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Ministry of the Environment
Integrated Environmental Planning Division
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Fax: 416-325-4437

Dear Mr. Webster,

Re: An improved regulatory framework for the management of non-agricultural source materials, EBR Registry Number 010-1436

I am writing on behalf of the Canadian Institute for Environmental Law and Policy (CIELAP) to provide comments on the Ministry of the Environment's proposal to improve the regulatory framework governing the application of non-agricultural source material on agricultural land. CIELAP was founded in 1970, with the mission to provide leadership in the research and development of environmental law and policy that promotes the public interest and sustainability.

The purpose of this proposal is to develop a regulatory framework that will eliminate overlapping approval requirements for application of non-agricultural source material (NASM) on agricultural land under the *Nutrient Management Act, 2002* and the *Environmental Protection Act*, and to develop and revise existing standards under the *Nutrient Management Act, 2002* to focus on the quality of the materials. In reviewing and amending these regulatory requirements, it is important to address public concerns about the environmental and human health impacts of emerging contaminants, such as pharmaceuticals and personal care products, found in NASM.

The definition of NASM in O. Reg. 267/03 includes pulp and paper biosolids, sewage biosolids, anaerobic digestion output and other non-agricultural material capable of being applied to agricultural land as a nutrient. Given this broad definition, it is essential that the Ministry of the Environment and the Ministry of Agriculture, Food and Rural Affairs take proper precautions to determine what contaminants are contained in NASM, and how they may affect environmental and human health if applied to agricultural land. The use of sewage biosolids, or sludge, is of particular concern to CIELAP and must be subject to strict requirements when being applied to agricultural land.

In 2006, CIELAP released a report – entitled *There is No “Away” - Pharmaceuticals, Personal Care Products, and Endocrine-disrupting Substances: Emerging Contaminants Detected in Water* – available at <http://cielap.org/pdf/NoAway.pdf>. This report highlighted research showing that between 50% and 90% of the active ingredients in drugs are not absorbed by the human body but instead are excreted. As a result there is a high concentration of contaminants from pharmaceuticals found in sewage.

While some of these contaminants may be removed from sewage sludge by wastewater treatment, others are not. For example, one study noted in CIELAP’s 2006 report found that the endocrine-disrupting compound nonylphenol is largely removed from the wastewater effluent, but then instead partitions to the sewage sludge. Although a percentage of nonylphenol may be removed from the sludge by aerobic sludge composting, the sludge digestion processes generally used does not remove it.

After sewage sludge is placed on agricultural land as a NASM, contaminants from excreted substances may be carried in runoff into ground or source water. A growing number of studies have linked the presence of antibiotics to drug-resistant strains of pathogens, or anti-microbial resistance. The presence of endocrine-disrupting contaminants from pharmaceuticals and personal care products have been shown in studies on fish, bird and small animals to cause impaired or abnormal reproduction, feminization of males of species, depressed thyroid and immune functions, and hormone-related cancers. Although studies have not yet been published on their effects on larger animals and humans, the potential for negative impacts requires that the government act with precaution.

CIELAP’s 2006 report recommended that governments review their sewage sludge management practices in light of issues related to pharmaceuticals and resistant bacteria in water. Given the potential that pharmaceuticals and personal care products may pose a serious risk to the environment and to human health, it is important for the Ministry of the Environment to address emerging contaminants in pharmaceuticals and personal care products, such as antibiotics and endocrine-disrupting substances, in the proposed regulatory framework for the application of NASM on agricultural land. It would be beneficial to add additional sub-categorization based on the concentrations of these contaminants in NASM, similar to those proposed for metals, pathogen content and odour annoyance.

Thank you for the opportunity to provide input on this proposal. Please contact me, or Maureen Carter-Whitney, CIELAP’s Research Director, if you wish to discuss any of these comments further.

Yours sincerely,



Anne Mitchell
Executive Director

Cc: Hon. John Gerretsen, Minister of the Environment
Gord Miller, Environmental Commissioner of Ontario