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2003 Program Overview

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Section 1

Background

The fundamental principles behind By-law P-800 include human health and environmental protection.

Discussions towards a municipal pesticide by-law began in earnest in 1997 when a regional councillor raised a question at Council on behalf of his constituents regarding regulating “toxic” products.

In 1998 a second regional councillor lobbied to make the regulation of pesticide-type products a municipal responsibility through the Municipal Government Act (MGA) and Halifax Regional Council forwarded on the request to the Province of Nova Scotia.

In the spring of 1999 the Province granted authority to Halifax Regional Municipality (HRM) to regulate pesticide use within the municipality, with the enabling legislation specific to residential property and property owned by the Municipality.

HRM Council in the summer of 1999 requested that an Advisory Committee be set up to provide advice to them on a pesticide related by-law. Subsequently an ad hoc Pesticide Advisory Committee, made up of industry, community, appropriate regulatory and environmental stakeholders, was established later that same year.

The Committee met on numerous occasions, with two distinct positions being established. One position sought a restriction on all pesticide use, while the other argued against the need for a by-law or restrictions. Therefore, in December of 1999, reports were forwarded to Regional Council on consensus and non-consensus items.

During the spring and summer of 2000, five supplementary reports were forwarded to Regional Council from staff, and three public hearing sessions were held during the formal reading process.

After this somewhat lengthy but very open public process, By-law P-800, Respecting the Regulation of Pesticides, Herbicides and Insecticides, became effective August 19, 2000. This by-law balanced the restriction of pesticide products with a notwithstanding clause which enabled pesticide use under very specific conditions and incorporated a process to notify neighbouring properties.

A very general overview of the by-law implementation stages is as follows:

Year 1 (2000/01): Ban on cosmetic use of pesticides on municipal property and commencement of public awareness programs.

Years 2 & 3 (2001/ 02): Commencing April 1, 2001, a ban on cosmetic use of pesticides on residential properties located within a 50-metre radius of:

- a property registered as being occupied by persons at risk who provide medical documentation;
- the boundary of any property containing any school, licenced day care, playground, park, church, licensed seniors’ residence, university or hospital.

Year 4 (2003): Commencing April 1, 2003, a general ban on the cosmetic use of pesticides applied to all properties in HRM affected by the By-law.

The **2001 and 2002 Overview Reports** are available on-line at www.region.halifax.ns.ca (follow the Naturally Green icon to the Pesticide By-law web site).

The intent of this document (2003 Overview) is to provide the reader with a general overview of the 2003 related activities. It is presented in 5 Sections (1. Background, 2. Program Components, 3. Performance, Costs, Administration, 4. Community & Stakeholder Feedback and 5. Key Points, Future Options, Opportunities) in order to help provide an organized and chronicled description on how the various components were put in place, managed and carried out.

Section 5 (Key Points/ Future Options and Opportunities) is of particular interest as 2003 was the first year of the By-law extending to all residential-use properties in Halifax Regional Municipality. During the transition period (2000-2002) the By-law only applied to residential properties located within 50 metres of a medically registered property or property containing a school, licenced day care, playground, park, church, licenced seniors' residence, university or hospital. When all of these properties are factored in, the 50-metre buffers would have affected approximately 20-25% of all residential use properties. In order to cover the remaining 75% of residential properties that are affected in Year 4 of the program, the program was expanded to cover the expected four- to five-fold increase in operations.

Section 2

Program Components

2.1 By-law Enforcement

Pesticide by-law enforcement is carried out by the HRM By-Law Enforcement Section of the Community Projects Division of Environmental Management Services.

Enforcement Strategy

The enforcement strategy for the pesticide by-law has been in accordance with the Regional Council approved Pesticide By-Law Enforcement Policy. This policy provided the strategic direction that:

- Enforcement of the by-law will be reactive to complaints received and preventative enforcement patrols seeking violations will not be undertaken;
- Response times to complaints will depend upon location of the alleged violation and resources available. It is anticipated that given the staffing levels and the size of the municipality, staff will typically arrive after the alleged application has been applied;
- Investigation into alleged violations will rely primarily upon eye witness testimony and physical evidence such as product containers;
- General Environment Canada weather reports will be utilized to determine alleged violations of the by-law's weather restriction. As a result micro-climate information will only be available through eye witness testimony.

For alleged violations, Council direction provided that:

- The first approach to achieving compliance with the by-law will be through attempted

- education, mediation and persuasion of alleged violators;
- Repeat violations will be ticketed and/or prosecuted where sufficient evidence is available to support such action.

By-law Enforcement Operational Activity

The number of By-law Enforcement related complaints received between April 1, 2003, and October 1, 2003, was 98. In comparison, 111 complaints were received in 2002 and approximately 400 in 2001.

This continued reduction in the number of By-law Enforcement related complaints, particularly in light of the By-law now extending to all residential use properties in 2003, leads staff to conclude that levels of voluntary public compliance with the Pesticide By-law are very high.

This year 90 of the complaints have been closed for the following reasons:

- 62 cases were invalid (cases where the by-law officers could not substantiate the complaint)
- 23 cases were closed due to owner compliance (the situation was addressed through by educating the property owner)
- 5 cases were closed for miscellaneous reasons of a varying and insignificant nature

Response time averaged 1.9 days per complaint.

Eight cases were listed as still active (i.e., under investigation) as of October 1st, with one pending potential prosecution.

The majority of the complaints received this season were that signage was not posted 24 hours in advance of the spraying. In order to determine the timing of the sign posting vs. the application time By-law Officers must rely solely on information provided in witness accounts. If the information provided by the witness or witnesses does not substantiate a violation of the by-law or if the witness is not prepared to testify in court, By-law Enforcement can do little more than educate the property owner regarding the requirements under the by-law. As indicated above, to date this season, there has been only one case where the information provided by witnesses was enough to recommend consideration for prosecution.

By-law Enforcement Opportunities

The By-law Enforcement section plans to review data and trends of the past three summers to determine any potential streamlining and service enhancement opportunities. The review will also include the evidence investigation process and how it may be enhanced.

2.2 Communication, Education & Awareness Programs

The overall Communications Strategy on the Pesticide By-law and the accompanying Public Awareness and Education Programs on Sustainable Gardening and Landscape Maintenance alternatives to pesticides is of paramount importance and key to the success of the corporate pesticide use reduction initiatives.

The Pesticide By-law is not a stand alone initiative. It is an integral component of a much larger corporate umbrella addressing issues of environmental sustainability.

HRM is working towards a “**Sustainable Community**” that uses its resources wisely, reduces waste, promotes sustainable practices and provides quality services to its residents. This is consistent with the corporate scorecard theme of a “healthy, sustainable, vibrant community”. The Pesticide By-law therefore has been promoted with this theme and direction in mind.

As of April 1, 2003, the By-law now extends to all residential properties therefore messaging and public information packages in 2003 reflected this whenever possible.

Through continuous monitoring of calls and information requests, staff was able to prioritize public information and education needs and address them accordingly. As an example, more detailed information was made available this year regarding “ant” control and “chinch bugs” management.

Major Components of the 2003 Public Education and Awareness Initiatives

Information about Sustainable Gardening and Landscape Maintenance (examples)

- Public Workshops on Sustainable Gardening and Landscape Maintenance - partnered with Regional Library and Clean Nova Scotia - 7 spring workshops - 5 fall workshops
- Series of Fact Sheets on Sustainable Gardening and Landscape Maintenance - 7 different topics - (Facts Sheets available on HRM Website under “Naturally Green” section)
- Fact Sheet on Administrative Order #23 (Permitted Products)
- Articles in 4 editions of Naturally Green that is delivered to all households in HRM
- Television commercials on Sustainable Maintenance (spring and fall)
- Educational Poster Series with National Post and Daily News
- Several “special” newspaper inserts
- Naturally Green and Sustainable Practices Web Site
- Sustainable Landscape Maintenance special insert sent to all households in HRM

Information about Pesticide By-law Information (examples)

- Pesticide By-law brochure
- Pesticide By-law web site
- HRM Corporate Call Centre
- Various fact sheets
- Information flyer to all households
- Several radio and newspaper ads and info clips
- 2 family oriented television commercials on ATV (spring, summer, fall 2003)
- Public Service Announcements throughout the year on major initiatives

Public Displays, Home Shows, Expositions, etc. (examples)

- NS Homebuilders Home Show - Halifax Forum - March 2003 - over 16, 000 visitors
- Ideal Spring Home & Garden Show - Exhibition Park - April 2003 - over 32, 000 visitors
- Sustainable Community Display - Halifax Hall - Dr. Suzuki - May 2003
- Atlantic Organic Conference - Halifax Westin - June 2003
- National Key Conference - Mount St. Vincent’s University - August 2003
- Fall Home Show - Exhibition Park - October 2003 - over 32, 000 visitors
- Various smaller scale community events throughout the year

Telephone Inquiries

The HRM Corporate Call Centre acts as a first point of contact, providing names and instructions on accessing information and, if required, initiates an LIS service request for more detailed pesticide-related inquiries. The Call Centre responded to approximately 1,700 Pesticide By-law related inquiries this summer. This level of call volume is significant because it is substantially lower than the 10,000 calls originally received in 2001.

Approximately 92% of the calls were resolved immediately after speaking with a Call Centre Agent. Information was provided to the Call Centre Agents, enabling them to provide an immediate response to “frequently asked questions.” In other situations, LIS service requests were initiated on approximately 7% of calls. These service requests ranged from a request for an application form to a detailed inquiry regarding pesticide or sustainable landscape use. At any given time there are service requests which are works in process and therefore “unresolved.” This accounts for the remaining 1%.

Clean Nova Scotia, the contracted vendor responsible for doing on-site permit inspections, also provides detailed information over the phone to the public on a wide range of landscaping and pesticide by-law topics.

Face to Face Inquiries

Besides receiving 3,863 pesticide applications from residents, the various HRM Customer Service Centres were available to respond to general public inquiries about the Pesticide By-Law. Clean Nova Scotia also played a role in providing on-site information regarding sustainable landscape practices and the pesticide application process. Information was provided not only to individual applicants, but also to any neighbours present during the on-site visit.

HRM Website Resources on Pesticide By-Law and Sustainable Management Practices

Along with our own programs and information, HRM has also accessed a number of excellent resources and information on sustainable maintenance practices, and has made electronic links to them from our web site so the general public can have access to them as well. Our Naturally Green and Pesticide By-law web sites received over 27,000 visits this past summer. This is an increase from the 2001 benchmark of about 10,000 visits.

At-Source Education

10 workshops on sustainable gardening and landscaping and were scheduled for early spring and fall. These workshops were scheduled at the following locations:

Dartmouth North Public Library	Tuesday, March 18 / 7 pm
Cole Harbour Public Library	Wednesday, March 26 / 7 pm
Spring Garden Road Memorial Public Library	Saturday, March 29 / 2 pm
Captain William Spry Public Library	Wednesday, April 2 / 7 pm
Alderney Gate Public Library	Saturday, April 5 / 2 pm
J.D. Shatford Public Library	Wednesday, April 9 / 7 pm
Sheet Harbour Public Library	Saturday, April 12 / 2 pm

Alderney Gate Public Library

Saturday, September 20 / 2 pm

Bedford Public Library

Tuesday, October 7 / 2 pm

Spring Garden Road Public Library

Friday, October 17 / 12 noon

Note: Due to Hurricane Juan, three other fall workshops were cancelled.

In addition, garden centres throughout the HRM were offered training in sustainable gardening and landscape maintenance. In early spring, 57 centres were contacted, with 14 following up with sustainable landscaping and by-law education workshops. Six of the workshops were provided to the Atlantic Superstore. Other workshops were delivered as “lunch and learns” to groups such as NS Power, Department of Fisheries and Oceans, Kent, Nova Scotia By-law Enforcement and Department of Environment.

Education and Awareness Partnerships

In order to maximize resources and directly reach as many people as possible, a number of internal/external partnerships and a somewhat social marketing approach was utilized in order to get to the community grass roots, figuratively and literally.

Public awareness and educational efforts included external partners such as the Canadian Wildlife Federation, Dalhousie University, Nova Scotia Agricultural College, Landscape Nova Scotia, Clean Nova Scotia, and internal partners including the Halifax Regional Library, corporate Environmental Initiatives Committee, various internal HRM units such as: Marketing, Design & Print Services, HRM Customer Service Centres and HRM Corporate Call Centre. There were other external and internal partners as well.

These partnerships helped leverage other funding, training and communication opportunities providing excellent value for HRM tax payers.

Public Education and Awareness Opportunities

Staff is presently working on details with our partners for the 2004 public education and awareness programs. This includes discussions with the Pest Management Regulatory Agency, Province, the lawn care industry, local health and environmental interests, etc.

2.3 Pesticide Permit Application/ Assessment/ Education

Background

In accordance with Section 6 of the Pesticide By-law, under the notwithstanding clause 6(2), a pesticide application may be carried out within a prohibited area in order to control or destroy plants or insects that constitute a danger for human beings or that have infested a property.

An effective yet simple Pesticide Permit Application system was established in 2001 to assist with the administration of these notwithstanding clauses.

On May 1, 2001, Regional Council approved the on-site pesticide permit application approval/rejection capability for permit inspectors. This helped streamline the process.

Further, Regional Council also approved on January 9, 2001, an amendment to Administrative Order #15 (Respecting Licence, Permit and Processing fees) that there be no fee for a Pesticide Application Permit. This prevented a cost deterrent to properly applying for a permit.

Pesticide Permit Application Process

The pesticide permit application process is as follows: First a resident fills out a pesticide application form and submits it to the HRM Customer Service Centres. This information is reviewed by the Customer Service Centres to ensure it is pertinent and complete, and is then added to a database and sent to Clean Nova Scotia for an on-site assessment of the pest problem. Should the inspectors give their approval, the resident may choose a landscape/pest control company to correct the problem, or they may apply it themselves. Educational materials are provided on sustainable landscape methods and alternatives whether or not the application has been approved.

Pesticide Permit Application Forms

Application forms are available through the following mediums:

- Print off a copy from the HRM Internet Site
(<http://www.region.halifax.ns.ca/pesticides/Spray-Permission-Form3.PDF>)
- Pick up a copy from the HRM Customer Service Centres
- Receive a copy from some landscape and pest control companies
- Request a copy by fax by calling the Strategic & Sustainable Resource Management Office (490-6028)

Once a form is filled out it can be dropped off, faxed or mailed to the HRM Customer Service Centres. Once received it is recorded in a database and then faxed to Clean Nova Scotia for a site inspection. This year the various HRM Customer Service Centres administered all 3,863 pesticide permit applications as well as responded to general public inquiries regarding the Pesticide By-law.

On-site Pesticide Permit Application Assessment

On-site inspections are conducted by Clean Nova Scotia (CNS), a contracted service vendor. Applications are sent by HRM to CNS by fax. Once the applications are received, appointments, where feasible, are made and schedules of the day's site visits arranged. All applications are sorted into geographic areas and an inspector assigned to that area for the day. Site visits are processed, on average, within 48 hours of receiving the application. It is noted that this year there were some occasions where the turnaround time was several days; however, the overall average was 48 hours.

Response time was impacted in 2003 during the peak period between July 14 to August 31 when 83% of the applications were received. This increase is attributed to a severe chinch bug outbreak which overloaded the system. Additionally, response time was also affected because inspectors were trying to batch together inspections within the same geographical area in order to be cost efficient. Finally, weather affected when a pesticide spraying application could take place.

This year saw the full implementation of the by-law to all residential properties within the HRM. Clean Nova Scotia has assessed applications received by the municipality requesting the permitted use of pesticides for cosmetic landscaping purposes. The application assessment process involves a visit to the affected property and a determination of whether a pesticide spraying permit can and should be

issued under the special conditions allowed in the by-law.

Clean Nova Scotia also responded to public inquiries regarding the pesticide by-law, sustainable landscaping alternatives, and permitted pest control methods and products. In addition, Clean Nova Scotia conducted information sessions for garden centres throughout the HRM to educate garden centre staff on the by-law and alternatives to pesticides.

In 2003 CNS Program Coordinator Donald Dodge and CNS Program Officer Kevin Brooks administered the program. In addition, seven new qualified team members were trained to conduct on-site inspections and to provide sustainable landscaping education.

About Clean Nova Scotia

Clean Nova Scotia is a non-profit environmental organization that provides information to the public, helping them to make positive decisions about our environment. Clean Nova Scotia also delivers a variety of environmental programs in Nova Scotia and the Maritimes.

For over 14 years, Clean Nova Scotia has worked cooperatively with individuals, households, schools, businesses, government, and other organizations to secure a sustainable, environmentally healthy society for future generations to enjoy. Clean Nova Scotia has a long history of providing quality, balanced information to Nova Scotians about different environmental topics. Throughout its history, Clean Nova Scotia has been very successful at creating and delivering educational materials as well as coordinating efforts to educate, raise awareness, and affect behavior change in Nova Scotia.

During the By-law transition years (2001 and 2002), Clean Nova Scotia delivered the pesticide permit application process and related public education and awareness component under contract with Halifax Regional Municipality. In 2003, a Request For Proposals was publically issued for this service and Clean Nova Scotia was the successful proponent.

Methodology for Conducting a Site Visit

Once a permit application is received by CNS, an appointment is scheduled and pesticide permit assessors visit the affected property. While on site, the assessor(s) examines the property to determine that the conditions described in the application meet those of the notwithstanding clause as spelled out in the by-law which include:

- to control or destroy plants or insects that constitute a danger for human beings
- control or destroy insects that have infested a property

If the problem is not obvious, the assessor asks the homeowner to point out the problem. The assessor completes a checklist and then discusses the pest problem with the property owner. The homeowner is provided with sustainable alternatives to controlling and preventing the specific pest problem (see educational materials below), and any questions the property owner has are answered by the assessor. If the conditions described in the application match those found on the property, and meet the notwithstanding clause of the pesticide by-law, the assessor issues the permit providing a copy to the homeowner and describing the special requirements for applying the pesticide. If conditions are not as described in the application, and do not meet the conditions of the notwithstanding clause of the pesticide by-law, then the permit is rejected and the homeowner receives a copy of the rejected permit form. If the pest is present, but is not deemed to be at an infestation level, then the homeowner is advised of the right to re-apply for a permit should the pest problem become worse.

Once site assessments are completed, the permit form (either rejected or approved), along with a copy of the application form, are returned to the HRM Customer Service Centre. Clean Nova Scotia also maintains a copy of each permit and application form and this information is entered into a spread sheet for easy data mining.

Most property owners have expressed satisfaction with the property assessment; however in a few cases property owners have expressed dissatisfaction with Clean Nova Scotia's evaluation as well as the permit approval process. In all cases, CNS has made every effort to explain the process and the reasons for rejection.

On-site Education: Sustainable Landscape Practices

Each property owner that receives a site visit is provided with an information package that includes:

HRM Naturally Green Pest Control Information Sheet – A series of data sheets particular to an insect. These sheets deal with chinch bugs, white grubs and crane fly/leatherjacket.

HRM Naturally Green Sustainable Turf Maintenance – Outlining natural (organic) techniques for healthy lawns and lawn care as well as soil conditioning.

HRM Naturally Green Fall Practices for Taking Care of the Soil

HRM Naturally Green Sustainable Maintenance Tips – Weed Control – Managing Weed Seed Banks

Other Materials – Other materials are occasionally provided, such as pictures and descriptions of pests and natural control methods. This material comes from reputable sources including, but not limited to, Rodales and Morton and Associates.

Process Improvement Opportunities: Pesticide Permit Administration

The handling and processing of hundreds of facsimiled permit requests between the HRM Customer Service Centres and Clean Nova Scotia is cumbersome and time consuming.

HRM plans to streamline this process to improve customer service through potential data base sharing with external partners and enhanced electronic handling of information and permit requests. There are better opportunities now, with a season of the full by-law in place to predict trends and critical ramp-up periods to enhance response times. Staff will return to Council in **approximately eight weeks** with process improvement recommendations.

Enhanced Partnership opportunities with HRM, Landscape Nova Scotia and others regarding the Pesticide Permit process will be further discussed in Section 5 (Key Points/ Future Options and Opportunities).

2.4 Projects, Partnerships and Research

Sustainable Landscape Maintenance Handbook

HRM has recently developed a Sustainable Landscape Maintenance Handbook and set of Sustainable

Practices Protocols for HRM internal use. These are also available to the landscape industry and general public by request.

Partnership to Research Feasibility of Using Compost on HRM Sport Fields

HRM in partnership with the FCM Green Municipal Enabling Funds, Dalhousie University, the Nova Scotia Resource Recovery Fund Board and other partners have completed source separated municipal compost top dressing research trials on our athletic fields.

We have over 340 HRM-owned sports fields located throughout HRM that will benefit from compost top dressing and related sustainable maintenance practices. However, applied science research was needed to help determine the operational, environmental and cost effectiveness of using source separated compost as part of an overall integrated sustainable maintenance program. It will also help complete the ecological cycle from curb side green bin to green field.

Partnership for a new Provincial Topsoil and Compost Use Guideline

HRM, along with the Nova Scotia Resource Recovery Fund Board has partnered and assisted Landscape Nova Scotia in the development of a new Topsoil and Compost Use Guideline for Nova Scotia. These Guidelines were released in the fall of 2003 and are premised on a more sustainable or whole systems approach which takes into account such things as locally available materials, maintenance levels, sustainability, healthy community, as well as physical and chemical characteristics.

The best defence against pests is healthy plants and soil.

Opportunities for continued Research and Related Activities

It is planned that Environmental Management Services will continue to work with our various partners seeking best practices in sustainable maintenance, research, innovation, and public education.

Various types of research are ongoing across the country regarding sustainable alternatives to pesticides. These range from the development of a naturally occurring fungus to control dandelions to the use of natural products such as kelp extract as an insecticide and soil enhancer.

2.5 Data Management

Property Registry

A Property Registry was established in order to identify medically registered properties during the 2 year transition period. After April 1, 2003, the full extent of the By-law came into effect making the property registry redundant because the notification and related clauses in the By-law now apply to all residential use properties in HRM.

Permit Application Database

Currently a database is maintained and administered by HRM Customer Service Centres. When applications are received, information is recorded on the Pesticide By-Law System (PBS). PBS is an oracle database that produces reports in adobe reader (.pdf) format.

Once entered into the database, the application is assigned an identification number and sent via fax over to Clean Nova Scotia for the on-site assessment. The PBS is used by the Strategic & Sustainable

Resource Management Office and the Customer Service Centres to track the progress of the applications. During the inspection the application is either approved or rejected. Once the inspection is complete, Clean Nova Scotia will provide paper copy back to the Customer Service Centres for data input.

Hansen LIS

There are a number of LIS problem codes designed to handle various types of inquiries. As of July 17, 2003 problem codes were established to handle the following types of inquiries: general information inquiries, pesticide permit requests, pesticide permit process questions, questions about affected properties, technical questions about which types of pesticides are permitted/not permitted, requests for information workshops and other questions.

Typically these service requests are logged by the Customer Service Centres or Corporate Call Centre for action by By-Law Enforcement or the Strategic & Sustainable Resource Management (or Clean Nova Scotia).

Section 3: Cost Efficiency, Administration & Permit Statistics

3.1 Maximizing Resources

Since the inception of By-law P-800 in 2000, several internal and external partnerships have been developed that not only help keep costs down, but also help provide for an enhanced pesticide use reduction program and related public education and awareness campaign on sustainable landscape maintenance.

Internally, we have utilized centralized corporate resources such as the Call Centre, HRM Customer Service Centres, By-law Enforcement, in-house marketing and communication staff from Shared Services and positioned the pesticide use reduction initiatives under the “**Naturally Green**” corporate umbrella. This has allowed further partnering and cost sharing through joint newsletters, promotion and advertising.

Externally, HRM has partnered with Clean Nova Scotia, Landscape Nova Scotia, various community groups, the Nova Scotia Agricultural College, Halifax Regional Libraries and others in the delivering of a comprehensive public education and awareness program on sustainable gardening and landscape maintenance.

3.2 Operating Budget and Costs (2003-2004)

The original estimate to annually administrate the Pesticide By-law was \$308, 000.

Effective internal and external partnerships has allowed staff to keep the annual operating costs substantially below the original estimate yet still deliver responsive programs and services. The budget has been relatively consistent since the inception of the Pesticide By-law, including the 2003-2004 budget. The 2003-04 actual cost is \$215,000* which is \$20,000 higher than the budgeted cost.

Costs directly associated with the implementation of the By-law and related programs are as follows:

2003-04 Pesticide/Sustainable Landscaping Program Costs:

Program Component	Budget	Actual/Forecasted Costs*
Public Education and Awareness	\$40, 000	\$30,000
Communications Plan, Advertising, Promotion, etc	\$35, 000	\$20,000
Research, Education and Related	\$ 5, 000	\$ 1,000
Permit Review Process and Education Program	\$38, 000	\$88,000
Administration, Support and Related	\$45, 000	\$44,000
By-law Enforcement	\$32, 000	\$32,000
Total	\$195,000	\$215,000

(*Actual costs up to October 2003, with forecasted cost to end of March 2004.)

Permit Review Process

The program area hardest hit in 2003-04 was the Permit Review Process. Additional costs in this area impacted the total budget by an additional \$20,000 in expenditures.

Staff advised during the Program and Service Review process late last winter that higher costs for the Permitting Process could be anticipated with the By-law now extending to all residential use properties effective April 1, 2003.

During the transition years (2001 and 2002) the 50-metre buffered properties affected about 20-25% of all residential use properties, therefore it could be reasonably assumed in 2003, that during the full implementation of the by-law, there would be a four-fold increase in permit requests and additional costs.

The Pesticide Permit Application review process was tendered this year. The successful proponents' fees for this service were approximately the same as the costs for this same service in previous years. In addition, the RFP allowed for a three-fold increase in permit application processing for this same amount of money. Therefore, even a four- to five-fold increase in permit requests for 2003, appeared to be reasonably within previous budget amounts.

Higher than normal Chinch Bug Infestation

Instead of the anticipated four-fold increase in permit requests, HRM received a twenty-fold increase in permit requests. This was largely attributed to one of the worst chinch bug infestations in recent years. Chinch bug permit requests account for 99% of the permit applications.

As of October 8, 2003 HRM had processed 3,863 pesticide applications. Eighty-three percent of the applications (3,219) were processed during the peak pesticide application period occurring between July 14th to August 31st. This huge demand overloaded the permit inspection process resulting in the additional overall budget cost of \$20,000.

This will be remedied for this year through saving in other EMS areas and/ or through the Variable Operating Stabilization Reserve.

Observations on Other Factors Impacting Cost

1. Poor Soil Quality

Areas of high permit requests coincided with areas of what appeared to be poorer quality and/ or insufficient soil and new construction areas where insufficient soil was often the case. This practice appears to be wide spread in new developments through out the HRM.

2. Balancing Industry Stewardship with Profitability

The Strategic & Sustainable Resource Management Office received a number of reports that lawn care companies did not inspect lawns before informing residents that they should apply for a permit. Additional reports indicate that some lawn care companies went so far as to distribute information leaflets informing the resident of a chinch bug infestation without conducting site inspections.

It is very important to determine the exact cause of a lawn care problem to help ensure the most appropriate remedies are applied.

Communications & Public Education Costs: Benchmark with City of Ottawa

HRM was one of the first major municipalities in North America to put in place pesticide use reduction legislation and related public education and awareness programs on sustainable alternatives. Thus it has been a bit difficult to bench mark with others. However, we are aware of what is happening in the City of Ottawa and provide the following information for comparison purposes only.

Preliminary survey results from **Ottawa's** anti-pesticide campaign indicate that **48%** of residents used pesticides on their lawns in 2002. Similar surveys carried out late last Fall (2002) in **HRM** indicate about **7%** of residents used pesticides on their lawns. However, it must be kept in mind that HRM has a full Pesticide By-law in place, Ottawa does not at the moment.

Ottawa's pesticide strategy budget (which is mostly advertising and communication) is \$400,000, with \$150,000 coming from the Province of Ontario. In comparison, the public education, awareness and communication portion of HRM's overall pesticide use reduction initiatives is about \$75,000. On a per capita basis, Ottawa's pesticide education programs appears to be very cost efficient working out to about \$0.50 per resident, which is less than a cost of a single postage stamp per resident. While this is impressive, HRM's costs are significantly lower at \$0.20 per resident.

The difference for HRM is that we have integrated a public education program with a pesticide by-law administrative structure. By establishing internal and external partnerships and by taking a social marketing approach we have been able to produce effective results at substantially lower costs. Community, business, academia, industry and individual involvement has been paramount in the success of HRM's programs to date. HRM's costs would have been substantially higher if not for these very important and effective partnerships.

Province of Ontario provides financial assistance to City of Ottawa for Public Education

It is noted that the Province of Ontario provided the City of Ottawa with \$150, 000 annually towards its pesticide use reduction campaign. HRM has not received funding from the Province of Nova Scotia and this is an area worth pursuing again.

Operating Budget Opportunities

The Pesticide By-law related public education, communication, related research, administrative support, enforcement and other related costs should remain in place for some time yet to assist the balance of the community and industry as it transitions over to more sustainable maintenance practices. Staff will pursue funding from the Province again.

3.3 General Administration

The Pesticide By-law and related public education and awareness programs are one of the services/ programs managed by the Strategic and Sustainable Resource Management Unit of Environmental Management Services. Besides administration, this unit is responsible for detailed technical responses and media inquiries.

3.4 Pesticide Permit Application Statistics (2003-04)

As of October 8, 2003, Clean Nova Scotia had conducted 3,863 application reviews and site visits with a few permit requests still being received. Outlined below are the permit approval and rejection rates, regional breakdown of applications, and pest problem.

Permit Decision	Actual	Percentage
Approved	3,505	91%
Rejected	358	9%
Permit Not Required	0	0
Total	3,863	100%

Region	Actual	Percentage
Dartmouth / Cole Harbour	1,283	33%
Bedford / Sackville	1,241	32%
Halifax	510	13%
Hammonds Plains/Tantallon	428	11%
All other areas	267	7%
Timberlea	134	4%
Total	3,863	100%

Type of Problem	Actual	Percentage
Chinch Bug	3,826	99%
Other	37	1%
Total	3,863	100%

Lawn Care Organizations and Products Used

There are five main lawn care companies currently working in the HRM. The following table shows the breakdown of pesticide applications, percentage of total applications and products used.

	# of Applications	% of Total (out of 3,863)	Product Used By This Company
Company A	158	4%	Sevin #26873
Company B	234	6%	Diazinon #11889
Company C	515	13%	Sevin #19531
Company D	1105	29%	Diazinon #26146
Company E	1168	30%	Diazinon #26146

Section 4

Community & Stakeholder Feedback

4.1 Opinion Polls, Surveys

The Pesticide By-law is not a stand alone initiative. It is a component of a much larger corporate umbrella addressing issues of environmental sustainability. HRM recognizes that our natural surroundings must be sustainably maintained and managed to help ensure quality and healthy community living now and for the future.

This is reflected in the corporate scorecard theme of a “healthy, sustainable, vibrant community” and in citizens’ responses to the various surveys and public open houses over the past few years.

The Pesticide By-law therefore has been promoted in conjunction with the corporate “Naturally Green” initiatives and a healthy, sustainable, vibrant community.

The By-law regulates the use of pesticides on the residential properties of almost 40% of the entire

provincial population, who happen to live within HRM, and on all HRM owned property.

Previous Surveys

2001 - In a commissioned public survey carried out by Corporate Research Associates Inc., on behalf of HRM, in August 2001 **awareness was high across the Region of the fact that the HRM Municipal Council had implemented a by-law to regulate certain aspects of pesticide use in the Municipality, with over 92% of home owners being aware .**

This same survey also indicated that 85% of respondents were interested in learning more about alternatives to pesticides.

2002 - Therefore, after two years of a transition period and a comprehensive public education and awareness program on the by-law and on sustainable gardening and landscape maintenance, **HRM needed to know how ready was the whole community for the full implementation of the by-law, effective April 1, 2003.**

The results from an independent third party public opinion poll showed that the majority of homeowners were now practising sustainable alternatives to pesticide use on their properties.

The Fourth Quarter 2002 CRA Metro Quarterly Survey carried out in the late fall of 2002 indicated only 7% of homeowners still using pesticides as their main control measure with the **overwhelming majority practising alternatives to pesticides.**

2003 - This year HRM received just under 3,900 requests (of which more than 99% were for chinch bug) for Pesticide Application Permits.

This represents less than 3% of the total residential properties and is consistent with the pesticide use reduction and sustainable maintenance trends seen in the previous public opinion surveys.

If not for chinch bug the number of pesticide permit applications would have been relatively low this year. In many cases the risk of major lawn damage can be prevented or reduced through sustainable landscape practices.

4.2 Local Comments

Overall, the vast majority of residents are aware of the By-law and support its general intent. This is based on direct feedback through a number of channels.

Perhaps some of the most important feedback is from those who are most affected medically by pesticides. Several letters have been received from residents providing anecdotal information on how their situations have improved greatly as well as letters from their physicians advising of health improvements with their patients.

On the other side of the issue, there has been some concerns raised regarding delays in the Permitting process.

Although approximately 3,863 permit requests were received over a very short period of a few weeks,

staff believe there are options and opportunities in this area for streamlining and response time improvements for the future.

This was the first year that the By-law now extended to all residential use properties and it would not be unreasonable to expect some fine tuning to improve service.

Residents appear to be very interested in pesticide use alternatives and want to know such things as: sustainable landscape maintenance practices, information on product effectiveness, and cost effectiveness.

Staff see this as a continued high priority for the comprehensive public education and awareness program.

Letters

Approximately 70 letters were received this spring and summer from residents. Over 95% of the letters supported the intent of the By-law, public health and environmental protection through pesticide use reduction.

Approximately 15 letters were received from the lawn care and pesticide industry this spring and summer and each of them either opposed the By-law and or portions of it.

Letters in the Newspapers

Staff are aware of approximately 15 editorials and/or letters to the editor this spring and summer in the local newspapers. Of the 12 from the public, 11 were in support of the By-law. The remaining letters were from the lawn care and pesticide industry and were either opposed to the By-law and or portions of it.

Telephone and Web Interface

The Call Centre responded to approximately 1,700 Pesticide By-law general enquiries this summer. Approximately 92% of the calls were resolved during the initial conversation between Call Centre Agent and caller. The remainder of the calls were referred directly to the Strategic and Sustainable Resource Management office due to their technical nature. These 100 calls or emailed inquiries which were of a more of a technical nature. The summer the Pesticide By-law and related Sustainable Practices received approximately 27,000 visits, with about 52,000 pages visited. The average length of the visits was several minutes, suggesting material and information were downloaded for further distribution.

Comments/ Letters from the Pesticide and Related Lawn Care Industries

HRM received several letters this year from the pesticide and related lawn care industries. Some examples and general themes include:

January - February 2003

- Letters from Scotts Canada requesting delaying or postponing the final phases of the Pesticide By-law.

March 2003

- Letter from the Regional Director National Golf Course Owners Association suggesting

- continued use of federally registered pesticides, no need for municipal pesticide By-laws.
- Letter from Scotts Canada suggesting no convincing evidence that synthetic chemicals pollutants are important as a cause of cancer in humans.
 - Letter from the president of the Atlantic Vegetation Management Association suggesting that municipal pesticide legislation was not required.

April 2003

- Letter from the president of Landscape Nova Scotia centred around an integrated pest management approach by the lawn care industry.

July 2003

- Letter from local lawn care company raising concerns about the availability of banned pesticides to the general public and the potential for misuse of products by homeowners. The letter also stated that the industry fully supports an IPM approach to plant health care.

Special Notes

A letter from the Mayor dated June 24, 2003 was forwarded to the Honourable Anne McLellan, Federal Minister of Health, regarding HRM citizens' concerns about the continued sales (federal jurisdiction) of certain pesticides and delays in implementing the new Pest Control Products Act regulations and changes.

August- November 2003

- Ongoing letters, calls, emails, meetings with Landscape Nova Scotia and the local lawn care industry to look at potential cost savings and streamlined service delivery in the identification, assessing and issuing of pesticide application permits within the parameters and spirit of the Pesticide By-Law. This includes enhanced public education and awareness on sustainable gardening and landscape maintenance alternatives to pesticides.

4.3 Regional, National, International Comments

Internationally

Staff is monitoring what is happening in Europe regarding pesticide use reduction and, in particular, sustainable alternatives to pesticides. Several European countries have restricted and/ or banned a number of pesticides for cosmetic use.

Nationally

Over the past year HRM has continued to receive a large number of requests from across Canada for information on our sustainable initiatives, such as the pesticide use reduction and public education and awareness programs.

A number of municipalities have used the HRM model as a reference including, Edmonton, Montreal, Oakville, Toronto and Victoria. The HRM model is a national case study on the Tools for Climate Change web site.

The Department of National Defence (DND), one of the largest land owners and employers in HRM, put in place an Environmental Directive, eliminating the cosmetic use of pesticides for lawn care for **all**

DND properties across Canada, effective April 1, 2003.

Some of the largest retail chains in Canada, (i.e., Loblaws, Atlantic Superstore), stopped carrying pesticide products in their garden centres this year.

Regionally

A number of Atlantic Canadian municipalities are looking at pesticide use reduction initiatives in their respective communities. This includes Cape Breton Regional Municipality, City of Fredericton, City of Charlottetown, City of St. John's, etc.

Pesticide use and risk reduction appears to be a major issue locally, nationally and internationally as citizens demand more environmentally sustainable alternatives to pesticide use and healthier, safer communities overall.

Halifax Regional Council's leadership and direction on pesticide use reduction and promotion of sustainable alternatives appear to be on the leading edge of this global movement.

4.4 What is Happening Legislatively at the Provincial/ Federal Levels

Pesticide registration, classification and sale is **federal** jurisdiction and is managed by the **Pest Management Regulatory Agency (PMRA)**.

At the federal level, the new **Pest Control Products** Act was approved by Parliament in December 2002; however, the implementation and administrative policies have not been put in place yet. This federal legislation is aimed at protecting human health and safety and the environment by regulating products used for the control of pests.

Some important initiatives presently taking place with the PMRA include, pesticide product re-classification and the re-evaluation of the most common active ingredients used in lawn care.

Regarding pesticide product re-classification, one of the proposals is to separate the higher-risk domestic products from the lower-risk products. Higher-risk domestic products could only be sold by vendor outlets holding a provincial licence or permit, and outlets must have trained/ certified employees to give homeowners advice and directions for the use of the product.

The PMRA has also been working to meet its commitment to re-evaluate the most common active ingredients used in lawn care. Re-evaluations of Chlorpyrifos, Diazinon, and Malathion are complete. These products have been, or are being discontinued for use in turf. In addition, turf uses for Captan have been discontinued. Reviews for 2,4-D, Dicamba, MCPA, Mecoprop, and Carbaryl are in the final stages. The target for completion of these re-evaluations is 2004.

The PMRA initiatives (i.e., pesticide re-reviews) will have a major impact on the local lawn care and pesticide application industry. For example, over 99% of the pesticide permit applications this year in HRM were for chinch bug control. The two main products used were Diazinon and Carbaryl (Sevin) which may both be removed from the market in the near future. Diazinon is already scheduled for removal.

This puts an increased onus on sustainable alternatives.

Also at the federal level, the **House of Commons Committee Report on the Environment and Sustainable Development** was tabled in Parliament in October 2003. The report from the Commissioner of the Environment and Sustainable Development identified several critical deficiencies in the federal management of pesticides. Some of the deficiencies included lack of full evaluations on new pesticides, lack of re-reviews of older existing pesticides, lack of compliance information, and potentially safer products not getting to users as fast as they should.

The mandate of the Commissioner of the Environment and Sustainable Development (part of the office of the Auditor General of Canada) is to direct Parliament and Canadians to significant environmental and sustainable development issues by providing timely and relevant information on audit findings.

At the **provincial level**, the **Nova Scotia Department of the Environment and Labour** administers the provincial pesticide applicators and vendors certification program. Business operators (vendors) are required to certify annually and report year end sales records by pest control products (PCP) number.

Pesticide applicators are required to renew their pesticide application certificates every five years.

There are approximately 150 registered vendors province wide and about 2, 000 certified applicators provincially, according to the Provincial Department of the Environment and Labour.

Provincial and Federal Legislative Opportunities

At the **federal level**, although a new Pest Control Products Act was passed by Parliament in December 2002, the administrative and policy components are not in place yet. Therefore, the new measures to improve human health and environmental protection have not been put in place yet.

More prompt action at the federal level would bring these new measures into effect and provide greater human health and environmental protection, as well as greater consistency across the country in this regard.

There have also been several delays with the federal agency (PMRA) responsible for pesticides regarding pesticide re-evaluations, re-reviews, re-classifications, public education and awareness, etc.

More prompt action by these federal agencies would also provide improved human health and greater environmental protection, help bring safer products onto the market, and on a national scale better educate the public about sustainable alternatives to pesticides.

At the **provincial level**, staff see potential opportunities for the provincial department of the Environment and Labour to share pesticide-use general information which would help determine trends, effectiveness, etc.

Further, as was the case with the City of Ottawa who received financial assistance from the Province of Ontario towards their public education and awareness program on alternatives to pesticides, perhaps there may be similar synergies and opportunities between the Province of Nova Scotia and HRM.

4.5 Administrative Order #23

Administrative Order Number 23, Respecting Pesticides, Herbicides, and Insecticides Excluded From the Pesticide By-law is a companion document to the Pesticide By-law P-800 and provides a list of permitted pesticides which are excluded from the provisions of the Pesticide By-law. It was approved by Regional Council on August 22, 2000.

The list includes such products as insecticidal soaps, BT (*Bacillus Thuringiensis*), dormant oils, lime sulphur, etc.

Staff believe there should be a formal science-based protocol to amend the permitted products list. Staff also suggest that it be a clear and transparent process with established time lines to allow for appropriate changes (if required) to collateral materials, web sites, brochures, etc. that reference the permitted products list, thus giving the public ample notification of changes.

A proposed Protocol to Amend Administrative Order #23 was presented for Regional Council's consideration on June 5, 2001; however, Regional Council requested that staff re-review the proposed recommendation in conjunction with the efforts at the time of the federal **Pest Management Regulatory Agency** (PMRA) and its **Healthy Lawns Strategy**.

Over the past two and a half years, staff has been awaiting important information from the PMRA on the results of some of the key initiatives they have been mandated by the Federal Government to carry out under the Healthy Lawns Strategy. This includes a re-evaluation of the seven most commonly used lawn pesticides; a federal reclassification system for residential use pesticides; and an enhanced pesticide safety review process, to name a few that were to have been completed by the end of the 2001-02 fiscal year.

As referenced in Section 4.4, the House of Commons Committee Report on the Environment and Sustainable Development tabled in October 2003 indicated that the PMRA has still not completed these initiatives.

As well, and as previously mentioned in this Overview Report, "A Proposal For A Harmonized Pesticide Classification System For Canada" is presently under way with the Pest Management Regulatory Agency (PMRA); however, it has not been completed.

Although the PMRA is behind schedule, staff believe it is important to have the results of these federal initiatives prior to returning to Regional Council with a recommendation for a protocol to carry out amendments to Administrative Order #23. In the interim, staff will continue to use the originally proposed draft protocol as a guide.

This interim protocol has worked well to date, with the addition of diatomaceous earth in 2001 and acetic acid in 2002.

Opportunities Regarding Administrative Order #23

Depending upon what continues to happen at the federal level regarding pesticide re-reviews and re-classifications, Administrative Order #23 may not be required in the future. In the interim it provides

local remedies until desired federal policies and programs are in place.

Section 5

Key Points/ Future Options/ Opportunities

5.1 Service Delivery Enhancement Opportunities

Based on direct feedback from the public, the Pesticide By-law appears to be meeting its fundamental intent of human health and environmental protection.

Public opinion surveys indicate that the vast majority of homeowners are making the transition to more sustainable landscape maintenance practices, with only 7% still using pesticides as their main control. The number of pesticide application permits issued this year represents about 3% of total residential use properties, further showing a trend away from traditional pesticides.

This year just under 3,900 pesticide permit applications were processed, with over 99% for chinch bug.

Regarding chinch bug, in many cases, applications came from locations with poor quality and/or insufficient soil, or other poor growing conditions.

Healthy plants and soil are the best defences against pests such as chinch bug, and HRM will continue its public education and awareness efforts in sustainable gardening and landscape maintenance.

Over 80% of the permit requests came in over a short period of time (July 14-August 31). This created some bottlenecks and delays.

Staff is working on ways to streamline the “paper” process, including enhancing electronic record management and creating direct on-line permit application access and ability.

Further, electronic database information sharing between external partners would speed up and improve the flow and availability of information during the pesticide approval process. This will improve access and convenience for property owners and/or lawn care companies working on their behalf requesting a pesticide application permit. Staff will return to Council in approximately eight weeks with process improvement recommendations.

Staff is also engaged in ongoing discussions with Landscape Nova Scotia and the local lawn care industry aimed at potential cost savings and streamlined service delivery in the identification, assessing and issuing of pesticide application permits within the parameters and spirit of the Pesticide By-Law. This includes partnership opportunities to enhance public education and awareness on sustainable gardening and landscape maintenance alternatives.

5.2 Legal Questions - Liability

The Pesticide By-law is a piece of legislation which HRM has jurisdiction to adopt pursuant to the Municipal Government Act. No liability rests with any level of government because they have

regulations which is in their authority to make.

As to the administration of the program, the municipality has the right to establish and set the level of enforcement that it can afford and to set standards with respect to the issuance of permits, etc., including the time frames in which these permits will be issued.

As long as HRM stays reasonably within any guidelines set, HRM has a good defence to any claims for compensation.

In the absence of defined guidelines, HRM is not liable as long as it responds to applications for permits within reasonable time frames, considering all of the circumstances surrounding the analysis of the application.

During the two-year transition period (2001 and 2002) the turnaround time for permit application review from the time the assessors received it to completion was 24 hours, 95% of the time.

This year with the By-law now extending to all residential use properties and coinciding with one of the worst chinch bug infestations in years, we witnessed a 20-fold increase in permit requests from previous years. The average turnaround time as reported by Clean Nova Scotia for 2003 was 48 hours, with some requests taking several days due to extenuating circumstances.

Although HRM is reviewing all processes to determine streamlining and improvement opportunities, including the permitting process, it appears that HRM responded to applications for pesticide application permits within reasonable time frames, considering all of the circumstances surrounding the analysis of the various applications.

5.3 Summary

Overall, the rollout of the By-law P-800, Respecting the Regulation of Pesticides, Herbicides and Insecticides and related education and awareness programs appears to be going well.

The intent of the By-law - to protect those medically affected by pesticides and also to protect the environment - appears to be effective to date, based on feedback and letters from the community.

The By-law is meeting its fundamental intent.

In the bigger picture of a sustainable, healthy community, the general public, as witnessed in the opinion polls and surveys and public feedback, is embracing Regional Council's leadership and direction in pesticide reduction by practising sustainable alternatives to pesticides in the maintenance of their own properties.

This year saw the By-law extend to all residential use properties.

Details and overviews of the various processes related to the Pesticide By-law are discussed in the preceding sections of this report. Opportunities and options to streamline and improve service delivery of the By-law are also presented in each appropriate section. This also includes some discussion on what is happening legislatively as well on the provincial and federal levels. Initiatives at the federal level

in the future may impact HRM's Pesticide By-law as federal agencies and departments responsible for pesticide registration, classification and sale in Canada begin to put in place proposed major changes that are designed to improve public health and environmental protection.

Therefore, while we await the results from a number of these ongoing pesticide related federal initiatives, staff recommend to continue implementing the By-law as originally approved and improve service delivery wherever reasonably possible. **Communication** and **Public Awareness** have been key factors in all of the Pesticide By-law related initiatives and will continue to be.

Stephen King

November 2003