

# **Controversy Surrounding *The Environment Amendment Act*: Balancing the Risk of West Nile Virus Over Malathion Fogging**

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My wife and I get sick when the pesticide trucks come around every year. We don't need to hear when our area is being fogged—we can feel it in our legs, a dull ache that tells us the poison truck has come. We have tried to get our house taken off the list, and the city has duly recorded our name and address, but it has no effect. The guys on the truck just spray everything, including people's vegetable gardens. Once my wife saw them spray our house and ran outside to tell them we were supposed to be missed. The guy on the truck noticed her, turned around... and sprayed her with the fog.... Another night we saw them playing with the neighbour's dog, who likes chasing water hoses and figured, somewhere in his tiny dog brain, that he was playing the same game. He cheerfully chased the spray around his dog pad, his muzzle dripping with malathion. The truck had stopped so that the sprayer could play this game for a minute or two. We never bothered to complain, figuring that if they weren't going to respect our wish to be bypassed, they weren't going to investigate our complaint. It's our word against theirs.<sup>1</sup>

## **I. INTRODUCTION**

Winnipeg is known as the mosquito capital of Canada and “in the summer of 2001, West Nile Virus was recognized as an emerging public health threat”.<sup>2</sup> As a result, provincial and civic officials pumped millions of dollars into fighting the bugs by helicopter and on foot. In 2002, the Manitoba government passed changes to the *Environment Act* through Bill 10, which became *The Environment Amendment Act*. This *Act* allows the Minister of Health to declare an imminent health emergency, subsequent to which, the Minister of Conservation would order cities to fog with adulticides containing malathion.<sup>3</sup> In cases where mosquitoes present a health

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<sup>1</sup> Interview of Mike Bodner, Wolseley resident (10 May 2004).

<sup>2</sup> Interview of Rob Altemeyer, NDP MLA Wolseley (2 December 2003).

<sup>3</sup> *Ibid.*

emergency, Minister Chomiak can call municipalities to spray both public and private areas in order to lower mosquito populations and thereby prevent the transmission of West Nile. Prior to the *Act*, citizens could register their properties and be exempt from spraying.<sup>4</sup> Citizens however, are no longer able to opt-out of spraying programs, and under the *Act*, city workers can trespass on any private property without a warrant.<sup>5</sup>

## II. BALANCING RISKS OF WEST NILE VIRUS OVER THE INDEFINITE AFFECTS OF MALATHION

*The Environment Amendment Act* was passed with little opposition;<sup>6</sup> however, the enforcement of the *Act* has stirred concern and resistance among some environmentalists and residents of Wolseley.<sup>7</sup> Opponents of malathion fogging assert that the adverse health affects of malathion outweigh the risk and severity of contracting West Nile Virus. Unfortunately, the effects of spraying were never canvassed in the development and passage of Bill 10. Given the complete absence of any consideration into the health risks associated with malathion spraying, legislature's approval of *The Environment Amendment Act* is contentious. The provincial government has been rather fortunate, because although pockets of citizens have raised a ruckus, thus far they have primarily confronted municipal workers and city council, yet have not directly challenged legislature or their MLAs.<sup>8</sup>

### A. Risk of Contracting West Nile Virus

Before delving into the crux of *The Environment Amendment Act*, it is important to understand that the *Act* was introduced amid an atmosphere of widespread apprehension of West Nile. The *Act* was pushed "through Parliament the summer that the West Nile Scare came

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<sup>4</sup> Green News, The Green Party of Manitoba "Greens say New Democrats in a Fog About Malathion" online: <<http://www.greenparty.mb.ca/news/news071602.html>>.

<sup>5</sup> Bill 10, *The Environment Amendment Act*, 3d Sess., 37<sup>th</sup> Leg., Manitoba 2002 (assented to 23 May 2002).

<sup>6</sup> Manitoba, Legislative Assembly, *Debates and Proceedings* [herein after *Hansard*], Vol. LII No. 14 (4 December 2001) at 485; Vol. LII No. 07 (21 November 2001) at 283-284; Vol. LII No. 24 (1 May 2002) at 956-957; Vol. LII No. 25 (2 May 2002) at 989-990; Vol. LII No. 25B (2 May 2002) at 1033-1034.

<sup>7</sup> Interview of Mike Bodner (10 May 2004).

<sup>8</sup> Interview of Rob Altemeyer, NDP MLA Wolseley (2 December 2003); Interview of Hon. Jon Gerrard, L MLA River Heights (5 April 2004).

to Winnipeg.”<sup>9</sup> Fearful unease proliferated like a plague through the province, propagated by the odd horror story and snowballed through ignorance. Although not a single human or animal case was confirmed in Manitoba prior to and during the inception of the *Act*, the impact of West Nile was unknown.<sup>10</sup> Minister Chomiak therefore made it clear that the government recognized the potential of West Nile to produce a health emergency and that he needed the capacity to respond in the event that such an emergency arose.<sup>11</sup>

Prior to the *Act* in 1999, West Nile had caused 62 cases of serious human illness including seven deaths in the New York City area.<sup>12</sup> The Virus was also discovered in Ontario in August of 2001.<sup>13</sup> It was only after the *Act* was assented to (23 May 2002), that West Nile was found in two dead wild crows in Manitoba (on 7 July and 12 July 2002).<sup>14</sup> Although the Canadian Medical Association reported the largest outbreak of West Nile ever recorded in 2002 whereby “more than 4 000 people in North America became ill after being infected with West Nile”, no human case had yet been confirmed in Manitoba in 2002 or 2003.<sup>15</sup> By July of 2003, 19 cases in birds were infected with West Nile in Manitoba.<sup>16</sup>

The public was well informed by the media that West Nile infection was transmitted through the bite of an infected mosquito.<sup>17</sup> However little was known about the transmission to animals or whether West Nile could be spread through other means and one’s likelihood of contracting the Virus.<sup>18</sup> In actuality, the chances of contracting West Nile Virus are

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<sup>9</sup> Interview of Mike Bodner, Wolseley resident (10 May 2004).

<sup>10</sup> *Hansard* Vol. LII No. 25 (2 May 2002) at 989-990.

<sup>11</sup> *Ibid.*

<sup>12</sup> Manitoba Government Legislative Electronic Publications, News Release “Proposal to Strengthen Legislation as a Precaution Against West Nile Virus” (4 December 2001), online: <<http://www.gov.mb.ca/chc/press/top/2001/12/2001-12-04-03.html>>; *Hansard* Vol. LII No. 25 (2 May 2002) at 989.

<sup>13</sup> CBC Manitoba, “Indepth: West Nile Virus, Timeline” (2005) online: <<http://www.cbc.ca/news/background/westnile/timeline.html>>.

<sup>14</sup> CBC Manitoba, News “Winnipeg’s Mosquito Population Plummet” (7 July, 2003), online: <<http://www.cbc.ca/stories/2003/07/06/mosquitoes030706>>.

<sup>15</sup> Canadian Medical Association, CMA.CA “West Nile Virus in Canada” (9 September 2003), online: <[http://www.cma.ca/index.cfm/ci\\_id/3303/la\\_id/1.htm](http://www.cma.ca/index.cfm/ci_id/3303/la_id/1.htm)>.

<sup>16</sup> CBC Manitoba, News, *supra* note 14.

<sup>17</sup> About two weeks after feeding on the blood of an infected bird, the mosquito becomes capable of passing the Virus to people and animals by biting them. See Canadian Medical Association, *supra* note 15.

<sup>18</sup> A total of 140 species of wild and domestic birds can be infected with West Nile including birds of the crow family (such as magpies, grey or blue jays and ravens) which are particularly vulnerable to West Nile, as well as mammals (like dogs, cats, horses, bears, mountain sheep and goats, mules, donkeys, cattle, and alpaca) which

extremely remote.<sup>19</sup> The risk is insignificant because it is extremely rare for a person to be bitten by a Virus-infected mosquito. According to Dr. Susan Robereckik, deputy chief medical officer of health for Manitoba, “as few as one per cent of mosquitoes can carry West Nile.”<sup>20</sup> In addition, once bitten by a carrying mosquito, an individual’s chance of becoming sick is also extremely low.<sup>21</sup> If an individual is bitten by one of these mosquitoes, most will show slight symptoms or no symptoms.<sup>22</sup> Only about 1 in 200 will feel mild flu-like symptoms<sup>23</sup> (such as fever, headache, body aches and sometimes a rash).<sup>24</sup> Meanwhile 1 in 2 000 will feel sick enough to see a doctor<sup>25</sup> (after experiencing fever, aches or other flu-like symptoms to varying degrees but will recover quickly).<sup>26</sup> In exceptionally rare cases, the Virus can cause encephalitis, an inflammation of the brain that may lead to death;<sup>27</sup> but only 1 in 20 000 are this severe.<sup>28</sup>

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are far less susceptible. See Canadian Medical Association, *supra* note 15. There is no evidence that West Nile Virus can be spread from birds to humans or animals, nor is there evidence that it is spread from person to person contact. See Canada Medical Association, CMA.CA “West Nile Virus (WNV) in Canada” (16 November 2003), online: <[http://www.cma.ca/index.cfm/ci\\_id/3256/la\\_id/1.htm](http://www.cma.ca/index.cfm/ci_id/3256/la_id/1.htm)>. People can, however, be infected by blood transfusions and organ or tissue transplants, and pregnant women can pass the virus to their unborn babies or through breast milk. In addition, laboratory workers who handle infected specimens can get the virus through needle punctures or cuts. See Canadian Medical Association, *supra* note 15.

<sup>19</sup> CBC Manitoba, *supra* note 14.

<sup>20</sup> Manitoba Government Legislative Electronic Publications, News Release “Manitoba Government Unveils West Nile Virus Strategy” (23 April 2003), online: <<http://www.gov.mb.ca/chc/press/top/2003/04/2003-04-23-01.html>>.

<sup>21</sup> CBC Manitoba, *supra* note 13.

<sup>22</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

<sup>23</sup> *Ibid.*

<sup>24</sup> Municipal Suppliers, The Municipal Information Network “Aducticiding for Mosquitoes Ordered for the Towns of Virden and Deloraine” (2003), online: <[http://www.municipalsuppliers.com/news\\_detail.asp?ID=9531](http://www.municipalsuppliers.com/news_detail.asp?ID=9531)>.

<sup>25</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

<sup>26</sup> Municipal Suppliers, *supra* note 24.

<sup>27</sup> *Ibid.*

<sup>28</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

## **B. Emotive Public Fear of West Nile Virus**

Despite the diminutive chances of contracting West Nile Virus and the low risk of the virus causing any substantial harm, the West Nile Virus was characterized in the 2001 Speech from the Throne as a “public health emergency” which mandated more effective “mosquito control measures.”<sup>29</sup> Numerous factors perpetuate public fear of West Nile. Firstly, the Virus is fairly new in North America and the name sounds somewhat foreign and strange.<sup>30</sup> Secondly, the only current treatment for the disease is through supportive programs (such as hospital stays); so there is no medication or anti-viral drugs for West Nile.<sup>31</sup> Thirdly, in the most severe cases the Virus can cause paralysis, encephalitis (an inflammation of the brain), permanent neurological effects, tremors, convulsions, coma and even death.<sup>32</sup> Fourthly, these bizarre and tragic consequences come from mosquito bites – which are quite common, daily occurrences that are fairly inevitable in summer months. Fifthly, one’s chance of contracting West Nile is directly proportionate to his or her exposure to mosquitoes. Thus, all citizens are at some risk in the summer and there is no way to anticipate or predict who will contract West Nile. Finally, public fears are also fuelled by extensive media coverage that skews the risks and consequences of West Nile. Media sources tend to focus on a few sensational and horrific cases of West Nile rather than on the frequency of minor cases. The glut of media coverage on West Nile far outweighed the coverage of health risks to pesticide spraying. Correspondingly, public fear of West Nile

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<sup>29</sup> *Hansard* Vol. LII No. 01 (13 November 2001) at 6.

<sup>30</sup> West Nile Virus was named after the West Nile region of Uganda where it was first discovered in 1937. See Canadian Medical Association, *supra* note 15.

<sup>31</sup> “No vaccine, specific treatment, medication or cure for West Nile Virus” currently exists. See Canadian Medical Association, *supra* note 15. Work on a vaccine for West Nile is being conducted in the United State. Acambis, a biotechnology firm located in Massachusetts has been testing a West Nile vaccine on monkeys. It will likely take a year for the vaccine to be tested on humans in clinical trials for approval and then another four to five years before the vaccine is readily available. See Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

<sup>32</sup> Such severe cases of West Nile are most likely to occur among people with weakened immune systems, in people 50 years and older and in children. See CBC Manitoba, *supra* note 13. These individuals (with compromised immune systems) may experience more serious health problems, including meningitis and encephalitis. Typically they experience symptoms such as a “rapid onset of severe headache, high fever, stiff neck, nausea, difficulty swallowing, vomiting, drowsiness, confusion, loss of consciousness, lack of coordination, muscle weakness, paralysis, movement disorders, parkinsonism, poliomyelitis-like syndrome and muscle degeneration”. See Canadian Medical Association, *supra* note 15.

overshadowed the concerns of a few on the fairly unspecified health affects of malathion fogging.

### C. What is Malathion?

Malathion is one of the most controversial insecticides used to control mosquito populations.<sup>33</sup> It is an organophosphate insecticide that has been registered for use in Canada since the 1950s.<sup>34</sup> Winnipeg has sprayed malathion in ultra low volume doses to control mosquito populations for decades.<sup>35</sup> Opponents to malathion spraying assert that if it were dispersed in a gaseous state, it could be called a “nerve gas,” but it is dispersed as an atomized liquid, “therefore it should more accurately be called a “nerve fog.”<sup>36</sup> The use of strong and emotive words skews the reality that malathion is really applied in a very fine ultra-low-volume spray.<sup>37</sup> Meanwhile opponents to spraying argue that the government sugar-coats the spraying of malathion by using phrases that sound more technical and sterile such as “control insect populations” or “avoid health emergency” to coat the mosquito-genocide.<sup>38</sup> They also claim that mosquitoes are a natural part of the Manitoban ecosystem and spraying cities with malathion puts many other species at risk.

Malathion is a “non-specific agent,” meaning it not only effects target species but also can kill things other than mosquitoes.<sup>39</sup> In both Canada and the United States, malathion is registered for residential uses to control for insects on lawns, gardens, and ornamental trees, shrubs and plants.<sup>40</sup> There is evidence that malathion affects the nervous system of all organisms that it comes in contact with, to varying degrees.<sup>41</sup>

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<sup>33</sup> A. Mulholland, CTV News / Bell Globemedia Inc., News “Debate Continues on Safety of Mosquito Control” (2003), online: <[http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/1051578201577\\_179?s\\_name](http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/1051578201577_179?s_name)>.

<sup>34</sup> B. Nosal & R. Pellizzari, CMAJ “West Nile Virus” (6 May 2003), online: Canadian Medical Association Journal <<http://www.cmaj.ca/cgi/content/full/168/11/1443?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&fulltext=West+Nile+Virus%94+Bob+Nosal%2C+Rosana+Pellizzari&andorexactfulltext=and&searchid=1&FIRSTINDEX=0&sortspec=relevance&resourcetype=HWCIT>>.

<sup>35</sup> A. Mulholland, CTV News / Bell Globemedia Inc., News, *supra* note 33.

<sup>36</sup> Malathion Web Page “Malathion and Pesticide Information” (2002), online: <<http://www.members.shaw.ca/nomalathionplease/info.htm>>.

<sup>37</sup> B. Nosal & R. Pellizzari, CMAJ, *supra* note 34.

<sup>38</sup> Malathion Web Page, *supra* note 36.

<sup>39</sup> *Ibid.*

<sup>40</sup> B. Nosal & R. Pellizzari, CMAJ, *supra* note 34.

<sup>41</sup> Malathion Web Page, *supra* note 36.

Malathion is toxic to all insects, including those considered beneficial to humans, such as ladybugs, honeybees, dragonflies, moths, butterflies, spiders, and countless others.<sup>42</sup> According to Health Canada, “malathion is also highly toxic to fish, aquatic insects, frogs and other amphibians”.<sup>43</sup> However Health Canada also maintains that since mosquito programs are typically carried out at night or early morning, the impact on honeybees and other insects is minimal.<sup>44</sup>

#### **D. Effects of Malathion on Humans and the Effectiveness of Spraying**

A broad divergence of views on the health affects of malathion and effectiveness of fogging exists. Supporters of fogging point to studies that find little or no risk associated with the chemical. For example, the Westchester County Board of Health in New York did a “comprehensive literature review, risk assessment, and epidemiological and attributable risk analysis of adulticides”, including malathion, and concluded that “no significant adverse human health effects would be expected from adulticides” used for mosquito control.<sup>45</sup> The Board concluded that malathion could cause short-term and fairly insignificant effects to some sensitive individuals like skin irritation or respiratory effects.<sup>46</sup> Similar conclusions were reached by the US Environmental Protection Agency (PMRA), which conducted extensive evaluations of malathion in 2000 and approved its use as an adulticide.<sup>47</sup> Other studies on malathion have found little or no human health effect.<sup>48</sup>

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<sup>42</sup> A. Mulholland, CTV News / Bell Globemedia Inc., News, *supra* note 33.

<sup>43</sup> *Ibid.*; Malathion Web Page, *supra* note 36; Green News, The Green Party of Manitoba, *supra* note 4.

<sup>44</sup> A. Mulholland, CTV News / Bell Globemedia Inc., News, *supra* note 33.

<sup>45</sup> Westchester County Board of Health “Environmental review for the Comprehensive Mosquito-Borne Disease Surveillance and control Plan” (2003), online: <[http://www.westchestergov.com/health/PDF/ComprehensiveMosquito-bornePlan\(Final\\_Mar08\).pdf](http://www.westchestergov.com/health/PDF/ComprehensiveMosquito-bornePlan(Final_Mar08).pdf)>

<sup>46</sup> *Ibid.*

<sup>47</sup> US Environmental Protection Agency “Organophosphate Pesticide Information: Overview of Malathion Risk Assessment 2000” (2000), online: <<http://www.epa.gov/pesticides/op/malathion/overview.htm>>; US Department of Health and Human Services, Public Health Service “Agency for Toxic Substances and Disease Registry: Toxicological profile for malathion – draft for public comment” (5 Aug 2002), online: <[www.atsdr.cdc.gov/toxprofiles/tp154.html](http://www.atsdr.cdc.gov/toxprofiles/tp154.html)>.

<sup>48</sup> E. Kahn, M. Berlin, M. Deane, R.J. Jackson, & J.W. Stratton. “Assessment of Acute Health Effects from the Medfly Eradication Project in Santa Clara County, California” (1992) at 279-84; Ottawa, Health Canada “Fact sheet on the use of

Every pesticide in Canada must pass a “science-based assessment by Health Canada’s Pest Management Regulatory Agency (PMRA)”, and malathion was approved by the PMRA (part of Health Canada) as a reasonably safe adulticide.<sup>49</sup> Chris Krepski, spokesman for the PMRA, alleged that malathion is safe if used according to instructions and safe in small doses.<sup>50</sup> Since extremely low concentrations of malathion are used in mosquito control, Krepski asserted that malathion has “a good record of safe use.”<sup>51</sup> Margaret Fast of the Winnipeg Regional Health Authority reviewed the literature extensively and concluded that there was “nothing that shows malathion is a health risk to citizens.”<sup>52</sup>

Despite these findings, many parents and health care professionals are concerned about the dangers of chemical pesticides, especially when children are exposed. Those opposed to malathion spraying say “they simply want to protect their children from harm caused by pesticides.”<sup>53</sup> Critics of malathion doubt its effectiveness and question its impact on human health and the environment. Manitoba’s Green Party maintains that, “malathion fogging can be hazardous to human health.”<sup>54</sup> The Party points to studies that implicate malathion in “human developmental disorders, reproductive problems, digestive problems, damage to the neurological system, disruption of the endocrine system, and cancer.”<sup>55</sup> Studies of health effects associated with chronic, low-level exposure to chemical pesticides point to risks that include birth defects, intestinal disorders, and kidney problems,<sup>56</sup> as well as “respiratory disease (such as asthma), immune system disorders, endocrine disruption, developmental disorders, cancer, gastrointestinal problems, neurological effects, and endocrine disruption associated with malathion.”<sup>57</sup> The Environmental Protection Agency asserts that in humans, malathion can “over-stimulate the nervous system causing nausea, dizziness, confusion, and at very high exposures (such as

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malathion in mosquito control programs” (2003) online: <[www.hc-sc.gc.ca/pmra-arla/english/pdf/fact/fs\\_malathion-e.pdf](http://www.hc-sc.gc.ca/pmra-arla/english/pdf/fact/fs_malathion-e.pdf)>.

<sup>49</sup> B. Nosal & R. Pellizzari, CMAJ, *supra* note 34.

<sup>50</sup> A. Mulholland, CTV News / Bell Globemedia Inc., News, *supra* note 33.

<sup>51</sup> A. Mulholland, CTV News / Bell Globemedia Inc., News, *supra* note 33.

<sup>52</sup> CTV News Staff, CTV News, Bell Globemedia Inc., News “Mosquito Fogging Stirring Controversy in Winnipeg” (2003).

<sup>53</sup> Malathion Web Page, *supra* note 36.

<sup>54</sup> *Ibid.*

<sup>55</sup> A. Mulholland, CTV News / Bell Globemedia Inc., News, *supra* note 33.

<sup>56</sup> CBC Manitoba, *supra* note 13.

<sup>57</sup> Malathion Web Page, *supra* note 36.

accidents or major spills), respiratory paralysis and death.”<sup>58</sup> The EPA, however, also maintains that malathion is still considered “safe in both Canada and the United States for low-level applications in residential areas.”<sup>59</sup>

Although the potential health effects of malathion fogging are contentious, opponents to spraying argue that spraying does little to lower mosquito numbers and therefore has an insignificant impact on the likelihood of contacting West Nile Virus. Spokesman for Ontario’s Ministry of Health, John Letherby, claims that, “the best estimate they have is that spraying with malathion is only 25 per cent effective.”<sup>60</sup> In addition, malathion is quite transient in that it disintegrates rapidly in the environment. So without repeated applications, “mosquito numbers return to pre-treatment levels within a few days.”<sup>61</sup> Conversely, Winnipeg’s entomologist Randy Gadawski insists that the effectiveness rates are actually much higher than 25 per cent.<sup>62</sup> He claims that scientific evidence is on his side and it proves that malathion is the best way to combat mosquitoes.<sup>63</sup> Given the clash of information on the long-term effects of pesticides and effectiveness of spraying, malathion opponents assert that the government should not guarantee its safety or support its use, especially since it can affect the health of children, pets, elderly people, and people with breathing difficulties and those with weakened immune systems.

### **III. THE ENVIRONMENT AMENDMENT ACT**

The legislative assembly approved *The Environment Amendment Act* on 22 May 2002.<sup>64</sup> As mentioned, the *Act* gives the province authority to proactively respond to a presence of West Nile in Manitoba without waiting for a declaration under *The Emergency Measures Act*.<sup>65</sup> The Health Minister can order municipalities to spray all neighbourhoods

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<sup>58</sup> CBC Manitoba, *supra* note 13.

<sup>59</sup> *Ibid.*

<sup>60</sup> J. Prittie & J. McConvey “Vile West Nile” (20 March 2003).

<sup>61</sup> B. Nosal & R. Pellizzari, CMAJ, *supra* note 34.

<sup>62</sup> J. Prittie & J. McConvey, *supra* note 60.

<sup>63</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

<sup>64</sup> Green News, The Green Party of Manitoba, *supra* note 4; *Hansard* Vol. LII No. 36B (22 May 2002) at 1734.

<sup>65</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 12.

with chemical fog containing malathion that kills mosquitoes.<sup>66</sup> Thus, at Minister Chomiak's discretion, city crews are required to drive down all streets and spray all land and standing water where mosquitoes breed.<sup>67</sup>

### **A. How Bill 10 Became Law: Genesis and the Legislative Process**

The momentum behind Bill 10 came primarily from the NDP (governing) party. Clearly the primary purpose of the *Act* was to reduce the potential impact of the West Nile Virus by giving the province and municipalities greater rights of entry to spray adulticides over urban areas.<sup>68</sup> Minister Chomiak proposed the measures to “ensure an effective co-ordinated response for mosquito control measures in the event of a West Nile Virus health emergency.”<sup>69</sup> Likewise, Premier Gary Doer stated that the primary goal was to reduce mosquitoes in the capital region and other urban areas.<sup>70</sup> Bill 10 was first mentioned briefly in the speech from the throne and like most other bills, passed through the notice, introduction, and first reading without any opposition.<sup>71</sup> In the second reading of Bill 10, Minister Chomiak stated emphatically and repeatedly that no case of West Nile had yet been

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<sup>66</sup> Bill 10, *The Environment Amendment Act*, *supra* note 5.

<sup>67</sup> Adulticiding is one component of a 5-Part strategy implemented by the province to combat West Nile Virus. In July of 2002, Chomiak introduced a five-point plan for dealing with the West Nile Virus and there are five regional response teams that each deal with a different aspect of the plan. See Municipal Suppliers, The Municipal Information Network, *supra* note 24. The five-part plan includes the amendment along with a surveillance program, a public education program, the fogging campaign and Canada-wide cooperation. See Manitoba Government Legislative Electronic Publications, News Release “Province to Work With Municipalities on Mosquito Control” (15 July 2002), online: <<http://www.gov.mb.ca/chc/press/top/2002/07/2002-07-15-02.html>>. Chomiak stated that the strategy was to promote “a rational and consistent approach throughout the province, and is predicated upon public health approaches for any emergency disease”. See Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20. The ongoing residential fogging campaigns in Winnipeg (expanded by ministerial order under the amendment), is the only controversial aspect of the five-part program.

<sup>68</sup> *Hansard*, Vol. LII No. 25 (2 May 2002) at 990.

<sup>69</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* 12.

<sup>70</sup> Manitoba Government Legislative Electronic Publications, News Release “Expanded Mosquito Control Plan Announced for Winnipeg” (23 April 2002), Available: Information Services, Room 29, Legislative Building, Winnipeg, MB R3C 0V8.

<sup>71</sup> *Hansard*, Vol. LII No. 14 (4 December 2001) at 485; Interview of Hon. Jon Gerrard, L MLA River Heights (5 April 2004).

confirmed in Manitoba.<sup>72</sup> Nonetheless, he asked for a “speedy passage” of the amendment since there was a “high probability that some occurrence” would appear in “the mosquito population and the bird population.”<sup>73</sup> Bill 10 was accepted in the second reading without any debate and was moved to the committee stage.<sup>74</sup>

## **B. The Committee Stage and Legislative Debates**

The committee stage is generally quite important because it provides an opportunity for members of the public to have direct input into the creation of the law through oral or written submissions. In addition, the committee comprises Members selected from each Party, so both the sponsor and opposition critics can voice their support, concerns, and critical assessments on the bill. According to Liberal leader Hon. Jon Gerrard, “the most effective way to get increased attention to a bill is to have significant public participation at committee stage.”<sup>75</sup> Unfortunately, none of the eleven MLAs present on the Committee on Law Amendments mentioned the potential health risk associated with spraying malathion.<sup>76</sup> In addition, according to Dr. Gerrard, “there were no citizens who came forward to present at the committee stage on Bill 10 to voice concerns about the potential for adverse health effects of malathion, or about the potential for this legislation to be too invasive in allowing the provincial government to mandate the use of malathion without adequately balancing the health effects of the malathion and the health risks do to problems like West Nile Virus.”<sup>77</sup>

Glen Cummings (MLA St. Rose) suggested that the amendment could be a case whereby the government was taking “too much power, authoritarian power or arbitrary power, into their hands in order to accomplish something that maybe they can already do.”<sup>78</sup> Minister Chomiak however, clearly emphasized that the amendment ensured adequate protection against a potential health emergency and was not an overreaction.<sup>79</sup> The committee canvassed sections 25(11) and 25(12)

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<sup>72</sup> *Hansard*, Vol. LII No. 25 (2 May 2002) at 989-990.

<sup>73</sup> *Ibid.* at 989-990.

<sup>74</sup> *Hansard*, Vol. LII No. 25B (2 May 2002) at 1033-1034.

<sup>75</sup> Interview of Hon. Jon Gerrard, L MLA River Heights (5 April 2004).

<sup>76</sup> Manitoba, Legislative Assembly of Manitoba, *The Standing Committee on Law Amendments*, 37<sup>th</sup> Leg., (8 May 2002) at 44-49.

<sup>77</sup> Interview of Hon. Jon Gerrard, L MLA River Heights (5 April 2004); *Ibid.*

<sup>78</sup> Manitoba, Legislative Assembly of Manitoba, *The Standing Committee on Law Amendments*, 37<sup>th</sup> Leg., (8 May 2002) at 44 (Mr. Glen Cummings).

<sup>79</sup> Manitoba, Legislative Assembly of Manitoba, *The Standing Committee on Law Amendments*, 37<sup>th</sup> Leg., (8 May 2002) at 45 (Honorable Dave Chomiak).

of the *Act*, which enable the province to reimburse municipalities for spraying costs and gives the province discretion to compensate people for damage to real and personal property.<sup>80</sup> Yet the overall discussion was succinct and neglected any mention of malathion. Hon. Jon Gerrard suggested that the inadequate assessment of possible harmful effects of spraying was partially due to the bill being introduced in an atmosphere of uncertainty (whereby the bill came in shortly after the September 11 catastrophe and the potential for human illness from West Nile Virus was fairly indefinite).<sup>81</sup> Each clause was passed without any interruption of a comment, question or amendment and thus the committee's clause-by-clause consideration of the bill was extremely brief.<sup>82</sup> After the committee stage, the bill slid through concurrency and the third reading again without any mention of the use of malathion, and according to Dr. Gerrard the amendment was passed with a group of other bills and acts in a rather inconspicuous and covert way.<sup>83</sup>

One MLA, Jack Reimer, thought that the Minister of Health was overloaded with work and suggested that the additional responsibilities should be dealt with a minister who was less burdened such as the minister of highways. He also voiced a concern that a rural minister should handle the implementation of the *Act* rather than an urban minister.<sup>84</sup> His concerns however were ultimately disregarded, leaving the Health Minister with total discretion over when municipalities would be sprayed.

MLA Gerald Hawranik contended that the *Act* was a covert "downloading of costs onto municipalities."<sup>85</sup> Hawranik's speculation was exact since under the *Act* the Minister can essentially force municipalities to spray or else penalize them with a fine.<sup>86</sup> For example, s. 25.1(10) states that "any municipality that fails to comply with the health minister's orders may be required to pay the amount of any expenditures made by the government."<sup>87</sup> In addition, the amendment allows but does not mandate that cities receive full or partial

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<sup>80</sup> Manitoba, Legislative Assembly of Manitoba, *The Standing Committee on Law Amendments*, 37<sup>th</sup> Leg., (8 May 2002) at 47 (Mr. Gerald Hawranik).

<sup>81</sup> Interview of Hon. Jon Gerrard, L MLA River Heights (5 April 2004).

<sup>82</sup> Manitoba, Legislative Assembly of Manitoba, *The Standing Committee on Law Amendments*, 37<sup>th</sup> Leg., (8 May 2002) at 49 (Madame Chairperson, Ms. Bonnie Korzeniowski).

<sup>83</sup> Interview of Hon. Jon Gerrard, L MLA River Heights (15 November 2003).

<sup>84</sup> *Hansard*, Vol. LII No. 07 (21 November 2001) at 283-284.

<sup>85</sup> *Hansard*, Vol. LII No. 33A (16 May 2002) at 1547.

<sup>86</sup> Bill 10, *The Environment Amendment Act*, *supra* note 5.

<sup>87</sup> *Ibid.*

reimbursement from the province for expenditures.<sup>88</sup> City representatives failed to attend the committee stage, consult with MLAs, or challenge the offloading of services onto municipalities. Municipal governments therefore bore the costs of spraying plus shouldered the lion's share of vocal opposition to spraying. Fortunately for the City, the Province has kicked in hefty annual reimbursements.<sup>89</sup>

### **C. No More Buffer Zones**

Prior to the amendment, since the 1970s, Winnipeg residents could request crews not to spray within 100 metres of their property.<sup>90</sup> Mosquito-fogging permits issued to the City of Winnipeg contained the condition that citizens could register in opposition to the program to prevent chemicals from being sprayed near their properties.<sup>91</sup> Citizens who registered to opt out of the program were entitled to a 100-metre buffer to both sides of their front street and back lane.<sup>92</sup> Every summer, hundreds of Winnipeggers wrote the city's Insect Control Branch to request exemption from city spraying.<sup>93</sup> In some places, entire blocks were "fog free" zones. For example, in Wolseley enough residents registered in opposition that the entire neighbourhood was left out of the insect control program for several years.<sup>94</sup> At times neighbouring residents were even annoyed when individuals opted out of mosquito spraying because they felt that fogging provided relief from pesky mosquitoes.<sup>95</sup> Now, however *The Environment Amendment Act* gives the province authority to require city spraying even when homeowners

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<sup>88</sup> *Ibid.*

<sup>89</sup> Residential fogging with malathion is extremely expensive; citywide coverage costs approximately \$75,000. Fogging in 2001 took place 3 times, in 2002, it took place twice, and in 2003 it began in April and continued to early September. See City of Winnipeg, 2002 News Releases "Rising Waters Drive Up Mosquito Count" (19 August, 2003); Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20. In 2003, the provinces provided \$5.8 million to address the West Nile Virus an implemented a strategy that included surveillance, source reduction, an education campaign stressing personal protection, and insect control. Of the \$5.8 million, \$2.2 million went to a provincial co-ordination office, regional response teams, and the surveillance, public education and lab components. The other \$3.6 million was paid by the province and city (75 per cent and 25 per cent respectively) to cover larviciding and adultciding. See Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

<sup>90</sup> Manitoba Government Legislative Electronic Publications, News Release, *Ibid.*

<sup>91</sup> CBC Manitoba, *supra* note 13.

<sup>92</sup> Green News, The Green Party of Manitoba, *supra* note 4.

<sup>93</sup> Malathion Web Page, *supra* note 36.

<sup>94</sup> *Ibid.*

<sup>95</sup> *Ibid.*

are opposed. City spraying crews can no longer maintain any spray-free buffer zones around homes; rather, under the *Act*, entire municipalities must be fogged to kill as many mosquitoes as possible. In addition, under s. 25.1(7) of the *Act*, municipal workers may enter, pass over or through any land to spray.<sup>96</sup> In sum, Winnipeg residents have no alternative means to avoid having their properties fogged with malathion.

#### **D. Support for the Bill 10**

Mayor Glen Murray was actually quite pleased that the premier and province led the way by creating the amendment and initiating partnership with Winnipeg and surrounding municipalities.<sup>97</sup> Murray said that the amendment would “mean more enjoyable summers for everyone living in and visiting the city.”<sup>98</sup> Winnipeg City Councillor Jenny Gerbasi stated that the partnership of the province and cities ensures a “proactive and comprehensive response to the threat of the West Nile Virus” that integrates “additional environmentally sensitive approaches in its plan.”<sup>99</sup> Dave Chomiak stated, “good prevention is good public policy” and the amendment is part of a strategy to give the province “a leg up in not only dealing with West Nile Virus... but with other public health threats that confront the province.”<sup>100</sup> Chomiak viewed the amendment as a reasonable step to protect the health of Manitobans.<sup>101</sup> Premier Doer stated that his party was “proud” of the “successful partnership with municipalities and Winnipeg to reduce mosquito populations.”<sup>102</sup> He asserted that larviciding was a “preventative solution” that was “more environmentally sustainable”; however, he did not directly comment on adulticiding.<sup>103</sup> Whether the amendment outweighs the negative health effects of malathion fogging (plus the invasiveness of spraying on private property) is contested in other circles.

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<sup>96</sup> Bill 10, *The Environment Amendment Act*, *supra* note 5.

<sup>97</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 12.

<sup>98</sup> *Ibid.*

<sup>99</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

<sup>100</sup> *Ibid.*

<sup>101</sup> *Ibid.*

<sup>102</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 70.

<sup>103</sup> *Ibid.*

#### **IV. CONTROVERSY ARISING FROM IMPLEMENTATION**

Numerous citizens, particularly residents of Wolseley, are opposed to fogging and claim that the amendment infringes on their rights. According to Wolseley MLA Rob Altemeyer, “only in the Wolseley neighbourhood are mosquitoes an issue, and even there the views and opinions on this are a long way from universal – some are opposed to spraying, some are in favour.”<sup>104</sup> Altemeyer suggests that residents in his riding are very politically active and “in the Wolseley neighbourhood in particular there is also a strong environmental ethic that goes back many years.”<sup>105</sup> According to environmentalist Dan Moroz, the community has become “ground zero” for the city’s growing controversy over fogging.<sup>106</sup>

##### **A. Opposition to Fogging**

In 2003 residents in Wolseley started a public-awareness campaign. Citizens also formed a coalition in opposition to the spraying of chemical pesticides like malathion.<sup>107</sup> They claimed that malathion is harmful to their health and the health of their children and pets and that fogging without consent is invasive and intrusive. They pointed to evidence where malathion use increased the risk for immune disorders and respiratory disease<sup>108</sup> and demanded “an immediate end to mosquito fogging in the city”...saying they preferred to take their chances with the West Nile Virus and “avoid exposure” to malathion.<sup>109</sup> John Powel, a resident in Wolseley, stated that the “residents have a right to protest against the fogging.”<sup>110</sup> The community however, was still fogged in 2002 and in 2003 in keeping with permits issued under *The Environment Amendment Act*.<sup>111</sup>

Opponents to spraying malathion claimed that spraying malathion to control mosquito populations is ineffective, expensive and hazardous. Ian Greaves of the Campaign for Pesticide Reduction claims that the

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<sup>104</sup> Interview of Rob Altemeyer, NDP MLA Wolseley (2 December 2003).

<sup>105</sup> *Ibid.*

<sup>106</sup> J. Prittie & J. McConvey, *supra* note 60.

<sup>107</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

<sup>108</sup> *Ibid.*

<sup>109</sup> CTV News Staff, CTV News / Bell Globemedia Inc., News, *supra* note 52.

<sup>110</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

<sup>111</sup> City of Winnipeg, 2002 News Releases “Mosquito Fogging Continues Under Provincial Order” (2002), online: <[http://www.winnipeg.ca/cao/media/news/nr\\_2002/nr\\_20020725.stm](http://www.winnipeg.ca/cao/media/news/nr_2002/nr_20020725.stm)>.

effects of fogging are more harmful than the threats of West Nile Virus.<sup>112</sup> According to scientist David Suzuki, “all pesticides are far too severe a method to combat mosquitoes,” which he argues pose little threat.<sup>113</sup> Some Winnipeg residents are opposed to fogging because they say that it gives them “headaches, itchy eyes, and even respiratory problems.”<sup>114</sup> In the past, some Winnipeg residents left their homes to stay with friends and relatives when their homes were sprayed and others discussed going to court to stop the expanded use of chemicals like malathion.<sup>115</sup> One citizen, Robin Faye, chose to pack up her family and move to Birds Hill Park campground to sleep for two weeks rather than her own home.<sup>116</sup> She perceived that sleeping in an area that was not fogged was much safer to her health.<sup>117</sup> “What I’ve been doing”, stated Faye, “is leaving at night and coming back in the morning – giving malathion a couple of hours to burn off.”<sup>118</sup>

### **B. Enforcement of the Act**

In Winnipeg, an alarming number of residents have been “doused directly by fogging trucks and helicopters.”<sup>119</sup> According to Dan Moroz, “people have been sprayed while walking their dogs at night.”<sup>120</sup> He knows an individual who was fogged twice one night in a back lane. Unfortunately for these residents, *The Environment Amendment Act* prevents any injunction from being laid “against the minister, a municipality or any person acting under the authority of an order” (s. 25.1(4)).<sup>121</sup> In cases where private property is damaged through the implementation of the *Act*, the *Act* provides that the government “may” compensate the individual (s. 25.1(12)), however compensation is completely discretionary.<sup>122</sup>

In 2002 and 2003, the Province of Manitoba’s Conservation Minister, Oscar Lathlin, issued a public health order that the City of Winnipeg fog

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<sup>112</sup> CTV News Staff, CTV News / Bell Globemedia Inc., News, *supra* note 52.

<sup>113</sup> A. Mulholland, CTV News / Bell Globemedia Inc., News, *supra* note 33.

<sup>114</sup> CTV News Staff, CTV News / Bell Globemedia Inc., News, *supra* note 52.

<sup>115</sup> *Ibid.*

<sup>116</sup> *Ibid.*

<sup>117</sup> *Ibid.*

<sup>118</sup> *Ibid.*

<sup>119</sup> J. Prittie & J. McConvey, *supra* note 60.

<sup>120</sup> *Ibid.*

<sup>121</sup> Bill 10, *The Environment Amendment Act*, *supra* note 5.

<sup>122</sup> *Ibid.*

all communities.<sup>123</sup> In the past, decisions to initiate fogging typically depended on mosquito counts in city traps.<sup>124</sup> However in Chomiak's initial proposal, he stated that, "action only be taken when a health emergency appears imminent or when a health emergency has been declared" and he emphasized at the committee stage that the *Act* was not an overreaction; rather it was "relatively narrow" and "the intent [was] very clear that a health emergency must exist."<sup>125</sup> Ironically, when Lathlin first ordered spraying in 2002, not a single case of West Nile had been detected in any human nor had any other threat arisen tantamount to an imminent health emergency. Initially the city proceeded to fog various communities that raised little objection and then proceeded to eventually fog all communities. Thus, under the *Act*, city-fogging crews sprayed every street, home, and yard even though no imminent health emergency existed.

### **C. Trouble in Wolseley**

When city crews proceeded to fog Wolseley in late July of 2002, numerous residents gathered on their lawns to wait for the crews and several residents parked their cars on streets (such as Alloway Avenue) to prevent the city's fogging trucks from spraying near their homes.<sup>126</sup> City officials maintained that the city would not back down despite the protests.<sup>127</sup> When one fogging truck tried to spray malathion on Home Street, a man on a bicycle wearing a gas mask blocked the truck from proceeding down the street.<sup>128</sup> A neighbour who was in favour of fogging then called police to the street.<sup>129</sup> Several police units arrived at the scene around one a.m. after a handful of people claimed the truck had gassed them.<sup>130</sup> The police ordered the truck to leave the area and offered one activist (who complained of illness) a trip to the hospital, yet no one was arrested.<sup>131</sup> The city called off the fogging for that evening.

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<sup>123</sup> City of Winnipeg, 2002 News Releases, *supra* note 111.

<sup>124</sup> City of Winnipeg, 2002 News Releases, *supra* note 89.

<sup>125</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 12; Manitoba, Legislative Assembly of Manitoba, *The Standing Committee on Law Amendments*, *supra* note 79.

<sup>126</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

<sup>127</sup> *Ibid.*

<sup>128</sup> *Ibid.*

<sup>129</sup> *Ibid.*

<sup>130</sup> *Ibid.*

<sup>131</sup> *Ibid.*

Unbeknownst to Wolseley residents, the city decided to resume fogging a few nights later and purposely concealed this plan. Wolseley was not listed on the city's schedule of neighbourhoods to be sprayed and residents were not prepared for the fogging.<sup>132</sup> Nonetheless, "residents in Wolseley were sprayed in the middle of the night without clear prior notice (so that some had their windows open at the time)."<sup>133</sup> Wolseley resident Marcus Rempel complained that the city's action in failing to warn citizens was illegal.<sup>134</sup> According to Rempel, the Insect Control Branch is required to give "24 hours notice before any neighbourhood is fogged."<sup>135</sup> Rempel also claimed that some "chemically sensitive residents of the neighbourhood had phoned" the city the previous evening to enquire and ensure that they would not be fogged and they were given assurance that there would be no spraying.<sup>136</sup> Numerous residents that had left their windows open that evening were disturbed that they had not been warned.<sup>137</sup> Rempel stated that he was surprised "that there were police escorts for the trucks" because in his opinion "the police helped the city to break the law."<sup>138</sup> The Winnipeg Police Department confirmed that they had monitored the fogging that occurred in Wolseley.<sup>139</sup>

On 16 July 2002, Manitoba's Green Party responded to the first use of the amendment by releasing a media report that condemned the NDP government. Green Party Leader, Markus Buchart, claimed that the amendment infringed on "Winnipeg citizens' right to a "no-fogging" buffer zone when malathion is sprayed in their neighbourhoods."<sup>140</sup> He also asserted that Chomiak's decision regarding spraying was tantamount to administering "a poison placebo to a healthy patient."<sup>141</sup> Buchart also contended that the government could not produce any study that proves that fogging is effective in reducing mosquito numbers under Manitoba conditions because no study exists.<sup>142</sup> Buchart also affirmed that "the Green Party sees the pesticide issue as a litmus paper

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<sup>132</sup> *Ibid.*

<sup>133</sup> Interview of Hon. Jon Gerrard, L MLA River Heights (5 April 2004)

<sup>134</sup> *Ibid.*

<sup>135</sup> *Ibid.*

<sup>136</sup> *Ibid.*

<sup>137</sup> *Ibid.*

<sup>138</sup> *Ibid.*

<sup>139</sup> *Ibid.*

<sup>140</sup> Green News, The Green Party of Manitoba, *supra* note 4.

<sup>141</sup> *Ibid.*

<sup>142</sup> *Ibid.*

test of whether a government cares about people's health and the environment, or not," and contended that "unfortunately, the New Democrats fail the test."<sup>143</sup> The Green Party claimed that the amendment was not really about public health, but about politics. Buchart argued that the New Democrats were capitalizing on public fears about the West Nile Virus.<sup>144</sup> He also alleged that Manitobans actually disagree with Chomiak that a health emergency is present because citizens do not cover up any more on summer evenings than usual.<sup>145</sup>

Buchart was not alone in opposing the implementation of the *Act*. Dr. Gerrard asserted that the "legislation was used in a way that was clearly suboptimal."<sup>146</sup> On 8 August 2002, Dr. Gerrard criticized the government's deliberate failure to provide normal, proper notice and act of sneaking into the community at night when numerous residents had left their windows open.<sup>147</sup> Dr. Gerrard also questioned the effectiveness of spraying in terms of risks and benefits since at the time, mosquito counts had decreased.<sup>148</sup>

Several other groups in Winnipeg demanded that the provincial government immediately suspend Winnipeg's mosquito fogging program.<sup>149</sup> On 13 March 2003, Winnipeg residents presented a petition to the Province of Manitoba asking for a public hearing before the City of Winnipeg was granted a spraying permit for 2003.<sup>150</sup> Homeowners were upset that they could no longer opt out of malathion fogging after the province instituted *The Environment Amendment Act*; nonetheless the *Act* was still implemented in both 2002 and 2003.

Manitoba Health Minister, Dave Chomiak, had no regrets about invoking the new powers (under the *Act*) to fog Wolseley.<sup>151</sup> Mayor Glen Murray also approved of the fogging and said that there was nothing underhanded about the approach.<sup>152</sup> Wolseley city councillor, Garth Steek, agreed that the spraying was appropriate, and that under the

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<sup>143</sup> *Ibid.*

<sup>144</sup> *Ibid.*

<sup>145</sup> *Ibid.*

<sup>146</sup> Gerrard, *supra* note 133.

<sup>147</sup> *Ibid.*

<sup>148</sup> *Ibid.*

<sup>149</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

<sup>150</sup> J. Prittie & J. McConvey, *supra* note 60.

<sup>151</sup> CTV News Staff, CTV News / Bell Globemedia Inc., News, *supra* note 52.

<sup>152</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

circumstances the city had no other choice because dissenters made fogging so difficult.<sup>153</sup> Glen Murray stated that, “the practice of providing 24 hours notice of which areas are to be fogged on any given night is not a requirement under provincial law.”<sup>154</sup> *The Environment Act* does require 48 hours notice before a fogging campaign begins.<sup>155</sup> The city claimed that proper notice was provided on 27 June, and since the surprise fogging of Wolseley did not occur until late July, the community had more than sufficient notice.<sup>156</sup>

#### **D. Who is Responsible, the Province or City?**

Stuart Murray (head of the Manitoba Progressive Conservative party) said that the protests in Wolseley made a mockery of the government and it was up to the province to put an end to the protests.<sup>157</sup> Murray also stated that “the minister of health would want you to believe the beef is with the city... but the minister of health is the one who issued the edict that we should spray the entire city – he’s the one who should follow it through”.<sup>158</sup> Lawyer John Stefaniuk disagreed and claimed that the responsibility lies not with the province but with the city, “because the city is responsible to see that fogging is completed.”<sup>159</sup> Health Minister Chomiak also placed the responsibility for spraying in the city’s hands because the province has already done its job in establishing the amendment, making the order and asking the city to implement the strategy.<sup>160</sup>

#### **V. CONCLUSION**

It is unclear exactly how effective the *Act* has been in reducing mosquito populations. A serious health emergency could have arisen had the government stood by and done absolutely nothing to reduce mosquito populations. Then again, prior to Bill 10, municipalities did fog extensively as well as enforce numerous other strategies to reduce mosquito populations. Since the only significant change created by the *Act* was the elimination of buffer zone registration, it is doubtful that the

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<sup>153</sup> *Ibid.*

<sup>154</sup> *Ibid.*

<sup>155</sup> Bill 10, *The Environment Amendment Act*, *supra* note 5.

<sup>156</sup> Manitoba Government Legislative Electronic Publications, News Release, *supra* note 20.

<sup>157</sup> *Ibid.*

<sup>158</sup> *Ibid.*

<sup>159</sup> *Ibid.*

<sup>160</sup> *Ibid.*

*Act* made any significant dent in reducing mosquito populations. Dr. Jon Gerrard adequately summed up the greater flaws in the creation and implementation of the *Act*:

In spite of numerous complaints of health problems associated with the spraying, there was no systematic research done to evaluate the extent of the health issue... it is an example of an *Act* that was pushed through without sufficient consideration because of the impending threat of West Nile Virus. It was not anticipated that the government would use it without a clearer assessment and clearer documentation of risks and benefits.... In hindsight, the *Act* should have clauses to require the government to provide a) documentation of its assessment of risks and benefits b) to provide follow-up independent research on risks and benefits and c) clear notification to residents of when and where spraying would occur.<sup>161</sup>

Those who oppose fogging could challenge the province to provide scientific evidence that the negative effects of fogging outweigh the remote risk of contracting West Nile.<sup>162</sup> If the government fails to respond to this challenge, it will be clear that they did not carefully balance their options. If implementation of the *Act* was more a reaction to widespread fears of West Nile than a careful balancing against the risks of malathion, then the *Act* is a waste of public funds. Opponents to fogging are still annoyed that their concerns have not been acknowledged or validated. Given the uncertainties surrounding malathion use, it would have been more appropriate for the government to carefully evaluate the consequences of implementing and enforcing the *Act*, then to disseminate their proposal to the public, and thereby embrace a greater public voice in their deliberations.

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<sup>161</sup> Gerrard, *supra* note 133.

<sup>162</sup> CBC Manitoba, News, *supra* note 14.

