

# **Pesticide Use on Private Property: Consultation Framework & Policy Options**

Prepared for:  
**Social & Public Health Services Department  
City of Hamilton**

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## I. Executive Summary

In October 2001, City Council requested that the Medical Officer of Health, in collaboration with key stakeholders, prepare a report that proposes a framework with which to explore the issues of municipal regulation of pesticide use on private lands in the City of Hamilton. This request stems from both the City's development of a formal pesticide reduction strategy for City-owned property over the last year, and the decision of the Supreme Court of Canada in June 2001 to uphold the pesticide by-law implemented by the Town of Hudson in Quebec.

While scientific uncertainty surrounds the chronic health impacts associated with particular pesticide products, there is a body of evidence that suggests that serious health effects such as childhood cancer may be associated with the use of pesticides. A number of individuals, public health organizations, and federal Members of Parliament (MPs) have applied the precautionary principle to pesticides and recommended a prohibition on their cosmetic use on lawns and gardens.

Pesticide regulations are administered by the federal and provincial governments. However, in June 2001 the Supreme Court of Canada ruled that the Town of Hudson had the legitimate power to regulate pesticide use under the "general welfare" provisions contained in the *Quebec Cities and Towns Act*. The "general welfare" provisions contained in Quebec law are very similar to those provided by section 102 of the existing *Ontario Municipal Act* and to those provided by section 130 of Bill 111, an *Act to Revise the Municipal Act*. This has led some to believe that municipalities in Ontario would have the same right to regulate pesticide use on private property as municipalities in Quebec do. However, an Ontario-specific legal analysis, whether in-house or external, is not included in this preliminary report.

A number of municipalities in Quebec and the Halifax Regional Municipality now have by-laws regulating the use of pesticides. Some of these by-laws impose widespread prohibitions on the use of pesticides on green space while others establish rules respecting signs, notification procedures and buffer zones. A number of municipalities in Ontario are currently examining the cosmetic use of pesticides on public and private property. Several of these municipalities were contacted to determine the policy options being considered and the consultation processes being used, and those findings are summarized in this report.

Several policy options are discussed including: education and social marketing; encouragement of industry self-regulation through voluntary Integrated Pest Management (IPM) accreditation; a by-law that sets clear rules about signage and notification; a by-law that requires IPM accreditation of all companies applying pesticides on private property; a by-law that mandates a specified buffer zone around the properties of schools, daycares, hospitals, nursing homes and sensitive individuals; and a by-law that mandates a widespread prohibition on private green space.

Several aspects of the consultation framework are discussed with a variety of options considered for each aspect. Social and Public Health Services Department staff are recommending that a pesticides advisory committee with City Councillors and balanced representation by the landscape industry and environmental/ community organizations be established to examine the policy options and develop a strategy for Hamilton. Staff have also identified a number of policy options, some regulatory and some non-regulatory, to be considered separately or in combination, by the pesticides advisory committee.

## **II. Background**

### Council Direction re: Pesticide Use on Public and Private Lands

In October 2001, City Council considered a staff report entitled, "Pesticide Reduction on Municipal Parkland and Open Spaces" (CS01093)(SPH1029) and recommended:

- (a) That Staff proceed with the development of an **Integrated Plant Health Program** (IPHP) which would include as a goal, the progressive reduction of lawn chemical use on municipal parks and open spaces within the City of Hamilton;
- (b) That Staff, in preparation of the plan, solicit public input. The process should include, but not be limited to, a Hearings Sub-Committee, and consultation with representatives of key stakeholder groups;
- (c) That a public opinion survey be conducted utilizing the services of a professional consultant at a cost of approximately \$7,000.00, to be funded from within the current operating budget;
- (d) That Staff develop, in collaboration with community organizations, a co-ordinated public pesticide education program aimed at helping residents make informed decisions about pesticide use on residential property;
- (e) That Staff, as part of the 2002 budget deliberations, report on the incremental capital and operating expenses associated with the implementation of the Integrated Plant Health Program;
- (f) That the final IPHP be brought forward to a future Committee of the Whole meeting for final approval, tentatively scheduled for spring 2002.
- (g) That the Medical Officer of Health, in collaboration with key stakeholders, report back to Committee of the Whole, proposing a framework to explore the issues of municipal regulation of pesticide use on private lands in the City of Hamilton.

Recommendations (a) through (f) will be addressed in a report prepared by the Parks Division of the Community Service Department and scheduled to be presented to Committee of the Whole during budget deliberations in May 2002.

This report has been prepared in consultation with the Community Services Department, Parks Division and responds solely to recommendation (g). It provides a preliminary examination of the issues surrounding municipal regulation of pesticide use on private property and proposes the policy options to be explored in further detail and a consultation framework for that examination. The health impacts, legal position and cost implications of various policy options will be examined during the larger consultation process and reported in a subsequent report.

### Introduction

Pesticides is the term used to describe thousands of products that can be used to control pests such as insects (insecticides), weeds (herbicides), fungus (fungicides) and rats (rodenticides). There are more than 7,000 pesticide products registered for use in Canada. The active ingredients most commonly used however include the following: diazinon, chlorpyrifos and carbaryl as insecticides; 2,4-D, mecoprop and dicamba as herbicides; and quintozene, iprodione, chlorothalonil as fungicides (Standing Committee, 2000).

Industry sales for pesticides totalled almost \$1.5 billion in 1997. Herbicides account for 85% of the market. While pesticides used for agricultural purposes account for 91% of sales, the sales of pesticides used for non-agricultural purposes account for 56% of the profits (Standing Committee, 2000).

Environment Canada estimates that approximately 1.3 million kilograms of chemical pesticides were applied to lawns in Ontario by licensed applicators in 1993. This represents about 25% of the amount used on agricultural land and it does not include the pesticides applied directly by homeowners. Unfortunately, more recent data on quantities used is not available (Environment Canada, 2002).

Pesticides are one of the few toxic agents that are intentionally released into the environment. While pesticides used on lawns and gardens today do not present the persistence concerns that are presented by pesticides such as DDT, they can harm non-targeted plant and animal species directly and indirectly.

### Summary of the Health Concerns

There are two broad types of concerns about health impacts that appear to be driving the demand by some for pesticide by-laws that limit the cosmetic use of pesticides on lawns and gardens. One type are concerns about chronic health effects such as cancer and neurobehavioural deficits (eg. learning disabilities) that may result from low levels of exposure (Daniels, 1997; Bosma, 2000). The other type of concerns are about acute

health effects such as breathing difficulties that may be experienced by a small minority of “sensitive” individuals upon exposure to higher levels of pesticides (HRM, 2000).

With the chronic health effects, concern appears to be greatest for exposures encountered by the fetus and by young children who are particularly sensitive to all types of toxic substances. Researchers from the U.S. National Cancer Institute who have examined the studies directed at pesticides and childhood cancer have reported that: “...it is noteworthy that many of the reported risks [for children] are of greater magnitude than those observed in studies of pesticide-exposed adults, suggesting that children may be particularly sensitive to the carcinogenic effects of pesticides” (Hoar Zahm, 1998).

While hundreds of studies have been directed at the health impacts of pesticides, it is still very difficult to determine with scientific certainty if the particular pesticide products in use today are actually causing some of the chronic health effects that have been associated with pesticides in the studies conducted. To some extent, this scientific uncertainty reflects the large variety of pesticide products in use, the mixed exposures encountered by the populations being studied, the poor exposure records available for the people being studied, and the large populations needed to prove causation given the low levels of exposure.

For example, when one group of researchers critically reviewed 31 studies published between 1970 and 1996 that evaluated the link between pesticides and childhood cancer, they concluded that: “Although increased risk of some childhood cancers in association with pesticide exposure is suggested by multiple studies, methodological limitations common to many studies restrict conclusions; these include indirect exposure classification, small sample size and potential biases in control selection” (Daniels, Olshan & Savitz, 1997).

Some believe that there is little cause for concern with pesticide use given the low levels of exposure encountered in environmental situations. For example, when researchers from the European Crop Protection Association critically reviewed the scientific studies directed at low level exposure to mixtures of pesticides, they concluded that: “...as a general rule, exposure to mixtures of pesticides at low doses of the individual constituents does not represent a potential source of concern to human health “ (Carpy, 2002).

The public health units in the City of Toronto and Halton Region have been analysing the scientific health literature related to pesticides used for “cosmetic purposes” for several months. The Toronto report is currently being peer reviewed by several experts who represent different perspectives on the issue. These two reports should be available in April 2002 and will be reviewed as part of the next stage in this process.

## Scientific Uncertainty and Prudent Avoidance

While the scientific debate on pesticides will continue, a number of public health organizations have decided that there is sufficient evidence of harm to warrant significant reductions in the use of pesticides.

Researchers at the U.S. National Cancer Institute have articulated the view that: “Although research is underway to characterize the risks of childhood cancer associated with pesticides and identify the specific pesticides responsible, it is prudent to reduce, or where possible, eliminate pesticide exposure to children, given their increased vulnerability and susceptibility. In particular, efforts should be focused to reduce exposure to pesticides used in homes and gardens and on lawns and park which are the major sources of pesticide exposure for most children” (Hoar Zahm, 1998).

The Ontario Public Health Association (OPHA) has recommended that municipalities restrict the non-essential use of chemical pesticides on public and private lands stating that “...appropriate measures should be taken where there is reason to believe that a pesticide is likely to cause harm” (OPHA, 2001).

The Canadian Association of Physicians for the Environment (CAPE) has recommended that the cosmetic use of pesticides should be ended within two years because: “...growing evidence that the health of future generations may be severely harmed by pesticides, alone or in combination with other toxic chemicals now permeating the global ecosphere” (CAPE, 2000).

The Canadian Cancer Society has concluded that: “Current evidence suggests that domestic exposure to pesticides probably causes less than one percent of cancer deaths and is, therefore, a small, but potentially important concern” (CCS, 2002). It has recommended that pesticide use on lawn and gardens should be avoided because: 1) there is suggestive evidence which indicates that pesticides present a cancer risk to humans; 2) there are no clear health benefits associated with their use on lawns; 3) there are no important economic benefits associated with their use on lawns; and 4) it is unlikely that exposure can be avoided when they are used on lawns (CCS, 2002).

The position of these public health organizations is echoed by the 17 Federal Members of Parliament (MPs) who examined the issue of pesticides as members of the Standing Committee on Environment and Sustainable Development: “Given what is known or suspected about the harmful effects of these products and given the purely esthetic purposes they serve, the Committee favours a ban on the use of pesticides for cosmetic purposes”.

The four organizations sited above have made recommendations that are aligned with the precautionary principle articulated in the Rio Declaration on Environment and Development under the United Nations Environment Program which states that: “...Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to

prevent environmental degradation”. This principle has since been codified in the *Canadian Environmental Protection Act* (CEPA 1999).

Some argue that the precautionary principle is meant to be applied to substances or situations that present a risk of irreversible damage that is global in its magnitude. However, to those in the public health field, the precautionary principle builds upon the concept of “prudent avoidance” that has been traditionally intended to ensure that “preventive action is taken in advance of scientific proof in situations where further delay could prove costly to society or nature and/or unfair to future generations” (O’Riordan, 1994).

### Regulatory Process

Pesticide regulations are administered by the federal and provincial governments. The federal Pest Management Agency (PMRA), under Health Canada, is responsible for conducting assessments of the environmental and health impacts of pesticides. Based on this assessment process the PMRA decides whether to grant a pesticide product approval for use. If approved a pesticide product is issued a *Pest Control Product Act* Registration number. The provincial Ministry of Environment is responsible for the post-registration of pesticides. This includes enforcing regulations to ensure pesticides are stored, displayed, sold, transported, used and disposed of properly and safely (as outlined in the *Pesticides Act*).

### **III. Legal Analysis**

The City of Hamilton’s Legal Services is in the course of reviewing the provisions of the federal *Pest Control Products Act* and the provincial *Pesticides Act*, and the regulations under each of those Acts, in order to determine whether there is a possibility for lawful regulation of non-essential pesticide use on private lands by municipalities. Legal Services has reviewed this preliminary report.

The below summary of the legal issues is based on a review of several documents including the: Supreme Court of Canada’s Hudson decision (File No. 26937); an overview presented to the Federation of Canadian Municipalities (FCM) Big City Mayor’s Caucus by Counsel at the Sierra Legal Defense Fund; and a report prepared on Bill 111 (*an Act to Revise the Municipal Act*) by Counsel at the Canadian Environmental Law Association (CELA). Counsel for the Sierra Legal Defense Fund represented FCM as intervenors in the Hudson case, while several community and public health groups were represented by Counsel from CELA.

#### Supreme Court of Canada Decision

In 1991, the Town on Hudson adopted a by-law (By-law 270) that restricted the use of pesticides within the City’s boundaries. This by-law was appealed to the Supreme Court of Canada by landscaping and lawn care companies charged under the by-law in November 1992. In June 2001, the Supreme Court of Canada ruled that the Town of

Hudson had the legitimate power to regulate pesticide use under the “general welfare” provisions contained in section 410 of the *Quebec Cities and Towns Act* (CTA) which states that: “The council may make a by-law: (1) to secure peace, order, good government, health and general welfare in the territory of the municipality, provided such by-laws are not contrary to the laws of Canada, or Quebec...” (Supreme Court, 2001).

The Supreme Court concluded that the Hudson By-law reflects the Town’s desire to protect the health of its citizens and as such, should be allowed under section 410, and that in applying the precautionary principle, the Town did not have to prove harm to human health in order to act. The Court also decided that while an absolute ban on the use of pesticides would be forbidden because of the long-standing principle that “delegated legislation must not be prohibitory”, the Hudson By-law bans only the non-essential use of pesticides. It concluded that the Hudson By-law does not conflict with either the federal *Pest Control Products Act* or the province’s *Pesticides Act*, but rather that the three laws establish a tri-level regulatory regime (Supreme Court, 2001).

### Applicability to Ontario

The Hudson decision applies to the province of Quebec and reflects the state of the law in that province. It is not yet clear how it will apply in Ontario. The “general welfare” provisions used in the Quebec case are captured in section 102 of the existing *Municipal Act in Ontario*, which reads: “Every council may pass such by-laws and make such regulations for the health, safety, morality and welfare of the inhabitants of the municipality in matters not specifically provided for by the Act as may be deemed expedient and not contrary to law...”

Counsel for the Canadian Environmental Law Association (CELA) maintain that Bill 111 2001 – an *Act to Revise the Municipal Act* – should not restrict the right of Ontario municipalities to pass by-laws in the future. CELA argues that section 130 in Bill 111 is analogous to section 102 of the current Ontario Municipal Act. It states that: “A municipality may regulate matters not specifically provided for by this Act or any other Act for purposes related to health, safety and well-being of the inhabitants of the municipality” (CELA, 2001).

Many municipalities across Ontario are currently examining the legal issues and policy options related to municipal regulation of pesticides on private property. Several cities and towns have recommended that the Association of Municipalities of Ontario (AMO) should produce a legal opinion on the applicability of the Hudson decision to Ontario under the existing *Ontario Municipal Act* and under Bill 111 that will take effect in 2003.

## **IV. Actions in Other Ontario Municipalities**

### By-laws in Quebec

The Hudson By-law prohibits the spread and use of a pesticide throughout the territory of the Town. Exceptions to this prohibition are spelled out and generally apply to pesticide use for agriculture and for public health reasons (eg. inside buildings, in pools, to purify water, and to destroy plants or animals that constitute a danger for human beings). Golf courses have been given five years to phase out the use of pesticides (Supreme Court, 2001).

Approximately 35 municipalities in Quebec have adopted pesticide control by-laws. None of these constitute a total prohibition of pesticides. All include some sort of exemptions. In Quebec, by-laws have been used to: require signage before and/or after pesticide use; require notification of pesticide use to property owners and/or neighbours; to limit pesticide use during particular environmental conditions (eg. high winds or high temperatures) or during specified times (eg. pesticide-free summers); as well as for widespread prohibitions.

### Halifax By-law

The only community to pass a pesticides by-law outside of the province of Quebec is Halifax in Nova Scotia. The Halifax Regional Municipality (HRM) passed its by-law with enabling legislation, granted by the Province in 1999, that was specific to the application and use of pesticides, herbicides and insecticides on residential and public property within the HRM.

The Halifax By-law, which has been in effect since August 2000, phases out the use of pesticides on public and private property over a four-year period. In the first year, the By-law prohibited the application of pesticides on municipal property. In the second year, it prohibited pesticide application within 50 meters of: 1) the boundary of a school, daycare, park playground, licensed senior citizens' residence, university, church or hospital; and 2) the property of a person registered as someone who suffers life-threatening reactions to pesticides. In the fourth year (2003), the By-law will prohibit pesticide application within the entire regional municipality.

The By-law does allow the use of pesticides for plants or insects that "constitute a danger for human beings or to control insects that have infested a property" if the application is specifically permitted by an inspector for that purpose. It also provides clear rules about notification before applying pesticides and signage before and after the application of pesticides.

In the summer of 1999, the HRM established a Pesticide Advisory Committee to provide advice on the development and implementation of the pesticides by-law. The Committee was composed of representatives of industry, the

community, environmental groups and regulatory bodies. It submitted a consensus and a non-consensus report to Council in December of 1999. In 2000, staff submitted five supplementary reports to Council and convened three public hearings on the proposal submitted.

A concurrent public awareness and education program on sustainable gardening and landscape maintenance practices was developed and implemented during the early stages of the By-law's implementation. Start up funds of \$120,000 were required to establish information processing and handling costs, advertising, public information and education costs. In October 2001, staff reported that a simple, yet effective, permitting process had been put in place to administer the notwithstanding clauses contained in the By-law that seemed to be working well.

### Actions in Ontario

Since June 2001, local and regional municipalities across Ontario have been wrestling with the implications of the Supreme Court's Hudson decision. One source has indicated that over 25 municipalities in Ontario are currently considering policy options related to the cosmetic use of pesticides on public and private property. For the purposes of this report, several local and regional municipalities (Toronto, Halton Region, City of Burlington, Sarnia, Waterloo Region) known to be active on this issue were contacted for information related to the policy options being considered and the consultation processes being used. Summaries of the findings for each of these municipalities are provided in Appendix A (attached).

### Timelines

Most of the municipalities in Ontario are still involved in the investigation or consultation stages of their processes. One of the exceptions is Sarnia, which had completed its consultation process and prepared a report for Council's consideration in February 2002. Sarnia's Environmental Advisory Committee (SEAC) recommended the development of an educational campaign on pesticides along with formalizing the City's Integrated Plant Health Program (IPHP) for all City-owned properties.

Toronto and Halton Region were in the process of preparing reports that would provide: in-depth analyses of the health issues; the results of public surveys conducted in their respective communities; the results of public consultation processes undertaken to date; a recommendation about policy options; and a recommendation about next steps. Both reports are expected to be completed by April 2002.

Waterloo Region has established an inter-municipal staff subcommittee to examine the issues related to pesticide use on private properties and has only recently begun to examine the issues in depth. The City of Burlington has prepared a preliminary report that summarizes the legal issues and the policy options, and which recommend steps

for further investigation. It is unlikely that any of these communities will have their processes completed before the end of the summer.

## **V. Actions in the City of Hamilton**

### Pesticide Use on City-Owned Property

The Parks staff have made significant strides in recent years to reduce the use of pesticides on City-owned property. For example, in 2001, Parks spot sprayed only 1.1% of the approximately 5,500 acres of parks, municipal properties and open spaces (excluding cemeteries and golf courses) maintained by the City, while in 1999, it blanket sprayed approximately 7% of the green space belonging to the City.

Over the last year, Parks has formally reviewed its policies and practices of pesticide use on City-owned property and conducted a comprehensive consultation process on the policies being formally developed. In October 2001, Parks sought and gained Council approval to proceed with the development of an Integrated Plant Health Program (IPHP), which “would include as a goal, the progressive reduction of lawn chemical use on municipal parks and open spaces within the City of Hamilton”.

In November 2001, Parks convened an in-depth Workshop for City staff and representatives of Landscape Ontario and the Hamilton Coalition on Pesticides with experts from the Guelph Turfgrass Institute (GTI) and the Canadian Network of Toxicology Centres. In January 2002, approximately 50 people participated in the Hearings Subcommittee held by Committee of the Whole on Parks’ proposal. Parks has also contracted the services of a professional consultant to conduct a public opinion survey to determine how Hamilton residents feel about the City’s parks and the City’s use of pesticide. Parks has written a report that describes the IPHP developed for City-owned property and summarizes the findings of the public consultation process and the results of the public opinion survey. This report is scheduled to go to Committee of the Whole during May 2002 budget deliberations.

### Consultation to Date on Pesticide Use on Private Property

Staff in the Social & Public Health Services Department have built upon the consultation process begun by Parks. They have met twice with the stakeholders from the November Workshop to solicit their advice on the policy options and consultation process to be proposed in this report. A list of stakeholders to involve in the larger consultation process has also been developed. This report has also benefited from the views expressed by speakers from public health organizations, environmental groups, industry associations, and regulating agencies at the Caledon Pesticides Forum convened in February 2002.

## **VI. Stakeholder Positions**

### Hamilton Coalition on Pesticides

The Hamilton Coalition on Pesticide Issues is a voluntary organization. It represents 20 community organizations with approximately 2,000 members in the City of Hamilton.

The Coalition promotes the use of good horticultural practices (nourishing the soil, using plants appropriate to this area's growing conditions, and using alternatives to pesticides). It supports the city's development of an IPHP for public property and would like the city to enact a by-law, which would phase out the cosmetic use of pesticides on all public and private property in Hamilton.

The Coalition believes that the public is not adequately protected by the federal regulation of pesticides or by the provincial licensing of pesticide applicators. It believes that the "Pesticides" report prepared by the Standing Committee on the Environment and Sustainable Development (1999) and the "Managing the Risks of Toxic Substances" report prepared by the Commissioner of the Environment and Sustainable Development (1999) support its position.

The Coalition believes that a by-law that eliminates the cosmetic use of pesticides on private property is essential in order to eliminate the risk of unwanted exposure and subsequent health problems. It would support exemptions to this policy for situations that present a risk to public health when all alternatives have been exhausted. It also believes that public education is essential to ensure that the public understands the health risks associated with pesticides, and to gain compliance with, and interest in, the development of alternative lawn and garden practices.

The Coalition has recommended that the City establish a Pesticide Advisory Committee (PAC) that would provide direction and advice on the development and implementation of a strategy that encourages alternatives to pesticides on public and private property. The Coalition has recommended that the PAC should be composed of City Councillors and representatives from the landscape industry, sports associations, community groups, environmental groups, school boards, labour, the chemically sensitive, and non-affiliated experts (e.g. ground water, medical, academic, turf).

### Landscape Industry

The landscape industry includes companies in the landscape business such as nurseries, lawn care companies, garden centres, and landscape designers. The landscape industry representatives included in this process work with Weedman and Landscape Ontario and are involved with the Integrated Pest Management (IPM) Council of Ontario and with an industry-funded organization called the Environmental Coalition of Ontario. They recognize that there is a movement across the county to reduce the use of pesticides on lawns and gardens, and support the notion of reduction rather than elimination. They

applaud the City's decision to introduce an IPHP and to gradually reduce the cosmetic use of pesticides on green space.

The IPM Council is in the process of developing an Integrated Pest Management (IPM) Accreditation process in an attempt to significantly reduce pesticide use among all sectors of the landscape industry by encouraging the application of Integrated Pest Management (IPM) and Plant Health Care (PHC) principles. It has established a governing body (PHC/IPM Council of Ontario) and is actively working towards implementation of a comprehensive accreditation process which includes education, examination, and auditing by a third party, for individuals working in the industry. The IPM Council hopes to have the IPM Accreditation process developed for full implementation by the fall of 2002.

The landscape industry representatives believe that pesticide use on private property should not be regulated at the municipal level. With the introduction of the new federal initiatives (ie. product re-evaluation and the Healthy Lawns project), they believe that pesticides are adequately regulated through the *Pest Controls Products Act* that is administered by the Pest Management Regulatory Agency in Health Canada, and through the *Pesticides Act and Regulation 914* that are administered by the Ontario Ministry of the Environment.

The landscape industry representatives believe that it is important for the public to understand that the existing federal and provincial legislation forbids them from marketing, selling, or making claims about any "alternative" products that are not legally registered for the "claimed" use.

They are also concerned that municipal by-laws will inadvertently target professional applicators whom they believe to be generally well trained and well regulated by the province, while doing little to reduce pesticide application by individuals whom they consider to be untrained and unregulated because a by-law could not prohibit retailers from selling pesticides to members of the public.

The landscape industry representatives do agree that pesticide reductions are needed but believe that that reductions are best achieved with by formalizing and enforcing industry initiatives, and by educating the public about good horticultural practices, the alternatives to pesticides and the safe handling procedures required when pesticides are used. They feel that public education has been hindered by the PMRA's reticence to register pesticide alternatives. Lawn care companies are more than willing to use alternative products as long as they are registered, effective and demanded by their customers. At present, they feel that these products have not developed to the point where pesticide use can completely stop.

The landscape industry representatives have suggested that the City staff convene two in-depth meetings, one with the landscape industry and one with

community and environmental groups, to explore their respective positions on, and concerns about, municipal regulation of pesticides on private property, in a non-confrontational way. They also feel strongly that public consultation should be done in a way that solicits the views of all members of the public especially their customers.

## **VII. Scope**

### Focus on Non-Essential Use on Lawns and Gardens

All of the municipalities in Ontario (Halton Region, Burlington, Sarnia, Waterloo Region, Toronto, Halifax) that were contacted for this report were examining the cosmetic or non-essential use of pesticides on lawns and gardens. In communities where pesticide use has not been publicly examined before, the focus is on pesticides used on both public and private property. In those communities that have established formal policies for pesticide use, and/or Integrated Plant Health Programs (IPHP) for public property, the focus has now shifted to private property.

None of the municipalities contacted are addressing policy options for pesticides used for agriculture or for indoor applications at this time. Given that the Supreme Court allowed the Hudson By-law, in part, because it focused on the non-essential uses of pesticides on lawns and gardens, it makes sense for Hamilton to limit the scope of its examination to the non-essential of pesticides on lawns and gardens on private property as well.

## **VIII. Policy Options**

### Rights and Beliefs

Pesticide use on private property is a complicated issue that cuts across many beliefs and rights. Many believe that they have the right to do as they choose on their property, and for many, the maintenance of a lawn with non-ornamental species (e.g., weeds) is a high priority. Others believe that pesticides present serious, and in some cases irreversible harm, to humans and to the environment, and that private property rights must not supersede the rights of others to safety and good health.

### Significant Reductions Required

There does appear to be a consensus among all parties that there should be a significant reduction in the quantity of pesticides used for lawns and gardens. A number of municipalities in Ontario have cut pesticide use on City-owned property by 90 to 95% over the last number of years. The City of Waterloo,

which committed to significant reductions in pesticide use ten years ago, used absolutely no pesticides on its parks for the first time in 2001. The IPM Council is establishing an IPM Accreditation process for its members in an attempt to significantly reduce pesticide use among those working in the lawn care industry as well.

Where the parties disagree is on the depth of the pesticides reductions required and on the means to achieve those reductions. Landscape Ontario has indicated that IPM can reduce pesticide use on lawns by 60% and that an IPM Accreditation process will encourage lawn care providers to achieve this reduction. On the other hand, environmental, community and public health organizations have called for the elimination of pesticides used for cosmetic purposes on public and private property, and for municipal by-laws, as well as education, to achieve this end.

### Non-Regulatory Options

People on all sides of this issue agree that public education and perhaps social marketing are essential to drive the reductions needed. Lawn care providers indicate that their pesticide packages are demanded by a public who want perfect ornamental lawns at little cost. They feel that public education could help educate their customers about the alternatives to pesticides and the benefits associated with them.

Environmental groups feel that the public needs to be educated about the health hazards presented by pesticides and the alternatives to them. They also believe that the education must be directed at changing the public perception about what constitutes a beautiful green space.

A successful education campaign would likely require a substantial investment in staff and resources. Changing behaviours requires long-term, multipronged social marketing approaches on a large scale.

The landscape industry representatives have suggested that the City could become involved in the IPM Council's Accreditation process as a means of addressing pesticide use on private property.

### Regulatory Options

In situations where the activities of one person in a community can have a detrimental impact on another, and subject to any conflicting provisions in federal and provincial legislation, by-laws can be used to provide regulatory protection to the ones affected. In the case of pesticides, it can be argued that some citizens consider themselves affected by their pesticide-using neighbours whether the health effects associated with pesticides are scientifically demonstrated or not. And some chemically sensitive individuals can

experience serious acute health effects such as shortness of breath or severe allergic reactions when pesticides are sprayed in the area surrounding their homes.

On the other hand, it is difficult to pass a by-law that limits the rights of many if the majority of citizens do not believe that health impacts are associated with pesticides, and do not believe that alternative technologies, practices and services exist. It is possible that many people would choose pesticide-free alternatives if they knew about them, believed they worked, and knew that they could contract companies to provide them. The question is, will people choose these unknown options, particularly if they are more expensive, if their ability to access pesticides is not removed by municipal legislation?

Pesticide by-laws can be drafted in a wide variety of ways to achieve a variety of purposes. In some cases, by-laws have been clearly designed to reduce pesticide use and potential exposure across a municipality; in other cases, they appear to have been designed to empower individuals concerned about pesticides to take action to protect themselves

### Widespread Prohibitions

To date, no municipality in Canada has totally prohibited the use of chemical pesticides on lawns and gardens. In Hudson and Halifax, where widespread prohibitions have been introduced for private and public property with by-laws, exemptions have been allowed for those situations that could present a risk to public health or significant damage to property. In Hudson, the pesticides prohibition was immediate with a five year phase out period being provided to golf courses. In Halifax, the pesticides prohibition was phased in over a four year period.

A widespread prohibition has the potential to significantly and effectively reduce the cosmetic use of pesticides across the municipality. It has the potential to eliminate the acute exposure situations that are a concern for the “sensitive”, while also eliminating the low level exposures that are a concern to some public health organizations and some members of the public.

On the other hand, a widespread prohibition has the potential of being very unpopular among citizens who feel it infringes on their property rights and/or who place a high value on their ornamental lawns, free of non-ornamental species (weeds). It is possible that some would simply ignore the by-law as it would do nothing to prohibit them from buying pesticides at a local store. It is likely that public dissatisfaction could be reduced by providing a prolonged phase out period that is accompanied by an intensive education and/or social marketing campaign that focuses on the health and environmental concerns associated with pesticides, the alternatives to pesticides, and the alternatives to traditional lawns.

## Focused Restrictions

As indicated earlier, municipal by-laws do not necessarily have to mandate a widespread prohibition of pesticides to serve the needs of the community. A by-law could be used to encourage a shift in attitudes and use of pesticides within the community. For example, a by-law that required IPM accreditation for all companies using pesticides on lawns and gardens within City limits could “encourage” lawn care companies and their customers to significantly reduce pesticide use while adopting alternative technologies and practices. This type of approach could substantially reduce the quantity of pesticides used across the City and educate a large number of residents about the alternatives that exist.

A by-law could also be used to provide added protection to those members of society who may be more sensitive to the toxic properties of pesticides. For example, the 50 meter buffer zone required around all properties with sensitive receptors (eg. schools) in Halifax’s phase out period, could be adopted as a long-term measure in another community that does not support a widespread prohibition. This type of approach could provide a greater level of protection to the small minority who suffer acute effects in response to pesticides, while providing a greater level of protection to the sensitive members of society such as children, who may be more susceptible to low levels of exposure. A buffer zone could also be extended to creeks and waterways to provide additional protection to aquatic organisms. Sensitive individuals (the term ‘sensitive’ requiring specific definition) could also demand a buffer around their properties under certain by-law scenarios.

These more focused approaches are less likely to provoke a widespread backlash from citizens who are not concerned about the use of pesticides. On the other hand, the focused approach is not as equitable in terms of those impacted or in terms of those “protected”. They will do little to educate the individuals who do not hire lawn care operators and who may present a risk to him/herself and his/her neighbours.

## Signage and Notification Systems

A by-law could also be used to require notification of neighbours or to build upon rules about signage for pesticides used on lawns and gardens. This type of by-law has the advantage of providing additional information to those citizens who are concerned about the health effects associated with pesticide while infringing very little on the rights of their neighbours. For example, notification the day before could be used by some households to ensure that windows are shut on the day that pesticides are sprayed on their neighbour’s lawn.

On the other hand, this kind of by-law does nothing to reduce overall use or release of pesticides into the environment, and little to reduce the low level exposure situations that concern some public health organizations and some citizens.

### Recommendations to Other Levels of Government

There are limitations to what can be accomplished with regulatory action at the municipal level. There are concerns, for example, about the sales of pesticides to individual residents who may not be aware of the health concerns associated with them or of the proper precautions to be taken when handling them. Those issues that cannot be addressed at the municipal levels should be explored with provincial and federal regulatory agencies during the consultation period, and may be the subject of recommendations to be directed at the provincial and federal levels of government.

## **IX. Consultation Processes**

### Who Develops the Strategy?

There are three questions to be answered when developing a consultation framework and process. The first question is: *who should be involved in investigating the issue and developing the strategy?* In a few of the municipalities contacted, this task was given to an Advisory Committee. In Sarnia, the Advisory Committee was composed of Councillors and non-affiliated citizens. In Halifax, the Advisory Committee was composed of stakeholders with a consensus and non-consensus report being produced. In other communities, such as Halton, the Region of Waterloo, Burlington and Toronto, staff were appointed the task of developing the strategy. In Toronto, staff have been consulting with a Pesticides Subcommittee composed of staff and stakeholders while in Burlington, staff have been consulting with a Sustainable Development Committee composed of citizens. A Council Subcommittee could also address the issue as has been done for the smoking by-law in Hamilton.

Staff are recommending that a pesticides advisory committee of Councillors with balanced representation from the landscape industry and community and environmental organizations should be established to examine the policy options and develop a strategy for Hamilton. For example, the composition could include three Councillors, three industry representatives and three environmental/community representatives with appropriate staff support provided by the Social and Public Health Services Department.

## How should the Public be Consulted when the Strategy is being Developed?

The second question is: *how should the public be consulted while the proposal is being developed?* In some of the municipalities contacted, the staff or advisory committee responsible for developing the proposal, met with representatives from various agencies and interests informally and individually. In other municipalities, formal meetings were held with individuals interested in or affected by the issue. In Halton, these formal meetings were held on two separate days; one with representatives of community and environmental groups and one with representatives of the lawn care industry and the regulating agencies. In Toronto, one large meeting was convened for all stakeholders with a professional facilitator hired to chair the meeting for the day. In a few municipalities, public meetings were held where any interested person from the community could express his/her position on the issue. In Toronto, Halton and Burlington, surveys have been, or will be, conducted to poll the opinions of the broader community.

In Hamilton, it is recommended that the Pesticides Advisory Committee (PAC) convene several in-depth meetings to discuss policy options with stakeholders: 1) one with local and regional representatives of lawn care companies, golf courses and other local businesses; 2) one with local and regional representatives of community, environmental and public health organizations including at least one “organic” lawn care industry; 3) one with representatives from Environment Canada, the Ontario Ministry of the Environment, and the local Conservation Authority; 4) one with local school boards and other agencies that serve children, the sick and the elderly; and 5) one with the general public.

The Advisory Committee should also explore alternative methods of soliciting public opinion that are more accessible to the general public. For example, citizens could be encouraged to make submissions on the proposal by e-mail or by telephone lines.

## How should the Public be Consulted on the Proposal once Developed?

The third question is: *how should the broader public be consulted about the proposal once developed?* Among municipalities in Ontario, this question is still being answered. Some indicated that the broader consultation would occur at Council meetings or Committee meetings. In Sarnia, the Advisory Committee convened a public meeting to vet the proposal before taking it to Council. In Hamilton, Council may wish to receive delegations directly at a meeting of the Hearings Sub-committee.

## X. Recommendations

It is recommended that:

- (a) A pesticides advisory committee with Councillors and a balanced representation of stakeholders be established, with appropriate staff support from Social and Public Health Services, to explore the health, legal, financial and practical issues associated with a variety of policy options that could be used to reduce non-essential chemical pesticide use on private green space within the City, and report back to Council with a recommended approach by Spring 2003;
- (b) The following policy options be included among those to be considered:
  - (i) Development of an intensive education and social marketing campaign;
  - (ii) Encouragement of industry self-regulation through the voluntary Integrated Pest Management (IPM) accreditation process being initiated by the IPM Council of Ontario;
  - (iii) Adoption of a by-law that incorporates one or several of the following options:
    - (1) Sets clear rules about the signage and notification requirements that must precede and follow pesticide application on private property;
    - (2) Requires industry administered IPM accreditation of all companies applying pesticides on private green space within the City;
    - (3) Limits the frequency and/or timing of pesticide application;
    - (4) Specifies buffer zones around the properties of sensitive receptors (eg. schools, sensitive individuals) and waterways; and/or
    - (5) Prohibits pesticide use on private green space throughout the City with or without a phase-in period; and
- (c) When developing the approach to be taken, the pesticides advisory committee:
  - (i) Further investigate the health, legal and cost implications associated with the policy options above;
  - (ii) Conduct five separate consultation meetings with business groups, community/environmental organizations, regulatory agencies, service agencies and the general public that may have a particular interest in the issue; and
  - (iii) Solicit the opinions of the broader public through e-mails, hot lines and other available communication means.

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## Appendix A:

### **Summaries: Activities in Several Other Ontario Municipalities**

#### Sarnia

In July 2001, Sarnia's City Council instructed the City's Environmental Advisory Committee (SEAC) to examine the issue of pesticide control and report back with recommendations. SEAC is a committee composed of Councillors (2) and citizens (7) appointed by Council with one staff person from Planning. The citizens are professionals with knowledge in science and environmental issues; they do not represent stakeholders.

SEAC gathered information from the scientific literature, Health Canada, the Ministry of the Environment, and other municipalities. It also held three public meetings to collect input from the community. At two of those meetings, citizens were invited to offer their comments about actions that should be taken by the City. At the third, SEAC presented its conclusions and heard comments on their conclusions. About 100 citizens in total participated in the three public meetings.

SEAC focused on the cosmetic use of pesticides only. Agricultural use of pesticides and any use of pesticides that is required by law or by a regulatory agency were excluded from the Committee's recommendations. Over the last ten years, Sarnia has cut its own use of pesticides by 90% and implemented an Integrated Pest Management (IPM) program.

SEAC has recommended that: 1) the City of Sarnia implement an Integrated Plant Health Program (IPHP) on City controlled properties; and 2) the City champion a Pesticides Educational Program (PEP) within Sarnia through a sub-committee of the SEAC. The PEP should be developed in consultation with all interested parties and should focus on helping residents with the "responsible and minimal use of pesticides and the promotion of alternatives to pesticide use". SEAC's report was scheduled to go to City Council on February 18, 2002.

#### City of Toronto

Since December 1998, Toronto has reduced pesticide use on parks, sports fields and roadsides by more than 95%. The reduction strategy was developed by a Council appointed Pesticides Subcommittee composed of staff from public health, parks and works, and representatives from the lawn care industry, the golfing association, the local union, a local environmental group, an organic lawn care company, and the local school board. In 2000, the Pesticides Subcommittee launched a pesticide reduction communications plan to encourage voluntary pesticide use reduction on private property.

In July 2001, Toronto Board of Health instructed the Medical Officer of Health to prepare a public discussion document that seeks broad input on the nature and scope of a potential pesticides by-law for the City of Toronto. City Council endorsed this recommendation in November 2001, and instructed the preparation of reports on the legal issues, the economic impacts, and the enforcement issues by the City Solicitor and two of the City's Commissioners. Toronto Public Health is currently preparing a report for the April Board of Health meeting that will: 1) summarize the scientific literature on the health impacts of pesticides; 2) provide the results of a public opinion survey conducted on pesticides; 3) provide the results of the consultation process conducted to date; 4) make recommendations on the broad policy options to be considered; and 5) suggest the process by which decisions should be made.

To solicit the views of the various stakeholders interested in or affected by this policy discussion, Toronto Public Health and the Pesticides Subcommittee convened a meeting of 55 individuals identified as interested in or affected by a pesticides by-law to a day-long meeting to discuss their views. The meeting was facilitated by a professional and neutral facilitator. Each participant was given an opportunity to present his/her positions and all participated in a discussion to explore common ground.

### Halton Region

The Region of Halton Health Department prepared a preliminary report on the health effects of pesticides in June 2000. One of the recommendations made by Regional Council at that time was to establish a committee to address "the issue of pesticide use on public and private lands". The Halton Inter-municipal Pesticide Review Committee was established with staff representatives from the Region's Health Department, the Towns of Oakville, Milton, and Halton Hills, and the City of Burlington.

The Committee organized two stakeholder meetings - one with 30 organizations which regulate or use pesticides, and one with members of environmental/community organizations who have an interest in this topic - to provide an in-depth discussion of the issues related to pesticide use and municipal regulation.

In addition, the Committee has developed a public survey to explore public opinion about the use of pesticides on public and private land. This survey is being administered through the Rapid Risk Factor Surveillance System (RRFSS) administered by the York University Institute for Social Research. Under RRFSS, 100 Halton residents will be surveyed each month for six months beginning in October 2001. The Committee has also conducted a survey on 124 businesses to explore opinions about pesticide use and bans among Halton's business sector.

The Committee is currently preparing a report for Regional Council that will: 1) summarize the health literature related to pesticides; 2) describe the consultation process undertaken and the findings of that process; 3) provide the results of the RRFSS survey; 4) provide the results of the business survey; and 5) provide recommendations to Regional and local Municipal Councils. The Committee plans to submit this report to Regional Council in April 2002.

### City of Burlington

In 2001, the City of Burlington established the Healthy Green Spaces (HGS) Committee to examine the ways in which the City might reduce its reliance on pesticides. The HGS Committee, composed of City staff from Parks & Recreation, Parks Maintenance (ie. Parks, Forestry, Horticulture, Golf), Engineering and Communications, has produced a report that summarizes the issues, initiatives, and policy options, and stakeholder opinions related to the cosmetic use of pesticides on private property, and recommends a course of action for Council's consideration.

This report, which is scheduled to be submitted to City Council on February 25, 2002, has been developed in consultation with the Environmental Management Team, which is composed of employees from across the Corporation who have an interest in environmental issues, and with the Sustainable Development Committee, an advisory group composed of interested citizens. During the report's development, the HGS consulted informally with the lawn care industry and local community groups. The HGS plans to convene a formal public meeting in the spring to discuss the policy options presented in the report.

The three policy options presented in the report are: 1) the regulatory option with many variations on the theme, 2) education and outreach, and 3) to lobby provincial and federal governments for improved regulatory controls.

### Waterloo Region

The Community Services Committee (Board of Health) in Waterloo Region has instructed staff from Community Health to meet with representatives from the seven municipalities (3 cities and 4 townships) within the Region to develop Terms of Reference for reducing or possibly regulating cosmetic pesticide use. The Terms of Reference are to be submitted to the seven respective Municipal Councils for direction. As of February 2002, only the City of Cambridge had expressed interest in exploring a by-law to restrict the cosmetic use of pesticides on private property.

A September 2001 staff report prepared for the Community Services Committee in Waterloo indicates that the Region, which has been established by the *Regional Municipality of Waterloo Act*, does not have the broad powers to pass by-laws that local municipalities do under section 102 of the *Ontario Municipal Act*. The Region would have to use section 13 of the *Health*

*Protection & Promotion Act* if it wanted to regulate the use of pesticides, and this would require clear evidence that pesticides “have or are likely to have an adverse effect” on any person. Staff have concluded that the local municipalities in Waterloo Region are in a better position to regulate pesticides than is the Regional Municipality.

In Waterloo, the next steps may include developing an integrated educational campaign, conducting a community wide survey to determine the level of public support for a pesticides by-law, and/or developing a community consultation process for stakeholder input and by-law creation.