November 17, 2009

Chairman Mary Nichols and Members
California Air Resources Board
1001 I Street
Sacramento, CA 95812

Re: Public Health Benefits of Smart Growth

Dear Chairman Nichols and California Air Resources Board members:

As organizations participating in the Health Network for Clean Air, we are writing to voice our appreciation for the work of the Regional Targets Advisory Committee (RTAC) and the helpful recommendations in their report and to urge CARB to move forward to adopt ambitious regional targets that reflect the many public health benefits of smart growth. Developing ambitious targets that ensure communities move away from "business as usual" planning is very important to maximize reductions in greenhouse gases, criteria pollutants and chronic illnesses associated with car-dependent development. We appreciate that several recommendations in the RTAC report emphasize the importance of incorporating public health benefits in the process of developing regional targets. For example, the report recommends that public health benefits be identified, quantified and highlighted throughout the target setting and implementation processes as a means of increasing public awareness and support for improved land use.[1]

Our organizations believe that ambitious regional greenhouse gas reduction targets are a key component of California's fight against global warming, air pollution and chronic illness. By establishing ambitious targets that promote local strategies for smart growth, CARB has the opportunity to improve public health by reducing dependency on motor vehicles. Motor vehicles are the largest source of greenhouse gas and criteria air pollutant emissions in California and contribute to a wide range of adverse social and public health outcomes, including premature death. As California's population grows, increased driving will overwhelm California's ongoing efforts to achieve emission reductions through cleaner fuel and vehicle standards.[2] The AB32 Scoping Plan noted that vehicle miles traveled (VMT) in California increased by 35 percent since 1990, could increase another 20 percent by 2020 and may more than double by 2040.[3]

Research into community designs that feature more compact, mixed-use development, and that support active transportation modes such as walking, bicycling and transit, demonstrates the many public health benefits of getting people out of their cars (see attached resource list). In addition to reducing air pollution and its harmful effects on cardiovascular and respiratory health, such communities can encourage both

[1] Regional Targets Advisory Committee. 2009. Recommendations of the Regional Targets Advisory Committee (RTAC) Pursuant to Senate Bill 375, p. 43.
[2] California Energy Commission. 2007. Staff Report: The Role of Land Use in Meeting California's Energy and Climate Change Goals, p.9.
[3] California Air Resources Board. 2008. Climate Change Proposed Scoping Plan Appendices, Vol. I, Appendix C, Sector Overview and Emission Reduction Strategies: Transportation Vehicle Use, p. C-57.

children and adults to incorporate physical activity into everyday routines. Increased physical activity can reduce a number of chronic health risks such as obesity, diabetes, heart disease, cancer and depression. Social equity issues can be addressed by improving local access and transportation to nutritious foods and health care services that are often out of reach in low income communities and communities of color. Improving options for biking and walking can also help to reduce injuries as research has found motorists are less likely to strike a pedestrian or bicyclist as more people choose walking or biking.

We recommend the following priorities to CARB as you move forward to develop regional targets:

- Make the development of healthier communities a key goal in CARB's process for setting regional targets. The target setting process should provide a vision for what can be accomplished in terms of healthier, more active communities, and demonstrate pathways to achieve these goals.
- Develop ambitious targets that challenge each region to substantially depart from a business as usual approach to planning. Each region and sub-region can reduce greenhouse gas emissions, regardless of projected growth, current infrastructure and population.
- Use the process for setting targets recommended in the RTAC report on pages 9-14. The RTAC recommendations incorporate opportunities for input from the public and health organizations and for the consideration of public health and other co-benefits within the target-setting process.
- Promote the development and use of planning models that can accurately estimate the potential global warming and public health impacts of various land use scenarios. Cutting-edge work in King County, Washington to incorporate public health, air quality and climate change factors into existing parcel-specific models[4] could serve as an important tool for planning more sustainable, livable communities.
- Require interim measures of progress and periodic reviews to ensure that targets are neither too difficult nor easy to achieve. Periodic reviews could also allow for comparisons between expected projections and actual reductions to verify accurate planning projections.

The Health Network for Clean Air believes that incorporating these priorities into CARB's process would help to establish strong regional goals to curb greenhouse gas emissions while promoting healthier, more active communities with reduced rates of chronic disease and premature death. We thank you for your attention to public health and look forward to working with you on this important process.

Sincerely,

Bonnie Holmes-Gen, Senior Policy Director
American Lung Association in California

Kris Calvin, Chief Executive Officer
American Academy of Pediatrics, California District

[4] King County, Washington HealthScape: "I-PLACE3S Health & Climate Enhancements and Their Application in King County" June 2009. http://your.kingcounty.gov/kcdot/planning/ortp/HealthScape/I-PLACE3S-FINALREPORT%2006-01-09.pdf

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Steve Heilig, MPH, Director, Public Health & Education
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Shan Magnuson, Director
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Attachment

Public Health and Land Use Planning

Sustainable, mixed use communities designed around mass transit, walking and cycling have been shown to reduce greenhouse gases, air pollution and a range of adverse health outcomes. Setting ambitious regional targets to reduce greenhouse gases through smart growth and land use planning will help achieve the following public health benefits:

Improved Air Quality*:* Reducing vehicle travel through more compact development and improved options for biking and walking can reduce exposure to air pollutants such as ozone, particulate matter and toxic air contaminants. The American Lung Association's 2009 "State of the Air" report found that six of the ten most ozone-polluted cities in the United States are in California, as are three of the four cities most polluted by particulates.[i]

- According to the California Air Resources Board, exposure to unhealthy levels of ozone and particulate matter, both primarily produced through vehicle emissions in California, annually contributes to:
  - 280,000 asthma attacks
  - 22,000 cases of chronic bronchitis
  - 9,400 hospitalizations for cardiovascular and respiratory illnesses
  - 19,000 premature deaths
  - millions of lost school and work days.[ii]
- The Southern California Children's Health Study, a long-term investigation into air pollution and children's health has issued over 100 publications on the health effects of childhood exposure to ozone and particulates, including:
  - a 2008 study that found a 30 percent increased risk for new asthma cases in children living in communities with higher levels of traffic-related air pollution[iii]
  - a 2004 study that reported significant and permanent reductions in lung function and growth by the age of 18 due to long-term exposure to current levels of particulate matter ($PM_{2.5}$) and other traffic-related pollutants[iv]
  - a 2002 study that linked asthma onset to exposure to elevated ozone levels in exercising children[v]

Increased physical activity to reduce obesity and related illnesses: Safe and inviting options for active transportation including sidewalks, bike lanes, parks, trails, and local, reliable transit can encourage the integration of physical activity into everyday activities within a community:

- A 2006 study published in the *Journal of the American Planning Association* [vi] found a five percent increase in neighborhood walkability to be associated with:
  - 32% increase in time spent in physically active travel
  - almost a one-quarter point lower body mass index
  - 6.5% fewer VMT per capita
  - 5.6% percent fewer grams of oxides of nitrogen (NO_x) emitted per capita
  - 5.5% fewer grams of volatile organic compounds (VOC) emitted per capita
- A 2000 Centers for Disease Control literature review noted that regular participation in physical activity may reduce depression, anxiety and other mental health issues.[vii]

Improved access to nutritious foods and health care services: Communities that provide more equitable access to nutritious foods and health care services can help to reduce the prevalence of chronic illnesses:

- A 2008 study by UCLA's Center for Health Policy Research linked higher obesity and diabetes rates in low-income communities and communities of color to higher prevalence of fast food and convenience stores and a lack of neighborhood access to nutritious food options.[viii]
- A 2002 study of 15 low-income communities in the Bay Area found that two-thirds of residents lacked convenient access to health care services as demonstrated by not being able to get to a hospital within 30 minutes using transit or walking a half mile.[ix]

Reduced injuries: Paths dedicated for walking and cycling are critical to protecting pedestrians and bicyclists from motor vehicle accidents and creating a sense of safety that will encourage more individuals to utilize these transportation options.

- Research published in 2003 in the journal *Injury Prevention* found that there is "safety in numbers": motorists are less likely to strike a pedestrian or bicyclist the more people are walking or biking. [x]

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[i] American Lung Association State of the Air 2009. http://www.stateoftheair.org

[ii] California Air Resources Board. Quantified Health Impacts of Air Pollution Exposure. April 2009. http://www.arb.ca.gov/research/health/qhe/qhe.htm

[iii] Jerrett, et al. "Traffic-Related Air Pollution and Asthma Onset in Children: A Prospective Cohort Study with Individual Exposure Measurement". Environmental Health Perspectives 116:1433-1438. 2008.

[iv] Gauderman, et al. "The Effect of Air Pollution on Lung Development from 10 to 18 Years of Age" New England Journal of Medicine 351:1057-1067. 2004.

[v] McConnell R., et al., "Asthma in exercising children exposed to ozone: a cohort study". Lancet 359:386-9. 2002

[vi] Frank, L, et al. "Many Pathways from Land Use to Health." *Journal of the American Planning Association*. Vol. 72, No. 1. Winter 2006.

[vii] Frank, L. and Engelke, P. "How Land Use and Transportation Systems Impact Public Health: A Literature Review of the Relationship Between Physical Activity and Built Form. Active Community Environments Initiative Working Paper #1". December 2000. http://www.cdc.gov/nccdphp/dnpa/pdf/aces-workingpaper1.pdf

[viii] California Center for Public Health Advocacy, PolicyLink, & UCLA Center for Health Policy Research. "Designed for Disease: The Link Between Local Food Environments and Obesity and Diabetes." April 2008. http://www.healthpolicy.ucla.edu/pubs/publication.asp?pubID=250

[ix] The Center for Third World Organizing, People United for a Better Oakland and the Transportation and Land Use Coalition (Transform). "Roadblocks to Health: Transportation Barriers to Healthy Communities." 2002. http://transformca.org/resource/roadblocks-health

[x] Jacobsen, P. "Safety in Numbers: More Walkers and Bicyclists, Safer Walking and Bicycling." Injury Prevention. 9.3 (2003):205-209.