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PROPOSED WEST NILE VIRUS CONTROL ACTIVITIES FOR 2005

The Health and Emergency Medical Services Committee recommends that:

1. **The recommendation contained in the following report, February 10, 2005, from the Commissioner of Health Services be adopted.**

2. **Staff be directed to report in late fall, 2005 regarding the status of West Nile virus in the GTA.**

1. RECOMMENDATION

It is recommended that:

1. Health and Emergency Medical Services Committee and Regional Council receive and adopt the proposed West Nile virus control activities for 2005 contained in this report, subject to the approval of the 2005 Health Services Department Budget.

2. PURPOSE

The purpose of this report is to provide Health and Emergency Medical Services Committee and Regional Council with the proposed West Nile virus (WNv) control activities for the 2005 WNv control program.

3. BACKGROUND

WNv is a potentially fatal mosquito-borne virus that spreads through a bird-mosquito-bird cycle. WNv is endemic in Ontario and continues to be a health concern for the residents of York Region. The virus has been detected in mosquitos and birds throughout Ontario since 2001 (*see Attachment 1, Table 1*). Table 2 also shows a comparison of human cases of WNv in various jurisdictions from 2002 to 2004.

Since WNv is still an emerging disease, there are only four years of local data available upon which to base a course of action for the coming season. Preliminary research shows that there is a correlation between ambient temperature and the level of WNv activity within the adult mosquito—the warmer the weather, the more infectious the mosquito becomes (Dohm DJ et al, 2002). Therefore a hot summer in 2005, unlike the cool summers of 2003 and 2004 could result in a significant increase in the number of human cases in York Region.

In 2004, WNv control measures in York Region were continued and enhanced. Information on last year's WNv control activities can be found in Report No. 8, Clause

No. 4 of the Health and Emergency Medical Services Committee entitled *2004 West Nile virus Control Activities*.

4. ANALYSIS AND OPTIONS

In order to control the spread of WNv in York Region, there are several initiatives that will be undertaken and expanded from the 2004 WNv control activities program.

4.1 Education and Communication

Public education remains vital in ensuring residents understand their part in preventing family members and themselves from contracting WNv. Therefore the key messages in 2005 will again focus on mosquito breeding source reduction and personal protection (using insect repellent and wearing appropriate clothing). The Health Services Department will:

- Conduct educational workshops for members of the public, long term care facilities and other interested organizations upon request
- Provide pamphlets that will be available to the public through libraries, municipal offices, garden centres and mailed out on request
- Work with municipal communications group for consistency of information and to reduce duplication
- Provide press releases throughout the WNv season beginning in April and ending mid-October as required
- Send letters to construction companies, garden centres and golf courses advising them of steps they can take to reduce outdoor employees' exposure to the virus and to reduce the amount of standing water on their properties
- Provide up-to-date information on the York Region website

4.2 Surveillance

Three types of surveillance activities (bird, mosquito and human) are prescribed by the Ministry of Health and Long-Term Care (MOHLTC) to detect the presence and spread of WNv. Bird, mosquito and human populations are studied to determine the presence of the virus and this information is used to determine which actions are warranted to mitigate the disease.

The Geomatics Division of the York Region Planning and Development Services Department will be asked for their continued expertise and technical support in the updating of the WNv database and the mapping of any positive WNv locations.

4.2.1 Bird Surveillance

The surveillance program will begin in mid-May when York Region residents will be asked to report all dead bird sightings to York Region Health Services, Health Protection Division. All suitable crow and blue jay specimens will be sent to the Canadian Cooperative Wildlife Health Centre (CCWHC) for testing to determine the presence of the virus in the community. As in 2004, a private company will be contracted this year to

collect all reported dead birds to prepare specimens for shipping to CCWHC and to dispose of bird carcasses. Currently all nine area municipalities will not accept animal carcasses as part of their waste collection services.

4.2.2 Mosquito Surveillance

The mosquito surveillance program will consist of the following major components:

- Responding to standing water complaints
- Trapping adult mosquitoes
- Routine surveillance (dipping for mosquito larvae) of pre-determined standing surface water sites including storm water retention ponds (SWRP)

In 2004 it was identified by the MOHLTC that sewage treatment plants could be a potential source of mosquitoes breeding, therefore this year's surveillance will be expanded to include the monitoring of York Region sewage treatment facilities.

4.2.3 Human Surveillance

For 2005, York Region physicians will again be asked to monitor patients presenting symptoms consistent with the WNv. Routine communications with infection control practitioners in health care institutions, such as hospitals and family doctors' offices, will continue throughout 2005 to keep them updated on current trends and/or localized patterns.

4.3 Mosquito Control

Ontario Regulation 199/03, under the *Health Protection and Promotion Act*, requires the local Medical Officer of Health to make a determination based on a local risk assessment, of whether action, including the use of larvicides or adulticides, is required to decrease the risk of WNv. The risk assessment is based on the most current evidence of local activity including WNv in the human population and non-human species.

It is proposed that in 2005 a pest control company will again be contracted to:

- Larvicide municipal and regional catch basins with methoprene (a larval growth inhibitor) up to 4 times (21 days apart), during the mosquito season
- Larvicide private rear yard catch basins upon request
- Larvicide catch basins in parks, nursing homes and municipally-owned properties such as community centres, and municipal offices
- Survey and larvicide standing surface water such as road side ditches and SWRP if required, using Bacillus thuringiensis israelensis (Bti) to reduce the larvae population

In 2004, the MOHLTC WNv provincial plan included adulticiding should it be required. Thus, York Region will not need to contract for a stand-by adulticiding service in 2005.

In 2005, York Region Health Services will update the voluntary registry for residents with existing health conditions that would be exacerbated by adulticiding. Although this registry is not required by the MOHLTC, should adulticiding be necessary, individuals on the registry living in the affected areas would be notified by telephone 48 hours in

advance. This would ensure that affected individuals have adequate time to take any precautions they deem necessary and/or make alternative living arrangements.

4.4. Relationship to Vision 2026

The proposed WNv program control activities for 2005 are consistent with the following Vision 2026 goals: Responding to the Needs of our Residents and Engaged Communities and a Responsive Region.

5. FINANCIAL IMPLICATIONS

The following table outlines the costs associated with the 2005 WNv control activities.

Table 1
Summary of 2005 West Nile virus Budget

	2005 Gross Budget
Purchase of Service – Larviciding	$1,110,000
Purchase of Service – Dead Bird Pick-up*	50,000
Contract Staff (i.e. students)	166,022
Media Releases and Public Information	150,000
GIS/Planning	70,000
Supplies and Equipment	273,000
Total Gross Expenditures	$1,819,022
MOHLTC 55% Funding	1,000,462
Net Tax Levy (Funded through Reserves)	$ 818,560

* Includes collection, preparation for shipping to testing labs and disposal.

The overall costs between 2004 and 2005 have decreased by $318,927 through negotiating better contracts for purchase of service.

6. LOCAL MUNICIPAL IMPACT

Although York Region Health Services will continue to carry out surveillance, co-ordinate the mosquito control program, and provide educational services in 2005, it is expected that local municipalities will continue to participate in other WNv control measures, such as enforcing local standing water by-laws, to reduce mosquito breeding sites. The role of local municipalities is defined in the *West Nile Virus: York Region Contingency Plan* that was distributed to and discussed with the local municipalities in the spring of 2003.

York Region Health Services has enjoyed a collaborative working relationship with all local municipalities over the last two years and looks forward to continued partnering in 2005 for effective WNv programming.

7. CONCLUSION

This approach is consistent with the plans of the eight health units involved in the Central East West Nile virus Task Group and the guidelines and regulations set forth by the MOHLTC.

Continued positive WNv results in the bird, mosquito and human population throughout Ontario indicate that the virus is well established within the province. Since WNv is still considered a newly emerging virus with significant health implications, the York Region WNv control activities plan for 2005 proposes to continue the surveillance program, educate the public and use mosquito control to limit the spread of WNv in York Region.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the agenda for the April 7, 2005 Committee meeting.)