

4

UPDATE ON THE REVIEW OF THE PROPOSED GUIDELINE FOR COMPOSTING FACILITIES AND COMPOST USE IN ONTARIO

The Environmental Services Committee recommends the adoption of the recommendation contained in the following report dated February 16, 2010, from the Commissioner of Environmental Services.

1. RECOMMENDATION

It is recommended that:

1. Regional Council endorse York Region staff comments on the proposed Guidelines for Composting Facilities and Compost Use and the Regional Clerk notify the Minister of the Environment and the Association of Municipalities of Ontario.

2. PURPOSE

York Region staff prepared comments as input to the current Provincial review of the proposed Guidelines for Composting Facilities and Compost Use. This report documents the outcome of the review and requests that Council endorse staff comments.

3. BACKGROUND

Ministry of the Environment released for consultation the Guideline for Compost Facility Operation and Compost Use

The “Guideline for Composting Facilities and Compost Use in Ontario: Draft for Consultation” (hereafter referred to as “Compost Guideline”) was released by the Province of Ontario in November 2009. This is the proposed replacement for the “Interim Guidelines for the Production and Use of Aerobic Compost in Ontario” last revised in 2004 to harmonize the metals criteria with that of the Canadian Council of the Ministers of the Environment (CCME) guidelines.

The proposed Compost Guideline proposes three categories of finished compost: AA, A, or B with AA being the highest grade and B being the lowest. The proposed category AA compost is very similar to category A compost in the current guideline. The York-Dufferin SSO RFP will require the proposed facility to produce AA compost.

The proposed Compost Guideline will become the new guiding document for obtaining a Certificate of Approval for compost facilities in Ontario. Stakeholders were invited to

comment on the proposed changes; York Region staff submitted comments preceding the January 23, 2010 deadline.

4. ANALYSIS AND OPTIONS

York Region's leading-edge diversion experience will be of benefit to the Province by providing feedback on the proposed Composting Guideline

In 2008, York Region ranked first in diversion performance in WDO's category of Large Urban Municipalities for the second year in a row, and second overall in Ontario with its diversion rate of 53%. In addition, York Region waste diversion initiatives received three Gold level Waste Minimization awards in 2008 from the Recycling Council of Ontario (RCO). As an established leader in diversion in Ontario, York Region is greatly interested in the proposed Compost Guideline as it has the potential to affect the York Region Source Separated Organics (SSO) and Yard Waste programs and associated composting facilities. Our leading edge experience in waste diversion will be of benefit to the Province in shaping and implementing the new proposed Compost Guideline. The response was developed and submitted to the Ministry within the required timeframes. However, the required deadlines necessitated submitting comments in advance, with follow-up Council review and endorsement.

Waste Management staff consulted with the Health Protection Division and the Capital Planning and Delivery Branch

Waste Management staff met with representatives from the Health Protection Division of the Community and Health Services Department and affected branches in Environmental Services to obtain input on the York Region response to the proposed Compost Guideline. Their recommendations were incorporated into the response and all affected groups have approved the final response. Staff also solicited comments from all nine local municipalities on the proposed Compost Guideline.

Staff commented on nine key areas of the proposed Compost Guideline:

1. Diapers, Sanitary Products, and Animal Waste
2. Plastic Bags
3. Storage of Feedstock
4. Odour & Enforcement
5. Standards for Compost
6. Determining Compost Category
7. Sewage (Wastewater) Management
8. Health and Safety
9. Support for Innovation

Future composting facilities should be permitted to accept diapers, sanitary products, and animal waste

The proposed Compost Guideline identifies diapers, sanitary products, and animal waste as materials that present challenges for processing. In the staff response it was acknowledged that these materials can present challenges, however, if a composting facility is operating properly, these materials can still create the high quality compost. It is the opinion of staff that if materials can be composted in a process that creates high quality compost, then composting should always be the preferred option to landfill.

To produce category AA compost, processing facilities cannot accept any feedstock materials that contain “sewage biosolids, pulp and paper biosolids, or septage” under the proposed Compost Guideline. Ministry staff confirmed during consultation that this does not include diapers, sanitary products, or pet waste. The proposed Compost Guideline outlines the requirements for three categories of finished compost AA, A, and B. All three must meet strict heavy metal requirements which cannot exceed the concentrations listed in Table 1 below.

Table 1
Maximum Heavy Metal Concentrations in the Current and Proposed Compost Guidelines

	Current Guideline	Proposed Guideline		
Parameter	Maximum Concentration Category A Compost	Maximum Concentration Category AA Compost	Maximum Concentration Category A Compost	Maximum Concentration Category B Compost
	<i>mg/kg dry weight</i>			
Arsenic	13	13	13	75
Cadmium	3	3	3	20
Chromium	210	210	210	1060
Cobalt	34	34	34	150
Copper	100	100	400	760
Lead	150	150	150	500
Mercury	0.8	0.8	0.8	5
Molybdenum	5	5	5	20
Nickel	62	62	62	180
Selenium	2	2	2	14
Zinc	500	500	700	1850

The proposed Compost Guideline includes restrictions on the use of the different categories of compost. Proposed Category AA is the only category that can be used without restrictions for both agricultural and residential purposes. Category A compost can be used without a Certificate of Approval, however the product must be labelled with

the maximum compost application rates, identification of any biosolids used as a feedstock, and a warning that the product should not be used on soils with elevated copper or zinc concentrations. In order to use or transport category B compost a Certificate of Approval or a Non-Agricultural Source Material (NASM) Plan will be required under the proposed Compost Guideline.

Diapers, sanitary products, and pet waste contribute heavily to the diversion rate of York Region as these materials account for approximately 20% of the SSO materials stream based upon data collected from waste audits on pre-processed SSO materials. The SSO program accounts for roughly one third of the York Region diversion rate. Therefore if diapers, sanitary products, and pet waste materials were removed from the SSO program it would decrease the overall York Region diversion rate by an estimated 6%.

York-Dufferin composting facility will be designed to comply with the proposed Compost Guideline and produce category AA compost

The RFP for the York-Dufferin composting facility requires that the facility be ISO 14001 compliant. This will require compliance with all regulations and guidelines including an updated version of the proposed Compost Guideline. In addition, the RFP states that the facility must be designed to produce compost that meets the requirements for category AA under the proposed Compost Guideline.

Sharp object requirements in the proposed Compost Guideline are onerous and should be amended

The staff response noted that the sharp object requirements in the proposed Compost Guideline are onerous and require amendment. Currently, the proposed Compost Guideline states that if a load of finished compost contains one piece of sharp matter over 3mm then the entire load could not be considered category AA compost. Staff stated that this is an unrealistic measure and advocated that specific measurable tolerances be developed.

York Region continues to advance the SSO program by mandating certified compostable bags

The proposed Compost Guideline indicates that plastic bags are not an optimum collection medium for source separated organic materials. York Region is addressing this concern by mandating compostable bags for use in the SSO program effective May 1, 2011. This initiative will continue to advance the SSO program to ensure that York Region remains a waste diversion leader. However, it is recognized that plastic bags will continue to appear in the SSO for the foreseeable future and therefore the design of compost facilities must continue to include bag opening and screening equipment. A promotion and education strategy and implementation plan is currently being developed in conjunction with the nine local municipalities for roll-out in 2010 and to support the ban in the second quarter of 2011.

Feedstock storage times should be extended to allow facilities to operate effectively based on industry best practices

The proposed Compost Guideline recommends that SSO materials be incorporated in the compost process “on the date of receipt” to reduce odour. However this is not always possible as many facilities operate in a Last In First Out (LIFO) manner. In addition this does not take into account weekends and other scheduled closures.

The proposed Compost Guideline recommends that leaf and yard wastes be incorporated into the composting process within four days of receipt. Staff noted in the response that leaf and yard waste is a common bulking agent used in the composting process. Leaf and yard waste is not produced year-round and staff advocated for extended storage of these materials to be permitted. Recommended storage times for both SSO and leaf and yard waste materials should be based upon industry best practices.

Odour compliance should be better defined

Odour has been an issue for several composting facilities in Ontario and as a result odour is a key concern addressed in the proposed Compost Guideline. Staff recommended that odour issues be managed in an objective manner with specific and quantifiable definitions of what constitutes an odour event. Presently the proposed Compost Guideline does not include a definition of what constitutes an odour. If such standards were developed then the Ministry would be able to assess compliance more objectively.

To address potential odour issues, the York-Dufferin composting facility RFP will contain requirements designed to minimize odour including: operating the facility under negative pressure, a double door air-lock system, a backup electricity generator, odour control technology and backup odour control measures. Other design requirements for odour control will meet or exceed those proposed in the Compost Guideline.

Sewage/Wastewater Management

The proposed Compost Guideline outlines minimum requirements for retention ponds to manage run-off and leachate. Staff advocated that retention pond sizing consider climate change impacts and the potential for more severe extreme weather events.

Human and environmental health should be taken into account in all aspects of composting

Staff have advocated that the proposed Compost Guideline take human and environmental health aspects into account whenever possible. Staff advocated that heavy metal tolerances be re-examined and requested toxicological data be provided to staff to ensure that compost will be beneficial to the environment. In addition, staff stressed the

need for appropriate occupational health and safety standards and the importance of educating workers on the proper use of personal protective equipment.

The Ministry needs to administer the proposed Compost Guideline in a way that supports innovation in the composting industry

The SSO composting industry is in its infancy in Ontario and requires support from regulatory bodies to support continued increases in diversion across the Province. It is expected that many of the issues that have affected composting facilities recently such as odour will be rectified through future technological development and operational enhancements. Staff recommended that the Ministry administer the proposed Compost Guideline in a way that promotes innovation and the development of new processes for this emerging field. Advancements in processing technologies will not have the chance to develop in Ontario without support from regulatory bodies.

5. FINANCIAL IMPLICATIONS

There are no immediate financial impacts on York Region that result directly from the review of the proposed Guidelines for Composting Facilities and Compost Use.

There may be some costs associated with incorporating the design requirements outlined in the proposed guideline into the York-Dufferin SSO facility RFP. The RFP stipulates that proponents design facilities that meet or exceed the specifications outlined in the proposed Compost Guideline. Any costs associated with meeting this requirement will be known when final facility designs are submitted later this year.

Staff will continue to monitor these situations for developments.

6. LOCAL MUNICIPAL IMPACT

Local municipalities are not directly affected by the proposed Compost Guideline as it focuses primarily on processing. Staff will continue to work with the local municipalities on the transition to compostable bags.

7. CONCLUSION

Waste Management Staff have consulted with the Health Protection Division of the Community and Health Services Department and other affected units in Environmental Services and submitted comments to the MOE. Staff request that council approve these comments and send a letter of endorsement to the Minister of the Environment and to the Association of Municipalities of Ontario.

For more information on this report, please contact Laura McDowell, Director of Environmental Promotion and Protection at (905) 830-4444 Ext. 5077.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause is attached to this report.)



Environmental Services

January 22, 2010

Mr. Brad Guglietti, Senior Program Officer
Ministry of the Environment
Integrated Environmental Policy Division
Waste Management Policy Branch
135 St. Clair Avenue West, 7th Floor
Toronto, ON M4V 1P5

Dear Mr. Guglietti:

RE: Consultation on the Guideline for Composting Facilities and Compost Use in Ontario

York Region staff appreciate the opportunity to provide the following comments on the “Guideline for Composting Facilities and Compost Use in Ontario: November 2009 – Draft for Consultation” – EBR Registry Number: 010-6658. Due to the Ministry’s consultation schedule and EBR comment deadline, these comments will be considered by Regional Council on April 22, 2010. A copy of the Council recommendations will be provided to the Ministry after that date. As one of the top performing municipalities in waste diversion, the Regional Municipality of York is greatly interested in commenting on the proposed composting guidelines as it relates to York Region’s programs.

Comments to the Ministry of Environment on the “Guideline for Composting Facilities and Compost Use in Ontario: November 2009 – Draft for Consultation.”

The Regional Municipality of York is made up of nine local municipalities (Aurora, East Gwillimbury, Georgina, King, Markham, Newmarket, Richmond Hill, Vaughan, and Whitchurch-Stouffville) and provides services to over 1 million residents, and 25,000 businesses.

In 2008, York Region generated over 344,000 metric tonnes of waste, of which 53% was diverted from disposal. This ranked York Region first in diversion performance in WDO’s category of Large Urban Municipalities for the second year in a row, and second overall in Ontario. As an established leader in diversion in Ontario, York Region staff are greatly interested in commenting on the proposed options as these have the potential to significantly influence waste management in York Region and across Ontario.

This document will provide comments regarding the consultation guideline under 5 major themes:

1. Diapers, Sanitary Products, and Animal Waste
2. Plastic Bags
3. Storage of Feedstock
4. Odour & Enforcement
5. Standards for Composting
6. Determining Compost Category
7. Sewage (Wastewater) Management
8. Health and Safety
9. Support for Innovation

1. Diapers, Sanitary Products, and Animal Waste

Staff stress the critical importance of continuing to permit diapers, sanitary products, and animal waste in SSO programs. These items have been included in the York Region Green Bin program since its launch in 2005. These items also contribute significantly to the diversion rate of York Region and Ontario in general. Staff recognize that these materials present challenges for processing, however, if a compost facility has the proper equipment and is operating as designed then these materials should be composted whenever possible. Staff maintain that if materials can be included in a composting process that creates a high quality compost then compost should always be the preferred option over disposal.

Clarification regarding section 3.2 outlining the minimum requirements for Category AA compost was obtained from MOE staff at the consultation session held on January 12, 2010. MOE staff indicated that diapers, sanitary products, and pet waste would be considered acceptable feedstock material for Category AA compost. According to the guideline Category AA compost feedstocks cannot include: "sewage biosolids, pulp and paper biosolids and septage". York Region staff recommend the guideline clearly state diapers, sanitary products, and pet waste are an acceptable feedstock material for Category AA compost.

2. Plastic Bags

York Region staff stress the importance of continuing to permit plastic bags to be used as a collection medium. York Region staff acknowledge the MOE position that plastic bags create some additional challenges at the processing stage. New and existing facilities must be permitted to process feedstocks that contain plastic bags for the foreseeable future given the challenges associated with curbside enforcement. During the Summer of 2009 York Region launched a campaign to promote the use of compostable bags in the Green Bin program. Regional Council has now endorsed a plan to make the use of compostable bags mandatory starting in May 2011. As a part of this plan staff will launch an aggressive education campaign promoting the benefits of compostable bags. This fact notwithstanding, staff recognize that plastic bags will remain a collection medium for the foreseeable future and processors require the ability to manage feedstock contained in plastic. .

3. Feedstock Materials

The guideline states in section 10.2.2.3 that “Composting of these [food] wastes typically includes blending them with carbonaceous amendment materials such as wood chips, leaves, sawdust etc., to help balance nutrients and moisture”. This references the use of yard waste as a bulking agent. However, section 5.2 states that “Less putrescible wastes, such as leaf and yard wastes (except brush), should not be on-site for more than four days before entering the active composting process”. Since yard waste is not generated year-round this requirement is not realistic if yard waste is to be used as a bulking agent in the composting process. This would be a continual issue for any facility that uses yard waste as a bulking material. Staff recommend that the storage times for bulking agents be increased in the guideline to accommodate the seasonality of yard waste and other bulking materials. The acceptable storage times for bulking materials should be based on the best practices of the composting industry including the storage and odour control mechanisms established at individual sites.

Section 5.2 states “Highly putrescible wastes, including food wastes, biosolids and manures, should be incorporated into the active composting process on the day of receipt”. This will not always be possible for in vessel facilities as the composting process will not begin until a tunnel is filled. Also facilities operating in a Last In First Out (LIFO) manner may be challenged to ensure all materials are incorporated into the composting process on the day of receipt. In addition this does not allow any buffer for weekends and other scheduled shutdowns. Consideration should be given to extending this storage time in the guideline. The acceptable storage times for these materials should be based on the best practices of the composting industry including the storage and odour control mechanisms established at individual sites (i.e., negative pressure in loading areas).

4. Odour & Enforcement

York Region staff recognize the importance of composting as a method to divert organic material from landfill, and an alternate source of fertilizer. One of the purposes of the compost guideline is to protect human health and the environment by setting standards recommending good management practices. It is the position of York Region staff that the operational guidance contained in Part III (odour control, waste management, health and safety, vermin and vector control, dust control, etc) be further promoted and continuously reviewed by the Ministry to assist in the development of industry best practices and ensure continuous operational improvement..

In regards to odour enforcement, the compost guideline does not indicate what constitutes a “good odour” that naturally occurs during the composting process and a “bad odour” which would be of concern to the MOE. York Region staff request that the MOE objectively define and quantify what constitutes an odour in the guideline. Historically odour complaints have been addressed subjectively. Developing a standard by which to evaluate odour complaints would help avoid regulatory action against unnecessary issues arising from normal composting operations and would provide an objective standard for Environmental Officers to enforce C of A requirements.

5. Standards for Composting

York Region staff agree that the compost quality criteria outlined in Part II be based on the objective of protecting human health and the environment and support testing finished compost to ensure that final product does not become a source of contamination in agricultural or residential applications. During the York Region staff review of the guideline it was noted that several of the trace element maximum concentration values presented in Table 3.1 of the proposal are higher than the values outlined in the Ontario soil regulations (Ontario Reg. 153). York Region staff recognize that compost is designed to be mixed with soil as an amendment and not to be used as a soil replacement. York Region staff recommend that the Ministry review and provide rationale for the variation between the two documents.

York Region staff would like to request a copy of the toxicological analysis conducted to ensure that the allowable maximum concentrations in compost presented in Table 3.1 do not present an unacceptable health risk.

6. Determining Compost Category

York Region staff suggest that constant testing of both feedstock and the finished compost may be redundant. The frequency to test feedstock should be left up to the processor as they will be responsible for marketing the finished compost. Compost categories should not be determined by the feedstock used to generate the compost, rather it should be determined by the quality of the finished compost.

Requirements for sharp foreign matter are extremely onerous and would be difficult to meet for any compost operation as the guideline states that compost cannot contain any materials greater than 3mm. Currently the guideline indicates that if a large load of finished compost contained one piece of sharp matter over 3mm then the entire load could not be considered Category AA or A compost. Specific tolerances for sharp material, such as the ones defined for Category B compost should be created for Categories AA and A.

7. Sewage (Wastewater) Management

Section 5.3 Sewage (Wastewater) Management, outlines minimum requirements for retention ponds to manage run-off and leachate. York Region staff recommend that retention pond sizing consider climate change impacts and the potential for more severe extreme weather events.

8. Health & Safety

York Region staff agree with the importance of good management practices to reduce workers' exposure to potential health hazards and recommend that operational aspects (page 55) include worker training and supervision on the use of Personal Protective Equipment where needed. York Region staff also recommend that the Ministry of the Environment solicit comments from the Ministry of Labour to ensure that health and safety practices minimize worker exposure to bioaerosols and pathogens.

9. Support for Innovation

Source Separated Organics diversion is a relatively new evolution in waste management in Ontario. With any program or technology in its infancy, there will be some growing pains. There have been several cases where operational issues (primarily odour) have developed at SSO processing facilities in Ontario. In the future many of these problems will most likely be corrected through operational innovations and emerging technologies. In order to permit the SSO processing industry to further establish operational excellence York Region staff recommend that the MOE administer the new compost guideline in a way that promotes innovation and the development of new processes for this emerging field.

York Region is an established leader in diversion. A large component of York Region's success is a result of the Green Bin program. York Region has one of the longest running SSO programs in Ontario. York Region staff support this comprehensive composting guideline in general but recommend that the staff comments provided in this letter be applied to the guideline. York Region staff trust that the MOE will apply this guideline in a manner that builds on the advancements of municipalities and the SSO composting industry in recent years.

Sincerely,



Laura McDowell
Director, Environmental Promotion and Protection

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