

## **Incineration is our best option**

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By Hugh Holland

Despite extensive efforts to reduce, reuse and recycle, the amount of municipal waste has not declined significantly. More needs to be done to reduce, reuse and recycle; however, there will always be a need to dispose of significant quantities of municipal waste. Landfill has been the most common method of solid waste disposal for decades. However, convenient landfill sites are filling up. People are more and more concerned about potential soil and water contamination. Increased emphasis on buying locally grown food is increasing concern about the rapid depletion of good agricultural land.

Approval of new landfill sites takes years to obtain, especially when the waste is to come from remote urban jurisdictions. The Bob Rae government developed a list of potential new landfill sites in 1994, including several in Durham Region. Resistance was so strong from all sites on the list, that Toronto and Durham have been trucking garbage to Michigan for years -- until the 2010 cutoff by Michigan. It appears little or no progress has been made in the Toronto waste management situation in the past 15 years.

High-temperature incineration has emerged as a better alternative to landfill. However, some of the information currently circulating about incineration is outdated and inaccurate. Today's state-of-the-art high-temperature incinerators use very advanced combustion technology and are able to operate successfully within provincial and state air quality regulations at most locations across North America and Europe. Various mechanical configurations are used, but all operate on the following principles:

Waste is sorted, chopped, dried, and burned at temperatures around 982 C.

Smoke enters a secondary chamber where it is further burned at 1,371 C, then passed through a mechanical particle separator, a water scrubber and finally an electrostatic precipitator. Emissions meet contemporary air quality regulations.

The remaining ash (typically less than 5 per cent of original volume) is then cooled and removed to landfill. Any funeral director will tell you that ash from cremation (incineration) is typically under two per cent by weight and volume and is non-toxic.

Here are a few examples of successful use of modern high-temperature incineration:

Twenty-five per cent of municipal waste in the state of Minnesota is now processed in EFW (energy-from-waste) facilities that use the resulting steam to produce electricity.

The Brampton incinerator has been meeting MOE air quality standards for years.

Charlottetown, PEI, has a facility beside its hospital that burns municipal waste and provides all of the steam heat and hot water for the hospital.

GM Oshawa purchased an incinerator from France in 1985 and burned 100 tons of solid waste every day that was previously going to land fill. The steam was used to produce heat for paint-drying ovens. The MOE continuously monitored emissions and the facility was

consistently in compliance. This facility is no longer operating due to a massive conversion to recyclable containers for parts.

If suburban and rural protest groups continue to block landfill proposals and urban protest groups continue to block incineration proposals, there will be a crisis in the future.

In order to avoid a future crisis and to build public confidence in a now better alternative, municipalities should install some state-of-the-art incineration capacity now, before existing landfill sites are filled. People are realizing that the environment consists of air and soil and water and it is important to maintain all of these elements in a healthy state. New landfill sites close to urban centre are no longer a saleable proposition.

Transportation to remote landfill sites by hundreds of heavy trucks or rail cars uses large quantities of fuel, produces large quantities of emissions, increases traffic, accidents (health care costs) and equipment and road maintenance costs.

Incineration technology and costs have improved and will continue to improve. A 1999 study by the Environmental Science Division of the MOE concluded that "No significant human health effects are likely in a typical suburban community located near an incinerator or a landfill."

High investment costs of incineration can be offset by reduced costs of transportation (and its effects), and revenue from sale of steam heat or electricity.

When the public and community leaders take the time to obtain up-to-date, accurate, complete, and realistic information on waste management alternatives, they will find that when all factors are considered, state-of-the-art incineration is now a better alternative than expanding and creating new landfill sites.