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IMPROVING QUALITY OF BLUE BOX AND GREEN BIN MATERIALS

The Solid Waste Management Committee recommends the adoption of the recommendations contained in the following report, August 12, 2008, from the Commissioner of Environmental Services, with the following additional recommendation:

- 3. Staff report back to Committee with the summary statistics relating to violations to the proposed graduated notification and penalty system within six months of implementation.**

1. RECOMMENDATIONS

It is recommended that:

1. Regional Council endorse the implementation of a graduated notification and penalty system to ensure customers dropping materials off at regionally owned or contracted waste management facilities comply with relevant Regional policies and procedures.
2. The Regional Clerk forward this report to the Clerks of the nine local municipalities.

2. PURPOSE

This report discusses compliance issues and their implications to the Region and local municipality's diversion efforts. It also outlines a graduated system of notices and penalties, for consideration by Committee and Council, to encourage compliance by facility customers.

3. BACKGROUND

At the May 2008 meeting of the Solid Waste Management Committee staff presented a report recommending a by-law and graduated system of notices and penalties be adopted by the Region to encourage compliance by facility customers. The report was referred back to staff with a request that local municipalities be further consulted on the matter.

4. ANALYSIS AND OPTIONS

With the success of the Region's and its constituent local Municipalities' diversion programs has come several challenges including an increase in blue box contamination, issues with green bin contamination and unauthorized use of residential drop-offs by local businesses. Local municipal staff has expressed concern that the Region does not

have sufficient oversight at its own and contracted facilities to protect the integrity of the system. Regional staff is concerned that, left unchecked, these issues will impair our collective diversion efforts and have a significant financial impact on program operating costs.

4.1 BLUE BOX AND GREEN BIN CONTAMINATION IS A GROWING ISSUE

In 2005, the Region's blue box program was converted to a comingled system to reduce curbside collection costs for the local municipalities. Simultaneously, the program was expanded to include 25 additional container types making the program one of the most extensive in the Province.

The change to a comingled system has created a number of operational issues. Contamination has more than doubled under the new system. Collection crews no longer sort blue box materials curbside and can not control "small item" contamination by residents as effectively as under the previous system. In some instances, drivers ignore obvious blue box contamination, collecting blue box recyclables in bags or waste along with recyclables rather than incur complaints from residents about materials left at the curb. The Region currently has no means of controlling this growing issue.

Over compaction of blue box materials is resulting in increased costs and reduced diversion

Traditional waste collection vehicles hydraulically compact materials on board to increase the amount of waste they can carry per trip, thereby improving collection efficiency. If blue box materials are over compacted they become difficult, if not impossible, to separate. This action necessitates disposal of recyclable materials as residual processing waste, unnecessarily increasing processing costs and reducing municipal and Regional diversion efforts.

Regional staff analysed the impact of compaction on Material Recycling Facility processing efficiencies in 2006. Production losses were found to increase significantly at compaction rates exceeding a ratio of 2:1. Local municipalities were subsequently advised to not exceed a compaction rate of 2.5:1 aboard their collection vehicles and have been working with the Region to resolve this issue. It does, however, remain a key concern.

Contamination of blue box materials by school boards and depots is delaying program expansion

In 2005, the Region began accepting blue box recyclables from the local public school boards. Doing so, ensured local residents experienced the same blue box program at home and in the school. Contamination problems with loads of recyclables received from this source and an ongoing inability to resolve the matter forced Regional staff to temporarily put the planned expansion of the program to private schools on hold.

Regional staff is currently working with both boards and believe more definitive enforcement policies and penalties will help to resolve this matter.

Attempted use of residential depots by local businesses highlights need for effective controls

The Region currently operates four public depots where residents can drop off household hazardous wastes, electronic wastes or recyclable materials. A growing problem has been encountered at these sites with local businesses attempting to drop off business-related wastes. Small businesses frequently do not have low cost options for disposal of small quantities of electronics, recyclable materials or bulky items. Operation of these facilities is, however, controlled under a Certificate of Approval issued by the Ministry of the Environment and the current approvals for these facilities prohibit the receipt of waste from businesses. Staff support the concept of providing small businesses with access to Regional depots and Community Environmental Centres. However, effective controls to ensure legal compliance and an appropriate fee structure for these sites must be established.

Similarly, several local municipalities operate public depots where local residents can drop off blue box recyclables. These materials are, in most cases, hauled to the Region's Waste Management Centre for processing. Contamination of this stream by unacceptable materials such as shredded paper has been an ongoing concern of the local municipalities and has impacted the Region's ability to market blue box glass. In the spring of 2008, the Region will open the first of its Community Environmental Centres. Ensuring effective controls are in place to control contamination of recyclables at, and from these sites, is recommended.

Adherence to safety procedures and prevention of misdirected shipments at regional and contract site operations requires additional oversight

Regional waste management facilities and those private sector facilities contracted by the Region will receive and ship an estimated 140,000 truckloads of waste and recyclables in 2008. Some local municipal staff has expressed concern that Regionally-owned and contracted facilities lack sufficient oversight. At present, the Region's primary means of monitoring site activity is through the use of closed circuit cameras at certain sites and periodic staff inspections. Concern exists that loads delivered to these facilities by local municipal contractors may, periodically, be misallocated and outbound loads of Source Separated Organics and recyclables are being mismanaged. Creation of a new position within the Branch will provide better on-site management of incoming and outbound loads across the growing number of Regionally-owned or contracted facilities and supplement information obtained by the camera system.

To protect facility owners and vehicle drivers, the Region and its contract facility operators require that a variety of safety procedures be strictly adhered to. These include the use of personal protective equipment, safety harnesses and standard safety features on

collection vehicles such as safety bars. Most site visitors and vehicle drivers respect and abide by these procedures. Periodically, however, individuals are encountered who failed to abide by these procedures. A means of controlling these situations is required.

4.2 IMPLICATIONS TO JOINT MUNICIPAL WASTE DIVERSION STRATEGY INITIATIVES

The Joint Municipal Waste Diversion Strategy includes a number of priority initiatives. Amongst these is direction to improve diversion of waste from private sector sources such as multi-residential dwellings. Through the 2007 budget process, Council gave staff direction to support establishment of three-stream waste management systems in local municipal operations such as parks, recreational facilities and municipal buildings.

The Region currently provides free waste management services to its customers. The only controls available under the current waste management system are those fines and penalties that might be available through local municipal collection contracts. However, not all municipal contracts include remedies appropriate to address the issues facing the Region and its local municipalities. The multi-residential sector has historically been a primary source of blue box contamination. Providing property owners with sufficient motivation to establish effective collection systems will become increasingly important as the Region's multi-residential housing stock increases with time.

Similarly, as the Region and local municipalities expand three-stream collection services into areas such as parks and recreation facilities, transit systems and municipal buildings, it will be critical to ensure adequate controls are in place to minimize contamination while potentially accommodating new collection methods such as bagged recyclables.

4.3 PROPOSED GRADUATED APPROACH TO ENCOURAGING COMPLIANCE

To date, the Region has limited options when encountering problems with severely over compacted or contaminated loads other than to landfill the material. This growing problem has potentially long-term negative impacts on resident's perception of the Region's waste management services and on our diversion rate. Implementation of a graduated conformance management system provides the Region with the flexibility to take a measured response to problems it may encounter. Additionally, it provides ample warning and time for its customers to address the relevant concern.

The proposed system would include a range of actions including but not limited to:

- First violation – verbal warning
- Second violation – documented warning
- Third violation – \$500/load (the average cost of handling and disposal)
- Fourth violation – ban driver from facility or place on probation

Typically, as in the case of curbside municipal deliveries, violation notices and fines would be directed at the hauler in question with copies of the notices being provided, where appropriate, to the local municipality. This approach would allow the local municipalities, to take independent action, through existing penalty structures in their collection contracts, to address the concern. Fines may, however, be directed at the generator of the waste where they are clearly identifiable, such as in the case of a dedicated load from a school board or business dropping off waste at a Regional facility. Safety related violations would be directed at individuals where appropriate. A new Regional by-law and associated set fine structure are required to enable Regional staff to enforce compliance. Staff recommend hiring a full-time by-law enforcement officer to enforce the proposed by-law and to continue to work closely with our local municipalities to, where applicable, utilize options available under their collection contracts. Independent verification by representatives of the hauling company and/or local municipalities or waste owner would typically be sought irrespective of the approach taken. Branch staff will require training to issue fines under the new by-law.

By-Law application will require flexibility

Flexibility will be required in the application of this by-law. The Region and local municipalities are collectively putting considerable resources into developing new diversion programs for non-traditional areas such as multi-residential dwellings, parks and recreation facilities. These areas have unique collection issues and the associated challenges, such as contamination, need to be anticipated and taken into consideration when developing and applying the proposed by-law.

Flexibility in the application of penalties would also be required. Barring a driver from a Regional or Regionally contracted site on a temporary or permanent basis could, for example, occur after the second incident involving a serious breach of safety protocols or might occur where the driver has received a fourth violation related to the same issue within an appropriate period of time. Penalties would also be directed to the appropriate customer where sufficient evidence exists to demonstrate that their actions are the source of the alleged violation.

5. FINANCIAL IMPLICATIONS

The following table summarizes the estimated impact of program compliance issues. Estimated financial impacts are based on current contract prices and projected tonnages are based on historical program information.

Table 1
Estimated Annual Costs of Non-Conformance

Non-Conformance	Tonnage*	Financial Impact**	Diversion Impact
Blue Box Contamination	1,900	\$118,000	-0.6%
Green Bin Contamination	2,400	\$149,000	-0.8%
Over Compaction	700	\$133,000	-0.2%
Bagged Material	1,500	\$331,000	-0.5%
Depot Use by Businesses	300	\$120,000	-0.1%
Multi-residential Contamination	700	\$43,000	-0.2%
Parks & Recreational Facility Contamination	300	\$33,000	-0.1%
Total	7,800	\$930,000	2.4%

**Potential additional tonnage diverted by improved conformance*

*** Incremental costs*

The annual cost of enforcement is approximately 10% of the potential savings if the contamination reductions noted in Table 1 are achieved. Staff will include these enforcement costs in the 2009 operating budget as an efficiency improvement if this enforcement strategy is approved.

The enforcement by-law will be developed and accompanied by a report submitted for Council approval at a later date.

Development costs for the proposed policy and supporting by-law are not expected to be significant. Annual average enforcement costs are estimated at \$98,500 as detailed in Table 2. Revenues from collected fines will not significantly off-set these costs but both improvements in diversion and reduced operating costs are expected.

Table 2
Estimated Annual Costs of Policy Enforcement

Item	Annual Cost
Enforcement Staff (salary, benefits)	\$ 77,000
Vehicle* (Annual operating & replacement)	\$ 16,000
Office (phone, pc, supplies)	\$ 4,500
Administration (training)	\$ 500
Supplies	\$ 500
Total	\$ 98,500

*initial vehicle purchase is \$30,000

6. LOCAL MUNICIPAL IMPACT

Establishing effective controls over issues such as blue box contamination will ensure recyclables set out by local residents are diverted from landfill and facilitate collection contract management by local municipalities. This action will help protect the Region and local municipalities' efforts to achieve 65% diversion by 2010. Similarly, enforcing appropriate use of Regional depots ensures resident's property taxes are not applied to providing services to local businesses. Ensuring applicable safety procedures are followed at Regional facilities and those contracted by the Region will protect the Region and local municipalities from possible legal and regulatory action. Similarly, providing improved enforcement on-site will assist in ensuring loads received at Regional and contracted facilities are, in fact, from local municipal collection and billed correctly.

Local municipal staff has worked closely with Regional staff on the development of this report from its inception in the summer of 2006. Discussions and presentations were held with municipal recycling coordinators at their regular liaison meetings with the Region, the joint municipal commissioner's meetings, and N6 collection contract (Aurora, East Gwillimbury, Georgina, King, Newmarket and Whitchurch-Stouffville) charter meetings. This report reflects relevant comments and issues submitted from our municipal peers.

Regional and municipal staff will continue to work closely together to develop effective communication and liaison programs to prevent compliance issues and to take full advantage of enforcement options available through local municipal collection contracts and local waste management contract supervisors where non-conformance issues occur. This collaborative approach has successfully resolved start-up issues with the new collection contract for the municipalities of Aurora, East Gwillimbury, Georgina, King, Newmarket and Whitchurch-Stouffville, and has benefited both the Region and associated municipalities in terms of increased diversion.

Staff are working on mechanisms to continue to increase collaboration on key waste management issues including our work together on the Joint Waste Diversion Strategy.

7. CONCLUSION

Implementation of the proposed compliance policies and procedures is an important and necessary step in optimizing the Region's waste management programs, enhancing diversion and minimizing future operating costs for both the Region and local municipalities.

For more information about this report, contact Laura McDowell, Director Environmental Promotion and Protection at Ext. 5077 in the Environmental Services Department.

The Senior Management Group has reviewed this report.