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RE: Comments on California Air Resources Board (CARB) AB 32 Draft Scoping Plan, July 2008 Discussion Draft

Dear Chair Nichols and Members of the California Air Resources Board:

The California Conference of Local Health Officers (CCLHO) represents the 61 legally appointed physician Health Officers in California. CCLHO was established by statute in 1947 to advise the Department of Health Services (now Department of Public Health), other departments, boards, commissions, and officials of federal, state and local agencies, the Legislature and other organizations on all matters affecting health.

CCLHO commends CARB and Governor Schwarzenegger for their leadership and hard work on tackling the most pressing issue of our time, and applauds your effort to design a comprehensive emissions reduction plan. The draft scoping plan is a tremendous accomplishment and a key first step, in that it proposes a broad array of feasible mitigation strategies and sets measurable targets for achieving greenhouse gas (GHG) emissions reductions.

CCLHO is commenting on the AB 32 Draft Scoping Plan for two reasons:

First, climate change poses one of the most significant public health threats of the 21st century. It threatens the basic systems (food, water, shelter) on which human life depends. Climate change will increase heat-related illness, water-, food-, and vector-borne illnesses, injuries and deaths in extreme weather events, and health impacts associated with decreased crop yields, water shortages, and migration and civil conflict. Public health preparedness and response are key aspects of climate change adaptation, to reduce human harm from impacts of climate change. We understand that unless we act quickly and comprehensively to reduce warming and other climate-related environmental changes, our public health adaptive capacity is likely to be overwhelmed. We thus whole-heartedly endorse California's efforts to implement strong climate change mitigation efforts.

Second, climate change mitigation strategies can impact public health significantly. In many instances, the strategies that mitigate climate change have very beneficial public health "co-benefits." We believe it would be extremely unfortunate to ignore the potential co-benefits of mitigation strategies – both for the future health of Californians, and because the averted health costs associated with some strategies may significantly

change the net costs of implementation and thus allow for more aggressive mitigation efforts.¹ Our greatest concern with the draft scoping plan is that it fails to adequately consider the breadth of public health co-benefits.

We have several recommendations:

1. Evaluate the full range of public health impacts: AB 32 explicitly requires evaluation of the full range of public health impacts¹. CARB has not fulfilled this requirement. The draft states on page 52 that “ARB is conducting an evaluation of the potential public health benefits and impacts of the Scoping Plan”; however, it appears that the assessment of public health impacts will be limited to those related to “expected reductions in fossil fuel use and improvements in combustion efficiencies” (page 60). The draft plan discusses only the health co-benefits related to reduced emissions of NOx and soot (PM_{2.5}). An adequate assessment of health co-benefits (and of potential adverse health impacts) must consider the full scope of the co-benefits (or human health risks) of various mitigation strategies and implementation options – including those not addressed in the draft plan (see #4).

2. Formally engage public health: Without formal and systematic involvement of local health departments and the California Department of Public Health, we doubt that public health impacts can be adequately addressed. CCLHO therefore urges that CARB reach out to and formally and systematically involve local health departments and the California Department of Public Health (which together constitute the state’s formal public health infrastructure) in the AB 32 process.

3. Place more emphasis on reduction of vehicle miles traveled: We are concerned by the focus on technologies (e.g. fuel efficiency, low carbon fuels) for reduction of transportation-related emissions, especially given the fact that technological improvements in vehicles and fuels are likely to be offset by rapid growth in vehicle miles traveled (VMT). We believe that significant reductions in vehicle miles traveled are achievable, would attain meaningful GHG emissions reductions, and would have huge positive impacts on public health and health care costsⁱⁱ.

We strongly urge CARB to place more emphasis on reducing vehicle miles traveled, and specifically recommend that the plan:

- (a) Set higher targets for CO₂e reductions achievable through local government actions and regional efforts related to land use planning and transportation policies and investments. The 2 MMTCO₂e target grossly underestimates reductions that can be achieved through mixed-use density in proximity to transit, increased access and integration of existing public transit and car sharing, and expansion of active transport through supportive policies and infrastructure;

¹ Of course some mitigation strategies may adversely impact public health, or risk worsening health inequities; these adverse consequences must also be taken into account.

- (b) Provide distinct land use and transportation targets that are separate from local government targets for emissions reductions through other actions such as fleet efficiency;
- (c) Establish specific targets for emissions to be achieved through reduction in VMT, and incorporate in the plan the available array of strategies for VMT reduction;
- (d) Incorporate a section of the plan devoted to transportation, with an emphasis on policies and investments to promote walking, bicycling, and expansion of access to affordable public transit and transit-oriented development;
- (e) Include specific incentives, assistance, and resources for local and regional efforts to reduce VMT through sustainable community design and land use and transportation planning and policies. We support the recommendation that revenue generated from implementation of the scoping plan (e.g. cap and trade) be used to support local and regional agencies with the design and implementation of sustainable community and regional designs, as well as improved access to affordable public transit.

4. Incorporate and prioritize mitigation strategies with significant public health

benefits: We are disappointed that the draft plan does not incorporate other mitigation strategies that would both reduce greenhouse gas emissions and yield significant health co-benefits. A few examples of these include (a) vehicle speed reductionⁱⁱⁱ, (b) reduced meat consumption^{iv}, and (c) reductions in use of nitrogenous fertilizer^v. We urge CARB to engage public health professionals in a more substantive and complete analysis of the public health impacts of available mitigation strategies; we also encourage CARB to prioritize strategies that achieve mitigation objectives while benefiting the public's health.

5. Protect against inequitable adverse health impacts: The draft does not adequately address the potential inequitable regional or local risks to public health of the proposed cap and trade system. Low income communities and communities of color already suffer significant health inequities with reduced life expectancies and high morbidity and mortality rates, particularly related to chronic illness.²² We urge CARB to specifically incorporate measures to ensure that overall reductions in GHG emissions do not occur at the expense of increased pollution and adverse health impacts in local communities that already suffer from health inequities related to multiple sources of pollution, such as those in close proximity to freeways, ports, and industrial pollution sources. Industries that obtain permission to continue or expand emissions of greenhouse gases, in exchange for GHG mitigation measures elsewhere, must be required to control harmful co-pollutants that impact the health of local communities. Industries can not be allowed to increase (or avoid reductions of) toxics emissions due to incentives for GHG reductions.^{23, 24}

In summary, we commend CARB on your excellent work to date. We urge you to more fully consider public health impacts and co-benefits through more formal on-going work with California's public health community. We welcome the opportunity to work with you and support your efforts as this extremely important work on climate change mitigation proceeds. Thank you for your consideration of these comments.

Sincerely,

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Ann Lindsay, MD
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ⁱ Section 38561(d) The state board shall evaluate the total potential costs and total potential economic and non-economic benefits of the plan for reducing greenhouse gases to California's economy, environment, and public health, using the best available economic models, emission estimation techniques, and other scientific methods.

Section 38562(b) In adopting regulations pursuant to this section and Part 5 (commencing with Section 38570), to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:

(6) Consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.

ⁱⁱ Obesity and chronic illness are leading causes of morbidity, mortality, and health care costs.^{1,2,3} Increased active transport (walking and cycling) and use of public transit are associated with increased regular physical activity, which reduces the risk of all-cause premature mortality, heart attacks, strokes, colon cancer, diabetes, hypertension, obesity, osteoporosis, and depression, and improves psychological well-being and quality of life.^{4,5,6} There is considerable evidence that land use decisions and transportation investments/policies strongly impact the viability of active transport options, and thus impact population physical activity levels.⁷ A recent British study estimated that simply reverting to the walking patterns of 1975 would save 5.7 percent of passenger car emissions, and that if car owners walked as much as non-car owners a 15.4% reduction in emissions could be achieved.⁸ Many cities (e.g. Copenhagen, Bogotá, Berlin) have used land use and transportation policies and investments to successfully promote increases in active transport.⁹

ⁱⁱⁱ Vehicle speed reduction: Speed reduction would significantly reduce CO2 emissions and motor vehicle fatalities. Vehicle speed correlates strongly with fuel consumption, and hence with emissions of GHG and other pollutants; reduction from 70 to 55 miles per hour reduces miles per gallon fuel consumption by 17%.¹⁰ Two out of five deaths among teens in the United States result from motor vehicle crashes, and motor vehicle crashes are the leading cause of death among children in the United States. In the U.S. there are nearly 4300 fatalities and over 2.5 million injuries annually due to motor vehicle crashes¹¹. "A 3.5%–5% reduction in average travel speeds would be expected to achieve a 15%–21% reduction in deaths, which approximates one estimate of the total reduction achieved by combined effect of all U.S. federal motor vehicle safety standards."¹²

A recent European report suggests that a medium-sized diesel car will emit up to 14% more CO2 per kilometer at 80 mph compared to 70 mph; the report cites a British estimate that effective enforcement of the 70 mph speed limit in the UK could save around 1 MtC a year; reducing the limit to 60 mph would almost double this to 1.88 MtC.¹³ The city of Rotterdam demonstrated achievable co-benefits when it reduced speed limit in a controlled zone from 120 km/hr to 80 km/hour, with subsequent measured reductions in pollutant emissions (15-25% for NOx, 25-35% for PM10, 21% for CO), accidents (60%), casualties (90%), and noise (50%).¹⁴

iv Reduce meat consumption: The scoping plan addresses methane digesters, but does not identify other approaches to reducing methane emissions. One approach would be to launch a public education campaign regarding the significant health benefits associated with reduced meat consumption, which include reduced cardiovascular disease, cancers (specify sites), and diabetes¹⁵. Reduced meat consumption (and thus production) would significantly reduce green house gas emissions. It has been estimated that consuming one kilogram of beef has a similar impact on the environment as 6.2 gallons of gasoline, or driving 160 highway miles in the average American mid-size car.¹⁶ For a person consuming a red meat diet at 35% of calories from animal sources, the added GHG burden above that of a plant eater equals the difference between driving a Camry and an SUV; nationally this difference amounts to over 6% of the total U.S. greenhouse gas emissions.¹⁷ It should also be noted that methane reductions may have air quality-related ancillary benefits comparable to those for CO₂, due to impacts on tropospheric ozone levels.¹⁸

v Reduction in the over-application of nitrogenous fertilizer: Nitrogenous fertilizer is one of the primary sources of N₂O in the U.S.¹⁹ Over-application of fertilizer contributes to contamination of groundwater with nitrates, which have been associated in human epidemiological studies with increases in gastric cancer. Elevated nitrate levels have been found in the water sources that supply drinking water for more than 11 million Californians, primarily in the Central Valley.^{20,21}

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