

TORONTO STAFF REPORT

March 25, 2003

To: Board of Health
From: Dr. Sheela V. Basrur, Medical Officer of Health
Subject: Proposed Pesticide By-law

Purpose:

To present to the Board of Health a pesticides by-law similar to the Hudson, Quebec by-law, and to report on the experience of other jurisdictions as directed by the Board of Health.

Financial Implications and Impact Statement:

Resources to develop and coordinate pesticide use reduction programs were approved by City Council through the 2003 operating budget process (\$163,500 gross/\$81,800 net, including 1.0 FTE). Preliminary estimates indicate that the additional annualized cost of implementing the proposed by-law would be \$150,000 (gross)/\$75,000 (net) for by-law notification activities, \$200,000 (gross)/\$100,000 (net) for compliance assistance, and \$100,000 (gross)/\$50,000 (net) for complaint response and by-law enforcement, for a total of \$450,000 (gross) /\$225,000 (net) in 2004 and annualized at \$450,000 for 2005.

The request also includes 7 new seasonal (six-month) positions (4 seasonal Public Health Inspectors; 1 seasonal clerk; 2 seasonal Helpline workers) to implement the by-law. This request will be included in the 2004 Toronto Public Health operating budget submission. The Province has yet to confirm 50% funding for this activity.

The Chief Financial Officer and Treasurer has reviewed this report and concurs with the financial impact statement.

Recommendations:

It is recommended that:

- (1) the Board of Health endorse this report and the attached by-law and forward these to City Council for approval;
- (2) the financial implications summarized in Table 2 related to the implementation of the Pesticide By-law be forwarded to the Budget Advisory Committee and then to the Policy and Finance Committee during the 2004 budget process for their consideration;
- (3) the City Solicitor be authorized to prepare and introduce a Bill in Council in the form or substantially in the form of the draft by-law attached to this report as Appendix "A";
- (4) the Board of Health direct the Medical Officer of Health to report back annually on progress made in achieving pesticide use reductions through the implementation and enforcement of the pesticides by-law;
- (5) City Council request the federal Minister of Health to ensure that regulations made under the *Pest Control Products Act* require annual reporting of pesticides sales data, both by active ingredient and by municipality in which the products are sold, in order to facilitate municipal efforts to monitor and evaluate the effectiveness of pesticide use reduction programs;
- (6) City Council request the federal Minister of Health and the provincial Minister of the Environment to expedite programs presently underway to increase public access to reduced-risk pesticides, restrict public access to high-risk pesticides, improve access to information about the safe use of pesticides, and increase co-operative efforts through the Healthy Lawn Strategy in order to reduce reliance on lawn care chemicals;
- (7) City Council request the federal Minister of Health and the provincial Minister of the Environment to include the municipal sector as a partner in the Federal/Provincial/Territorial Committee mandated to provide advice and direction to governments on programs and policies for pesticides with the aim of enhancing sustainable pest control practices;
- (8) City Council request the provincial Minister of the Environment to establish standards for Integrated Pest Management in regulations under the Pesticides Act, and provide that IPM training be required in order to be a licensed exterminator in the Province of Ontario;
- (9) the Board of Health forward this report along with the Medical Officer of Health's report dated November 7, 2002 describing the "Common Ground" strategy to the Works Committee and the Economic Development and Parks Committee for their information;

- (10) the Board of Health forward this report to the Federation of Canadian Municipalities, the Association of Municipalities of Ontario, the Ontario Ministry of the Environment, Health Canada, the Ontario Public Health Association, and the Association of Local Public Health Agencies; and
- (11) the appropriate City officials be authorized and directed to take the necessary action to give effect thereto.

Background:

At its meeting on July 6 2001, the Board of Health asked the Medical Officer of Health to engage in public consultations toward the creation of a strategy to achieve the phase-out of non-essential outdoor use of pesticides. City Council endorsed the Board of Health's request in November 2001.

At the April 2002 Board of Health meeting, the Medical Officer of Health released a technical report and a discussion document to aid public consultation meetings held in May 2002. At the November 2002 meeting of the Board of Health, the Medical Officer of Health made recommendations arising from the consultations with the public and stakeholders pertaining to a strategy to achieve the phase-out of the non-essential outdoor use of pesticides.

At this meeting, the Board of Health directed the Medical Officer of Health to defer implementation of strategy for its April 2003 meeting and directed the Medical Officer of Health to prepare the exact wording of a by-law similar to the Hudson, Quebec by-law upheld by the Supreme Court of Canada to restrict the non-essential outdoor use of pesticides. The Board also requested that the Medical Officer of Health report to the Board on the experience of other jurisdictions with by-laws restricting the outdoor use of pesticides. The Board further directed the Medical Officer of Health to define "non-essential" pesticide use as agreed upon by an expert group of stakeholders convened in the spring of 2002.

This report has been prepared in consultation with City Legal Services, Works and Emergency Services, Parks and Recreation, Economic Development, and Urban Development Services. Prior to preparation of the by-law, the Medical Officer of Health also consulted with stakeholders representing the horticultural, retail, and manufacturing sectors and with stakeholders representing health and environmental non-government organizations.

Comments:

In April 2000 Toronto City Council unanimously adopted the "Environmental Plan" and its recommendations to make Toronto a clean, green and healthy city. Recommendation Seven stated the City's objective to eliminate, where possible, the use of pesticides and to develop a strategy to eliminate pesticide use on private lands. At the time City Council adopted the recommendation, several City departments had already made significant progress in reducing pesticide use. Since then, the Toronto Interdepartmental Environment Committee Pesticide

Subcommittee (TIE-PSC) has developed public information campaigns raising public awareness of the health and environmental effects of pesticide use and continues to educate the public about pesticide-free lawn care.

Reducing pesticide use is a long-standing commitment of the City of Toronto. This report reviews how to achieve pesticide use reductions on private property with a Hudson-style by-law supported by notification, compliance assistance and enforcement programs.

(1) Public Support for Pesticide Use Reduction in the City of Toronto

A Toronto Public Health survey of 1,000 residents of Toronto (2002) found strong public support for restrictions on pesticide use in the City. The survey was conducted during the months of September-October, 2002. The executive summary of the survey report is attached as Appendix B. Full copies of the survey report are available from Toronto Public Health.

Compared to the average for the whole city, the survey shows somewhat higher lawn and garden pesticide use in the former municipalities of Etobicoke, Scarborough, York and North York and lower use in the former municipalities of Toronto and East York (see table below).

Table 1. Pesticide Use and Support for By-law by Former Municipality

| Former Municipality | East York | Toronto | York | Scarborough | North York | Etobicoke | Average |
|---|-----------|---------|------|-------------|------------|-----------|---------|
| Used pesticides ¹ | 27% | 28% | 41% | 42% | 42% | 50% | 38% |
| Support For By-law (excluding undecided or no answer) | 72% | 78% | 70% | 70% | 64% | 75% | 72% |

¹ Figures for householders with a lawn who used pesticides at least once during 2001/2002.

The 2002 survey also showed strong support for pesticide use reductions (86%). The survey found that opposition to the concept of pesticide reductions was very low (8%) and that approximately three out of every four respondents were at least somewhat likely to try products and lawn care methods that are alternatives to chemical pesticides. Among respondents with lawns and gardens, 72% of those with an opinion supported a by-law that would restrict pesticide use on private property, i.e. on their own or their neighbour's property.

Public support for a pesticide by-law was generally lower in former municipalities where there was higher than average pesticide use. Etobicoke is the exception, with the highest proportion (50%) of respondents reporting pesticide use on their properties, but also showing higher than average support for a by-law.

(2) Health and Environmental Impacts of Pesticide Use

The report, “Lawn and Garden Pesticides: A Review of Human Exposure & Health Effects Research” (Toronto Public Health, 2002) provided a detailed overview of the health effects literature pertaining to urban use pesticides. The research focused on the health effects associated with the seven lawn and garden pesticides most commonly used in Canada. These are the insecticides diazinon, carbaryl and malathion and the herbicides 2,4-D, mecoprop, dicamba and 4-chloro-2-methylphenoxyacetic acid (MCPA). The report concluded that while the data do not support definitive statements about the risks associated with pesticides, the data do support the position that precaution is warranted. This means that it is advisable that pesticide use be avoided, especially where vulnerable populations may be exposed.

The best evidence for the possible health risk associated with commonly used lawn care pesticides comes from occupational studies (e.g. of agricultural workers and horticulturists) and others who use these same pesticides on the job. These occupational groups are subjected to higher exposures to pesticides than the general population, and researchers are therefore able to make more reliable associations between pesticide exposure and adverse health effects. In recent years, scientists have observed associations between pesticide exposures and adverse effects on reproductive and neurological health, and some forms of cancer. While not all studies show consistent results, a growing body of research suggests that even low levels of pesticides can have a negative effect on human health.

U.S. biomonitoring studies show a widespread presence of traces of some insecticides breakdown products in people’s urine, indicating that large portions of the population are routinely exposed to these pesticides. It is reasonable to expect that Toronto’s population is similarly exposed.

In the past year, several more studies have been published (see Appendix C). Toronto Public Health continues to monitor the ongoing research examining the questions of exposure and health effects from pesticides. The new studies continue to support a precautionary approach to policy development and prudent avoidance of pesticide exposure. This is especially important where vulnerable populations are involved, including infants, children, pregnant women, people with compromised immune systems and the elderly.

A study recently released by Environment Canada, the Ontario Ministry of the Environment and the City of Toronto Works and Emergency Services (Struger, et al. 2002) provides evidence that pesticides applied for lawn and garden care in the city can move from their site of application into the broader environment, including local streams. Nine pesticides and one pesticide metabolite were detected in the Toronto samples. The most frequently detected pesticides were MCPA (detected in 30% of samples), followed by diazinon (in 29% of samples) and 2,4-D (in 6.6% of samples). It is noteworthy that these three pesticides are commonly used in lawncare. The other pesticides detected (and their frequency of detection expressed as % of total samples in which residues were detected) were atrazine (3.7%), metolachlor (2.0%), des-ethyl atrazine (0.5%), carbofuran (1.5%), and cypermethrin (0.7%).

The extent to which these pesticides adversely impact the aquatic ecosystem in the Toronto area is unknown. However, it is of concern that 20% of the river samples collected in the study contained diazinon at levels exceeding the Ontario Water Quality Objective for the Protection of Aquatic Life (Struger et al., 2002).

The pesticides used in lawn and garden care may also have adverse effects on the terrestrial environment. The full extent of any adverse effects is unknown because of a lack of data on actual pesticide levels in the Toronto environment. In addition to aquatic life, bees, birds and beneficial soil organisms can be harmed by the pesticides used on lawns and gardens. In “Lawn and Garden Pesticides: A Review of Human Exposure and Health Effects Research,” (2002) Toronto Public Health summarized some of the existing studies in other jurisdictions that show adverse environmental impacts, particularly to birds and beneficial insect pollinators such as bees.

(3) Federal, Provincial and Municipal Roles Regarding Urban Use Pesticides

In Canada, pesticides are subject to regulation at the federal, provincial and municipal level. The federal government regulates pesticides through the *Pest Control Products Act*. Regulations under this Act require that any pest control product used or manufactured in Canada must be tested and registered with the federal government. In Ontario, the provincial *Pesticides Act* regulates the shipment, sale, application, storage and disposal of pesticides. The Act also regulates pesticide applicators by requiring permits, training, certification and licensing of applicators and sellers of pesticides.

Some Canadian municipalities regulate the use of pesticides through by-laws. These by-laws supplement the federal and provincial regimes by establishing what uses of pesticides are permitted within the municipality and which legally registered pesticides may be used.

(4) A Pesticide By-Law for Toronto

A proposed pesticide by-law for Toronto is attached to this report (see Appendix A). The Board of Health directed the Medical Officer of Health to prepare a by-law “similar to the Hudson, Quebec by-law upheld by the Supreme Court of Canada.” The proposed by-law follows the format of the Hudson by-law by setting out a general restriction on pesticides and then setting out exceptions to the restriction. In other words, the by-law identifies permitted uses of pesticides and permitted pesticide products. The by-law operates in conjunction with all provincial and federal laws applicable to pesticides and their use.

(a) Permitted Pesticides

The proposed by-law permits the use of selected, ultra-low toxicity pest control products. These products provide adequate pest control tools for most of the pest problems that may arise on residential lawns and gardens when used in conjunction with proper lawn care practices. The list of exempted pesticides recognizes that some registered pest control products pose very low or no health or environmental risks. The substances and mechanical methods (sticky media, pheromone traps) on the list were selected either because they are identified as preferred low

toxicity pest control products in Integrated Pest Management manuals and organic standards, or they are 'exempt' under the provincial *Pesticides Act*.

The following pesticides are permitted under the proposed Toronto pesticide by-law:

- (i) Insecticidal soaps
- (ii) Dormant or horticultural oils
- (iii) Silicon dioxide (diatomaceous earth)
- (iv) Bt (*Bacillus thuringiensis*), nematodes and other biological control organisms
- (v) Borax, also called boracic acid
- (vi) Ferrous Phosphate
- (vii) Pyrethrum or pyrethrins
- (viii) A product that uses pheromones to lure pests or sticky media to trap pests

(b) Permitted Pesticide Uses

The by-law also enumerates certain permitted uses of pesticides. Many of the permitted uses are directly related to the protection of human health, such as using pesticides to purify water, to disinfect swimming pools, wading pools and spas, to control rodents, to control or destroy a health hazard, and for use as personal insect repellent. Two uses – completely enclosed insecticide baits and treatments injected into trees, stumps and poles – are permitted because of limited exposure risk and the limited risk that the active ingredient will directly enter the environment. To protect the integrity of built structures, the by-law also permits the use of pesticides to control termites and as wood preservatives. Pesticide use is permitted within an enclosed building because indoor pesticide use is beyond the purview of this by-law. However, it is anticipated that as a natural outcome of the by-law, the public will become more aware of the potential effects of pesticide exposures and reduce their indoor use as well.

The following pesticide uses are permitted under the proposed Toronto pesticide by-law:

- (i) To disinfect swimming pools, whirlpools, spas or wading pools;
- (ii) To purify water intended for the use of humans or animals;
- (iii) Within an enclosed building;
- (iv) To control termites;
- (v) To control or destroy a health hazard;
- (vi) To control or destroy pests which have caused infestation to property;
- (vii) To exterminate rodents;
- (viii) As a wood preservative;
- (ix) An enclosed insecticide bait;
- (x) An injected treatment for trees, stumps or wooden poles;
- (xi) To comply with the Weed Control Act; or
- (xii) As an insect repellent for personal use.

The by-law provides that pesticides may be used to control or destroy pests which have caused infestation to property. This recognizes that even well-cared-for properties may become prone to devastating infestations. For example, a chinch bug infestation in a late summer drought can

completely destroy a lawn, especially if the household has been practising water conservation. Most other jurisdictions with pesticides by-laws, including Hudson, have drafted or amended their by-laws to provide for pesticide use in the event of an infestation. The proposed by-law for Toronto defines infestation as “the presence of pests in numbers or under conditions which involve an immediate or potential risk of substantial loss or damage.”

The intent of this “exception clause,” is to provide recourse in the event that plant life is threatened. However, in order to ensure that the overall objective of reducing pesticide use is met, the by-law implementation plan will focus on raising public awareness about practices to help prevent serious infestations. These practices include keeping plants (including grass) as healthy as possible by using sound horticultural techniques and by using alternative landscapes that are naturally resistant to pests, such as local plants and ground covers. Public information about the by-law will help people assess when they have an infestation and will also identify the least-toxic methods available to treat infestations.

The proposed by-law, unlike the Hudson by-law, does not provide for permitting or for advance posting of lawns where pesticides will be used, nor will it require reporting of pesticide use to the municipality. Each of these components of the Hudson by-law was given due consideration in the development of Toronto’s by-law. However, the resources required to implement any of these components are prohibitive for the City of Toronto. Hudson, Quebec is a town of 4,500 while Toronto is a city of 2.5 million. This difference in scale imposes limits on what the proposed by-law can reasonably require.

The Hudson by-law provides an exemption for agricultural uses of pesticides within the municipality. Such an exemption was not considered to be necessary in the Toronto by-law. There is very little agricultural production within the City, and the few outdoor operations that do exist, such as Community Gardens, are predominantly pesticide-free. Furthermore, food is the dominant route of non-occupational pesticide exposure (Curl, et. al., 2003).

Staff also considered incorporating into the by-law a requirement that any person applying pesticides in the City of Toronto be accredited in Integrated Pest Management (IPM). IPM is a practical approach that ensures pesticides are used only when necessary and only as a last resort. The Integrated Pest Management Council has developed an accreditation program that requires its members to be trained in IPM and audited annually for compliance with IPM principles. However, IPM Accreditation is still in a preliminary stage of development and will apply only to those lawn care companies that voluntarily adopt it. The Medical Officer of Health will continue to monitor the progress of the program, take steps to evaluate its effectiveness in achieving reductions in pesticide use, and report back to the Board of Health when this information is available.

The Board of Health directed the MOH to “define non-essential pesticide use as agreed upon by an expert stakeholders group convened in the spring of 2002.” However, it should be noted that the group of stakeholders convened in May 2002 did not reach a consensus on the definition of “non-essential.” In any event, the proposed by-law does not define “non-essential” because the object of the Toronto by-law is to reduce all pesticide exposures and the associated health risks.

Avoiding or reducing pesticide use for all purposes – ‘essential’ and otherwise – will best meet this public health objective.

(5) By-law Implementation Plan

It is recommended that implementation of the by-law be phased in over three years as follows:

Year 1 (2003) – Enactment of the by-law with an effective date one year hence. During this one-year window period, TPH will focus on program development, by-law notification and compliance assistance to increase the public’s awareness of the by-law, as outlined later in this report.

Year 2 (2004) – This will be the first year the by-law is legally in effect. Activities will continue to focus on notification and compliance assistance programming. Toronto Public Health Inspectors will respond to residents’ complaints about possible by-law violations primarily with warnings accompanied by educational material. A framework will be established to evaluate the effectiveness of by-law implementation and related activities in achieving pesticide use reductions in the City of Toronto.

Year 3 (2005) – There will be continued education and progressive enforcement in response to complaints through the issuance of a ticket and/or a summons to court if necessary for those using pesticides in contravention of the by-law.

Table 2. 2004 Budget Estimate to Implement Pesticide By-law

| Activity | Gross Amount (2004 Annualized Costs) | Net Amount (2004 Annualized Costs)* |
|--|--|---|
| Notification: | | |
| Advertising (transit, newspaper, outdoor) | \$150,000 | \$75,000 |
| Compliance Assistance: | | |
| Helpline Workers (2) – 1 FTE | \$46,500 | \$23,250 |
| Workshops (6) \$5,000 each | 30,000 | 15,000 |
| Incentive Program | 37,500 | 18,750 |
| Public Health Inspectors (2) – 1 FTE | 71,340 | 35,670 |
| Print Materials | <u>14,660</u> | <u>7,330</u> |
| Total | \$200,000 | \$100,000 |
| Complaint Response: | | |
| Public Health Inspectors (2) – 1 FTE | 71,340 | 35,670 |
| Clerical Support (1) – 0.5 FTE | 21,000 | 10,500 |
| Materials & Equipment | <u>7,660</u> | <u>3,830</u> |
| Total | \$100,000 | \$50,000 |
| TOTAL: | \$450,000 | \$225,000 |

*Figures assume 50% funding by the provincial government which is still to be confirmed.

The framework for implementation of the by-law builds on four key components: by-law notification, compliance assistance, complaint response and evaluation. The following sections include brief descriptions of each component.

(a) Notification

The proposed by-law would come into effect in April 2004. The public will require notification of the new rules in the period leading up to the by-law coming into effect and on an ongoing basis after that.

Notification activities will include a variety of methods to achieve widespread public awareness of the new rules. These will include announcements to print and television media, advertising on the TTC and in public transit shelters, posting information on the City web site, and distributing information to community centres, public health offices, and public libraries. The City will set up a help-line to assist Toronto residents by providing information about the by-law and to assist them with by-law compliance. It will also be used as a means for residents to report suspected by-law infractions in years 2 and 3.

City staff will be made aware of the pesticide by-law and of how to connect residents to the telephone help-line if they have questions about the new rules.

The resources required to provide public notification of the by-law will likely be greater in the first few years, although notification will always be a necessary component of by-law implementation. In the first year of the by-law (2004), it is estimated that notification will require approximately \$150,000 (gross)/\$75,000 (net).

(b) Compliance Assistance

The basic objective of the by-law is to reduce the risk of health effects associated with exposures to pesticides. This objective is best achieved by providing services to Toronto residents to help them achieve pesticide-free properties and, if they have a pest problem, to help them make the best use of the pesticides permitted under the by-law.

Information will be provided to the public in a variety of forms such as the help line, web pages, workshops, and demonstration projects. These will assist the public in adopting practices such as pesticide-free lawn care or using only permitted pesticides and cultivating alternative landscapes that are naturally resistant to pests. Workshops to inform the public about pesticide-free gardening will be provided in collaboration with Parks and Civic Gardens staff. Information will also be made available to assist the public in understanding when they may have an “infestation” as defined by the by-law and how the infestation may be treated in the least-toxic way. By-law compliance assistance activities will be coordinated with and build on the work of the Toronto Interdepartmental Environment–Pesticide Sub-Committee (TIE-PSC).

In the first year of the by-law (2004), it is estimated that compliance assistance activities will require approximately \$200,000 (gross)/\$100,000 (net).

(c) Complaint Response

Complaint response and enforcement are necessary components of the implementation plan. Responding to public complaints with progressive enforcement (warnings, tickets, summons to court) for violations of the by-law will help establish in the public mind that new rules apply in the City. This will help achieve the overall objective of reducing pesticide use and exposure. It is also important that there be enforcement to provide recourse when there are flagrant or repeat violations.

Enforcement of the by-law will be phased in, with the early stages putting emphasis on notifying the public about the new restrictions and directing them to compliance assistance services. In the first year of enforcement (2004) Toronto Public Health Inspectors (PHIs) will respond to complaints. Where they find signs of non-compliance, they will provide compliance assistance information to people acting in contravention of the by-law. PHIs will receive training in identifying permitted and non-permitted uses of pesticides. Health inspectors will rely on visual evidence and eyewitness testimony in order to enforce the by-law.

It is estimated that resources to deal with the first year (2004) of enforcement would be approximately \$100,000 (gross)/\$50,000 (net).

(d) Evaluation

Also crucial to the implementation of the by-law is a mechanism to show the results of the city-wide effort to reduce the use of pesticides. As mentioned previously, the federal *Pest Control Products Act* will require that sales information for pest control products be reported, once the applicable regulations are in place. It has been recommended in this report that these reports include both the active ingredient and the municipality in which the product is sold. With access to this data, municipalities would have a reasonably clear indicator of the effectiveness of pesticide use reduction programs. Other potential indicators for Toronto are surveys collecting self-reported pesticide use, data from IPM accredited lawn care companies (who must report their annual pesticide use as a condition of their accreditation) and studies monitoring the level of pesticides in Toronto rivers.

Each of these indicators can help build a picture of overall pesticide use reduction, and help to identify the most effective methods for assisting the public to comply with by-law requirements.

(6) Experience of Other Jurisdictions with By-Laws Restricting the Outdoor Use of Pesticides

Pesticide by-laws that apply to private property exist in two other Canadian provinces, Quebec and Nova Scotia. The province of Quebec is particularly active on the issue of pesticides, having recently introduced a bill amending its *Pesticides Act* that will prohibit the use of 28 pesticides in the province.

(a) Quebec By-laws

Pesticide by-laws in 40 Quebec municipalities have been in place for approximately ten years. To one extent or another, they are all similar to the Hudson by-law, with some variation in permitted uses, requirements for signage and so on.

In order to assess the success of the pesticide by-laws in Quebec in achieving reductions in pesticide use, Toronto Public Health staff interviewed municipal staff in Beaconsfield/Baie D'Urfe, Hudson, Westmount and Chelsea. Of these towns, only Beaconsfield produced regular reports on activities related to its by-law. The reports compare the number of permits issued from year to year for use of pesticides in the event of an infestation. However, the number of permits issued does not enable one to determine how many people may have used a pesticide without a permit. Since the Beaconsfield by-law has been amended several times, the number of permits issued in a year may not be an accurate indication of pesticide use reductions in that town.

In Hudson, Chelsea and Westmount, city staff interviewed by TPH all believed that pesticide use reductions had occurred, that residents were developing a preference for alternative methods and products, and that public support for their by-laws was high. Westmount reported that in the first year of its by-law (1994), residents made 100 applications for permits, but the number subsequently declined to approximately 10-15 a year. Hudson reports issuing an average of about 15 permits per year.

None of these three municipalities has, however, done a methodical evaluation of their by-laws, or has studies to support findings of pesticide use reduction.

(b) The Halifax By-law

The Regional Municipality of Halifax is in the third year of a phased-in pesticides by-law. The activities relating to the by-law in its first two years focused on public education and protecting vulnerable populations (pesticide applications were restricted in 50-metre buffer zones around schools, hospitals and properties of persons with medical sensitivities to pesticides). In April 2003, restrictions will apply to all properties in Halifax.

The Halifax by-law exempts low-toxicity pest control products listed in a schedule to the by-law. The exempted pesticides may be used without a permit. The Halifax by-law also permits pesticide applications in the event of insect infestations, or plant infestations that endanger human health. In order to use a non-exempted pesticide to treat an infestation, a person must apply for a permit. Before a permit can be issued, the property must first be inspected. The Regional Municipality does not charge for the permits it issues. At present, the permitting system applies only to "registered" properties. In April 2003, the permitting system will apply everywhere in Halifax.

The first two stages of the Halifax by-law have been supported by a public education campaign, providing information about the by-law itself, and about pesticide-free lawn and garden maintenance. A fall 2002 opinion poll that found that 93% of homeowners surveyed were using

mainly alternatives to pesticides (alternative methods or products or both, with limited pesticide use in accordance with the by-law exemptions), compared to only 7% who still used pesticides as their primary mode of pest control. The survey sample size was 400, and of those, 280 were homeowners. A Halifax spokesperson estimates these responses represent a substantial increase in those reporting they used alternatives to pesticides in the two-year implementation period of the by-law.

While the jurisdictions interviewed were all confident that their by-laws had achieved pesticide use reductions, there was only anecdotal evidence to support these claims. At present, other than surveying residents, there are few mechanisms readily available to municipalities that can measure reductions in pesticide use. The new federal *Pest Control Products Act* will require that sales figures for pesticides be reported to the federal Minister. This mechanism has the potential to help meet the needs of municipalities to evaluate the effectiveness of their pesticide by-laws.

(7) Recommendations to Federal & Provincial Agencies to Enhance the Effectiveness of the Toronto By-law

Several existing federal/provincial/territorial programs supporting pesticide use reduction in the urban environment have the potential to enhance Toronto's efforts to reduce pesticide use overall. The leading federal program is Action Plan on Urban Use Pesticides, which includes the Healthy Lawns Strategy. It incorporates several initiatives that are intended to:

- (a) reduce consumer access to higher toxicity products
- (b) provide better point-of-sale information to the consumer about the safe use of pest control products,
- (c) increase the availability of lower- and least-risk products, and
- (d) improve labelling so instructions are easier to follow

Each of these initiatives will make a significant contribution to Toronto's objective of reducing pesticide exposure. The Healthy Lawns Strategy should, however, include the municipal sector in the federal/provincial/territorial partnership. Municipal government is closest to the issue of pesticide use, and, as noted by the Supreme Court of Canada in the Hudson By-Law decision, can move flexibly in response to local needs. The federal Minister of Health should take whatever steps are necessary to include the municipal sector as a partner in the Federal/Provincial/ Territorial Committee mandated to provide advice and direction to governments on programs and policies for pesticides with the aim of enhancing sustainable pest control practices.

The federal initiatives listed above are moving forward very slowly. In the case of faster approvals for least-risk products, pesticide manufacturers have so far made very few applications for reduced-risk urban use pesticides. The federal Minister of Health and the provincial Minister of the Environment should make every effort to expedite these programs and increase co-operative efforts through the Healthy Lawn Strategy to reduce reliance on lawn care chemicals.

Regulations are currently being drafted for the *Pest Control Products Act* that will set out the reporting requirements of pesticide sales. To increase the capacity of municipalities to evaluate

the effectiveness of their pesticide use reductions programs, the federal Minister of Health should ensure that the regulations made under the *Pest Control Products Act* require annual reporting of pesticides sales data both by active ingredient and by the municipality in which the products are sold.

The lawn care industry in Ontario is voluntarily adopting an accreditation program for Integrated Pest Management. This is an important effort on the part of industry, but has, as of the time of this report, captured only a fraction of this sector (100 companies out of an estimated 1,300 in the province). Progress in pesticide use reduction has been documented in British Columbia where Integrated Pest Management has been incorporated into regulations under the B.C. *Pesticide Control Act*. The Ontario Ministry of the Environment should enhance pesticide use reduction programmes by establishing standards for Integrated Pest Management in regulations under the *Pesticides Act*, and providing that IPM training be required in order to be a licensed exterminator in the Province of Ontario.

Conclusion:

The findings of the medical research support a policy of prudent avoidance of pesticides. Eighty-six per cent of Toronto residents support reducing the use of pesticides and 72% support a by-law as a way to achieve these reductions. The proposed Toronto pesticides by-law provides exemptions so that a property owner has recourse to use a pesticide product in the event of a serious infestation. The by-law implementation and enforcement plan focuses on ensuring that people will know how to reduce their use of conventional chemical pesticides and avoid infestations on their property. The by-law implementation plan emphasizes public notification of the by-law and compliance assistance through information and complaint response. The implementation plan also proposes that a framework be developed to evaluate the impact of the by-law in achieving pesticide use reductions in the City of Toronto. Finally, all of Toronto's efforts would be enhanced significantly if the responsible federal and provincial ministries would expedite pesticide use reduction programs and develop regulatory standards for Integrated Pest Management.

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List of Attachments:

- Appendix A: Pesticides By-law
- Appendix B: 2002 Toronto Public Health Public Opinion Survey for the Phase-Out of Non-Essential Outdoor Pesticide Use, Executive Summary
- Appendix C: Summaries of Major Reports on Health Effects Associated with Pesticide Exposure Published Between April 2002 and April 2003

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