



TRANSPORTATION FACTS – Land Use

Roads

- The City of Vancouver has 2,997 Hectares of roads, streets and alleys. That equals 26.5% of the total land area of the city. In contrast Burnaby's roads consume 27.8% of its land while Surrey's consume 23.2%. This does not include parking or other automobile related land uses. (Source: *City of Vancouver, Burnaby and Surrey websites.*)
- The number of to and from work vehicles registered in the GVRD has increased by 29% 1993-2002. The population of the GVRD has grown by 17% 1993-2002. (Source: *GVRD Key Facts* http://www.gvr.bc.ca/services/growth/keyfacts/kf_toc.html)
- Overall, there are about 879 000 km of highways in Canada (Statistics Canada 1991). In urban areas, up to 42% of the land in downtown cores and 17% of the land in greater metropolitan areas may be occupied by motor vehicle infrastructure, including roads, rights-of-way, bridges, garages, retail outlets, and parking lots (Simpson-Lewis et al. 1979). In Toronto, 2% of the city's area is devoted specifically to parking (Macpherson 1988). (Source: *Environment Canada. "State of the Environment Factsheet"* <http://www.ec.gc.ca/soer-ree/English/Products/Factsheets/93-1.cfm>)
- Each U.S. car requires an average of 0.07 hectares (0.18 acres) of paved land of roads and parking space. For every five cars added to the U.S. fleet, an area the size of a football field is covered with asphalt. (Source: *Brown, Lester R. "Paving the Planet: Cars and Crops Competing for Land." News from the Worldwatch Institute. 14 February 2001.*)
- The United States, with its 214 million motor vehicles, has paved 6.3 million kilometres of roads, enough to circle the Earth at the equator 157 times. (Source: *Brown, Lester R. "Paving the Planet: Cars and Crops Competing for Land." News from the Worldwatch Institute. 14 February 2001.*)
- 1% of the US area is covered by roads. 22% of the continental US is ecologically affected by the road system. (Source: [*Estimate of the Area Affected Ecologically by the Road System in the United States*](#); By: Forman, Richard T. T., *Conservation Biology*, Feb. 2000, Vol. 14 Issue 1, p31, 5p)

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Sprawl

- A study of the Surface Transportation Policy Project in Washington, D.C. found that the most powerful sources of differences in household transportation spending are the spread-out development pattern known as sprawl. Less sprawling places with more efficient land use tend to cost people less. In places with more characteristics of sprawl, households use more of their spending power to pay for transportation. The study looked at 28 metro areas in the U.S. and found that in the one-third of these metro areas that were found to be most sprawling, households devote 20 percent more of their spending dollar to transportation than do the one-third of metro areas with the fewest sprawl characteristics. Sprawl increases costs by making automobile travel a necessity. The study also found that the most expensive places for transportation also provide little transportation choice, as measured by the ratio of transit service to roads. Generally, places where roads dominate have higher transportation expenses. (Source: *"Driven to Spend: The Impact of Sprawl on Household Transportation Expenses."* McCann, B. 2000. www.transact.org/Reports/driven)
- The most recent data available show that, between 1981 and 1986, 55 200 ha of rural land near 70 Canadian cities was urbanized. Of this, 59% was prime agricultural land (Source: *Government of Canada 1991. Environment Canada, "State of the Environment Factsheet";* <http://www.ec.gc.ca/soer-ree/English/Products/Factsheets/93-1.cfm>)
- Recent research has shown that cities with high rates of auto-dependency and dispersed land use patterns tend to have lower economic productivity than those with compact, transit-oriented urban forms. This is because after a certain point the excessive costs associated with car use and low density suburban sprawl drain cities of wealth compared to cities with more balanced transport systems and less dispersed urban land use. (Source: *Jeff Kenworthy, Felix Laube, Peter Newman, and Paul Barter, Indicators Of Transport Efficiency In 37 Global Cities; Washington, DC: World Bank, 1997.*)
- A study in the Greater Toronto Area compared the costs associated with a "business-as-usual" approach with those of a compact development scenario. The study showed that the former approach would cost the region \$90 billion over a 25-year period in capital investments for new infrastructure. Adopting a more compact urban form would save the region from \$700 million to \$1 billion per year, if external costs – such as those associated with emissions, publicly-borne health care, and accident policing – are added to the capital, operating and maintenance cost savings. (Source: *Pamela Blais, The Economics of Urban Form, prepared for the GTA Task Force by Berridge Lewinberg Greenberg Dark Gabor Ltd.; Toronto, January 1996.*)
- Thirty-two percent of the solid waste generated in the GVRD is demolition, land-clearing and construction waste. New construction on the urban fringe is a major contributor to this flow. Once occupied, detached housing tends to produce more waste per capita than higher-density alternatives. (Sources: *GVRD web site, "Garbage and Recycling"* <http://www.gvrd.bc.ca/services/garbage/index.html>;

Robert Paehlke, The Environmental Effects of Urban Intensification; Toronto Ministry of Municipal Affairs, 1991.)