ADULT MOSQUITO CONTROL POLICY

POLICY STATEMENT

Preamble

Whereas the City of Winnipeg is committed to utilizing environmentally friendly approaches in the services that it delivers including a reduction in the use of chemical pesticides, The Insect Control Branch's long term strategy is to reduce the necessity for controlling adult nuisance mosquitoes.

The Mosquito Control Program will be delivered based on the principles of an Integrated Pest Management Strategy (IPM). IPM is a decision making process that uses a combination of techniques to suppress pests and that must include but is not limited to the following elements:

- planning and managing ecosystems to prevent organisms from becoming pests;
- identifying potential pest problems;
- monitoring populations of pests and beneficial organisms, pest damage and environmental conditions;
- using injury thresholds in making treatment decisions;
- reducing pest populations to acceptable levels using strategies that may include a combination of biological, physical, cultural, mechanical, behavioural and chemical controls; and
- evaluating the effectiveness of those treatments.

The Insect Control Branch IPM strategy is based on the following components:

- Surveillance;
- Larviciding;
- Source Reduction;
- Public Awareness; and
- Adulticiding.

Beginning in 2005, a biological based larviciding program will be phased-in over three years in order to reduce the City's use of chemical pesticides and reduce the City's reliance on adult mosquito control.

Pre-emptive Residual Treatments will also be utilized to further reduce the City's need to implement a fogging program. Residual treatments involve the application of environmentally-sensitive products onto localized areas of long grass, etc in order to kill adult mosquitoes in their resting place during the day.

1) Consideration to initiate or stop adulticiding will be based on the **Adulticiding Factor Analysis (AFA) Guidelines.**

Adulticiding Factor Analysis (AFA) Guidelines

Definition - AFA: The analysis and overall judgment of multiple factors and conditions that are considered when undertaking a decision as to whether to initiate or stop an adult nuisance mosquito control program. The adult nuisance mosquito control program may include pre-emptive residual spraying or fogging in local areas or throughout the city. The City Entomologist will implement adult mosquito control activities based on the defined categories of a Low – Medium – High AFA.

AFA LOW – The AFA will be considered to be low through an analysis and judgment of the following factors:

- current moisture conditions in the soil and the probability of new significant rainfall in the next 7 days are minimal
- the current percent of nuisance adult mosquitoes from the New Jersey Light Traps is low
- the current stage of adult mosquito generation is decreasing, eg. adult nuisance mosquitoes are starting to die off as they are near the end of their lifecycle
- the "current degree day model" combined with other environmental conditions are not conducive for continued adult mosquito development
- the larval development sites do not indicate the continued increase in production of new adult mosquitoes
- effectiveness of larviciding indicates that the outlook for adult mosquito emergence is expected to not occur for more than one week

When the AFA is low pre-emptive residual spraying or ULV adulticiding (fogging) will not be considered.

AFA MEDIUM – The AFA will be considered to be medium through an analysis and judgment of the following factors:

- low moisture levels in the soil are increasing and there is a forecasted probability of new significant rainfall expected in the next 7 days (>2.2 cms), resulting in new additional water bodies being added to the current inventory of larval development sites
- the current percent of nuisance adult mosquitoes from the New Jersey Light Traps will potentially increase
- the current status and stage of adult mosquito generation at large is increasing, eg. adult mosquitoes are at an early part of the lifecycle and will be present for some time and are human biters.
- The "current degree day model" combined with other environmental conditions are becoming conducive for continued adult mosquito development
- the larval development sites indicate the continued increase in production of new adult mosquitoes even with enhanced effective larviciding
- the outlook for adult mosquito emergence is expected to continue for more than one week

When the AFA is medium some pre-emptive residual spraying may be considered in areas where control can reduce adult mosquito numbers before they become a high nuisance issue. At this level no ULV adulticiding (fogging) will be considered.

AFA HIGH – The AFA will be considered to be high through an analysis and judgment of the following factors:

- the medium moisture levels in the soil are becoming saturated and the forecasted probability of new continued significant rainfall is expected over the next 7 days (>2.2 cms) resulting in new additional water bodies being added to the current inventory of larval development sites
- the current percent of nuisance adult mosquitoes from the New Jersey Light Traps is high and are increasing at a rate where the new generations of nuisance adult mosquito are all at a level in the early part of the lifecycle and will be present for some time
- the "current degree day model" combined with other environmental conditions are conducive for the continued adult mosquito development
- the larval development sites indicate the continued re-emergence of new adult mosquitoes
- the outlook for adult mosquito emergence is expected to continue for more than one week
- enhanced larviciding efforts continue to be required

When the AFA is high, and pre-emptive residual spraying to reduce adult mosquitoes has been carried out in local areas, ULV adulticiding (fogging) will be considered in specific areas or throughout the city.

2) The Pesticide Use Permit issued by Manitoba Conservation will be adhered to with respect to its restriction, conditions and terms set forth in the permit.

3) Mosquito adulticiding will be carried out only within the present boundaries of the City of Winnipeg and on properties owned by the City outside those present boundaries by mounted Ultra Low Volume (ULV) sprayers with the corresponding Global Positioning System (GPS), Geographic Information System (GIS) and computer hardware available.

4) Pre-emptive residual treatments may be considered in areas where surveillance and adult mosquito monitoring have determined that public property may require localized treatment with an adulticiding pesticide product. This will allow for a reduction in nuisance or vector mosquitoes in a specific area before considering a fogging program within the City of Winnipeg.

5) Adulticiding will be carried out along public streets and lanes, and major parks, golf courses, and cemeteries owned and operated by the City of Winnipeg, as determined necessary by the City Entomologist. Furthermore, the City Entomologist may exclude specific areas of the City from an adulticiding program.

6) The Public Works Department Insect Control Branch crews are not allowed to enter onto private property to carry out any mosquito adulticiding. Adulticiding will only occur in city owned areas identified for adult mosquito control by the City Entomologist.

7) Adulticiding will be conducted using only Pest Management Regulatory Agency (PMRA) approved pesticides, and utilizing PMRA's label defined application rates. Factors that shall be considered in selecting a product are: environmental acceptability, those most effective, and those that can be applied within the limitations of available adulticiding equipment.

8) The Public Works Department Insect Control Branch will pursue those aspects of product research and development in order to ensure proper storage, handling and application of the pesticides. All adulticiding pesticides will undergo a pre-use, during use and post use concentration analysis of active ingredient. The emphasis of this research will be directed towards identifying safer insecticides; the economics of use; and methodologies with improved information on insecticides and their efficacy in the environment. Research will also examine alternatives to insecticide use and methods of operation that reduce risks to human health and non-target organisms.

9) City residents can register with the Insect Control Branch as an Anti Pesticide Registrant (APR) in order to exempt their property during residential adulticiding. The APR's property is based on the civic property plan to a maximum buffer of

90 meters on the adjacent sides of an objector's property. Adjacent is defined as property abutting or having a common border. Adulticiding will not be carried out within the buffer, except as ordered during a declared health emergency by the Provincial Chief Medical Health Officer. All notices for exemption must be in written form and received at least 48 hours prior to adulticiding by the Public Works Department Insect Control Branch.

10) Residents who contact the City at 311 will be advised whether or not they are within a defined APR buffer zone, however the specific addresses of the APR's will not be provided, as per the Freedom of Information and Protection of Privacy Act.