July 24, 2008

California Air Resources Board:

The Safe Routes to School National Partnership (SRTSNP) is pleased to have the opportunity to submit comments on the California Air Resources Board's (ARB) draft scoping plan for AB32, which should reduce greenhouse gas emissions in the State of California to1990 levels by the year 2020.

Our comments focus on the transportation sector, which accounts for approximately 38% of greenhouse gas emissions in the State of California. While we are pleased that the ARB asks for the development of regional plans that will document and reduce GHG emissions, we feel that your target for land use, (2 million metric tons) is quite low, as this represents less than 1% of the overall GHG emissions reductions. This land use target is not at all proportionate to its share of GHG emissions within the transportation sector.

By comparison, the Sacramento region alone (representing 6% of the state's population) has set a goal of .75 MMT from the land use sector by 2020. The draft target is significantly lower than the one that the California's Climate Action Team (CAT) set forth in 2006 calling on the State to eliminate 18 MMT of global warming pollution emissions using smart land use and transportation efficiency measures. Laying the groundwork for the 2050 emissions reduction target (80%) needs to happen now, the GHG-reduction benefits of better land use will increase steadily over time.

The SRTSNP requests that the ARB include the following in your revised scoping plan:

1) **Land Use and VMT**: Increase requirements in the scoping plan for GHG reductions through the land use sector, and make tracking vehicles miles (VMT) traveled and targets associated with VMT reductions a requirement through new regional land use targets. Require that regional transportation agencies include school siting and Safe Routes to School as components of their GHG reduction plans. Create an enforcement mechanism around these GHG reduction plans.

2) **Safe Routes to School:** Include Safe Routes to School infrastructure and non-infrastructure programs in the section of the scoping plan titled "public education and programs to reduce vehicle miles traveled." The State has funded a state Safe Routes to School (SR2S) program at an average of $24.25 million/year for the past seven years, but those allocations are now part of the volatile state budget process. The

AB32 Scoping Plan should call for the SR2S program to be funded on an ongoing basis at a level of $90 million dollars (2007 dollars) per year, which would be matched by federal and local dollars, for a total Safe Routes expenditure of $180 million annually. This would enable 100% of schools in the state to receive SR2S education and encouragement programs, starting in 2010. This would also fund an infrastructure improvement roll-out where each school in the state would receive bicycle and pedestrian safety improvements over a 25 year time period, with 4% of the schools in the state receiving the construction improvements each year.

When asked why they won't let their children walk or bicycle to schools, parents consistently site traffic safety as a top reason. Safe Routes to School is a proven strategy for reducing VMT and shifting automobile trips to be bicycle and pedestrian trips. A 2007 study conducted by the California Department of Transportation found that investment in Safe Routes to School infrastructure projects increased walking and bicycling in the range of 10% to 200%.

Based on a 2005 Marin County study conducted by Parisi Associates and Nelson/Nygaard, which documented GHG emission reductions through Marin's program, we calculate that if every school in the state currently operated a Safe Routes to School program that this could annually reduce 468,156 tons of CO2, and create an annual reduction of 1,099,357,028 VMT through school trips alone. With student populations possibly growing throughout the state, the annual reductions might be even greater by the year 2020. Providing infrastructure improvements at each elementary and middle school in the State of California would cost approximately $4.5 billion over 25 years, and conducting education and encouragement programs at each school would cost approximately $105 million annually. (Please see attached the detailed analysis related to these calculations). It is also noteworthy, that adults will use the infrastructure developed through Safe Routes to School programs, so VMT and GHG reductions will be even higher. The SRTSNP recommends that ARB fund such programs from cap and trade allowance allocations or other new revenue sources committed to reducing CO2 emissions, and require VMT reduction targets related to SRTS in the regional land use plans.

3) **School Siting:** Work with the California Department of Education (CDE) on the revision of their school siting requirements (Title 5) which are being updated now to ensure that CDE is encouraging neighborhood schools, and specifically mention the importance of school siting and neighborhood schools within the final Scoping Plan. The National Household Travel Survey indicates that only 42% of school trips are one mile or less in California. As we are building and rebuilding more schools in this state, it will be important to ensure that these new schools are neighborhood schools, where children can safety walk and bicycle. As an example of why this is important, parents at six elementary schools in the Natomas Unified School District were sent a transportation mode survey at the beginning of the 2004 school year. The results showed that walking to school decreases quickly as distance to school increases. For example, 60% of children living 1/4 of a mile or less from one of the surveyed schools were walking in contrast with only 5% of children living 1-2 miles from school who were walking.

Safe Routes to School and school siting are important issues to include within the scoping plan both for funding allocations through the cap and trade program, and as requirements for the regional target plans. Schools play a major role in how communities are designed, and how local traffic is generated, with its corresponding VMT and emissions. Working on Safe Routes to School and school siting issues to reduce VMT will help to ensure that ARB can reach GHG reduction targets, while also helping to change the habits of an entire generation.

We cannot focus only on technological solutions to reduce GHG emissions. Without improved land use, increased VMT will prevent us from achieving the 2020 goals. Additionally, technological solutions will not provide the co-benefits that improved land use can have such as promoting active, healthy lifestyles and reducing obesity-related illnesses that are exacerbated due to a lack of opportunity for healthy physical activity, such as diabetes.

Thank you for your careful consideration of our comments. We look forward to your reply, and to seeing the subsequent version of the scoping plan. Should you like to reach me, I'm available at 415-454-7430.

Best regards,

Deb Hubsmith, Director
Safe Routes to School National Partnership
P.O. Box 663
Fairfax, CA 94978
deb@saferoutespartnership.org
www.saferoutespartnership.org

Attached: Safe Routes to School Greenhouse Gas Reduction and Cost Calculations

Safe Routes to School
Costs and Benefits for CO2 and VMT Reductions

Calculated by the Transportation and Land Use Coalition (TALC)

The following are projections conducted on the potential benefits in CO2 reduction and Vehicle Miles Traveled (VMT) for a 25-year, California-wide rollout of the Safe Routes to Schools (SR2S) program, along with costing projections.

Reductions in CO2 and Vehicle Miles Traveled (VMT)

Calculations regarding CO2 and VMT reduction were extrapolated from a 2005 Nelson Nygaard/David Parisi study analyzing the effectiveness of the SR2S program in Marin County,[1] and are based on derived per-student reductions. TALC determined 10,026 elementary school students were enrolled at the schools listed in the study.[2] The study indicated a total CO2 reduction of 1,060.8 tons, and a VMT reduction of 2,589,840 miles.

Dividing the CO2 and VMT reductions calculated in the Nelson Nygaard/Parisi study by the number of elementary school students enrolled in affected schools yields an average reduction of 0.11 tons of CO2 and 258.31 VMT per student. These figures were then multiplied by the total number of elementary- and middle-school students in the State of California (4,255,960), yielding a projected statewide annual reduction of 468,156 tons of CO2, and a reduction of 1,099,357,028 VMT after rollout of the program is complete (see below for year-by-year reduction projections as the program is established).

Per-Student Education and Encouragement Costs

To calculate per-student costs for Education and Encouragement, TALC used expense data from the Marin County SR2S program, because Marin has both the most developed Education and Encouragement programs, and the best-studied program overall. Annually, Marin County expends $115,000 and $100,000 for SR2S Education and Encouragement activities, respectively. These activities engage schools with a total of 12,130 elementary school students each year,[3] yielding per-student annual Education and Encouragement costs of $17.72. (While the program engages particular elementary grades more intensively, this cross-school average is more useful for broad extrapolations across California elementary schools.)

There are 4,255,960 elementary- and middle-school students in California. Multiplying the number of California elementary school students by the annual per-student Education and Encouragement cost in Marin yields a total annual cost of $75,415,611 for elementary and middle school students in the state of California.

---

[1] "Safe Routes to Schools Program Evaluation 2004-2005" by Nelson-Nygaard Consulting Associates with the Marin County Bicycle Coalition and David Parisi Associates, prepared for the Marin County Department of PublicWorks, August 2005.

[2] All student enrollment numbers are from California Department of Education data, available here: http://dq.cde.ca.gov/dataquest/

[3] Based on interview with Wendi Kallins, Marin County SR2S Program Director.

Per-School Infrastructure Costs

The average SR2S grant amount in the most recent funding cycle was $374,448.[4] There are 7,003 elementary and middle schools in the state of California; conducting an infrastructure improvement at each of these schools would cost an estimated $2,622,259,344.

Calculating Program Benefits and Costs: 2010 - 2035

TALC analyzed the statewide rollout of conducting infrastructure upgrades, as well as Education and Encouragement programs, at all California middle and high schools over the period of 25 years. This analysis covered both the projected costs and benefits of the program.

Projected Benefits: Three Cases

CO2 and VMT reduction projections depend on to what degree Education and Encouragement, versus infrastructure improvements, are responsible. These have not been disaggregated in any systematic, controlled study. In order to produce a plausible range, **projections 1, 2, and 3 below assume Education and Encouragement produce 25%, 50%, and 75%, respectively, of the benefits of the program in order to establish a reasonable range of total benefits over that period.** Thus, in 2010-11, 4% of the schools (1/25) receive the benefits of both infrastructure upgrades *and* Education and Encouragement programs, while 96% of the schools (24/25) receiving only the benefits of the Education and Encouragement program; in 2011-12, 8% of schools (2/25) produce the benefits of having both infrastructural upgrades and Education and Encouragement programs, while 92% (23/25) show the benefits of Education and Encouragement alone, and so on, until the 25th year, in which all schools receive all of the projected CO2 and VMT benefits.

Under these assumptions, SR2S is projected to reduce between 7.5 million and 10.3 million aggregate tons of CO2 emission over the twenty-five-year project implementation:

Projected CO2 Reduction (in tons)			
Year	**Projection 1**	**Projection 2**	**Projection 3**
2010-11	131,084	243,441	355,799
2011-12	145,128	252,804	360,480
2012-13	159,173	262,167	365,162
2013-14	173,218	271,530	369,843
2014-15	187,262	280,894	374,525
2015-16	201,307	290,257	379,206
2016-17	215,352	299,620	383,888
2017-18	229,396	308,983	388,569
2018-19	243,441	318,346	393,251
2019-20	257,486	327,709	397,933
2020-21	271,530	337,072	402,614
2021-22	285,575	346,435	407,296
2022-23	299,620	355,799	411,977
2023-24	313,665	365,162	416,659

[4] Derived from the list of approved projects and grant amounts, available here: http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/sr2s.htm

2024-25	327,709	374,525	421,340
2025-26	341,754	383,888	426,022
2026-27	355,799	393,251	430,704
2027-28	369,843	402,614	435,385
2028-29	383,888	411,977	440,067
2029-30	397,933	421,340	444,748
2030-31	411,977	430,704	449,430
2031-32	426,022	440,067	454,111
2032-33	440,067	449,430	458,793
2033-34	454,111	458,793	463,474
2034-35	468,156	468,156	468,156
Aggregate Reduction:	**7,490,496**	**8,894,964**	**10,299,432**

Over the same period, VMT is projected to be reduced by a total of between 41.4 billion and 57.0 billion miles:

Year	Projection 1	Projection 2	Projection 3
2010-11	725,155	1,346,717	1,968,278
2011-12	802,850	1,398,514	1,994,177
2012-13	880,546	1,450,310	2,020,075
2013-14	958,241	1,502,107	2,045,974
2014-15	1,035,936	1,553,904	2,071,872
2015-16	1,113,631	1,605,701	2,097,770
2016-17	1,191,326	1,657,498	2,123,669
2017-18	1,269,022	1,709,294	2,149,567
2018-19	1,346,717	1,761,091	2,175,466
2019-20	1,424,412	1,812,888	2,201,364
2020-21	1,502,107	1,864,685	2,227,262
2021-22	1,579,802	1,916,482	2,253,161
2022-23	1,657,498	1,968,278	2,279,059
2023-24	1,735,193	2,020,075	2,304,958
2024-25	1,812,888	2,071,872	2,330,856
2025-26	1,890,583	2,123,669	2,356,754
2026-27	1,968,278	2,175,466	2,382,653
2027-28	2,045,974	2,227,262	2,408,551
2028-29	2,123,669	2,279,059	2,434,450
2029-30	2,201,364	2,330,856	2,460,348
2030-31	2,279,059	2,382,653	2,486,246
2031-32	2,356,754	2,434,450	2,512,145
2032-33	2,434,450	2,486,246	2,538,043
2033-34	2,512,145	2,538,043	2,563,942
2034-35	2,589,840	2,589,840	2,589,840
Aggregate Reduction:	**41,437,440**	**49,206,960**	**56,976,480**

Projected Program Costs

Assuming infrastructure costs are evenly distributed over the 25-year period, the program would require $104,890,373 per year. Due to federal SRTS funding from Congress and other bicycle and pedestrian improvements around schools, we expect that roughly half of the infrastructure costs will be covered through sources other than state funding. Combined with the $75.4 million annual cost of statewide, elementary- and middle-school Education and Encouragement programs, annually, the SR2S infrastructure and program costs would be $180,290,374, with roughly half, or $90 million coming from state sources. The combined, 25-year cost of Education and Encouragement programs with the statewide infrastructure rollout would be approximately $4.5 billion.

Once the rollout of the program is complete, provided infrastructure continued to yield the same CO2 and VMT reduction benefits, California could sustain the peak, final-year benefits by funding Education and Encouragement programming alone at these schools – or could increase these benefits further by investing in even more vital infrastructure projects. Thus, between 2035 and 2060, the SR2S Education and Encouragement program would cost approximately $1.89 billion, while yielding 11.7 million tons of CO2 reduction, and reducing VMT by 27.5 billion miles.