California Air Resources Board
1001 "I" Street
Sacramento, CA 95814
P.O. Box 2815
Sacramento, CA 95812
Attn: Draft Proposed First Update to Climate Change Scoping Plan
April 28, 2014

Dear Members of the California Air Resources Board,

We applaud CARB for its years of leadership in reducing California greenhouse gases (GHG) through implementation of multiple actions across many sectors. As public health professionals working on increasing the consideration of health and health equity impacts in climate change policy and planning, we are submitting comments for the record on the Draft Proposed First Update to Climate Change Scoping Plan (Update). Our comments focus on the targets for emissions reductions, and ways to improve the integration of public health and equity impacts and recommendations. We recommend that the Plan emphasize and prioritize immediate implementation of those strategies with the greatest health co-benefits—especially active transportation--and include a specific plan to assess and integrate health and equity impacts and recommendations throughout the Plan.

Strengthen GHG reduction targets:
We appreciate that the Scoping Plan Update addresses an array of interventions across the key sectors responsible for greenhouse gas emissions. Given the new scientific knowledge of global warming potentials and increased urgency of immediate action indicated in the recently released IPCC AR 5 report, we urge the setting of more aggressive reduction targets. Our specific comments on targets include:

- The Plan states that emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 limit (p. 37). We strongly support CARBs assertion that we are not on a trajectory to achieve the needed reductions, and that we need to set interim targets (e.g. 2030 and 2040), and evaluate progress. We support the Plan's proposal for annual reporting on trajectories at current rates of emissions, with pre-established strategies for mid-course corrections if not meeting the necessary targets. We strongly urge that *a process and specific timeline for setting sector-specific interim emission reduction targets be delineated in the Plan.* We endorse the Environmental Justice Advisory Committee's (EJAC) recommendations to set an aggressive and accelerated reduction curve beyond 2020 because of the critical importance of pursuing early reductions. We support EJAC's recommendations that California should establish minimum emission reduction targets of 40% of 1990 levels for 2030 and 60% of 1990 levels for 2040.

- We support strong action on short-lived climate pollutants (SLCP), which can improve health and equity and quickly slow climate change. *We urge the Plan to accelerate reductions in SLCP now; not after 2020.*

- We recommend the following additional measures for SLCP:
    - Black carbon: We commend CARB for the very significant progress in reducing black carbon emissions, and we would like to see additional control of other diesel sources (e.g. leaf-blowers, lawnmowers, etc.)
      Methane: We are happy to see that CARB will develop measures in 2014 to reduce methane leakage from gas production, processing and storage. We endorse the EJAC's recommendation to not allow credit for methane capture from dairies.
    - Hydrofluorocarbons: Now that an alternative automobile air conditioning refrigerant is readily available, we propose eliminating credit to automakers for using it.

Include broader consideration of health impacts of climate change:
We are pleased to see that improving public health is one of the goals supported in the Plan. While there is a section outlining human impacts at the end of the Plan (p. 138), we recommend that human health impacts be included in climate change impacts listed at the beginning (p. 10), rather than as an addendum. This is important because research and experience relayed from the front lines of climate change policy-making in California suggests that enumerating the human health impacts of climate change to the public and decision-makers increases their commitment to immediate climate action. For example:

Sea Level Rise: include saline incursion to drinking water, displacement of populations, cost of drinking water treatment, and flooding/relocation impacts on hospitals/clinics, schools, and homes.
Agriculture: include reduced crop yields, increased food prices, increased food insecurity, and associated increased chronic disease (diabetes and obesity) risks.
Water supply: include climate change exacerbation of drought impacts and associated impacts on water quality, water quantity, increased contamination, and impacts from fires.
Ocean Acidification: include reduced availability of fish and shellfish for human consumption/protein
Heat waves: include significant excess deaths due to heat waves, urban heat islands, and populations most vulnerable to heat waves, and increased risk of power outages at times energy most required to protect against heat.
Wildfire risks: include impacts on air quality and displacement (e.g. San Diego), and risks to water systems.

Strengthen equity:

"Avoid disproportionate impacts to disadvantaged communities" is a goal and mandate repeated throughout the sector reductions, but there is a notable lack of specificity or planning on how to achieve this. For example, the Plan states the need to monitor and assess the health and environmental justice (EJ) impacts of programs and policies, making changes when necessary to maximize benefits (p. 36), but lacks a specific recommendation or plan for the monitoring/assessing of health and EJ impacts.

The Plan states, "Fortunately, many of the actions that reduce GHG emissions also improve the health and well-being of these vulnerable communities, providing an opportunity to address many of our current environmental and health disparities," (p. 139). While this is a point of central importance, health and equity will not necessarily improve unless policies are targeted and intentional about improving the health and wellbeing of all communities, with particular attention to communities facing inequities. In fact, policies can be regressive for communities facing inequities. For example, transit oriented development can cause residential displacement or increase exposure to air pollution, without careful attention to inclusionary and affordable housing and site design and building standards.

We are concerned that ARB is too narrow in its definition of "environmental justice impacts" to mean impacts typically defined in relation to environmental laws, such as air quality disparities. The Scoping Plan goes beyond environmental laws and regulations, entailing all sectors that will impact health and equity. Thus, the Update needs to be broader in its conception and scope of health and equity to a more holistic framing of the potential co-benefits and adverse health consequences that might accrue from a comprehensive scoping plan. Potential health and health equity impacts include physical activity, injuries, energy and food costs, indoor and outdoor air quality, noise, water quality, mental health and social connectedness, housing affordability and risk of displacement, and access to jobs, amenities, services, and other opportunities.

Our specific recommendations follow:

- We endorse EJAC's recommendation to assess the benefits and problems of AB32 in environmental justice communities so that as AB 32 is implemented, State Agencies can be responsive to and responsible for the communities hit first and worst by climate change.
- We recommend that CARB collaborate with public health experts (such as the California Department of Public Health, the California Conference of Local Health Officers, other non-profit and academic experts on climate change and public health, and the EJAC) to devise a specific plan and metrics for monitoring health and EJ impacts. This important Plan has the potential to broadly change the distribution of risk and opportunity in our state, and should thus consider and leverage policies and resources to improve the health outcomes and life chances of communities facing inequities.

Sector-specific comments on health:

We strongly encourage CARB to integrate health considerations into specific sector-specific proposed actions. Several examples of the relationships between health and other sectors are outlined below.

Transportation and Land Use:
We are pleased to see the recommendation to expand investments in active transportation (p. 120), and urge an increased focus on reductions in VMTs through public transit and active transportation infrastructure investments, with their attendant huge health and equity co-benefits. Increased physical activity through increased active transportation (walking, biking, public transit), can provide significant population health benefits including reductions in premature mortality, obesity, respiratory illnesses, heart disease, stroke, diabetes, depression, dementia, breast and colon cancer.[i, ii] We find the transportation sector strategies to be overly reliant on technology advances and fixes, and focused on Zero Emission Vehicles, Low Carbon Fuel Standards, and GHG standards for vehicle emissions. Specific transportation sector recommendations are below:

- We support the recommendation that Caltrans, working with local and regional agencies, consider lifecycle benefits and impacts (including environmental, construction, operation, and maintenance costs) for transportation infrastructure projects (p. 65). We strongly recommend also assessing health through the use of health impact assessment.

- We support the recommendation that Caltrans and regional transportation agencies will increase investment in expanded transit and rail services, active transportation, and other VMT-reduction strategies in their next regional transportation plans. We encourage CARB to incorporate more robust statements as to the importance of VMT reduction, and to reflect those in future regional GHG reduction targets under SB375.

- We support the recommendation that SGC will support SCS implementation, including, for example, integration of the Regional Housing Needs Allocation planning, as well as provision of local assistance for transit, active transportation, and affordable transit-oriented housing development.

- We support the Plans recommendation to expand existing affordable transit-oriented development (TOD) and infill housing development that cut VMT (p. 120), and strongly recommend CARB specify mechanisms for reducing the risk of displacement of low-income communities that may accompany this development, such as those being developed by the Association of Bay Area Government's Prosperity Plan.

Agriculture:

- We recommend adding strategies designed to increase urban or peri-urban agriculture through changes in urban land use and zoning to reduce food miles traveled for urban areas, and improve urban food security and climate resilience.
- We additionally recommend adding strategies to reform Concentrated Animal Feeding Operations (CAFOs) to reduce methane, improve health and other ecological benefits.

Water:
We strongly support the Plan's recommendations for groundwater monitoring and management measures, as well as a plan to support low-income communities in water rate structures.

- Currently, water quality and treatment is correlated with levels of local economic resources, so we recommend targeting incentives for technologies that improve water quality treatment and energy efficiency to low-income communities.
- The Proceedings of the National Academy of Sciences found evidence of methane contamination of drinking water accompanying gas-well drilling and hydraulic fracturing.[iii] We recommend a study of the impacts of continued expansion of fossil fuel extraction and its impacts on water in California.

Energy and Building Efficiency:
We support the recommendations in the energy sector supporting and prioritizing building energy efficiency. As the Update states, residential and commercial energy efficiency measures—if done correctly--can have significant positive benefits to indoor air quality and to respiratory, cardiovascular, and mental health outcomes.[iv]

- We recommend the Update provide specific mechanisms for increasing access to energy efficiency upgrades for those communities with health and financial concerns. If low-income communities, communities with existing health inequities, or those in air pollution hot spots had access to these improvements, strategies could have improved energy and health outcomes. Oregon has created a model on-bill financing system that incentivizes landlords to participate in home energy upgrades, while allowing residents to enjoy the energy bill and health benefits.
- We similarly recommend the Update recommend that K-12 school energy efficiency upgrades financed by Proposition 39 prioritize schools in areas with heat, air pollution, or noise exposures, health disparities, and socioeconomic vulnerabilities.

In conclusion, we are proud of the gains CARB has made in many areas while increasing public support for climate change mitigation. We support and celebrate the Update's extensive plans for reducing California greenhouse gases (GHG) through implementation of multiple actions across many sectors. We urge CARB to improve the health component of the Update by emphasizing and prioritizing immediate implementation of those strategies with the greatest health co-benefits, and including a specific plan to assess and integrate health and equity impacts and recommendations

throughout the Plan. We look forward to partnering with CARB to implement these plans to slow climate change and improve health through aggressive action in all sectors of the economy.

Sincerely,

Matthew Marsom,
Vice President for Public Policy & Programs

Cc: Mary Pittman, President & CEO, Public Health Institute

These comments were prepared by Solange Gould, MPH, DrPH (c), of the Public Health Institute's Center for Climate Change & Health.

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[i] Woodcock J, Edwards P, and Armstrong BG. "Public Health Benefits of Strategies to Reduce Greenhouse Gas Emissions: Urban Land Transport," *The Lancet,* November 25, 2009.

[ii] Maizlish, Neil, Health Co-Benefits and Transportation-Related Reductions in Greenhouse Gas Emissions in the Bay Area: Technical Report, Center for Chronic Disease Prevention and Health Promotion, California Department of Public Health, 11-21-11. Available at http://www.cdph.ca.gov/programs/CCDPHP/Documents/ITHIM_Technical_Report11-21-11.pdf

[iii] Stephen G. Osborn, Avner Vengosh, Nathaniel R. Warner, and Robert B. Jackson. Methane contamination of drinking water accompanying gas-well drilling and hydraulic fracturing. Proceedings of the National Academy of Sciences. May 17, 2011. 108(20). www.pnas.org/cgi/doi/10.1073/pnas.11006821088172-6.

[iv] San Francisco Department of Public Health. Saving Energy, Improving Health: Potential Impacts of Energy Efficiency Program Design on Noise and Air Pollution Exposure, 5-30-13, last accessed 4-21-14 at: http://www.sfphes.org/component/jdownloads/finish/6/257