

Development of a Biosolids Master Plan

By Louise Hollingsworth and Bob Kuzyk

Municipal wastewater treatment plants generate liquid and solid discharges that have to be managed in an environmentally responsible way. In the past, attention focused on the liquid: effluents discharged to watercourses. Legislation, regulations and effective facilities and operating procedures have evolved in this regard. In the case of solids management, the same level of attention to the protection of human health has been applied, but changes in the rules have started to appear in recent years.

Evaluating the current and anticipated applicable laws, regulations, and guidelines in the municipal, provincial, or federal jurisdiction is an important consideration in the development and implementation of a biosolids management program.

Regulation of biosolids in Ontario has historically been handled under the *Environmental Protection Act* and the

Ontario Water Resources Act. Although these remain key legislations for compliance and regulation of waste management and sewage treatment approvals, there is new legislation, the *Nutrient Management Act* (NMA), which was passed on June 27, 2002. The NMA is intended to regulate all land-applied nutrients in Ontario, including biosolids.

Land application of biosolids is regulated under Part V of Ontario's *Environmental Protection Act*, and Ontario Regulation 347. The Ministry of the Environment currently approves the spreading of biosolids or non-agricultural wastes through the Ministry of the Environment Land Application Program. The Ministry is currently reviewing this program.

Municipalities or contractors must apply to the Ministry of the Environment's Regional Offices for a Certificate of Approval for an "organic soil-conditioning site." Certificates of approval

usually contain site-specific conditions and require compliance with general standards set out in Regulation 347. Before issuing an approval, the Ministry staff may inspect proposed sites to make sure that they meet the standards.

The Ministry also uses the "Guidelines for the Utilization of Biosolids and Other Wastes on Agricultural Lands," issued in March 1996, to evaluate the suitability of sites. The guidelines state: "The use of biosolids and other waste materials must be of benefit to crop production or soil health." Furthermore, they require that "such use shall not degrade the natural environment or cause any degradation in drinking water supplies."

Farmers who plan to use biosolids on their land also submit an application to the local Ministry of the Environment District Office. These applications must be accompanied by an analysis of the soil for each field on which biosolids will be used, including levels of nutri-

