

# Landfill Waste



## Noteworthy:

- Alberta has a goal to reduce municipal waste to 500 kilograms per capita by 2010. That is a 50% reduction over 1998 levels.
- By 2003, the per capita reduction was 25%.
- According to government of Alberta statistics, in 2003, Alberta generated 0.78 tonnes of non-hazardous waste per person.
- According to Statistics Canada data, Alberta generates more waste per capita than any other province in Canada.
- Recycling rates in Alberta are amongst the lowest in the country.
- Due to increases in population in Alberta, total waste disposal in the province has increased in the last few years.
- In October 2004, the province announced a new recycling program for electronics. Through this program, an environmental fee is collected when electronics are purchased. The revenue from the environmental fee covers the cost of collecting and recycling the electronics at the end of their lives.

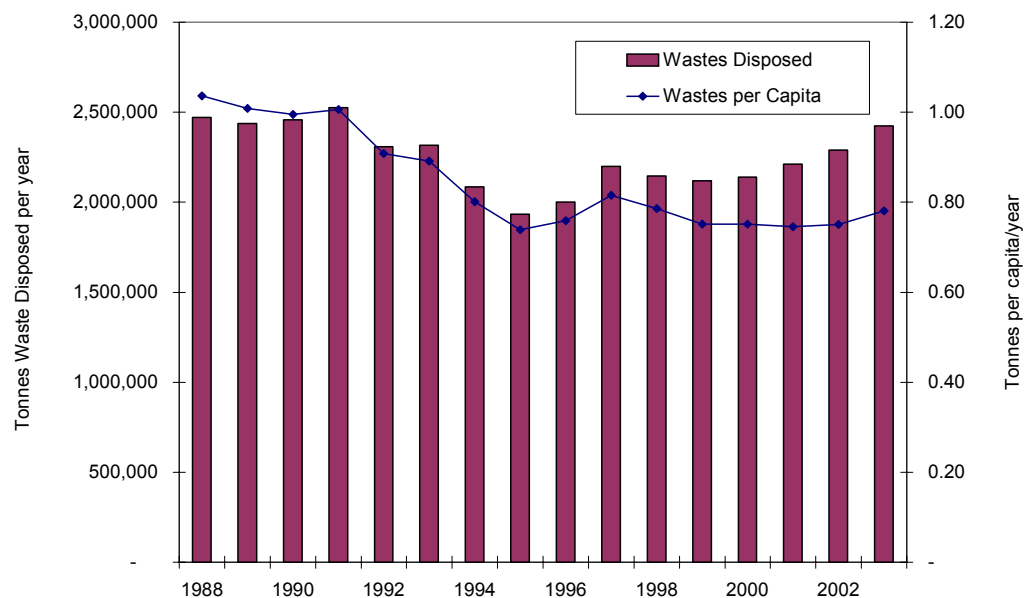
## Municipal Solid Waste in Alberta: How Much?

According to data from Statistics Canada, Alberta generates more waste per capita than any other province in Canada. Furthermore, recycling rates in Alberta are amongst the lowest in the country. The amount of municipal waste sent to Alberta landfills dropped from 1.04 tonnes per capita to 0.78 tonnes per capita between 1988 and 2003, but this is

only half way to reaching the provincial target of a 50% reduction in per capita waste from 1988 levels by 2010. Despite programs for recycling beverage containers, used tires, used oil, electronics and pesticide containers across the province, too much waste is going to landfill. Relatively low landfill fees may be one reason for this. Where landfill space is short or expensive, municipalities are

forced to find other solutions. Edmonton is a prime example of what can be achieved. Faced with a shortage of landfill space in the late 1980s, it initiated comprehensive domestic recycling, reuse and composting programs that now divert about 60% of residential waste from landfill.

### Total and per Capita Waste Disposal in Alberta, 1988 to 2003

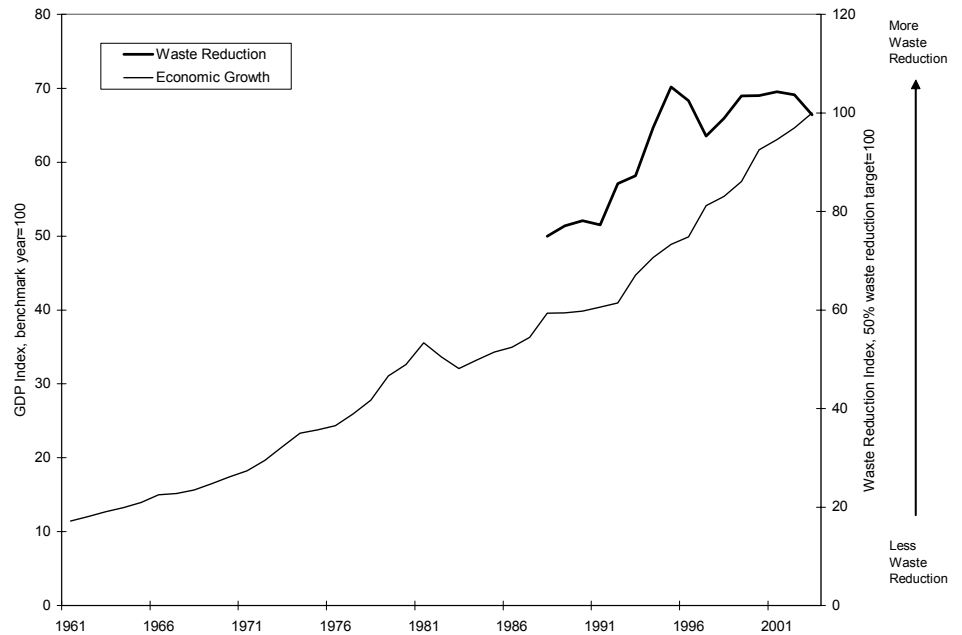


Source: Alberta Environment

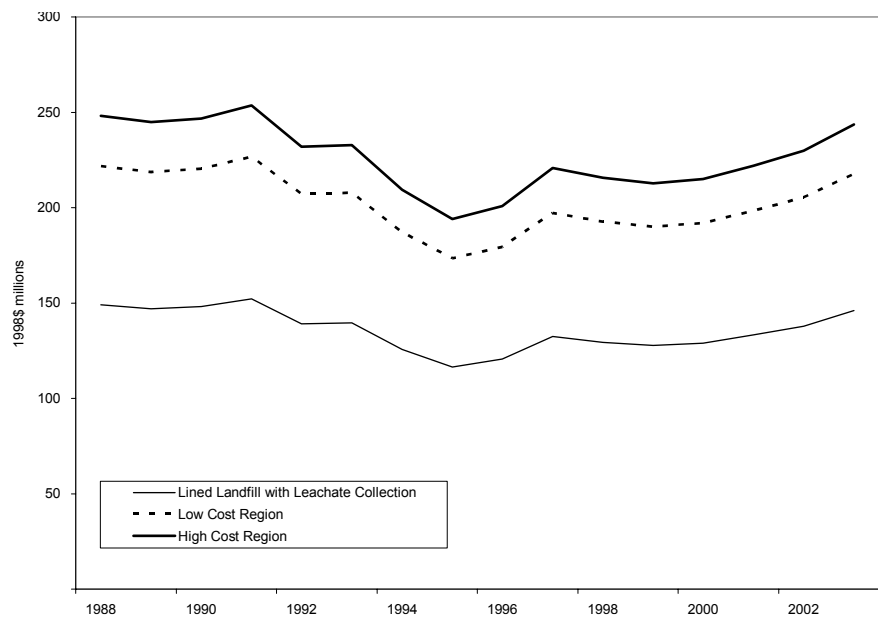
# So What?

Alberta needs to work harder to reduce per capita waste and increase the proportion of reused or recycled materials. Of course, the best solution is to reduce waste at source. Some companies, such as Interface and IKEA, view waste as lost profits. If more companies adopted that perspective we would encourage production processes that avoid toxic waste, reduce material input and throughput, and improve energy and resource eco-efficiency. Waste management, along with remediation services and administrative support, contributed \$2,450 million to Alberta's GDP in 2003. In addition to the operational costs of collection, transportation and disposal of waste (captured in the figure above), there are also environmental costs associated with solid waste disposal. Such costs have been estimated from a number of U.S. studies and begin at \$60.27 (1998\$) per tonne of solid waste in a lined landfill with leachate collection. Without such environmental protection measures the range of environmental costs associated with solid waste disposal is \$89.73 (1998\$) to \$100.44 (1998\$) per tonne of solid waste. The figure to the right shows three estimates for the environmental costs of waste disposal for Alberta; one for each per tonne cost estimate described above. Total environmental costs for waste disposal in Alberta are equal to the cost per tonne times the total volume of municipal waste in the particular year. Thus, if all of Alberta's landfills are lined and have leachate collection, the environmental costs from waste disposal in 2003 would have been equal to \$146 million (1998 \$). With no lining or leachate collection the environmental costs would increase to \$244 million in 2003 (1998\$).

## Alberta Municipal Waste Disposal Index: Where are we today?



## Big Bucks: The Environmental Cost of Waste Disposal in Alberta, 1988 to 1999



Environmental costs associated with municipal waste ranged from \$146 million to \$244 million in 2003.

The target of 100 on the index graph above is equal to a 50% reduction in municipal solid waste per capita from 1988 levels. The index for 2003 is 66, as the volume of waste was 75% of 1988 levels.

