Open Letter to Premier Gary Doer, Cabinet Ministers, Members of the Legislative Assembly, Winnipeg Mayor Sam Katz, City Councillors, Municipal Councillors and Civil Servants, and Medical Officers of Health

Whereas the elderly and those with weakened immune systems and chronic diseases are most at risk from West Nile virus (1) (2),
Whereas fogging with malathion for adult mosquitoes most affects unborn and developing children, the elderly and those with weakened immune systems (3) (4),
Whereas adulticiding has not been proven to be effective at killing mosquitoes and mosquitoes are developing resistance to pesticides (5) (6),
Whereas adulticiding harms and kills off predator species, which do not rebound as quickly as mosquitoes (7) (8), and
Whereas adulticiding affects mosquitoes, birds, humans and other hosts and vectors of West Nile virus, in ways that increase levels and transmission of the virus (9) (10)

Therefore be it acknowledged that
FOGGING WITH INSECTICIDES MAY INCREASE THE RISK OF WEST NILE VIRUS

Whereas the Government of Canada endorses Absolute Priority to Health and Environmental Protection (11) and

Whereas appropriate preventive measures are to be taken where there is reason to believe that a pesticide is likely to cause harm (12)

Therefore, we, the undersigned, respectfully request that you, our elected representatives and civil servants, ensure that there will be

NO FURTHER FOGGING FOR ADULT MOSQUITOES IN MANITOBA

prepared by Glenda Whiteman
Concerned Residents of Winnipeg (CROW), Inc.
May 2004
and endorsed by:

Canadian Coalition for Health and Environment
Campaign for Pesticide Reduction! Winnipeg
Chemical Sensitivities Manitoba
Coalition for Alternatives to Pesticides, Quebec
Roseisle Creek Watershed Association
Earth Action, Prince Edward Island
Janine Gibson, Organic Food Council of MB
Dr. Jennifer Armstrong, Ottawa Environmental Health Clinic
*Dr. David Suzuki
Dr. Gary Podolsky, Winnipeg
Dr. Brenda Maxwell, Winnipeg
Dr. Shirley Thompson, University of Manitoba
Dr. Stéphane McLachlan, University of Manitoba
Research, Advocacy and Information Network
Ecomafia UWSA Service Group
Winnipeg Chapter, Council of Canadians

Appendix 1. Letter of Support from Canadian Association of Physicians for the Environment
*Appendix 2. Alternative Mosquito Control Resources
*Appendix 3. Non-Toxic Mosquito Control

modified November 2004

Appendix 1--Letter of Support

(signed original on file)

The Canadian Association of Physicians for the Environment endorses the position of CROW which opposes the use of malathion for adulticiding of mosquitoes in Winnipeg.

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Appendix 2--Alternative Mosquito Control Resources

*While communicating his agreement to endorse this Open Letter, Dr. David Suzuki recommended that it should include alternatives to pesticide use. Following are some resources which offer alternatives to pesticides for mosquito control.

The CROW website: www.crowinc.org

The Best Control for Mosquitoes by Steve Tvedten
Part One. Information and background http://www.thebestcontrol.com/chapter-23/23.htm
Part Two. Alternatives http://www.thebestcontrol.com/chapter-23/Mosquitos-Part2.htm

Information on non-toxic mosquito control products can be found here:
www.mosquitobarrier.com
www.mosquitoczar.com
http://www.rense.com/general54/coinn.htm
http://www.wtv-zone.com/infchoice/mcs_links.html

The Sierra Club describes non-toxic mosquito control methods here:
www.sierraclub.ca/national/programs/health-environment/pesticides/mosquito-fact-sheet.shtml

Recommendations for safe mosquito control are included in the CCHE position paper on WNv.
http://www.cche-info.com/pdf/cche--pesticides-wnv-statement.pdf

Beyond Pesticides have these fact sheets and an excellent paper:
http://www.beyondpesticides.org/alternatives/factsheets/Backyard%20Mosquitoes.pdf
http://www.beyondpesticides.org/alternatives/factsheets/Mosquito%20control.pdf
http://www.beyondpesticides.org/mosquito/DOCUMENTS/Nashville%20advice%20TNDOHCountyDirsMtngGottfriedvm.pdf

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Appendix 3--Non-Toxic Mosquito Control

Around the world, the most effective mosquito control has been shown to be a combination of common-sense strategies. A paradigm shift is needed in Winnipeg. Winnipegers need to understand their role in helping the City reduce mosquito populations and restore nature's ecological balance. A combined approach including the aspects outlined below is needed.

Paradigm Shift (Public Education):

- Blame/Responsibility shifting
  - rather than laying any blame or expecting civic employees to take care of this problem for us, we all have to understand that we need to work together to reduce mosquito populations
  - mosquitoes don't usually fly very far--if you have mosquitoes in your back yard, they probably hatched there

- Resource shifting
  - we must stop investing in poisons which have been shown to increase mosquito populations over time, and start investing in projects that will restore natural predator populations and people's ability to protect themselves
  - obviously, over time, reduced reliance on toxins will result in reduced health care costs

- Tolerance shifting
  - it is unreasonable and arrogant to assume we can eradicate a specie from the food chain without creating consequences
  - if we were not already sick or immune depleted because of toxic exposures, we would all stand to benefit from the WNv antibodies being bitten by an infected Culex tarsalis mosquito may provide
  - towns that have switched to non-toxic mosquito control measures have had to suffer through only one summer of high mosquito counts before Mother Nature restored equilibrium

Source Reduction: the best way to prevent mosquito breeding is to remove stagnant water

- drainage
- expand the TEEAM project into every area of Winnipeg: teams of students can clean yards, eaves troughs, etc (note. this means more than identifying needs, this means doing the work)
- coordinate community clean-up days when volunteers could help those unable to remove breeding sites from their yards
- continue advertising personal means to reduce breeding sources

Personal Protection

- incentives (subsidies, tax breaks) to build gazebos, screened porches, repair window screens, purchase kitchen tents, etc.
- update building codes to require screened-in areas in new buildings
- incentives (subsidies/remove sales tax?) to purchase mosquito net clothing
- continue to educate (wear long, loose, light clothing and non-toxic repellent, and avoid exposures at dusk and dawn)

Natural Predators: a healthy bird population is our best defence against West Nile virus

- If the City were to stop applying toxins regularly, residents could be encouraged to support the return of natural predators, such as
    - dragonflies and other flying insects (dragonfly pond instructions are available)
    - purple martins, bats and other birds (Did you know? Humans are not usually the mosquito's first choice for a blood meal. If more birds were around, fewer humans would be bitten.)
    - nematodes, frogs and larvae-eating fish

Natural Repellents

- Many plants have repellent properties. Some work while planted in the ground, and others are processed and used in herbal repellents
    - cedarwood, garlic, lemongrass, frankincense, cinnamon, basil, rosemary, cloves, peppermint, lemon balm, onions, feverfew, thyme
    - scented geraniums, marigold, tomato, eucalyptus
    - citrosa, lemon thyme, citronella grass, tansy
- Rubbing freshly picked sage leaves on the skin and clothing also works

Larviciding

- a sonar device is now available

Sources

1) " Evidence shows that many people infected with West Nile virus have mild symptoms, or no symptoms at all. **People with weaker immune systems and people with chronic diseases are at greater risk for serious health effects. While the overall risk of serious health effects increases with age**, persons of any age or health status can be at risk of serious health effects associated with West Nile virus infection. That is why it is so important to avoid mosquito bites, especially if the virus is active in your neighbourhood, town or region." Health Canada http://www.hc-sc.gc.ca/english/westnile/general.html#5

2) "Less frequently, the virus can cause encephalitis, an inflammation of the brain. This is **more likely to occur among older adults and people who have weakened immune systems.**"
What you need to know about West Nile virus, Government of Manitoba, infohealth brochure, p2, also available at: www.gov.mb.ca

3) "The Committee recommends that the government ensure legal protection, through the new Pest Control Act, for **the most vulnerable groups: fetuses, children, seniors, women, Aboriginal people, persons suffering from multiple chemical sensitivity or in poor health, and professional users of pesticides**. To this end, decisions on pesticides should be based on the protection of the most vulnerable groups." *Pesticides: Making the Right Choice for the Protection of Health and the Environment*, House of Commons Standing Committee on Environment and Sustainable Development, May 2000, p180, available on the Parliamentary Internet: www.parl.gc.ca

4) "**Children are particularly vulnerable to the effects of pesticides**. Children eat and drink more per kilogram of body weight than adults. Their skin is more permeable and their livers do not excrete as efficiently as adults'. Their hand-to-mouth behaviour increases the chance of ingestion and they play on the ground outdoors and on the floor indoors. Parents track pesticides indoors on their shoes, inadvertently exposing their children. Some pesticides that degrade outdoors in sunlight are more persistent once they are present indoors." *Pesticides Literature Review*, Ontario College of Family Physicians, April 2004, p 4, available at www.ocfp.on.ca

5) "The effectiveness of malathion as a tool for mosquito control decreases over time because **mosquitoes build up resistance** to it. In addition, application procedures can be ineffective. For instance, when malathion is applied via ultra low volume spraying by mist blowers, hydraulic sprayers or aircraft, only about one drop in 1000 will actually hit the mosquito. Since it takes three drops to kill a mosquito, this not only means that spraying often fails to kill the target organism, but **virtually all of the pesticide ends up on non-target species**. When considering pesticides for community mosquito control programs, even for West Nile Virus, malathion is a poor choice. It has been linked to birth defects, a wide range of cancers, and other health problems in humans and non-target wildlife species. The great irony is that **it is not very effective**." *Malathion Fact Sheet*, Sierra Club of Canada, available at: http://www.sierraclub.ca/national/programs/health-environment/pesticides/malathion-fact-sheet.shtml

6) "Broad-spectrum insecticide resistance is increasing, and is hastened by wide-range, frequent insecticide applications. (4) As insects adapt, higher application rates increase risk to other species, including humans. Non-specific pesticides harm people and mosquito-predator populations directly, (5) and also decrease predator populations indirectly by interrupting (temporarily) the supply of the mosquitoes they eat. For example, eleven years of pesticide spraying to control adult mosquitoes carrying equine encephalitis in NY state led to a fifteen-fold increase in mosquito carriers of the disease. (6) When the pesticide effect wears off,

the environment has lost its natural checks and balances. **Mosquitoes have short life spans and populations rebound in days or weeks, while mosquito predator populations rebuild more slowly, if at all**." Official CCHE position on the West Nile virus, Canadian Coalition for Health & Environment, p1, available at: http://www.cche-info.com/pdf/cche--pesticides-wnv-statement.pdf

7) "Pesticide use in Canada has resulted in contamination of drinking water sources and **harm to birds and fish**." *Managing the Safety & Accessibility of Pesticides*, Report of the Commissioner of the Environment & Sustainable Development to the House of Commons, Office of the Auditor General of Canada, 2003, p 24, available at www.oag-bvg.gc.ca

8) "Minimal amounts of pesticides are believed to reach their target. One set of estimates indicates that 0.1 to 5% of an herbicide may reach its target weed, and 0.003% of an insecticide may be consumed by the target pest. These estimates suggest that the remaining quantities of pesticides are released into the environment, where they can **adversely impact non-target organisms such as birds**." *Pesticides: A Public Health Perspective* Toronto Public Health Environmental Protection Office, October 1998, p 30

9) "Aside from the adverse health effects posed to humans, adulticiding may actually increase the number of mosquitoes by destroying their natural predators.[1] Additionally, mosquitoes that survive the spraying may become resistant, longer-lived, more aggressive, and have **an increased prevalence of the virus within their bodies**.[2]" *Public Health Mosquito Management Strategy: Managing mosquitoes and insect-borne diseases with safety in mind* Pesticides and You, Vol. 22, No. 2, 2002, p 13, Beyond Pesticides/National Coalition Against the Misuse of Pesticides, also available at: http://www.beyondpesticides.org/MOSQUITO/reportsandpublications/mosquito%20_strategy.pdf

10) "We have good reason to suspect that spraying will increase mosquito populations and that the **increased populations will have a higher proportion carrying WNV and be more pesticide resistant. Simultaneously, spraying could make humans both more likely to catch a mild version of WNV and transform if from a mild flu to a serious encephalitis**. If someone asks, "What can we do to stop the spread of WNV" the answer should be that the most important preventive action is to stop spraying pesticides. Spraying to fight WNV is like trying to put out a fire by pouring gasoline on it." *Spraying Can Make West Nile Virus Worse*, Green Party of St. Louis, available at: http://www.greens.org/s-r/31/31-16.html

11) "The government, like the Standing Committee, makes the **protection of human health and the environment the absolute priority** for pest management decisions." Government Response to the Report of the House of Commons Standing Committee, *Pesticides: Making the Right Choice for the Protection of Health and the Environment*, p 3, available at http://www.hc-sc.gc.ca/pmra-arla/english/pdf/hlawns/hl-GovtResp-e.pdf

12) "Appropriate preventive measures are to be taken where there is reason to believe that a pesticide is likely to cause harm, even when there is no conclusive evidence to prove a causal relation between the pesticide and its effects. *Pesticides: Making the Right Choice For the Protection of Health and the Environment*, Standing Committee on Environment and Sustainable Development, May 2000, p13, available on the Parliamentary Internet at: www.parl.gc.ca