

REGION OF WATERLOO

TRANSPORTATION AND ENVIRONMENTAL SERVICES, Waste Management

TO: Chair Jim Wideman and Members of the Planning and Works Committee

DATE: June 1, 2004 **FILE CODE:** E21-20

SUBJECT: ELECTRONICS (E-WASTE) DIVERSION PROGRAM

RECOMMENDATION:

THAT the Regional Municipality of Waterloo approve a new e-waste diversion program to be implemented over the next year as follows:

- a) Operation of a one day “amnesty” drop-off event for personal computers and monitors (limit of four pieces per car) on October 16th, 2004 at the Cambridge and Waterloo landfill sites;
- b) Provision of permanent drop-off facilities for e-waste at the Cambridge and Waterloo sites effective May 2, 2005 and approval of a \$10 processing fee per piece for up to four pieces (\$25 each piece for more than four) effective June 6, 2005; and
- c) Implementation of a landfill and curbside collection ban for e-waste effective June 6, 2005.

SUMMARY:

According to Environment Canada, approximately 70,000 tonnes of e-waste was landfilled in Canada in 2003 and is expected to increase at a rate of 5 per cent annually. It is proposed that the Region manage the implementation of an e-waste diversion program in a phased manner.

A single day “amnesty” drop-off event in the fall of 2004 would be followed by provision of permanent drop off facilities in May 2005 and a formal landfill ban in June 2005. Drop-off locations would be provided at both the Cambridge and Waterloo Waste Management facilities.

A fee of \$10 per e-waste unit is proposed for June 2005 to offset the cost of transportation and processing of the materials. Consistent with the CFC recovery program for appliances, a fee of \$25 per unit will be charged for large quantities to encourage large volume generators to deal directly with the end markets.

The e-waste would be transferred to the Noranda E-Waste Recycling Facility in Brampton, Ontario where the materials will be shredded and/or separated for reuse or recycling. Initially, the program would target personal computers, monitors and associated peripheral devices (such as printers and scanners) and home office equipment (small photocopiers and fax machines). Future program expansion may include household audio/visual electronics as end use markets evolve.

REPORT:

Background

Disposal of e-waste to sanitary landfill is a rapidly growing issue in Canada and abroad. According to Environment Canada, approximately 70,000 tonnes of e-waste was disposed in Canada in 2003, and it is expected that this amount will grow by up to 5 per cent annually. The bulk of the e-waste disposed of in landfills is comprised of personal computers, computer monitors and peripheral devices such as scanners and printers. E-waste is also an important component of the waste stream because of its potentially hazardous nature. Some computer monitors contain lead oxide while printed circuit boards contain a range of heavy metals. For this reason, Regional staff has been seeking a recovery facility that guarantees a high level of component recycling.

Proposed Regional E-Waste Diversion Program

Proposed Recovery Facility:

Currently the new Noranda Electronics Recycling Facility in Brampton is the only facility in Ontario that guarantees a high level of material recovery from e-waste. While some other facilities accept used computers for recycling, typically high value components are recovered with the remainder landfilled. Staff has inspected the Noranda facility and is impressed with the modern, clean and efficient recovery process. Staff has previously deferred implementation of computer recycling until a stable and reputable end market was available. Noranda operates a state-of-the-art facility and it is proposed that the Region contract directly with Noranda until another facility is available with similar recovery efficiency.

2004 Single Day Computer Amnesty

Roll-out of the program would initially involve a single day "amnesty" event at the Cambridge and Waterloo Landfill sites on Saturday, October 16th, 2004. Regional residents would be encouraged to drop-off their used computers and monitors free of charge to a maximum of four units per car. Upon completion of the day long program, the material would be transferred to Noranda in Brampton for recycling. It is anticipated that up to 20 tonnes of e-waste would be collected and diverted through this one day event. The single day event would also provide valuable information toward the implementation of a full scale program. The event would be operated in a similar fashion to the existing household hazardous waste (HHW) events.

Permanent E-Waste Drop-off Facilities

Commencing May 2, 2005, it is proposed that the Region provide convenient drop-off locations at both the Cambridge and Waterloo Waste Management Facilities in advance of a landfill ban on June 6, 2005. A fee of \$10 per e-waste unit (i.e. personal computer, monitor and associated peripheral devices or fax machine) would be charged effective June 6, 2005 to offset the cost of transportation and processing of the materials. A fee

of \$25 per unit would be charged for more than four units to encourage large generators to deal directly with end markets. Similar to the one day “amnesty” event, the e-waste would be transferred to Noranda Recycling as required.

Landfill and Curbside Waste Collection Ban

Promotion and education will be undertaken in advance and during rollout of the new e-waste program. After June 6, 2005, e-waste set out for curbside collection will not be picked up and will be stickered with details of the e-waste program. In addition, vehicles using the small vehicle transfer stations or landfill site after June 6, 2005 and found to contain e-waste would be required to separate the e-waste from the rest of the waste and pay the appropriate fee. This is the same as the current practice for landfill bans on cardboard, tires, and pallets.

Long Term Plan

Upon evaluation and confirmation of the success of the proposed e-waste program and the availability of suitable markets, receiving facilities may be expanded in the future to include other home electronic waste such as VCRs, stereos and TVs. At present, the recycling markets for many of these items are not stable due to the lower value of components.

CORPORATE STRATEGIC PLAN:

The program recommended herein is intended to improve waste diversion and decrease the amount of waste being landfilled at a reasonable cost. This is consistent with the Corporate Strategic Plan of ensuring that we spend wisely the dollars that we are entrusted with and maximize their use for those we serve.

FINANCIAL IMPLICATIONS:

The single day “amnesty” program is anticipated to cost \$40,000 and will be provided for through the Division’s 2004 Waste Management Alternatives Capital Budget for new program evaluation. The full scale landfill ban and drop-off program will have a net operating budget impact of \$50,000 beginning in 2005. This new expense will be incorporated into the new 2005 – 2014 rate model. At the time of writing, annual funding levels from Waste Diversion Ontario (WDO) had yet to be confirmed. If funds are available for e-waste recycling, the Region’s budget requirements will be reduced

OTHER DEPARTMENT CONSULTATIONS/CONCURRENCE:

Staff from the Finance and Purchasing Departments has reviewed this report.

ATTACHMENTS NIL

PREPARED BY: Jon Arsenault, Manager, Engineering and Programs

APPROVED BY: Michael Murray, Commissioner of Transportation and Environmental Services