015-article.pdf), Urban Forestry & Urban Greening [↑](#footnote-ref-4)