

## **EXECUTIVE SUMMARY**

Peel Public Health's 2006 West Nile Virus Prevention Plan identifies the activities the Medical Officer of Health intends to carry out in order to comply with Ontario Regulation 199/03 "Control of the West Nile Virus." Under Regulation 199/03, the local Medical Officer of Health (MOH) is required to conduct a risk assessment of the conditions pertaining to the West Nile Virus (WNV) in the health unit. The risk assessment identifies the probability of human infection based on WNV surveillance activities as well as other pertinent information elements. Completion of the risk assessment in accordance with the regulation offers guidance to the MOH regarding appropriate WNV reduction activities, and if needed, provides a review of appropriate mosquito reduction activities (i.e. larviciding or adulticiding) and their effectiveness.

Information from past seasons has been used to prepare this 2006 WNV prevention plan. To ensure a coordinated approach in preventing mosquito-borne disease outbreaks in the Region of Peel, Peel Public Health is working closely with local municipalities and conservation authorities, the Ontario Ministry of Health and Long-Term Care (MOHLTC), the Ontario Ministry of the Environment (MOE), Health Canada (HC) and neighbouring public health departments.

Peel Public Health's approach to WNV control will emphasize disease prevention in humans and protection of the environment. The goal of the West Nile Virus Prevention Plan for 2006 is to minimize the impact of WNV on human health through region-wide surveillance and Integrated Mosquito Management (IMM). This means an emphasis on public education, source reduction and targeted mosquito reduction through larviciding. If the level of WNV in Peel increases, then education, surveillance, and reduction will be intensified. Adult mosquito reduction will only be considered should surveillance findings indicate a significant risk to human health despite the implementation of other measures.

The West Nile Virus Prevention Plan 2006 includes the following components:

### **Public Education and Community Outreach:**

Peel Health will continue to maintain public awareness of mosquito-borne disease, risk, surveillance and prevention through the media, our Web site ([www.peel-bugbite.ca](http://www.peel-bugbite.ca)), and advertising in local publications. Weekly status updates will be widely distributed and posted on the Web site. Peel Public Health will ensure that all public notification requirements for larviciding and adulticiding (if needed) are met. Accurate and timely information of these mosquito reduction activities will be provided to the public including application schedules, location of the interventions, type of pesticides being used, and how to reduce exposure.

### **Human Surveillance:**

A system for detecting mosquito-borne diseases among humans will include active monitoring for suspected cases of viral encephalitis and aseptic meningitis

in local hospitals from July to September. Health care providers play a critical role in the detection, prevention and clinical management of mosquito-borne diseases. A late spring edition of Peel Public Health's medical information letter, *Health Professionals Update*, focusing on WNV will be distributed to health care providers in the Region of Peel with subsequent updates as needed.

### **Host (Dead Blue Jay and Crow) Surveillance:**

Peel Public Health will monitor infection and illness in animals, with a focus on crow and blue jay deaths. Reports of dead birds will be received from the public by Peel Public Health staff seven days a week from early May to the end of September. Viral testing of a limited number of crows and blue jays will be performed by the Canadian Cooperative Wildlife Health Centre (CCWHC) in Guelph in 2006.

### **Mosquito Surveillance:**

Peel Public Health will monitor mosquitoes across the region by collecting larvae and adult mosquitoes to determine the distribution, density and species. Adult mosquito traps will be located in each regional ward in Mississauga, Brampton and Caledon. Adult mosquitoes will be collected weekly from mid-June to the end of September. The adult mosquitoes will be shipped to the mosquito laboratory service provider for counting, identification and viral testing. Seasonal field staff will survey a wide range of aquatic habitats for the presence of mosquitoes in the larval stage from mid-May to October. Larval surveillance also involves the collection and identification of the larvae found at the breeding sites. Mosquito surveillance data will be used in decision-making about public education and mosquito reduction activities.

### **Pesticide Effects Surveillance:**

Peel Public Health does not anticipate adverse human health effects from the mosquito reduction measures in this plan. However, health care professionals will be informed about potential health effects of pesticide exposure and the need to report potential pesticide-related illness to Peel Public Health. Peel Public Health will carry out surveillance for any adverse effects of pesticide exposure due to either larviciding or adulticiding. In addition, Peel Public Health will work with other agencies to monitor possible ecosystem effects from pesticide use.

### **Larval Mosquito Reduction:**

Peel Public Health will reduce mosquito breeding by identifying and referring priority stagnant water sites to the local municipalities for remediation and by the application of larvicide to sites on municipal property that cannot be emptied or drained. There will be an emphasis on *Culex* species (the main vectors of WNV in Peel) and their breeding sites located in urban and suburban settings. Through a public information campaign, Peel Public Health will urge residents to reduce breeding sites around their homes.

These activities will be augmented with the application of larvicide to priority breeding sites where water cannot be eliminated, including roadside catch basins in the Cities of Brampton and Mississauga, and in towns, villages and rural subdivisions of the Town of Caledon.

**Adult Mosquito Reduction:**

Peel Public Health has developed a contingency plan for the reduction of adult mosquitoes by the application of the pesticide "Malathion" through ground spraying. In the event that a significant risk to human health occurs due to WNV despite the successful implementation of the other components of this plan, adult mosquito reduction may be conducted. Habitat, weather, time of year, surveillance information and the proximity to human populations will be considered in determining the need for adult mosquito reduction measures.