



October 15th, 2015

California Air Resources Board
Climate Investments Branch
1001 I Street
Sacramento, CA 95814

RE: 2030 Target Scoping Plan

On behalf of California ReLeaf – a statewide non-profit that supports community groups committed to greening our golden state through urban forestry -- we are writing to provide comments on materials presented at the 2030 Scoping Plan kickoff workshop on October 1st in Sacramento.

California ReLeaf applauds the Air Resources Board (CARB) for clearly identifying perhaps the single most important strategy that will need to be implemented to achieve the ambitious goals put forward in state statute and the Administration's Executive Order B-30-15: "An Integrated Plan for Addressing Climate Change." CARB captures this strategy in the third slide from the kickoff workshop presentation, and identifies opportunities to create those connections throughout the slide show. From our organization's perspective, an integrated plan for addressing climate change is the cornerstone to success. Consequently, our comments focus exclusively on this point.

Integrating Urban Forestry

Within the first update to the Climate Change Scoping Plan completed in 2014, CARB asserts that "the current system of siloed planning and development responsibility among multiple state agencies... is not an effective model for the future." CARB goes on to note "the transformation that is necessary to reach our climate goals will require a cohesive effort..." These comments are especially relevant today. California ReLeaf strongly supports these assertions, and would encourage CARB to take continue its leadership role in such an effort by integrating urban forestry and its GHG reduction benefits into relevant sectors that include Energy Efficiency, Green Buildings, and Transportation and Land Use.

We know from the first update to the Climate Change Scoping Plan that CARB recognizes the energy conservation benefits of urban forests. Yet urban forestry is not identified as an implementation tool within the Energy Efficiency section of the presentation. The cooling power of California's 200 million existing urban trees lowers our energy consumption by about 7,300 GWh each year, which is equivalent to more than seven

100 megawatt power plants. That is why programs like SMUD's Shade Tree Partnership continue to thrive and result in GHG reductions coupled with cost savings.

Recommended Actions for the Energy Efficiency Sector:

1. Identify urban forestry as an implementation tool in the Energy Efficiency sector.

Similarly, green buildings have the potential to consist of so much more than retrofits and solar panels. Green roofs and strategic shade tree plantings have the potential to lower energy demand in both cooling and heating by 20% or more. Energy savings produced by 300,000 shade trees replaces the need for 30,000 air conditioners. CARB even highlights a building with a green roof in page 30 of the presentation, but does not integrate green roofs and urban forestry into the Green Buildings discussion.

Recommended Actions for the Green Buildings Sector:

1. Identify urban forestry and green roofs as an implementation tool in the Energy Efficiency sector.
2. Identify increased integration of urban forestry and green roofs into the Green Buildings sector as part of the Mid and Long-Term Vision for this sector.

The role for urban forests in the Transportation and Land Use sector goes beyond energy efficiency and can actually provide multiple GHG reduction benefits by reducing VMT's, avoid emissions through mitigating the urban heat island effect, and carbon sequestration. In fact, the visioning slides beginning on page 73 of the presentation capture key components of how urban forestry integrates in this sector.

Impervious surfaces, such as asphalt, concrete and roof surfaces, contribute to urban heat islands and elevated air temperatures via their high heat capacity, thermal conductivity, and often low reflectance of solar radiation. Close to 28 percent of the state's population (9.5 million people) live in high threat areas for air quality and urban heat. Relative to vegetation and soil, impervious surfaces are associated with low levels of evapotranspirational cooling. Within cities, temperatures can vary by up to 14 degrees or more Fahrenheit between green spaces with plants and trees and high rises encircled with concrete and asphalt. Increasing canopy cover through creating and sustaining urban forests and green infrastructure can mitigate the adverse impacts of air pollution and urban heat islands on human health and environmental quality by cooling urban heat islands, reducing energy use and filtering pollutants from the air.

With appropriate incentives and tools, the implementation of Senate Bill 375 and SCSs reduce such threats, and optimize GHG reductions not only from transportation but also from natural resource protection, including urban forests. But up-front integration, as denoted by CARB, is key to success. Development without guidelines to conserve urban forests leads to decreased natural resources, and the increasing potential for urban heat islands, air pollution and increased stormwater flow associated with decreased water quality. Increase in the area of impervious surface due to new roadways and building hardscapes creates more water runoff, higher peak flows, soil erosion, and thermal hotspots. Grading activities in conjunction with new development amplify the issue. These are all fundamental land use issues that can be

addressed through integration of urban forestry into the Land Use and Transportation Sector. Smart growth strategies at the outset with opportunities for expansion of the urban forest can support other planning goals. As outdated urban areas and infrastructures are renovated and improved, they can be retrofitted to accommodate large-stature trees to maximize benefits.

For example, modifying traditionally impervious surfaces with pervious pavers and bioswales in parking lots, planting trees along road medians, and adding green space above and adjacent to structures (i.e. parks) can reduce stormwater runoff. In Southern California, where at least 1/3rd of the water is imported, when it rains, California sends billions of gallons of free water to the ocean. If we can capture just the first ¾ inch that falls in LA County alone, that's enough water for 700,000 families every year and about half the additional water they need by 2025. Green infrastructure can play a pivotal role in reducing energy demands and the associated GHG emission by retaining that water locally.

Recommended Actions for the Transportation and Land Use Sector:

1. Identify urban forestry as an implementation tool in the Land Use and Transportation sector.
2. Identify increased integration of urban forestry and green infrastructure into the Land Use and Transportation sector as part of the Vision for 2030 and 2050, and for achieving 2020 Goals.

Finally, we applaud CARB for including urban greening in the Natural and Working Lands Sector, where the carbon sequestration value of California's 200 million urban trees plays a significant role in meeting California's mid-term and long-term GHG reduction goals. As such, we encourage CARB to include urban forestry as a recognized investment in the 2020 Status Update.

Recommended Actions for the Natural and Working Lands Sector:

1. Specify urban forestry as a recognized investment in the 2020 Status Update.

Urban forestry plays an essential role across multiple sectors in reducing GHGs and maximizing the state's climate investments. A March 2013 study inventoried and assessed San Jose's 1.6 million-tree urban forest, and reached the following conclusion:

- Building shade and air temperature decreases from trees reduce residential air condition demand by 415,000 MWh, saving \$77 million in cooling costs each year.
- The existing urban forest intercepts 1.2 billion gallons of rainfall annually, which reduces stormwater runoff management costs valued at \$6.7 million.
- If carbon dioxide sequestered and emissions avoided from cooling savings by the existing trees -- a total of 100,181 tons -- were sold at \$10 per ton, the revenue would be \$1 million.

CARB can help shape the role and goal for what California's urban forest can contribute in meeting 2020, 2030 and 2050 targets.

Thank you for taking the time to review our comments, and for the tremendous effort exhibited by CARB and its staff thus far. We are excited about future investments in projects that reduce greenhouse gas emissions while also investing in our communities and the health of California's residents. We believe the Scoping Plan updates can be a tremendous resource to set that stage for decades to come.

Sincerely,

A handwritten signature in black ink, appearing to read "Chuck Mills". The signature is fluid and cursive, with the first name "Chuck" and last name "Mills" clearly distinguishable.

Chuck Mills
Director of Public Policy and Grants