Safe Routes to School National Partnership

PACIFIC NORTHWEST

Active Transportation Greenhouse Gas Reductions

Significant investments in walking and bicycling, in coordination with transit and land use investments, offer cost-effective opportunities to reduce greenhouse gas emissions (GHG) in Oregon. Transportation is responsible for about 25% of the Portland Metro region's greenhouse gas emissions.[1] Numerous studies have shown that investments in bicycle and pedestrian infrastructure improvements and education programs increase rates of bicycling and walking while reducing vehicle miles traveled (VMT), and that these investments are cost-effective compared to other methods.[2, 19]

Reducing GHG and VMT

It is estimated that bicycle and pedestrian improvements can provide GHG reductions of 8-14% when implemented on a regional scale.[3,4]

Additional GHG reductions can be achieved when bicycle and pedestrian improvements are coordinated with transit and the development of walkable communities and main streets.[5,6]

A study of urban areas found that VMT reductions of up to 20% could be achieved if half of trips under 5 miles were taken by walking and bicycling.[7]

Educational and encouragement activities combined with infrastructure improvements can lead to significant reductions in congestion (10-13%) and associated GHG emissions.[8, 19]

GHG Reductions from Safe Routes to School Programs

Parents driving children to school contributes to 20-25% of morning traffic congestion.[9]

In many schools in Oregon, more than 50% of children that live within one mile of school are driven in a private automobile.[20]

Nationally, 40% of parents return home after school drop offs.[10]

Safe Routes to School programs have been shown to increase rates of walking and bicycling in Oregon schools in the range of 20 to 200%.[11]

Safe Routes to School Programs have been effective in reducing school vehicle trips by up to 50%.[12]

Co-benefits

Improvements in bicycle and pedestrian safety help reduce collisions.[13,14]

Studies have shown that health care costs related to physical inactivity could be reduced by as much as 15% through investments in active transportation networks.[4,15]

Reducing the average body mass index (BMI) in Oregon by 5% could lead to health care savings of more than $2 billion in 10 years and $7 billion in 20 years.[16]

Investments in active transportation networks increase local home values and support local economies.[17]

Active transportation projects create more jobs per million dollars spent than road-only projects.[18]

References:

1) http://library.oregonmetro.gov/files//10116_climate_change_fact_sheet_pla_csc.pdf
2) http://faculty.washington.edu/ostergrn/CommuterProfiles/health%20promotion/pucher_preventative_medicine.pdf
3) http://www.seattle.gov/environment/documents/TAG_Transp&LandUse_Report.pdf
4) http://www.cdph.ca.gov/programs/CCDPHP/Documents/ITHIM_Technical_Report11-21-11.pdf
5) http://www.wsdot.wa.gov/research/reports/fullreports/765.1.pdf
6) http://www.arb.ca.gov/cc/sb375/policies/ped/ped_brief.pdf
7) http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3261937/
8) http://www.sustrans.org.uk/assets/files/Info%20sheets/ff44.pdf
9) NHTSA 2003; Dept. of Environment
10) http://www.travelbehavior.us/Nancy-pdfs/Active%20Transport%20Data%20for%20Decision-Making.pdf
11) Yang, 2011: http://otrec.us/project/483
12) http://saferoutespartnership.org/resourcecenter/research/traffic-congestion-and-transportation-trends
13) http://pediatrics.aappublications.org/content/131/2/290.full.pdf+html
14) http://www.ehjournal.net/content/8/1/47
15) http://www.publichealthadvocacy.org/costofobesity.html
16) http://healthyamericans.org/assets/files/obesity2012/TFAHSept2012_OR_ObesityBrief02.pdf
17) http://www.ceosforcities.org/pagefiles/WalkingTheWalk_CEOsforCities.pdf
18) http://www.peri.umass.edu/236/hash/64a34bab6a183a2fc06fdc212875a3ad/publication/467
19) http://library.oregonmetro.gov/files/2011_to_2013_rto_evaluation_report_sdg.pdf
20) http://saferoutespartnership.org/state/srts-in-your-state/oregon