Walkerton Inquiry, Part II
Public Hearing #5:
Regulatory and Technical Issues for Specific Sources of Contaminants; Water Quantity

Submission by the Association of Municipalities of Ontario, Ontario Good Roads Association, Municipal Engineers Association

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1. Introduction

Thank you for the opportunity to make a submission to the Walkerton Inquiry Public Hearing #5: *Regulatory and Technical Issues for Specific Sources of Contaminants; Water Quantity*. AMO will not be represented at the meeting, but is providing this submission by way of written comment.

The question of controlling specific sources of contaminants is clearly vitally important to the quality of water. Acute health effects from contaminated drinking water are often associated with microbiological contaminants (e-coli, giardia, cryptosporidium). These contaminants may come from non-point sources, such as wildlife around a surface water body, which are difficult to control. Or they may come from cattle from agricultural operations. This underlines the importance of agricultural nutrient management plans.

While some chemical contamination can have acute effects, such contamination is more often associated with long term health effects. Most industrial and municipal point sources of contaminants are regulated provincially.

2. Agricultural Contaminants

Contaminants in farm animal manure, such as various forms of e-coli, can cause acute illness if they make their way into a drinking water supply.

Farm organizations have long been advocating the development of nutrient management plans by farmers to control the migration of 'nutrients' from their farm operations into the water table or onto adjacent properties where wells may be sited.

A number of municipalities have also taken precautions by introducing nutrient management by-laws, some of which limited the number of heads of cattle that were permissible per farm within the municipal boundaries. These by-laws were in response to the dramatic increase in scale of so-called 'industrial' agricultural operations in areas of Ontario.

Most recently, the Ontario Government has proposed nutrient management legislation (Bill 81) which would require formalized nutrient management planning

for agricultural operations in Ontario. This legislation, if passed, will supercede municipal by-laws related to nutrient management.

Although Bill 81 is only a legislative framework for more detailed regulations to come, AMO is pleased with the direction that the Government is taking. Provincial implementation and enforcement of this legislation will provide consistency and regulatory authority that was previously lacking.

AMO's only concern with Bill 81 as it relates to nutrient management plans is that it is unclear how the new legislation will affect municipal authority (i.e., by-laws or official plans) to protect environmentally sensitive areas, such as source water bodies. If the legislation is interpreted to mean that it supercedes all municipal powers that impinge on agricultural operations, there is concern that local planning and zoning authority to protect local water source from agricultural operations has been lost.

In future nutrient management legislation and regulation, the Government must clarify how provincial authority will affect municipal authority in local planning and zoning decisions as it relates to the protection of environmentally sensitive areas and agricultural operations.

AMO has raised this concern with the Province as well as at the recent Standing Committee hearing on Bill 81. We will have to await the Committee's determination and response to the various issues raised during their consideration of the Bill.

3. Human Wastewater and Biosolids

Discharges from sewage treatment plants (STPs) are a source of contamination of water. As the owners and operators of municipal sewage treatment systems, municipal governments have a direct responsibility to properly treat sewage and dispose of the sewage sludge that remains after the treatment process.

Municipalities face two main challenges in the treatment of sewage. First, treatment systems are highly capital intensive and municipalities have a limited tax based from which to finance expansions, upgrades and replacements of treatment systems, along with all its other service requirements, many mandatory requirements as a result of the provincial download of services.

Secondly, loadings into sewage treatment systems originate from many small and large point and non-point sources, from households, industry, and commercial enterprises, to rainfall and urban run-off. While municipalities are responsible for the treatment system itself, it is extremely difficult to control the many sources of contaminants that feed into the municipal treatment system. And as treatment techniques improve, the quality of the effluent improves, yet the volume and degree of contamination of the remaining sludge increases.

3. Human Wastewater and Biosolids (cont'd)

The solution to improving the quality of both effluent and sludge, the by-products of the waste water treatment process, is two-fold. First, municipalities must invest in maintaining, upgrading, and replacing their treatment systems. In the past, municipalities benefited from senior government grants. With the decline in grants over the last 6 years, municipalities will have to charge rate payers more, and adjust their long term asset management plans accordingly.

Secondly, and ultimately more importantly, all orders of government must strengthen controls that prevent pollution from entering the sewage treatment system in the first place. Measures should also be taken to reduce the volume of discharges. It has been estimated that sewage in big cities contains some 200 chemicals, including endocrine disrupting chemicals, heavy metals, and toxic household substances. In terms of volume, it has been estimated that the average Canadian generates 63,000 litres of waste water each year. The cost to municipalities to treat this sewage will only increase.

Some controls are already in place at the municipal level. A number of municipalities have introduced sewer-use by-laws that prescribe standards for substances entering the sewage system. Some go as far as to prohibit some substances altogether. However, for a more consistent approach, stronger provincial and federal rules that reduce or prohibit the release of toxic, persistent, and bioaccumulative pollutants at source are required.

As mentioned, it falls to municipalities to manage the by-product of the treatment system, the sewage sludge. The remaining sludge is typically landfilled, incinerated, or spread on agricultural land. The spreading of sludge, or biosolids, on agricultural land can provide a positive use for the sewage byproduct. The nutrient value of the sludge is used to fertilize agricultural land. However, some residents close to agricultural operations that spread biosolids are concerned about the contents of the biosolids and whether these contents are seeping into the soil and groundwater.

The Provincial Government's recently proposed Nutrient Management Legislation (Bill 81) is requiring that municipalities prepare nutrient management strategies, which will outline how each municipality plans to dispose of or recycle their sewage. It is anticipated that regulations under the legislation may tighten up guidelines for the quality of biosolids that may be spread on agricultural lands. The object of spreading sludge must be the beneficial value of biosolids to the soil, and not as a cheaper disposal method.

This may result in a reduced amount of biosolids being spread on agricultural land, which will in turn increase the amount of sewage sludge being disposed of in landfills or incinerated.

The need to ensure that biosolids are of 'spreadable' quality underlines the importance of reducing the contaminants in the sewage in the first place.

4. Other Contaminant Sources

a) Landfills

Landfills are a potential source of contamination if toxic leachate from liquid hazardous wastes disposed of in sites is able to leak out of the landfill and into the soil and into surface or groundwater.

Landfills are currently the primary disposal option for municipal household waste. Efforts to reduce the amount of municipal waste, through waste diversion programs, has been given a boost with the proposed Provincial Waste Diversion Act. If passed, municipalities expect to receive 50% funding for their blue box recycling programs from industry, support which is welcomed and which will help sustain municipal recycling and other waste diversion programs. It is also expected that the new Waste Diversion Ontario organization will be tasked with developing other waste diversion programs and will hopefully, when it is in place ill put a priority on developing a program for household hazardous waste. This would reduce the amount of hazardous waste in municipal landfills.

In 1998, the Province introduced Reg. 232/98, which applies to new and expanding landfill sites. It includes requirements for site design for groundwater protection and buffer areas, operations, assessment of groundwater and surface water conditions, closure of sites, contingency planning for leachate control, and financial assurance. The challenge is to divert the waste and develop new recycling markets so that landfills have a longer life span since a number of municipal landfills are nearing their capacity. The Waste Diversion Act is an important step in the right direction and a significant component of an environmental strategy that relates to water quality and quantity.

b) Urban development

Please see AMO's submission for Public Meeting #4, Source Protection.

5. Water Quantity

Increasingly we are hearing that the next global crisis may be driven by a shortage of water. Through the combination of a number of factors- overuse of the resource, lack of care in protecting water recharge areas, and the possible effects of climate change in evaporating existing water sources, we could indeed see water quantity emerge as a top public policy issue.

Many parts of Canada have experienced drought conditions that have jeopardized agricultural operations. In Ontario, key stakeholders and the Ontario government reacted to drought conditions in the late 1990s by developing a Drought Response Strategy. This is a good first step in putting in place a comprehensive response protocol in times of low water levels.

5. Water Quantity (cont'd)

Household water conservation measures are a pro-active way to reduce water consumption. Canadians rank second to only the American in daily residential per capita water use. According to one source, each Canadian consumes 326 litres of water per day, compared with 200 litres per capita per day in Sweden, and 150 litres per capita per day in Italy. Municipalities can play an important role in promoting the use of low-flow residential taps and toilets. National standards for water conserving household appliances could also be strengthened.

Conservation authorities, in partnership with municipal governments and stakeholders, have been instrumental in bringing the issue of water quantity protection to the fore. The need for water budgets of aquifers and the need to protect recharge areas are intrinsic to water quantity protection.

AMO has also previously argued that the water taking permit process in Ontario needs to be more rigorous. Currently, permits to take water are issued with little information on the quantity of water available and the competing uses of the particular source in questions. Perhaps this is a product of complacency due to the perception that there is an abundance of both surface and ground water in Ontario. However, as industrial, agricultural, commercial and household consumption rates steadily increase, Ontario's water sources, and the quantity of groundwater in particular, are increasingly under threat.

Municipal governments and conservation authorities are sometimes consulted on water taking permits, but not always. AMO has made previous recommendations to the Minister of the Environment to direct that all water taking permits be circulated to municipal planning authorities and conservation authorities where they exist. This recommendation has not been acted upon and we encourage the Commission to consider how consultation on water taking would strengthen the planning system in Ontario.