



To: Board of Management

From: Robin D. Hale
Chief Operating Officer

Subject: **2009 ENERGY REPORT**

Date: 2010-04-22

Summary:

This report updates the Board on the Zoo's energy consumption for 2009.

Recommendations:

It is recommended that this report be received for information.

Background:

The 2009 Energy Report for the Toronto Zoo, prepared by Hao Yuen, Supervisor, Energy & Waste Management Office, at the City of Toronto is attached (Schedule 1). The report shows the total energy consumption and cost in comparison to the base year of 2008.

This report takes into account weather conditions and billing period length by making an adjustment to the base year energy use to provide for a fair comparison to 2008 (actual energy use). All of the costs are shown in 2009 dollars.

The report includes a number of tables, an executive summary, energy consumption and costs, and a report showing the actual (not weather adjusted) energy use for each energy type on a quarterly basis for the past four years (includes CO₂ emissions).

Comments/Discussion:

The report shows a slight decrease (less than 1%) in energy use and a decrease (3.3 %) in energy cost in comparison to the adjusted base year of 2008. The Toronto Zoo has undertaken a number of energy efficiency improvements in the past to reduce energy consumption. These have included the installation of a centralized building automation system, lighting retrofits to energy efficient lamps, replacement of boilers, hot water heaters and HVAC units with high efficiency equipment and insulation improvements. In 2010 the Zoo is pursuing biogas, solar thermal and photo-voltaic opportunities in keeping with the Zoo's Green Plan.

The following details are provided in regard to the energy consumption identified in the 2009 Report. Fuel consumption for gasoline, diesel, and propane reflect the Zoo's purchased consumption rather than the actual usage.

Electricity

Electricity usage increased slightly by 1.3% in comparison to 2008.

Natural Gas

Natural gas usage increased slightly by 1.2% in comparison to 2008.

Water

Water usage has decreased by 8.6% in comparison to 2008. The reason for this decrease included the wetter than normal summer in 2008 resulting in less irrigation.

Heating Oil

Heating oil usage has decreased by 21.7% in comparison to 2008. Heating oil is only used at Valley Halla, the Gate House, Marmot Barn, and the Ferret Barn. Since heating oil is purchased in bulk and the figures represent purchased quantities and not actual consumption, the results may be misleading.

Diesel

Diesel fuel consumption has decreased by 23.3% in comparison to 2008. Since diesel fuel is purchased in bulk and the figures represent purchase quantities and not actual consumption, the results may be misleading.

Propane

Propane usage has decreased by 2.9%. Since propane is purchased in bulk and the figures represent purchased quantities and not actual consumption, the results may be misleading.

Gasoline

Gasoline has decreased by 34.5%. Since gasoline is purchased in bulk and the figures represent purchased quantities and not actual consumption, the results may be misleading.

Robin D. Hale
Chief Operating Officer

List of Attachments:

Schedule 1 - 2009 Energy Report