DIETRICK INSTITUTE
Applied Insect Ecology

California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: 2030 Target Proposed Scoping Plan

Dear CARB and other stakeholders,

We are a training institute working at the intersection of pesticide use reduction and carbon sequestration requesting that the policy for Natural and Working Lands reflect more understanding of natural cycles. We would like to see the 2030 Scoping Plan include establishment of a Water Management Plan to Restore Small Water Cycles and Climate in California. The model for such a plan is the attached United States Action Plan for the Restoration of Natural Water Cycles and Climate by Michal Kravčík and Jan Lambert.

Dr. Kravčík is a consultant to the Dietrick Institute and to the Ojai Valley Inn for design of community-based and valley-wide transformative models. In his affiliation with Voices of Water for Climate he is developing a proposal for a "Watershed Sisters Project" for Ventura County with his home region of Slovakia that has implemented 30,000 rain harvesting measures for climate mitigation. He was recognized as a Goldman Environmental Award recipient for this work around the world.

The development of a California Water Management Plan to Restore Small Water Cycles and Climate is necessary to achieve the most ambitious goals and targets for re-vegetation and carbon sequestration. This supports many positive impacts for social justice including cleaner air and improved quality of life.

Carbon sequestration is an urgent necessity. However it cannot happen without rain water infiltrating the soil to be captured for use in photosynthesis - instead of channeling it in pipes and concrete chutes to speed it to the sea! To greatly accelerate carbon sequestration requires that the Water Resources Board prohibit storm water drainage to the ocean and other wasteful and unreasonable use of precious water resources. At the same time the ARB must promote far-reaching education and provide resources for the development of rain water harvest projects to slow, spread, and sink the water into soil and aquifers. The increased

space and opportunities for rainwater retention, through better land and stormwater management techniques will green up these areas pulling down more carbon from the atmosphere supporting the small water cycle to continue to draw down more CO2.

As a side benefit according to Dr. Kravčík these steps will also lead to more "soft rains" in the summer months, creating more positive cycles instead of negative ones! These land management techniques to improve stormwater retention and infiltration to soils make use of all natural materials and low-cost easy-to-implement solutions. They require basic training about water flows and some initial engineering to be done correctly. Once the plans are done by trained Water Harvesting Practitioners, most can be implemented, by people with basic hand tools OR more quickly and on larger scales by combining people power with assistance from some light machinery (small excavators or tools for breaking up any old concrete or asphalt obstructions). Of course each potential site will be different and analyzed within the framework of the overall watershed action plan. A summary of the US Action Plan vision and mission is included at the end of this comment.

Our proposed state water management plan for restoring climate includes a major focus on rehydrating California forests with appropriate water harvesting measures. Ambitious water harvesting is essential in conjunction with the recommendation of Ara Marderosian of Sequoia ForestKeeper to rebuild healthy forests and leaving sick and dead trees where they fall to help capture water. The importance of reform of forest management policy is explained in the letter to the California Department of Forestry and Fire Protection by Battle Creek Alliance, Center for Biological Diversity, Conservation Congress, Ebetts Pass Forest Watch, Friends of the Earth-US, Geos Institute, John Muir Project, Los Padres Forest Watch, Sequoia ForestKeeper, Sierra Club CA, and Wild Nature Institute on March 17, 2017 in their joint comment on the January 20 draft of the California Forest Carbon Plan. http://www.sequoiaforestkeeper.org/pdfs/comment_letters/CenterforBiologicalDiversityetalForestCarbonPlanComments.pdf

Stopping water runoff is key, but we also point to another perspective consistently ignored by climate scientists regarding the vital services that the insect as well as the microbial foodwebs contribute to sequester woody carbon in place. We are particularly aware of the vital role of decomposer insects in healthy ecosystems sequestering carbon in insect bodies and frass in natural systems. At a minimum, CARB must stop the utter folly of spending millions incentivizing the use of dead trees for fuel when they are essential to optimize carbon sequestration in the diversity of microbial and arthropod foodwebs.

US ACTION PLAN FOR THE RESTORATION OF NATURAL WATER CYCLES AND CLIMATE vision and mission requires proper utilization of three indispensible resource and process sets:

a. Water, in all its forms (aquifers, soil and plant moisture, surface waters, ocean waters & theneglected green-house gas “water vapor”)

b. Fresh water, CO2, the sun, soil and seeds (photosynthesis)

c. Human potential for cooperation, compromise and ingenuity (policy changes, land management techniques and urban/suburban development shifts).

The processes to implement the solution frameworks we describe will open up opportunities for optimizing human potential (new cooperation, technologies, products and services). It creates opportunities for efficient, environmentally sustainable and conscientious use of natural and human resources.

Simply by restoring damaged landscapes, and especially forests, to retain rainwater for use by small water cycles:

- Vast areas of previously arable land that have become dehydrated will return to life.
- Heat barriers will be reduced.
- Balance in freshwater supplies will be restored
- Increase in green spaces will naturally assist in the restoration of the local, regional and global climate(s).
- Many barriers to socio-economic mobility and stability will be removed.
- The potential for social strife will be reduced.

The Dietrick Institute will be continuing to communicate and promote model implementation of these principles at the community, city and county levels to accelerate watershed resilience and climate mitigation. The main regulation that is required in the Scoping Plan is to support rain water harvesting.

Sincerely,

Jan Dietrick, Executive Director
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