Water Environment Association of Ontario

P.O. Box 176
MILTON, ON L9T 4N9
Tel: 416-410-6933
Fax: 416-410-1626
Email: weao@weao.org
Website: http://www.weao.org

*"WEAO WILL BE THE PREEMINENT ORGANIZATION OF TECHNICAL AND PROFESSIONAL INDIVIDUALS DEDICATED TO THE PRESERVATION AND ENHANCEMENT OF ONTARIO'S WATER ENVIRONMENT"*



January 4, 2008

Kevin Webster,
Senior Policy Coordinator,
Ministry of the Environment,
Waste Management Policy Branch
135 St. Clair Ave. W., floor 7,
Toronto, Ontario
M4V 1P5

Re: Regulation Posting Notice EBR #010-1436, *An Improved Regulatory Framework for the Management of Non-agricultural Source Materials (NASM).*

The Water Environment Association of Ontario (WEAO) represents the wastewater sector in Ontario. Our membership is composed of municipalities, academia, engineering consultants, industry, and provincial and federal departments with a focus on wastewater management (municipal wastewater, storm water management, water reuse, and biosolids). Our Association has an active Residuals & Biosolids Committee and a good working relationship with both the Ministry of the Environment and Ministry of Agriculture, Food and Rural Affairs.

The Association believes the development of a comprehensive, improved regulatory framework for management of non-agricultural source materials is a good step. In previous comments regarding the Nutrient Management Act and Regulations, WEAO has encouraged the Ontario government to provide a more even playing field for land applied nutrients across the board. However, we also believe that this step must adequately address the issues, by ensuring that decisions have been made based on science, and that stakeholders comments are used to develop the final product. There are areas within the proposed regulatory framework that we feel require additional attention and focused discussion with stakeholders.

WEAO's Residuals and Biosolids Committee (representatives from municipalities, equipment suppliers, consulting firms, academia, and land applicators) have prepared a technical review of the EBR notice (attached). In general we applaud the efforts to improve the regulatory framework but suggest that before it be approved there be further consultation to ensure issues of training, implementation, and additional complexity created in formulating the framework be addressed. The resource capacity in the field of environmental management (regulatory and

other) is diminishing as the population ages. Stakeholders and the public are already confused by dealing with a plethora of new legislation related to nutrients, clean and safe water, source water protection plans, plans and strategies in general. Although this initiative is an attempt to resolve the complexity, it may have inadvertently created more in the process.

We trust the following comments will be found to add value to the consultative process. We look forward to additional details being provided, and the opportunity to provide further comment. We would also welcome the opportunity to meet with Ministry of the Environment and Ontario Ministry of Agriculture, Food and Rural Affairs staff to provide stakeholder consultation in a personal setting.

Sincerely,

Catherine Jefferson, MSc.
Executive Director
Water Environment Association of Ontario

Attachment

Cc: Vince Nazareth, Chair Government Affairs Committee
Don Hoekstra, Chair Residuals & Biosolids Committee

**ATTACHMENT**

The Water Environment Association of Ontario (WEAO) supports the Ontario government's efforts to address the present duplication in regulations relating to the land application of biosolids. Given the agronomic benefits of applying biosolids to agricultural land in Ontario, regulating this practice under nutrient management rather than waste management regulations makes good sense. Providing a stream-lined approach to regulating the land application of Non-Agricultural Source Materials (NASM) in Ontario, under the Nutrient Management Regulation, is a step in the right direction.

In reviewing the proposed framework, it is clear that much effort has gone into developing the draft framework. WEAO appreciates this, and supports the continuous improvement of science-based regulations. However, we are concerned that more details have been prepared than are provided at this time in the draft framework. For instance, sampling and analysis requirements are alluded to, with mention of meeting limits set in the Waste Management Regulation, but specific details are not provided. Similarly, mention is made of moving between odour classifications, but the logistics of making this happen are not provided.

WEAO applauds the effort to harmonize the NASM regulatory framework with the upcoming source protection regulations. There is much concern about the extent to which source protection regulations will impact current nutrient application activities. We would suggest that the Nutrient Management Act (NMA) application standards should not be overruled by a source water protection plan unless some specific trigger, such as the result of a hydrogeological study, indicates that more restrictive measures are required for specific areas. (i.e., there must be a valid technical basis for more restrictive application standards under source protection and not just that it was a good idea under a risk minimization strategy). WEAO encourages the Ontario government to continue to ensure these regulatory instruments work together, rather than conflict with each other.

WEAO also supports an agronomic approach to determining application rates for land applied nutrients, and agrees that Nutrient Management Plans (NMPs) can be an appropriate tool for this. However, we are concerned about how field-based NMPs will work, what their lifespan will be, and who will prepare them. For instance, since biosolids land application will trigger the requirement for a farmer to have a field-based NMP, it is expected that the biosolids industry (municipality or biosolids contractor) will provide the NMP as an added service to the farmer. This opens the preparer of the NMP to some liability when they have no control over the NMP being properly followed beyond the application of the biosolids. There is also concern about farmer buy-in to the NMP when he has not been involved in the preparation. WEAO looks forward to the release of further details relating to the field-based NMPs, in order to make the best use of this tool in determining agronomic application rates.

We have carefully reviewed the approach to metal criteria and classification in the draft framework. While we appreciate the opportunity to apply nutrients at a rate between 8 and 22 dry tonnes, a change from the existing Nutrient Management Regulation where it was one rate or the other, we have some concerns about the classification criteria chosen.

Despite increased sewer use controls, and decreasing metal concentrations in municipal biosolids, it is virtually impossible for biosolids to meet the metal criteria proposed for the CM1 category. These criteria are more stringent than the Federal fertilizer criteria, which allows for unrestricted use of registered products. While we understand and appreciate the difficulty in trying to regulate so many different NASM materials under one regulatory framework, choosing the compost criteria for CM1 limits creates a situation where biosolids products will never be able to meet this criteria.

This creates a dichotomy that will be difficult to explain to the public – a biosolids product that meets or exceeds provincial requirements for land application for CM2 but cannot meet the stricter criteria of CM1. Yet registration of the same product under the Federal Fertilizers Act could allow for the same material to be removed from provincial regulation but the product cannot meet the strictest of the provincial criteria. For municipalities pursuing further treatment for their biosolids products and aiming for registration as a fertilizer product, the inability to meet the stricter provincial criteria is a disincentive to producing a "higher quality" biosolids product. For this reason, WEAO strongly encourages the Ontario government to utilize the existing limits for 22 dry tonnes in the Nutrient Management Regulation, which align with the Federal Fertilizer Regulation, as the stricter CM1 criteria.

We also have comments regarding the following specific components of the draft regulatory framework:

**6.2 Haulers** - limiting the exemption for C of A to only NASM going directly to land, is of little value as most material must first go into storage, thus unless the exemption is applied to all haulage of the NASM, the broker would still require a C of A;

**20 Odour standards** - the proposed odour standard, especially the clause that NASM must not be applied if it exceeds the COA3 limit, begs the question of how one would determine if they meet or exceed the COA3 limit. Ultimately the criteria will either end up being totally subjective, or it will need to be backed up by a formal testing protocol and a significant database of samples. In either case the regulation should be clear on how this is to be evaluated.

The outright prohibition on spreading of materials that smell more than high solids centrifuge cake may be problematic, as some of the materials listed in COA3 such as greases etc, may indeed have a stronger odour. Also, given the large variation in odour strength between high solids centrifuge (HSC) cakes from plant to plant and over time, what is the basis against which materials should be evaluated?

The separation distances from individual residences for COA3 materials become excessive and limit both the value of land application and available land base. The purpose of the Odour standards is avoidance of annoyance. This is a subjective matter and in many cases closer application may be possible without causing annoyance. The regulation should in general allow application up to the edge of the residential property. As proposed, the area within 25-50m of residences could be supplied only by non NASM, or a NASM without odour such as pellets, such as manure or chemical fertilizer, which can also generate odours. The regulation should allow for closer application with the permission of the resident(s). The odour testing data on biosolids cake injection do not support the need for a 100m setback;

**21.1.2** - consideration should be given to the Phosphorus sorptive capacity of the iron and aluminum in sewage biosolids. The phosphorus in most sewage biosolids is tightly bound, and while it is available to plants, it will not readily leach into surface water or groundwater. The application of sewage biosolids may even reduce the runoff of phosphorous by sorbing phosphorus already present in the soil. In particular the use of a phosphorus saturation index, or some other measure to reflect the solubility of the phosphorus in the NASM should be used. The potential for phosphorus leaching with sewage biosolids high in iron or aluminum is minimal and this should be reflected in the allowable application rates;

**23.3** - **paragraph 3**, the use of the pathogen data from the last 4 months means that generators greater than 45,400m3/d would be using a geometric mean of the last 8 samples, rather than the current standard of the last 4 samples. Also small generators may only have 2 samples in the previous 4 months so their geometric mean would then only be on 2 samples. This variation in the number of samples could have significant implications for determination of compliance.

It may be useful to have some guidance on dealing with excursions in sampling data, and an appropriate response to materials applied with parameters exceeding the limits. For instance, if a single sample shows an uncharacteristic spike, is it possible to collect and analyze additional samples? On what basis could a suspected contaminated sample result be discarded? If additional samples are taken, do all samples in the past 4 months need to be used, or just the 4 or 8 most recent? Is it necessary to have sample analysis results available prior to land application? If so, this would effectively eliminate any direct from plant to field application. If a sample comes back with very high results that cause the average to exceed a limit, but the results are not available until after the material is spread, is there some action necessary for the material spread, or should spreading simply cease until further analysis is done?

Could sampling parameters and frequency be modified for any category through an approved nutrient management strategy, such as eliminating the unnecessary measurement of nitrate and nitrite which are not found in any significant quantity in anaerobic biosolids?

WEAO appreciates the efforts being made, and would appreciate sitting down with those finalizing the framework to provide personal stakeholder input from stakeholders who will be directly affected by any changes.

Prepared by the WEAO Residuals & Biosolids Committee

January 4, 2008