

## Calgary Parks and Open Spaces Can be Managed Naturally - Without Pesticides

by Lauren Rama, September 1, 2007

The City of Calgary Parks Department has made efforts to reduce their use of unnecessary pesticides. Why not go all the way to no unnecessary pesticide use as many other cities have?

Calgary is now the largest city in Canada without the protection of a pesticide bylaw. Even tiny amounts of pesticides can effect health and development, especially of children and pets. Scientists are recommending that precautions be taken when there is evidence of harm, as is the case with pesticides, even when the exact cause and effect relationship for a substance is not known. It's not worth the risk to health and the environment to use pesticides simply to make green spaces fit a certain standard of aesthetics. See <http://www.healthycalgary.ca/Page-3.html> for more on why a bylaw is needed for Calgary, including information and studies on the harmful effects of pesticides to health and to the environment.

Other cities have successfully stopped using pesticides in their parks and green spaces. See the Appendices for information on how some of those cities and a local school district, tree nursery, and award-winning community have gone to natural landscaping. 133 Municipalities across Canada have now passed bylaws phasing out pesticide use and have stopped unnecessary use of pesticides in their green spaces. The entire Province of Quebec is protected by pesticide legislation. If they can do it, so can we in Calgary.

### Calgarians Want Protection from Pesticides

In a poll commissioned by the Sierra Club of Canada - Chinook Group and the Canadian Association of Physicians for the Environment in February 2006, **4 out of 5 Calgarians supported a bylaw** that would phase out the use of cosmetic pesticides. See Appendix A for a summary of the report. The **Imagine Calgary vision also has a goal for zero pesticide use** by the year 2010.

### Cost Factors

Natural maintenance practices are **healthier for the soil and plants and can be cheaper in the long-run**. See Appendix A2 for how the City of Waterloo phased out pesticides and reduced its green space maintenance costs by 40% per acre over 6 years.

Precise cost comparisons between natural and chemical landscaping approaches are difficult to make because so much depends on how each is done and because significant costs such as health care are incalculable. The trend, however, suggests that when an institution, government body, business or household decides to use natural landscaping practices (as was done for thousands of years before World War 2 and the advent of chemical warfare), costs are rarely a problem or limiting factor. In fact, examples of substantial cost savings exist, such as Toronto's prestigious Granite Club golf course which cut pesticide use by half and saved \$40,000 per year.

The City of **Edmonton has saved money by naturalizing** many of their public open spaces, particularly along roadways. In the 1990's, Edmonton replaced more than 200 hectares of mowed lawn in parks and along roadways with trees and shrubs. The money saved from mowing was used to plant over 700,000 plants.

## **Eliminating Pesticides Can be Done in our Climate**

It has been argued by some in the Parks Department that even though natural plant health care programs work in other cities, Calgary has a drier, cooler climate and that green spaces cannot be maintained here without pesticides. It has also been said that it is difficult to use hardy fescue grass mixes in turf grass areas in Calgary because they are not hardy here. Yet Bow Point Nursery and The Rocky View School Division, both just west of Calgary, have been using fescue grasses successfully and neither have used chemical pesticides for years. **Local evidence and expert experience indicate that it is possible to manage landscapes naturally in the Calgary area:**

The most difficult area to grow plants in Canada is the Chinook Zone [Calgary is in this climate/geographical area]. The most difficult site to keep green in the Chinook Zone are school grounds. In 2002, "Communities in Bloom" declared the Rocky View School Division Grounds to be some of the best maintained in Canada. The Rocky View School Division practices organic lawn care and has for over a decade. The best part about using organic methods is that the benefits are cumulative.

Following a few simple steps with the big picture in mind eliminates the need for pesticides; achieves water conservation; attracts birds, butterflies and pollinators to your natural corridors; and reduces maintenance times and costs.

*Steve Repic, Chief Groundskeeper, Rocky View School Division. See Appendix E1.*

The beauty of a drier climate, such as the Front Range of the Rocky Mountains, is that it is easier to go without pesticides and use natural, organic gardening methods. There is simply less "pest" pressure. In more humid climates there are a lot more problems with fungus, plant diseases, and insects.

*Becky Elder  
Organic Gardener since 1975 in Colorado  
Blue Planet Earthscapes since 1995 in Colorado  
Writer and Teacher*

## **Natural Landscaping Practices for Parks and Green Spaces**

Here are some natural landscaping practices that are used with success in the Calgary area and in other cities. See the Appendices for how Waterloo and Halifax, as well as Boulder, Colorado and Whitehorse, which have similar ecosystems to Calgary, have gone natural.

The basic premises are to:

- choose plants that are appropriate to the Calgary environment so they don't require much maintenance
- improve the health of the soil so it keeps the plants healthy.

### ***Plant hardy grasses in new areas of park, boulevard, or other green spaces***

Grasses that are hardy for this area require less water and nutrients to grow well. They tend to choke out weed growth. If you mow - mow high. See <http://www.healthycalgary.ca/Page-76.html> for more on hardy grasses for Calgary.

### ***Overseed existing grass areas with hardy grasses***

Spreading a thin layer (1 cm. or 1/4 inch) of compost and mixing in hardy grass seeds allows hardy grasses to take over existing grassy areas. This may need to be done for 2 - 4 years before the hardy grasses take over.

### ***Aerate heavily used grass areas***

Using a core aeration machine to pull small plugs of soil out of grass that is heavily walked on or used as sports fields helps loosen the soil and allows nutrients to better reach the grass roots.

### ***Plant native shrubs and trees in green space areas***

Native shrubs and trees provide habitat for birds, beneficial insects, and wildlife. They require less water and maintenance than grassed areas

### ***Spread compost and spray actively aerated compost tea***

A thin layer of decomposed organic matter or a rich soup of soil micro-organisms that both improve the active organic life in soils so they can better nourish the plants. Usually compost would be spread once a season and compost tea would be sprayed three times a season.

See [www.healthycalgary.ca](http://www.healthycalgary.ca) - the How section for more information on how to use natural landscaping practices.

## **Implementing Natural Landscaping**

Waterloo and Halifax are the best examples of how a municipality has implemented natural landscaping. See <http://www.healthycalgary.ca/Page-136.html> for Waterloo and <http://www.healthycalgary.ca/Page-96.html> for Halifax.

Here are some steps they took:

- Retrained staff over a period of years to understand and properly use natural landscaping practices; staff went from being equipment operators to being more horticulturalists
- Involved sports field users in the new plan for maintaining sports fields
- Asked the public to accept more weeds in low profile areas.

## **Conclusion**

Other cities have successfully eliminated unnecessary pesticide use. So can Calgary. It will take political will and changes in the way City parks and open spaces are designed, installed and maintained. It is worth it for the sake of Calgary residents' health and for the environment.

See the Coalition for a Healthy Calgary web-site for examples of how other cities have gone natural:  
Local examples of going pesticide-free.

Local examples of naturalization.

See Appendix A - for a summary of the Calgary Poll.

See Appendix B - "That Doesn't Make Sense" a Rebuttal to public statements made mostly by a spokesperson for the Calgary Parks Department.

See Appendix C - for an opinion editorial piece published in the Calgary Herald that makes the case for a pesticide bylaw for Calgary.

## **Appendix A - Summary of the Calgary Oracle Research Poll on a Pesticide Bylaw**

In February 2006, the Canadian Association of Physicians for the Environment and the Sierra Club - Chinook Group commissioned Oracle Poll Research Group to do a survey. 500 randomly selected residents of Calgary, 18 years of age or older were surveyed.

The questions asked were:

Do you currently use cosmetic or nonessential pesticides on your home lawn or garden to control weeds and insects? 33 % -Yes, 62% No

Homeowners who currently use cosmetic pesticides were asked: "If you were provided with information on methods to have a lawn and garden that are free of cosmetic pesticides and also free of weeds, what would be the likelihood that you would stop using them? 64% - Totally likely.

Respondents were asked to agree or disagree with these statements:

Cosmetic or nonessential lawn pesticides used in my community pose a health threat to pets such as cats and dogs - 67% Totally agree, 11% Totally disagree

Cosmetic or nonessential lawn pesticides used in my community pose a health threat to children - 71% Totally agree, 13% Totally disagree

Cosmetic or nonessential lawn pesticides used in my community pose a threat to the environment including wildlife, air quality and ground water - Totally agree - 60%, Totally disagree- 9 %.

Respondents were read the statement below and then asked three questions on pesticide phase-outs:

"Towns and cities have the right to enact by-laws phasing out the use of cosmetic pesticides . . . a right that has been upheld by a recent Supreme Court ruling. Many municipalities in Ontario, Quebec, as well as other big cities across Canada (such as Toronto, Vancouver, Halifax) have recently phased out the cosmetic use of pesticides on residential lawns. Toronto and Mississauga have virtually eliminated pesticide use on weeds in local parks through legislation."

Would you support or oppose a phase out of cosmetic pesticide use . . .

on private residential property - 82% support, 12 % oppose

in public parks in your community - 84 % support, 11% oppose

in other public places such as schools and hospitals - 89% support, 9 % oppose.

To download the full report on the poll, go to <http://www.healthycalgary.ca/Page-34.html>

## **Appendix B - “That Doesn’t Make Sense” - Rebuttal to The City Parks Department’s Statements on a Pesticide Bylaw**

These are responses to statements made mostly in the media by Simon Wilkins, with the Integrated Pest Management Program of the City of Calgary’s Parks Department.

- The City says they use pesticides to protect the ecology. That doesn't make sense. It is well known that pesticides destroy ecosystems - killing soil, beneficial insects, killing wildlife and disrupting natural cycles.
- The City says they spray for public health and safety reasons. That doesn't make sense. All kinds of studies show the health risks, especially to children, of pesticides. Also - at least 20,000 people in this City suffer from Chemical Sensitivities and are severely affected by the widespread pesticide use. Over 126 other municipalities have passed pesticide bylaws to protect the health of their citizens. Calgary is now the largest city in Canada without such a bylaw.

The Pesticide Bylaw we are suggesting would allow for preventing West Nile virus with chemical use of pesticides, if natural, biological controls don't work. The City has been using natural, biological controls successfully for a number of years.

- The City says that Parks are safe within 4 to 6 hours of being sprayed. We don't know how they can say that. Recent studies show that the Killex mix (2-4,D, dicamba and mecoprop) the City uses in Parks is "persuasively linked to cancers, neurological impairment and reproductive problems." In Germany, on the rare occasions when pesticides are used in public places, they close the area to the public until the grass grows back and it's mowed once - usually a week or two.
- The City has said they need to spray dandelions to prevent lawsuits from people slipping on dandelions. There is no foundation for this. There is no recorded case of such a lawsuit in North America. And if Calgary does not act soon to put in a pesticide bylaw, the City could face lawsuits for its pesticide use from people whose health suffers from pesticides.
- The City says that a benefit of using pesticides is reduction of allergies from weeds. Yet many people react to pesticides, and pesticides can cause long-term health effects, including depleting immune systems so people are more prone to allergies. Other cities use mowing to deal with allergy-causing weeds. Calgary could too - this would be safer for everyone. Some cities have exceptions in their bylaws to allow chemical spraying of ragweed if natural controls do not work (e.g. Toronto).
- The City says they have significantly reduced pesticide use. They may have reduced the intensity (the amount used over a certain area) and the concentration of pesticides, They have not reduced the overall amount of pesticides used. From what we can tell, there has been no significant decrease in overall use of pesticides.
- Another common argument made by the pesticide industry is that if used properly, pesticides are not harmful. Often the old adage “the dose makes the poison” is cited - that the doses used are low. Yet studies done in the last few years show that low doses of pesticides can be more harmful than larger doses. See <http://www.healthycalgary.ca/Page-84.html> (Health). And serious deficiencies have been found in how the federal regulatory process for pesticides protects human health. See <http://www.healthycalgary.ca/Page-35.html> (Federal Regulations Don’t Work).

## **Appendix C - Opinion Editorial - Pesticides Should be Made an Election Issue**

Calgary Herald, page A19, July 26, 2007

The Coalition for a Healthy Calgary is calling for the City of Calgary to pass a bylaw that would phase out the use of unnecessary pesticides on private and public lands in Calgary. By pesticide, we mean synthetic chemicals used to kill insects, weeds, fungi, and rodents for aesthetic purposes. The Coalition for a Healthy Calgary wants a pesticide bylaw to protect the health of Calgarians and the environment.

Jim Nix, of Nutri-Lawn wrote in his opinion piece "The Green, Green Grass of Home" published July 18, 2007 that he uses government-approved products to control weeds. Interestingly, the Pest Management Regulatory Agency (PMRA), the Federal Government regulating body, says that it is illegal to claim that products it approves are safe. The PMRA approves pesticides if the studies submitted by the pesticide companies show that the probability of risk is "acceptable." But Canada's doctors and nurses say the risk is not acceptable because pesticide exposure can lead to very serious illness. Scientific studies have shown strong correlations between pesticide use and cancer, Parkinson's disease, asthma, birth defects, miscarriages, hormonal problems, and learning disabilities.

A report done for the Auditor General's department in 2003 showed great deficiencies in the pesticide approval process. Many products were approved decades ago when standards were much lower. Also, it is the pesticide company's responsibility to have the scientific testing done and then submit the results to the government. The health testing is done mainly on rats which have enzymes for dealing with toxins that humans don't have. Another deficiency in the process is that the testing is usually done solely on the active ingredient in the product which is generally only about 10% of the product. The other 90% of most products used are ingredients that make the pesticide more effective (e.g. surfactants). Usually this full product mix is not tested. Combinations of products are also not tested, yet pesticides are usually combined for use as in the most common lawn and garden weed killer - Killlex.

Studies of how the full pesticide products and combined products work in the environment show that these full combinations are more harmful than one product alone. That pesticides are approved by the Government does not mean they are safe; cigarettes are also approved by the Government!

In order to protect Canadian's health, the Federal Health Minister (Anne McLellan at the time) and the Supreme Court have recommended that municipal pesticide bylaws be passed to complement the federal regulation of pesticides. Over 126 municipalities have now passed bylaws. Calgary is the largest city in Canada without that protection.

Medical bodies, such as the Canadian Cancer Society, the Ontario College of Family Physicians, the Registered Nurses Association of Ontario, and the Canadian Association of Physicians for the Environment support pesticide bylaws.

A City Parks department spokesperson has said they are using pesticides to protect the ecology and prevent degradation of natural areas. Yet pesticides disrupt the natural ecosystem that has evolved over thousands of years, often leaving areas more vulnerable to so-called weeds. Pollinating insects, birds, and wildlife die from pesticides. Our rivers are polluted and the aquatic life, including that of the multi-million dollar Bow River fishery is harmed. Family pets are also very vulnerable to pesticides.

## **Appendix C - Opinion Editorial - Pesticides Should be Made an Election Issue** continued

In contrast to Calgary, the City of Waterloo, Ontario, has practised a policy of naturalizing open spaces for almost 20 years - replanting open areas with indigenous plants local to the area. Waterloo achieved substantial savings in their maintenance budget by doing this. Their philosophy is to work with nature rather than trying to fight it. Fighting nature does not work. We in Calgary have poured thousands of taxpayer dollars into killing dandelions and there are more dandelions than ever before.

International scientific bodies have suggested that when there is evidence of harm (as there is in the case of pesticides to human health and the environment) that precautions be taken. This is especially true when there is no matching benefit. Pesticides are not necessary. Natural, organic practices work well as Mr. Nix said. It makes little sense to risk our health, the health of future generations, and our natural environment. A 2006 poll showed that 4 out of 5 Calgarians agree and support a pesticide bylaw for Calgary. The Imagine Calgary vision based on public involvement and adopted by City Council includes a goal for zero pesticide use in Calgary.

Mr. Nix should check his facts. A study done in 2004 by Cullbridge Marketing and Communications Group and the Canadian Centre for Pollution Prevention reviewed 62 communities in North America and Europe and found that the only effective way to reduce pesticide use is a bylaw. Furthermore, pesticide bylaws are most effective when coupled with education. How Mr. Nix can say that pesticide sales increased in cities that have passed pesticide bylaws is a mystery when the Federal Government only began requiring tracking of pesticide sales in 2007.

Toronto recently released a study on the effectiveness of their pesticide bylaw and found that homeowner use decreased by 35 % in just two years. In Halifax, which has a permit system, the number of permits requested has steadily fallen.

The lawn care industry has benefitted from pesticide bylaws. In Halifax, a Statistics Canada report showed that number of landscaping firms increased by 53% after the bylaw was passed in 2000.

Municipal elections are on the horizon in October. The Coalition for a Healthy Calgary is asking Aldermen and candidates to declare their support of a pesticide bylaw. Contact your Alderman today to let them know that it is time to respect the wishes of the majority of Calgarians. Dandelions don't hurt anyone, pesticides do!

For more information on what the Aldermen are saying, natural landscaping practices, health studies etc. visit [www.healthycalgary.ca](http://www.healthycalgary.ca).

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On behalf of the Coalition for a Healthy Calgary