



*Chemical Herbicide spraying in the Boreal – why its time to move on.*

In much of the boreal forest, chemical herbicides are being applied by the forestry industry to control vegetation in competition with replanted conifer trees. However, there are many alternatives to chemical herbicides. The province of Quebec has, since 2001, completely eliminated the use of herbicides in their forestry program. Below are several of the reasons why Ontario needs to “catch up” with its eastern sister province and other countries with a similar composition, boreal forest.

**A few of the many reasons why every political party should pledge to ban the application of synthetic, chemical herbicides (a type of pesticide designed to kill plants) in Ontario’s boreal forests include:**

- public opinion is in favor of reducing exposure to pesticides
- medical, environmental, and social justice community generally support reducing exposure to pesticides
- source water protection for northern Ontario, the arctic, and the great lakes
- planning for the long term economic prosperity of the province (health care / financial liability for damage to health and the environmental)
- accommodation of first nation communities
- protection of endangered species
- creation of new employment opportunities in northern Ontario
- sustained and enhanced tourism opportunities for northern Ontario
- the alternative solution to vegetation management is already known and in place in other parts of the boreal forest, including Quebec

**PUBLIC OPINION**

- **Statistically, most Ontarian’s are opposed to the non-essential application of chemical pesticides (and herbicides) and believe them to be a health and environmental risk.**

Support growing for ban on pesticides  
Sep, 05 2007 - 4:30 PM

HAMILTON (AM900 CHML) - Support appears to be growing for a ban on the cosmetic use of pesticides in Hamilton.

A random survey of 500 residents by the Canadian Cancer Society finds 70% support for a by-law phasing out the use of lawn chemicals on private property.

The poll also found that 77% of respondents feel pesticides pose a threat to the environment and 87% support banning their use in public parks.

[http://www.900chml.com/news/news\\_local.cfm?cat=7428545912&rem=73939&red=80154523aPBInv&wids=410&gi=1&gm=news\\_local.cfm](http://www.900chml.com/news/news_local.cfm?cat=7428545912&rem=73939&red=80154523aPBInv&wids=410&gi=1&gm=news_local.cfm)

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Hamilton Spectator

City ails without a pesticide bylaw; Physicians support phase-out of non-essential pesticides. Common-sense legislation is needed

by Gideon Forman and Allyson Ion

As the leaves start to drop from the trees and Hamilton residents start thinking about fall gardening, they may want to seek assistance from an unlikely source -- their family doctor.

This year, physicians across Ontario are giving advice on how residents should maintain their property and the first thing they're saying is avoid pesticides -- the poisons used to kill weeds and insects -- and instead use lawn-care methods and products that are non-toxic.

Why do doctors support the phase-out of non-essential pesticides? One reason is the release in April 2004 of a groundbreaking scientific study by the Ontario College of Family Physicians (OCFP), an association representing over 7,000 family doctors. The OCFP's research -- the most comprehensive in Canadian history -- showed consistent links between pesticide use and serious illnesses such as cancer, reproductive problems and neurological diseases.

Among the college's findings:

- \* Associations between pesticide exposure and brain cancer, prostate cancer and kidney cancer.
- \* Associations between pesticide exposure and birth defects, fetal death, and underweight babies.
- \* Pesticides are implicated as a cause of tumours in children.

\* Increased risk of leukemia (a form of cancer) if children are exposed to insecticides and herbicides used on lawns and gardens.

As well, a 2006 study from the Canadian Pediatric Society, Canada's premier authority on children's health, found that 2,4-D (the most common lawn herbicide) is "persuasively linked to cancers, neurological impairment and reproductive problems."

In a word, doctors are saying that, even when used as directed, pesticides can be extremely harmful to adults and children. In fact, the threat they pose is so significant that leading health organizations including the London Regional Cancer Program, the Canadian Cancer Society, the Children's Hospital of Eastern Ontario, the Registered Nurses Association of Ontario, the Ontario College of Family Physicians, and the Ontario Medical Association (Section on Pediatrics) all support bylaws that prohibit non-essential pesticide use.

These health authorities recognize that citizens have a right to maintain their property. But they're urging them to do so without poisons. Fortunately, that's not very difficult.

Homeowners can control insect pests by using nematodes, which are naturally occurring microscopic worms that effectively kill grubs and larvae but are harmless to people and the environment. They can control weeds by aerating their soil, applying natural compost, recycling grass clippings, keeping grass long (at least three inches), and overseeding. (Overseeding crowds out unwanted species.)

But a pesticide phase-out isn't supported only by the medical community. It's also backed by the citizens of Hamilton. A survey released earlier this month from Oracle Poll Research found 83 per cent of Hamiltonians believe pesticides threaten children's health and 87 per cent support a pesticide phase-out in public parks.

Seventy-eight per cent support a pesticide phase-out on private property.

If toxic lawn products are unsafe and unpopular and effective non-toxic ones are now easy to obtain, surely it's time for Hamilton to pass a pesticide bylaw. This common-sense legislation would prohibit the cosmetic use of pesticides while still allowing homeowners to destroy harmful pests such as rats, mice, termites and poison ivy.

Across Canada, pesticide bylaws have been passed by 125 communities, including Montreal, Peterborough, Toronto, Newmarket and London.

Isn't it time Hamilton listened to local residents, doctors, nurses, and hospitals and followed suit?

Gideon Forman is executive director of the Canadian Association of Physicians for the Environment ([www.cape.ca](http://www.cape.ca)). Allyson Ion is community outreach consultant of the Canadian Cancer Society ([www.cancer.ca/hamilton](http://www.cancer.ca/hamilton))

#### THE MEDICAL COMMUNITY

- **The following organizations are among those who support a ban on the cosmetic application of pesticides (including the same herbicides used in forestry) in municipalities, citing health and environmental concerns.**

<http://www.flora.org/healthyottawa/fs-supports-bylaw.htm>

Some of the Organizations calling for Municipal Pesticide By-laws include:

- Allergy and Environmental Health Association
- Allergy Asthma Information Association
- Association of Early Childhood Educators, Ontario
- Board of Trustees, Children's Hospital of Eastern Ontario
- Breast Cancer Prevention Coalition
- Canadian Association of Physicians for the Environment
- Canadian Cancer Society
- Canadian Environmental Law Association
- Canadian Federation of University Women
- Canadian Institute of Child Health
- Canadian Labour Congress
- Canadian Liver Foundation
- Canadian Nurses Association
- Canadian Pediatric Society -- former President Dr. Robin Walker
- Canadian Physiotherapy Association
- Canadian Public Health Association
- Canadian Society for Environmental Medicine
- Coalition for Alternatives to Pesticides
- Great Lakes United
- Health Action Network Society
- Humane Society of Canada
- International Institute of Concern for Public Health
- Learning Disabilities Association of Canada
- The Learning Disabilities Association of Niagara
- The Lung Association of Nova Scotia
- Medical Officers of Health:
  - Dr. Sheila Basrur, Chief Medical Officer of Health
  - Dr. Alban Goddard-Hill, Former Acting Medical Officer of Health, Hastings & P.E. Counties
  - Dr. Robert Cushman, Former M.O.H., Ottawa
  - Dr. Robert Strang, M.O.H., Nova Scotia, Central Region
  - Dr. Barbara Yaffe, Acting M.O.H., Toronto
  - Michael O'Sullivan, Executive Director of the Humane Society of Canada
- New Brunswick Lung Association
- Newfoundland & Labrador Medical Association
- Nova Scotia Canadian Institute for the Blind
- Nova Scotia College of Family Physicians
- Nova Scotia Government Employees Union
- Ontario College of Family Physicians
- Ontario Nature
- Ontario Public Health Association
- Ottawa and District Labour Council

- Pesticide Exposure Group of Sufferers
- Pesticide Free Ontario
- Physicians from CHEO
- Prince Edward County Federation of Naturalists
- Registered Nurses Association of Ontario
- Dr. Rob Rutledge, oncologist at the QE II Medical Centre (Halifax area)
- Sierra Club of Canada
- Toronto Board of Health
- Toronto Environmental Alliance
- United Steel Workers of America
- Dr. Vance L. Trudeau, Associate -- Professor of Biology, University of Ottawa
- Women's Healthy Environments Network
- World Wildlife Fund

**In the Ottawa region, a list of doctors who support the call by the Coalition for a Healthy Ottawa for a by-law includes:**

- the CHEO heads of Pediatrics, Neonatology, and Endocrinology
- the director of the CHEO Research Institute
- the CHEO Board of Trustees
- the chair of the Canadian Leukemia Studies Group
- the Director of Epidemiology at Chalmers' Research Institute
- the head of the in vitro / fertility clinic at the Civic Hospital (now Ottawa Hospital)
- the head of the Rehabilitation Centre
- several environmental medical specialists
- numerous doctors and scientists at the University of Ottawa.

**The Canadian Cancer Society has posted the following on their website**

[Speak up for a pesticide-free New Brunswick!](#)

According to the US Environmental Protection Agency, approximately 95% of the pesticides used on residential lawns are considered probable or possible carcinogens.

[http://www.cancer.ca/ccs/internet/frontdoor/0\\_3384\\_langId-en.00.html](http://www.cancer.ca/ccs/internet/frontdoor/0_3384_langId-en.00.html)

For a list of municipalities that have implemented pesticide bylaws:

<http://www.flora.org/healthvottawa/BylawList.pdf>

See also

<http://www.ontariosportsman.com/pesticide-documents/DrDavidSalisbury-Ottawa-Medical-Officer-Pesticides-and-Health.pdf>

<http://ottawa.ca/calendar/ottawa/citycouncil/hrssc/2005/10-20/ACS2005-PGM-POL-0058.htm>

#### **ENVIRONMENTAL & SOCIAL JUSTICE ORGANIZATIONS**

**- The following organizations are among those who support a ban on the cosmetic application of pesticides (including the same herbicides used in forestry) in municipalities, citing health and environmental concerns.**

- Canadian Autoworkers Union • Canadian Environmental Law Association
- Canadian Institute of Child Health
- Canadian Labour Congress
- Canadian Union of Postal Workers
- Council of Canadians
- Pollution Probe
- Sierra Club of Canada
- Sierra Legal Defense Fund, now EcoJustice
- The Canadian Federation of University Women
- The Catholic Women's League of Canada
- The Composting Council of Canada
- World Wildlife Fund
- WhiteMoose

Alan Simard, President of Saving The Region of Ontario North Group (STRONG), questions the rationale behind non-essential chemical herbicide

The following petition attempts to lay out several reasons why the same concerns should be addressed in the context of the boreal forest.

<http://www.ontariosportsman.com/pesticide-documents/non-essential-pesticides-petition-2007.pdf>

Of course, there are many more individuals and organizations in support of a municipal pesticide bylaw and alternatives to herbicides by the forestry industry.

#### **SOURCE WATER PROTECTION**

Preventing the non-essential release of chemical herbicides in the Boreal forest will significantly enhance source water protection for the residents of Northern Ontario and Southern Ontario. Herbicide spraying is happening right across the province in the boreal forest. The arctic watershed divide runs through the Boreal forest, south of which the water flows into the great lakes. All water north of the divide flows into the James and Hudson's Bay, an area already experiencing severe chemical contamination problems.

Government Maps of the boreal range

[http://cfs.nrcan.gc.ca/sof/common/maps\\_e.html](http://cfs.nrcan.gc.ca/sof/common/maps_e.html)

Much of the boreal forest is to the south of the divide, with all the run off flowing into the great lakes.

<http://en.wikipedia.org/wiki/Image:Canada-Drainage.png>

On either side of the divide, I believe we would have the freshest, cleanest water, just about anywhere in the world. It is the start of a watershed, largely devoid of any industry. If the **water bottling industry** is searching out fresh, untapped, clean water, the divide would be a prime location so long as it does not become contaminated with chemical herbicides. This resource should be protected forever.

The chemicals being applied in the southern parts of the boreal are making their way into the creeks, reaching the rivers, entering the lakes, and eventually making their way into Lake Ontario, further compounding the chemical contamination problems already faced in there. With more residents from Southern Ontario tapping into the great lakes for their drinking water, more emphasis must be put on source water protection.

It's a serious issue for every citizen of Toronto because they draw their drinking water from Lake Ontario, and even the best water treatment plants cannot extract these chemicals.

Source water protection upstream is the only way to keep Lake Ontario clean. Much of chemicals being sprayed in the southern boreal each year will eventually make their way into Lake Ontario.

Various departments of the federal and provincial governments have been petitioned to investigate and perform water sampling pre and post herbicide application which occurred this summer and fall in the boreal forest. The submission cited empirical evidence demonstrating that the herbicides being applied by the forestry industry were in fact entering the waterways by direct drift, run off, and ground water mingling with surface water.

<http://www.whitemoose.ca/Forestry/Herbicide/Application-for-Investigation-Herbicides-07-07-06.doc>

## PLANNING FOR THE LONG TERM ECONOMIC PROSPERITY OF THE PROVINCE

### - Public Health Care

The Ontario system of health care gives residents of the province the right to be treated for serious medical conditions at the expense of the provincial government. The links between environmental degradation and human health are becoming more recognized by a variety of medical organizations.

<http://www.ontariosportsman.com/pesticide-documents/Ottawa-Pesticide-Debates.pdf>

In October 2005, at the Ottawa pesticide debates, Dr. Robert Cushman stated that no one could belittle the impacts that pesticides have had on public health. There are a number of issues to be considered, including economics, health, individual rights, and a level playing field. **He remarked that the risk of cancer has increased and 48% of the provincial budget goes into health care.**

Alan Simard, president of the STRONG group, argues "Politics and corporate profit should not take precedence over the human health of the

### Ottawa Pesticide Debate Minutes - October 20, 2005

<http://ottawa.ca/calendar/ottawa/citycouncil/hrssc/2005/10-20/minutes26.htm>

### - Short and Long Term financial liability

Herbicide application as a method of vegetation management was selected because it represented the most "cost efficient" method of vegetation management for the forestry industry. While it is true that aerial application of herbicides is less "expensive" in the short term for the applicator, the valuation does not take into account the long term liability associated with these chemicals. Our Canadian soldiers exposed to a variety of similar vegetation management herbicides, including Agent Orange (a mixture of two herbicides, one still used in Ontario) have most recently been offered a financial settlement package from the Ontario government for the health effects they incurred as a result of the exposure.

Such liabilities are becoming more visible as the chief of the Saugeen Nation north of Ignace, Ont., has declared his tribes plans to seek \$1 billion in compensation. "We are against the spraying ... (and) plan to go ahead with a study on the health effects of our people," Chief Edward Machimity said Tuesday from the First Nation community near Savant Lake.

<http://www.whitemoose.ca/Forestry/Herbicide/Herbicide-Class-Action.pdf>

<http://www.whitemoose.ca/Forestry/Herbicide/Ring-V-TheQueen2007-Herbicide-Class-Action.pdf>

## ACCOMMODATION OF FIRST NATION COMMUNITIES

Accommodation of First Nation peoples living in Northern Ontario is a legitimate expectation. Canadians are watching all parties and demanding fairness in the way we treat the First Nations, including accommodating their wishes for Environmental Stewardship.

The First Nations and Metis peoples have demonstrated in our courts that they possess the "right" to hunt, fish, trap, gather berries, and otherwise live off the land as they have for generations. The chemical contamination of tradition lands poses the greatest threat to the ultimate demise of these peoples. The right to hunt, trap, and gather berries is completely useless if the land around you is contaminated and you cannot consume those natural, renewable resources without experiencing health problems.

*"Canada's Aboriginal peoples called for an end to the use of chemical herbicides under Canada's National Forestry Strategy, which was endorsed by a number of governments across the country. Ontario has to be held accountable to its commitments," said Lorraine A. Rekmans.*

I have received the following resolutions from aboriginal bands against the chemical application of herbicides by the forestry industry. However, a lack of a central collection centre (like [www.flora.org](http://www.flora.org) for municipal pesticides) is most certainly reducing the actual quantity of organizations who have formally taken a position on the matter.

- Muskegowuk Council

<http://www.whitemoose.ca/Forestry/Herbicide/Mushkegowuk-Council-Herbicide-Resolution.pdf>

- Serpent River First Nation

*According to Lorraine A. Rekmans, the Aboriginal Affairs Advocate for the Green Party of Canada, "The systematic application of chemical herbicides in Ontario and the contamination of waterways is in violation of the Treaties signed with the original peoples of Ontario and impacts directly on basic human rights to healthy food sources. This is a violation of our Constitutionally protected rights as Aboriginal peoples. In fact this is a violation of all people's rights. As a member in confederation, Ontario has to take its responsibility to uphold the treaties seriously."*

### PROTECTION OF ENDANGERED SPECIES

The potential damage which pesticides could be causing to our endangered species is truly unknown, and the effects may be irreversible by the time the effects are realized.

Environment Canada indicates that if you want to help endangered species in Canada, you should follow this easy tip.

7. Do not use pesticides around the home.

- Did you know? In 1998, the use of the insecticide carbofuran was banned in Canada after it was proven that it had harmful effects on the Burrowing Owl, an endangered owl in Canada.

[http://www.speciesatrisk.gc.ca/help\\_e.cfm](http://www.speciesatrisk.gc.ca/help_e.cfm)

The most current guideline for forestry herbicide application was published in 1992. This guideline expresses that it outlines the "minimum" buffer zones from the sensitive values referenced in the guide. In practice, no additional buffer zones are required by the MNR, and none are applied, though the empirical evidence demonstrating pesticide movement has grown significantly from that time.

The guidelines expresses that a minimum of 120 metre buffer zone is to be applied to the habitat of all endangered species and that it is the responsibility of the MNR to collect these values before any spraying occurs. In Northern Ontario, we are fully aware of endangered species like the Woodland Caribou, Mountain Lion, and Wolverine. Nearly all MNR offices in Northern Ontario have sighting reports for Mountain Lions, also known as eastern cougars.

The Ontario Puma Foundation has a visual representation on their website showing cougar sightings across the province. Based on my conversations with other residents of Northern Ontario, I have reason to believe that the sighting reports received by the Ontario Puma Foundation and the MNR are significantly lower than actual sightings.

<http://www.ontariopuma.ca/sightings.htm>

Regardless, the MNR is allowing the forestry industry to spray chemical herbicides on endangered species habitat in Northern Ontario by refusing to declare any of the lands endangered species habitat. Seemingly, the only way the MNR could comply with their guidelines to maintain a 120 metre zone from endangered species habitat would be to prevent all chemical application in the boreal.

<http://www.ontariosportsman.com/pesticide-documents/MOE-Buffer-Zone-Guideline-1992.pdf>

The MNR recognizes these illusive animals are living in the region but have so far have refused to designate any area as "habitat" for a single mountain lion.

The problem is compounded by a chronic lack of funding. In regards to endangered species like the Golden Eagle, many forest management plans identify the nests of unknown raptor species in their forests. While these nests may receive a 120 metre buffer zone, the habitat for the birds living in these nests is clearly much larger than 120 metres.

The Fish and Wildlife Conservation Act lists a variety of animals as being protected, including the Blue-Spotted Salamander in Schedule 10. The act prescribes that

No hunting or trapping of certain species

- 5. (1)** A person shall not hunt or trap,
- (b) a specially protected amphibian;

The intent of this regulation is to protect the Blue-Spotted salamanders from human interference and destruction. Several scientific documents have reached the conclusion that the chemical herbicides being applied by the forestry industry maybe linked to amphibian mortality.

<http://www.ontariosportsman.com/pesticide-documents/Roundup-Amphibians-Ontario-Nature-2005.pdf>

<http://www.ontariosportsman.com/pesticide-documents/reylea-article.pdf>

Many of the models used by the industry to demonstrate that the herbicides being applied are faulty in that they examine the average concentration over a large cut block, rather than the higher concentrations that would be found in the low lying run off pools, the most likely damp spots for amphibians living in that forest.

Protect our endangered species by protecting their habitat for non-essential chemical contamination.

### CREATION OF NEW EMPLOYMENT OPPORTUNITIES IN NORTHERN ONTARIO

As the unemployment percentage rises in Northern Ontario, the potential for government operated vegetation management programs increases in feasibility. For many small communities in the North, vegetation management could significantly supplement forest harvesting in regards to employment opportunities. In small, remote communities, such an income supplement could greatly assist the local economy. Under a spraying system, the employment opportunities for vegetation management are

outsourced to aviation companies, rarely local to the region in which they are working, employing a very small percentage of the total workers that would otherwise be required to control the vegetation.

#### SUSTAINED AND ENHANCED TOURISM OPPORTUNITIES

Tourism outfitters operating in Northern Ontario are acutely aware of herbicide spraying, as the spray season occurs at the same time as the bear hunting season. Northern Ontario is divided into bear management area's and large tracts of these bear management area's are sprayed with herbicides every season, making hunting them irresponsible. From my observations as a bush pilot, the bears and moose do not return in quantities like before the spraying for at least a decade. They may travel through the areas but in concentrations much less than before the spraying had occurred.

We risk chemical contamination of our big game animals as well as our creeks, rivers, and lakes. Many of the rivers and lakes in southern Ontario, exposed to decades of pesticide run off from metropolitan and agricultural sources, now have fish advisory guidelines. These guidelines express the government's views regarding the "safe" quantity of fish to be eaten from the waterbody. Restrictions on fish harvest in the northern Boreal waterways would have a crippling effect on tourism operators, both remote and drive in.

From a document submitted to the government called Planning for Prosperity (retrieved from the World Wide Web at <http://www.wildontario.org/plan.html> on November 19, 2003), tourism in the north employed 34,000 people, and that number was rising. At the same time, the number of people employed by the timber industry was declining and such a pattern continues to this day. Clearly these jobs revolving around resource based tourism (dependent on a pristine environment) must be protected for the long term economic prosperity of the province.

*"As a tourist outfitter living off the land, an avid angler and hunter myself, its very important to me to ensure that the chemical herbicides being applied by the forestry industry are not ending up in the waterways and contaminating the fish or wildlife,"* said Joel Theriault, a 3rd generation tourist outfitter with family operations between Timmins and Chapleau, Ontario.

#### THE SOLUTION IS ALREADY KNOWN AND IN PLACE ..... In Quebec

The solution to these problems is only as far away as the Quebec border. While Domtar, Tembec, and other multinational forestry companies insist that the only way to control vegetation in Ontario's boreal forest is to aerially apply chemical herbicides, many of these corporations have head offices in Quebec ... a province that has (since 2001) banned the use of chemical herbicides in their forestry program. The provincial vegetation management experts have devised new and creative ways to control the vegetation in the boreal forest, without the application of chemical herbicides.

Many of the practices of the Ontario forestry industry, such as failing to replant immediately, have been replaced by cutting edge vegetation management techniques. As long as any proposed changes do not have the effect of reducing the cost of vegetation management to the forestry industry, there should not be any NAFTA ramifications. Given the broader social benefits accruing with the alternatives to herbicides, and the financial hardship of the Ontario forestry industry, any financial difference should be covered by the provincial government. This money will be a small offset for business as usual (herbicide spray) health care costs and source water remediation in the future.

Several of the tools available used by the forestry industry of Quebec, and available for use by the Ontario industry include:

- immediate replanting after harvest of nutrient loaded, larger seedlings
- manual thinning of birch and poplar under brush
- steam / hot water vegetation management
- controlled fire burns
- selection harvesting of mixed composition forests with spot planting to restore species that require a fire, or other natural disturbance, to regenerate

For additional information about Quebec's vegetation management program, try these helpful resources.

<http://www.aqgv.qc.ca>

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