

MANITOBA HEALTH

WEST NILE VIRUS PROGRAM 2011:

Planning Documents for Municipalities

III. Adult Mosquito Control Package

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The following package contains all applicable information and forms necessary for adult mosquito control under an Order, including:

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A. MOSQUITO ADULTICIDING UNDER AN ORDER

FREQUENTLY ASKED QUESTIONS:

What is the difference between adulticiding and larviciding?

Adulticiding is the application of pesticide to kill adult mosquitoes and may be applied either by ground based or aerial equipment. Larviciding is the application of pesticide to kill mosquito larvae before they become adult mosquitoes. In Manitoba, mosquito adulticides are applied as an Ultra-Low-Volume (ULV) spray where small amounts of insecticide are dispersed by truck-mounted equipment.

What is the difference between nuisance mosquito control and mosquito control under an Order?

In situations where a public health threat (specifically, a high risk of WNV transmission) is considered imminent, the Province may issue an Order for adult mosquito control. Adult mosquito control under an Order targets *Culex tarsalis* since this is the most important mosquito species for transmission of West Nile virus (WNV) to humans in Manitoba. Most other mosquito species in Manitoba do not carry the virus. Municipalities may choose to control any mosquito species at any time (nuisance mosquito control) in accordance with their Pesticide Permit (Appendix A). The Province is not involved in nuisance mosquito control.

How is the decision made to issue an Order for adult mosquito control in a municipality?

The Chief Provincial Public Health Officer or designate may advise the Minister of Health of the presence of an 'imminent' or existing health emergency. The main considerations for adulticiding under an Order include:

- Imminence of significant human risk based on surveillance and other data;
- Human population density;
- Weather conditions, including temperature, rain, and wind;
- Time of year; and
- Life-cycle of *Culex tarsalis* mosquitoes.

Subsequently, the Minister of Health may initiate a *Declaration of a Health Emergency*. Upon the Minister of Health's *Declaration* of an existing or imminent health emergency, the Minister of Conservation may issue an Order for adult mosquito control to a municipality(ies) outlining its terms.

What are the responsibilities of the municipality under an Order?

A municipality is required to carry out all requirements identified in the Order; the Province will work with municipalities on these requirements. Teleconferences between Manitoba Health, the Consulting WNV Entomologist, the municipality(ies) affected by the Order, and other relevant parties will be scheduled as soon as an Order is issued so that issues related to the implementation of the Order can be communicated and clarified.

One of the primary requirements for municipalities under an Order is to provide advance notice to the public at least 24 hours prior to the commencement of adulticiding. The

public notice must identify the pesticide products to be used in the program, as well as when the program will begin. Sample notices for media, public posting and for campgrounds appear on pages 7-9 of this document. Municipalities should notify residents of each subsequent spray event, if applicable.

Who will perform adulticiding under an Order within our municipality?

Municipalities can perform adulticiding under an Order themselves, provided that they have licensed and experienced staff to do this. If a municipality is unable to carry out its own adult mosquito control, Manitoba Health has contracts with the Cities of Winnipeg and Brandon to provide mosquito control under an Order in southern Manitoba. Manitoba Health will work with each municipality to ensure plans are in place to meet the conditions set forth in the Order.

Does the municipality require permission to access private property under an Order?

No, permission is not required to access private property under an Order for adult mosquito control.

Will adulticiding equipment be available for municipalities to use in the case of an Order?

Municipalities that are subject to an Order to undertake adult mosquito control may access certain types of equipment (including ULVs for adult mosquito control) from one of the Mosquito Control Centres in Winkler or Brandon, or from Winnipeg. Access requires trained staff with pesticide applicators' licenses and the required permits, and is dependent on scheduling needs.

What products are available for adult mosquito control under an Order?

In Canada, pesticides must be registered by the Pest Management Regulatory Agency (PMRA), a division of Health Canada. Malathion is the product used by Manitoba Health for adult mosquito control under an Order. Malathion has a long history of successful use for adult mosquito control in Manitoba using Ultra Low Volume foggers mounted on trucks. Other products are registered by the PMRA for adult mosquito control; for further information, see the PMRA web site at www.hc-sc.gc.ca/pmra-arla.

What if there are some individuals who are concerned about or oppose mosquito adulticiding under an Order?

Municipalities should keep an up-to-date list of residents who oppose the use of pesticides for adult mosquito control. Prior to adulticiding under an Order, municipalities should make an effort to provide individual notification to these residents at least 24 hours in advance of any spray operation.

Where can the public get information on adult mosquito control activities under an Order in Manitoba?

In the event of adult mosquito control under an Order, public notification in the area **must** occur at least 24 hours in advance of the program. This notification may occur by newspaper, radio, television and/or other public notification means.

Municipalities should also notify residents of each subsequent spray event, if applicable. Once an Order is issued, the public can obtain information on the schedule of mosquito control activities by:

- Contacting their municipality;
- Contacting Health Links/Info Santé at (204) 788-8200 or outside Winnipeg at 1-888-315-9257; or
- Visiting the Manitoba Health WNV website at www.manitoba.ca/health/wnv.

Under what conditions does adult mosquito control occur?

The general guidelines are as follows:

- ULV treatment starts no earlier than 9:30 p.m. and ends no later than 8:00 a.m.;
- ULV treatment does not occur if the temperature falls below 13 degrees Celsius. *Culex* species and many other species are not active at temperatures lower than this. During a ULV operation, temperatures are typically recorded at regular intervals;¹
- ULV treatment ceases or does not occur if wind speeds are too high and not conducive for effective adult mosquito control; and
- ULV treatment does not occur if there are or have been significant amounts of precipitation. However, treatment may resume a half hour to one hour after a short thunderstorm and light rainfall if there is no evidence of additional precipitation events occurring.

Is there a cost-shared funding arrangement for adulticiding under an Order?

The 75 per cent provincial/ 25 per cent municipal cost-shared funding formula applies to adult control activities undertaken under an Order. As with WNV-related larviciding, reconciliation occurs at the end of the season. In situations where a municipality's employees undertake the adult mosquito control under an Order, the reconciliation form used for cost-shared larviciding can be used to claim associated costs; however, a separate form is required for each of larviciding and adulticiding costs. In situations where adult mosquito control under an Order is conducted in a municipality by the City of Winnipeg or the City of Brandon, Manitoba Health will invoice the municipality for 25 per cent of the costs.

¹ ULV trucks have thermometers and wind metres to measure local conditions. Therefore, these measurements may vary from information available from weather stations.

B. MUNICIPALITY 'TO DO' LIST:

- Maintain a list of individuals who have self-identified as being opposed to pesticide use. Municipalities should make efforts to individually notify these residents prior to undertaking adult mosquito control.
- Implement a mosquito adulticiding program following the direction of an Entomologist designated by Manitoba Health and consistent with the conditions set forth in the Order.
- Participate in scheduled teleconferences with Manitoba Health so that issues related to implementation of an Order can be communicated and clarified between all relevant parties.
- Provide advance notice to the public, in the print media, radio or on television, at least 24 hours prior to the commencement of the spraying program. Ensure the notice states why an Order is in place, the description of the area required to be adulticided, the product to be used, the time and date that adulticiding will occur, the buffer zone distance to be sprayed, general precautions citizens should take during adulticiding, and a contact number should citizens have any questions.
- Notify the public of each spray event, as is feasible.
- Maintain an adulticiding log report if municipal staff are undertaking adulticiding under an Order. The log report must include date and time of application, amount and type of product used, weather conditions at time of spraying (including temperature, wind speeds, and precipitation), and a map of treated and untreated areas.

C. SAMPLE NOTIFICATIONS
(ADULTICIDING UNDER AN ORDER)

MEDIA NOTICE (*ENTER DATE*)

Subject:(*Enter name of City, Rural Municipality, or Town*).....Mosquito Spraying Program

The Manitoba Government has issued an Order to begin adult mosquito control (Mosquito Spraying) within the.....(*Enter name of City, Rural Municipality, or Town*).....and portions of the municipality(*ies*) of (*Enter name of Rural Municipality(ies)*).....due to the high numbers of adult *Culex tarsalis* mosquitoes, some of which are infected with West Nile virus, that have been found in.....(*Enter name of City, Rural Municipality, or Town*).....

Presuming weather conditions are conducive, the spraying will occur during the late evening and early morning starting no earlier than (*enter date*). **The spray treatment may occur twice in seven days.** If spraying is cancelled due to weather conditions, it will be carried out as soon as weather permits.

Spraying may include private roadways and field roads leading to dwellings that are set back further into large agriculture fields.

The area targeted for spraying is outlined in a map attached to the notification.

For further information about the spraying schedule or West Nile virus, contact Health Links/Info Santé at 788-8200 or 1-888-315-9257 or visit the Manitoba Health WNV website at <http://www.manitoba.ca/health/wnv>. You can also contact your municipal office.

Respectfully,

PUBLIC NOTICE

RESIDENTS OF

THE(Enter name of City, Rural Municipality, or Town).....AND PORTIONS OF THE MUNICIPALITY(ies) OF.....(Enter name of Rural Municipality(ies) that fall within the 3 km extended treatment area).....

The Manitoba Government has issued an Order, under *The Environment Act* to begin adult mosquito control (Ground-based ultra-low volume spraying) in the.....(Enter name of City, Rural Municipality, or Town).....and parts of the RM('s) of.....(Enter name of Rural Municipality(ies)).....within a 3 km treatment area of the.....(Enter name of City, Rural Municipality, or Town)....., because of high numbers of adult *Culex tarsalis* mosquitoes, some of which are infected with West Nile virus, that have been found in.....(Enter name of City, Rural Municipality, or Town).....

Presuming weather conditions are conducive, the ground based spraying will occur during the late evening and night starting no earlier than (*Insert day, month and year*). **Spraying may occur twice in seven days.** If spraying is cancelled due to weather conditions, adult mosquito control will be carried out as soon as weather permits. For information on mosquito control including planned mosquito control times, please contact your municipal office or call Health Links/Info Santé at 788-8200 or 1-888-315-9257 or visit the Manitoba Health WNV website at www.manitoba.ca/health/wnv

The pesticide product to be used for ground based spraying is Malathion dispersed by an ultra-low volume cold aerosol sprayer.

Activities to reduce exposure to Malathion:

- Close all windows and doors.
- Stay away from working trucks while spraying is underway.
- Fans and air conditioners can be turned off or set to exhaust.
- Wash fruits and vegetables.
- Remove clothes and children's toys from outdoor areas.
- Wash any household items or toys left outside before use.
- For information on Malathion, please see the PMRA website at: www.hc-sc.gc.ca/pmra-arla.

Activities to reduce exposure to mosquitoes:

- Use appropriate mosquito repellent, reduce time spent outdoors when mosquitoes are active, especially between dusk and dawn; wear light coloured, long sleeved, loose fitting clothing; fix screens; and reduce standing water.

(Enter date)

NOTICE TO ALL CAMPERS

SPRAYING FOR MOSQUITOES TO REDUCE THE RISK OF WEST NILE VIRUS

Spraying to control mosquitoes to reduce the risk of West Nile virus will take place in this campground this evening (*Enter date*), weather permitting. Spraying with truck-mounted ultra-low volume units will take place between the hours of 10:00 p.m. and 11:00 p.m. in the campground area.

People who wish to reduce their exposure to Malathion can take precautions including:

- Staying inside your camper or tent, or leaving the campground between 10:00 p.m. and 11:00 p.m.;
- Closing all doors and windows on trailers, and making sure all tent doors are zipped and flaps closed on all screened doors and windows;
- Turning off fans and air conditioners;
- Removing clothes, food, camping/storage equipment and toys from the campsite and putting them in the tent, camper trailer or vehicle; and
- Rinsing off any outdoor furniture or play equipment left outside before using them.

Campers can reduce their risk of mosquito bites by:

- Using an appropriate insect repellent;
- Wearing long pants, long-sleeved shirts, socks, shoes and a hat, particularly during the peak mosquito hours between dusk and dawn; and
- Maintaining door and window screens so they fit tightly and are free of holes.

More information about West Nile virus is available on the Manitoba Health WNV website at <http://www.manitoba.ca/health/wnv>, from Health Links/Info Santé at (204)788-8200 or 1-888-315-9257, or by calling your municipal office.

APPENDIX A: NUISANCE MOSQUITO CONTROL

- Manitoba Health is not involved with nuisance mosquito control operations.
- There is no cost-shared funding available for nuisance mosquito control.
- Municipalities may choose to control any nuisance mosquito species (i.e.: non-*Culex tarsalis*) at any time, provided that all appropriate licenses and permits are in place.
- All appropriate licenses and permits must be obtained prior to conducting any operations. For permit information contact the Department of Conservation; for licensing information contact MAFRI (Manitoba Agriculture Food and Rural Initiatives).
- Personnel involved in the application of pesticides for the control of nuisance adult mosquitoes must be certified and licensed. Certification information can be obtained from Assiniboine Community College.
- Notify your Regional Coordinator or Field Surveillance Team member when conducting nuisance mosquito control if your community has adult mosquito traps operated as part of the provincial WNV surveillance program. Fogging operations will impact surveillance efforts, consequently prior knowledge will allow for more informed decisions regarding *Culex tarsalis* activity and WNV transmission risk.

CONTACTS:

Manitoba Conservation – Pesticide Permits

Randy Webber – Pesticide Approvals, (204)-945-7107
Randy.Webber@gov.mb.ca

Manitoba Agriculture Food and Rural Initiatives – Licensing

Tracey Cummer – (204)-745-5660
Tracey.Cummer@gov.mb.ca

Assiniboine Community College – Certification

Gailyn Neurenberg – Pesticide Coordinator, (204)-725-8700 ext. 7116
neurenbergg@assiniboine.net

Assiniboine Community College – Pesticide Certification Program Guide for 2010-2011

<http://public.assiniboine.net/Portals/0/2010-11%20Pest%20Student%20Guide.pdf>