

# Campbell River Environmental Committee

CREC, PO Box 20092 STN. A, Campbell River, BC, V9W 7Z5

November 15, 2016

Petition to Mayor and City Council of Campbell River for a budget change to facilitate the ban of pesticides in Campbell River, BC and to implement a Pesticide Use Bylaw.

"Pesticides come in many forms including insecticides, herbicides, and fungicides. How we choose to manage pests in our yards is important for our families, our community and environment. Even low-levels of pesticide exposure can pose a potential risk to the health and well being of our families, especially children." Campbell River, City Hall Website Pesticide Awareness Page.

The above quote is a powerful, important quote. The last sentence bears repeating. "...Even low-levels of pesticide exposure can pose a potential risk to the health and well being of our families, especially children."

"Glyphosate is classed as moderately persistent in soil, with a half-life of 20 - 100 days, depending on soil conditions." (Government of Canada website)

In the April 19, 2004 Council Agenda - Campbell River City Hall Archives - Conrad Berube, Senior Pest Management Officer – Ministry of Water Land and Air Protection, Water and Herbicides, makes reference to the half-life of Glyphosate in both soil and water - "it has a fairly short half-life - 47 days. The half-life in water is 12 days to 10 weeks." Long enough for children, adults and pets to come in contact with.

(A half-life is the time it takes for a certain amount of a pesticide to be reduced by half when applied in various environments.)

In the past Roundup® or a 'type' of Roundup® (Glyphosate is the active ingredient therein) has been sprayed by wand up and down our city streets from moving vehicles. Some of this spraying took place on breezy days, vapour drift being a serious concern. Trillion® is used on our playing fields.

We have been told that operators 'do their best' to respect setbacks.

We have been told the product is 'inert once it hits the ground.'

We have been told spraying is necessary to protect against the costly repairs to sidewalks and curbsides that weeds can cause.

I recently contacted Dr. Rick Relyea, Professor of Biological Sciences at the University of Pittsburgh, PA for 15 years, and now Director of the Darrin Fresh Water Institute and Director of The Jefferson Project at Lake George at the Rensselaer Polytechnic Institute in Troy, New York, USA. His research on aquatic life is very well published (well over 100 published articles to date), much of it focused on the effects of pesticides on amphibians and aquatic life.

In an article sent to me by Dr. Relyea, the effects of Roundup® on human cells are detailed, this on the work of the French team led by Gilles-Eric Seralini, a University of Caen molecular biologist - this group of scientists have found that it is the inert ingredients in Roundup® that amplified the toxic effect on human cells- "One specific inert ingredient, polyethoxylated tallowamine, or POEA, was more deadly to human embryonic, placental and umbilical cord cells than the herbicide itself..."<sup>1</sup>

“POEA is a surfactant, or detergent derived from animal fat. It is added to Roundup® and other herbicides to help them penetrate plants’ surfaces, making the weed killer more effective.”<sup>2</sup> In their study on the human cells mentioned above - “The two ingredients (Glyphosate and POEA) work together to “limit breathing of the cells, stress them and drive them towards suicide.”<sup>3</sup> (Please see attached Scientific American article)

Dr. Relyea’s work has found that Roundup® is extremely lethal to amphibians. Dr. Relyea studied an entire pond’s community which included 25 species, including crustaceans, insects, snails, and tadpoles and how they responded to recommended doses of insecticides and herbicides. Dr. Relyea found Roundup® caused a 70 percent decline in amphibian biodiversity and an 86 percent decline in the total mass of tadpoles. Certain species of frogs were completely eliminated, others nearly. Roundup®, designed to kill plants was found to be lethal to amphibians. Algae in the ponds bloomed because there were no frogs to eat the algae.<sup>4</sup>

Dr. Relyea explained this decline in more understandable terms, “It’s like killing all the cows in a field and seeing that the field has more grass in it—not because you made the grass grow better, but because you killed everything that eats grass.”<sup>5</sup> The above article highlights the dangers of using this herbicide near our ponds, streams and wetlands, ponds and streams that are part of our sensitive salmon habitat.

Since 2009 Campbell River has returned to the use of pesticides on its hardscapes and playing fields. Budgetary restraints dictated this move away from a more natural approach to weed care. Where Campbell River returned to pesticides - Communities on Vancouver Island and the mainland continued and continue to adopt healthy, environmentally friendly methods of tackling weeds in their communities. I recently researched a number of communities similar to our own in an effort to understand more about the use of pesticides closer to home. Powell River, Courtenay, Qualicum Beach, Nanaimo, Coquitlam (Sidney) and Vancouver (Please see attached page for more information on these communities and their approach to weed care).

These communities, in many cases larger communities than our own, have made the transition to a pesticide free community, ensuring the health and well being of their citizens, flora and fauna. These communities prefer to lead by example and model pesticide-free approaches to lawn/weed care by using techniques such as scraping, steaming, string-line trimmers, over seeding, etc.

The Pesticide Awareness Page states, “The City of Campbell River supports Nature Works - the pesticide education and awareness program developed by the Comox Valley Regional District (CVRD) and adopted by the City’s Environmental Advisory Commission to reduce non-essential pesticide use “. This statement is misleading, for the other communities that support Nature Works have bylaws firmly in place to ensure that pesticides are no longer used by citizens, fines are also in place to ensure this, (Village of Cumberland, Town of Comox, City of Courtenay).

This program, if properly in effect, at least bans the use of pesticides by homeowners, this is a start, but much more needs to be done, to remove pesticides wholly from our environment, as other communities, provinces and countries have done. A Pesticide By-law needs to be enacted in Campbell River, but the City of Campbell River itself must lead by example, eliminating all non-essential pesticide spraying. Invasive species being the exception to the rule.

It is the responsibility of local government to ensure the healthiest environment it can for its citizens. The use of pesticides with little notice to residents of where and when spraying will take place is disconcerting.

It is not for citizens to have to search for the information, it should be at the forefront, with proper warning given to citizens of Campbell River that spraying is to take place - a small advertisement on the City Currents page of the local paper or a link to a letter on the City Hall website does not suffice. Forestry and Telecommunication companies take out full-page ads to alert the public to where (and when) spraying will take place and each and every product used. The question must be raised, does spraying pesticides throughout our community leave the city open to liability should health issues arise?

There is of course an increased cost to a community when more natural methods are employed, more manpower needed. These costs pale in comparison to health of the citizens of Campbell River, our sensitive fish habitat and our most valuable ecosystems. New residents to Campbell River may be relocating from communities where pesticides are already banned. Campbell River must follow the movement away from pesticides to a natural approach to weed control. If need be this very issue could be put to a vote. For the sake of all Campbell River residents we must work to preserve the natural beauty of our surroundings that makes our city both a fantastic place to live and a premier destination for visitors from across the world.

Communities that have moved away from Pesticides:

The City of Powell River passed a resolution in April of 2016 directing that staff act as champions in the goal of pesticide reduction in the City by providing leadership through education and leading by example while encouraging the use of Integrated Pest Management practices. This year they have begun to use Munger's Horticultural Vinegar for roadway vegetation control.

Courtenay is conducting a pilot project using the Foamstream method.

The Town of Qualicum Beach has a bylaw regulating the use of pesticides. The use of pesticides is kept to a minimum and only used to control weeds deemed noxious by the province. Ball field weeds are mechanically removed and sidewalk weeds are controlled using string line trimmers.

The City of Nanaimo has had a Pesticide Use Bylaw in place since 2010. The bylaw restricts the use of pesticides on ornamental lawns and gardens on residential land and City parkland. For roadways and sports playing fields, the City uses an Integrated Pest Management approach for managing weedy plants. Environmentally benign approaches are used the vast majority of the time - cutting with a weed eater, scraping, hand pulling, etc. Herbicides are used on invasive plants, i.e.: Knotweed, but only by trained contractors who target the plant to control spread. Some trials are also being done using steam to kill weedy plants on hardscapes - trials are still ongoing.

The Town of Sidney uses roundup to control weeds on curb/pavement and sidewalk cracks. They also use roundup for chain link fence lines. They DO NOT use selective herbicides to control weeds in turf. Selective herbicides tend to be more toxic and more persistent. They attempt to control weeds in playing turf and parks by employing sound horticultural practices.

The City of Coquitlam's Parks Department doesn't use any herbicide on any asset category in their portfolio of parks, playing fields or other landscaped areas, except for limited use on specific invasive weeds (e.g. Giant hogweed and Japanese knotweed). They remove weeds manually in shrub beds, pavers, parking lots, etc. They implement good turf grass practices on sports fields, activity lawns and hardscapes so that the grass can out-compete the weeds.

These practices include:

- Frequent mowing to 3” which favours the grass over the weeds.
- Irrigation to help prevent the grass from going summer dormant when the foot traffic is highest leading to compaction – and providing a chance for the weeds to thrive while the grass is down.
- Aeration to repair compaction and stimulate roots.
- Fertilization to develop a strong grass stand that leaves little opportunity for weed seeds to germinate.

The City does have limited resources for maintenance, so not all City lands receive the same level of maintenance. Decisions are constantly being made to ensure an appropriate level of maintenance is applied to each area. Also, staff make significant efforts during the planning stages for new landscaping so that the design and plant selection will result in the lowest maintenance requirements. The City’s Engineering Department contracts with a licensed company to apply high pressure steam to control weeds in amongst some of the hard-surfaced areas within the industrial district, as well as on medians and sidewalks on arterial roads and some collector roads. The City has adopted the practices described above to support an herbicide-free approach and to demonstrate that effective landscape management can be achieved without relying on herbicides.

“The City of Vancouver uses an Integrated Pest Management approach to manage its pest problems. With this approach, pest prevention along with cultural, mechanical and biological methods are used in preference over chemical pesticides. As a result, all neighbourhood parks, sportsfields and playgrounds are now pesticide-free. The City of Vancouver does not use any pesticides for cosmetic use in parks or other city-managed lands. Herbicide treatments may be used to control noxious and destructive weeds. This is done only once all other control methods have proven ineffective. These treatments are always done with proper signage and by a certified applicator.”

The Campbell River Environmental Committee respectfully requests the City of Campbell River implement a budget change to adopt an Integrated Pest Management that bans the use of pesticides, except for limited use on specific invasive weeds, and that the City implement a Pesticide Use Bylaw.

Yours sincerely,  
Campbell River Environmental Committee,  
Per,

Catherine Martha Holmes, member of CREC

Leona Adams, President, CREC

1, 2, 3, Gammon, C. (2009) Weed - Environmental Health News, Weed - Whacking Herbicide Proves Deadly to Human Cells. Scientific American, June 23.

4 K.H. (Summer 2005) University of Pittsburgh, Research Review, page 12.

5 Drs. Foster & Smit, Veterinary & Aquatic Serviced Department. (2005) Roundup, the Herbicide, is Toxic to Amphibians, Especially Frogs and Tadpoles, [peteducation.com](http://peteducation.com). (July).