



November 22, 2011

Submission to Members of Edmonton City Council

On behalf of the Toxics Watch Society of Alberta

Introduction

Founded in 1986, the Toxics Watch Society is a non-profit, environmental advocacy organization working to reduce the emissions, exposure, and use of toxics chemicals in Alberta. Early projects of the society include establishing and participating in the annual Toxic Round-up with the City of Edmonton and the Alberta Special Waste Management Corporation between 1986 – 1994, and advocating for the creation of a Pesticides Right-to-Know Bylaw for the City of Edmonton in 1993.

More recently, Toxics Watch has been working at the provincial and federal levels on air quality policy, and on regional air quality management through the Alberta Capital Airshed Alliance (ACAA).

Particulate Matter and Ground-level Ozone

Toxics Watch supports Council's direction to prioritize active transportation as the preferred mode of travel, as expressed in *The Way We Green* (2011). We therefore support the City's recent initiatives to expand the infrastructure network to facilitate alternative modes of transportation to the commuter automobile, specifically bike lanes.

However, Toxics Watch is concerned that the City's current budget proposal provides no funding for any work in the upcoming three fiscal years to continue the development of bicycling infrastructure.

Our concern arises from our longstanding involvement in local air quality, principally in the management of two pollutants contributing to urban smog: fine particulate matter and ground-level ozone. Epidemiological studies indicate that human health effects associated with these two pollutants occur at *any* concentration. Consequently, we should expect that air quality guidelines will become progressively strict over time, and that every opportunity to reduce emissions of these pollutants should be undertaken.

According to the ACAA's Capital Region Ozone Management Plan¹, 37% of oxides of nitrogen pollution (NO_x, see graph) in the Edmonton area is emitted from vehicle transportation. In addition to being an air pollutant itself, NO_x is a precursor emission of

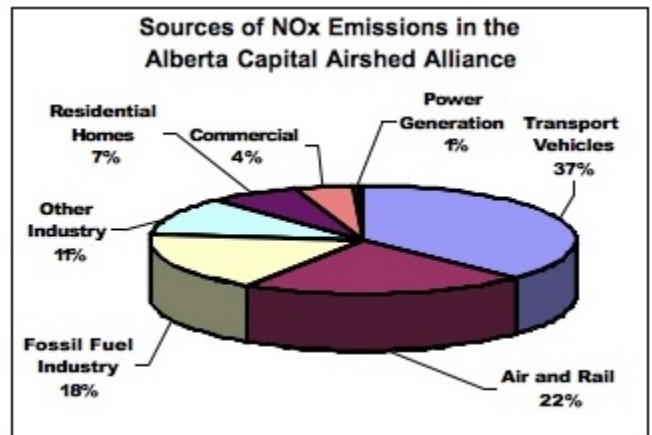
¹ Available at <http://capitalairshed.ca/AirQualityManagement/tabid/58/Default.aspx>

both ground-level ozone and fine particulate.

Reducing the number of kilometres driven in Edmonton will reduce emissions from transportation that contribute to degraded air quality.

Municipal Support of Cycling

According to Transport Canada, bicycling ranks fourth at a mode of urban transportation but has been slowly increasing since 2001.² The City of Edmonton's 2005 Household Travel Survey found that 16% of trips taken by citizens are by active modes - walking and bicycling.³ Accelerating the increasing modal share of bicycling will reduce air pollution, improve citizen's fitness, and slow the need for increases in public transit and road capacity to combat traffic congestion.⁴



Edmonton currently has very little dedicated bicycle infrastructure, especially in comparison with European cities that have very high rates of cycling (and corresponding low rates of per capita automobile transportation).

Municipal intervention has been shown to increase cycling rates. In fact, "14 case studies show that almost all cities adopting comprehensive packages of interventions experienced large increases in the number of bicycle trips and share of people bicycling."⁵

Conclusions

Shared and dedicated bike lanes are valuable means for decreasing the number of cars on the road and reducing emissions of air pollutants such as NOx and fine particulate matter that Edmontonians breathe.

Funds are clearly available for active transportation, as over \$250 million has been earmarked for road-related projects, which continue to subsidize inactive transportation while at the same time adding to the number of kilometers driven on city streets.

² <http://www.tc.gc.ca/eng/programs/environment-utsp-casestudy-cs77ebikeplanning-1177.htm>

³ http://www.edmonton.ca/transportation/roads_traffic/travel-pattern-analysis.aspx

⁴ Ibid

⁵ Pucher, J., Dill, J., & Handy, S. (2010). Infrastructure, programs, and policies to increase bicycling: an international review. *Preventive Medicine, 50 Suppl 1*(1), S106-S125. Elsevier Inc. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/19765610>

Recommendation

Toxics Watch recommends that an approach, proportional to the travel modal split according to the 2005 Travel Survey, be taken to transportation infrastructure budgeting with an amount equivalent to 16% of the road-project budget being allocated to active modes (16% of \$250 million = \$40 million).

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