

Request for Decision City Council



Type of Decision										
Meeting Date	May 29, 2003				Report Date	May 22, 2003				
Decision Requested	<input checked="" type="checkbox"/>	Yes		No	Priority	<input checked="" type="checkbox"/>	High		Low	
	Direction Only				Type of Meeting	<input checked="" type="checkbox"/>	Open		Closed	

Report Title
City of Greater Sudbury - West Nile Virus Preparedness and Response Plan 2003

Policy Implication + Budget Impact	
<input type="checkbox"/>	This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified.
	<p>The Province has stated that it will cover 100% of the cost of the larvicide and 50% of the cost of applying the larvicide with municipalities responsible for the remaining 50%.</p> <p>In accordance with the Health Protection and Promotion Act, the City of Greater Sudbury has been billed for \$16, 061 as its share of the Board of Health approved budget for the direct incremental costs related to West Nile Virus.</p> <p>Municipalities will only be billed their share of the Board of Health approved budget for contingency costs related to larviciding and /or aducliding in the amount of \$75, 000 should it be necessary to undertake these initiatives.</p> <p>Additional costs may be required as a result of the mapping of surface water features.</p>
<input checked="" type="checkbox"/>	Background Attached

Recommendation	
	<ol style="list-style-type: none"> That Council endorse the proposed City of Greater Sudbury - West Nile Virus Preparedness and Response Plan 2003 that outlines the City's role in contending with the possibility of West Nile Virus becoming a human health risk in the area; That the appropriate City officials be authorized and directed to take the necessary actions in preparing for the possibility of West Nile Virus in the area; and That Council approve the necessary funds associated with the City of Greater Sudbury - West Nile Virus Preparedness and Response Plan 2003 as needed.
	Recommendation Continued

Recommended by the General Manager
<p>Doug Nadorozny Manager of Economic Development and Planning Services</p>

Recommended by the C.A.O.
<p>Mark Mieto C.A.O.</p> 

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Date: May 22, 2003

Report Prepared By

Stephen Monet, Ph.D.
Coordinator of Environmental Initiatives

Division Review

Name
and Title

RECOMMENDATION:

1. That Council endorse the proposed City of Greater Sudbury - West Nile Virus Preparedness and Response Plan 2003 that outlines the City's role in contending with the possibility of West Nile Virus becoming a human health risk in the area;
2. That the appropriate City officials be authorized and directed to take the necessary actions in preparing for the possibility of West Nile Virus in the area; and
3. That Council approve the necessary funds associated with the City of Greater Sudbury - West Nile Virus Preparedness and Response Plan 2003 as needed.

Purpose

The purpose of this report is to outline the actions that shall be undertaken by the City of Greater Sudbury to ensure that its role in preparing for the possibility of West Nile Virus becoming a human health risk in the area is consistent with the Draft Sudbury and District Health Unit West Nile Virus Control Plan 2003 (Appendix 1).

This report outlines the City of Greater Sudbury - West Nile Virus Preparedness and Response Plan 2003, henceforth referred to as the *City WNV Plan*. The intent of the *City WNV Plan* is to demonstrate 'duty of care' by the City in dealing with the possible incidence of West Nile Virus in the municipality.

Background

West Nile Virus has rapidly emerged as a new disease in southern Ontario. West Nile Virus is now a reportable disease in Ontario, and, as such, local Health Units are legally required to monitor and respond.

Here in Sudbury, the Sudbury and District Health Unit (SDHU) has prepared its Draft West Nile Virus Control Plan 2003, henceforth referred to as the SDHU Plan. The SDHU Plan clearly outlines the actions to be undertaken in preparing for and responding to the possibility of West Nile Virus in Sudbury and other municipalities within the SDHU's jurisdiction. The SDHU Plan also establishes the role of the municipalities in fulfilling their responsibilities in dealing with the possibility of West Nile Virus becoming a human health risk in the area. Actions associated with the municipal role include those related to public education, possible enactment of by-laws, and operations aimed at applying larvicides (products that kill developing mosquitoes in standing water).

Date: May 22, 2003

Elimination of all mosquitoes and mosquito breeding habitats in the City of Greater Sudbury is not possible. Therefore, rationality and common sense must prevail along with a demonstration of a reasonable degree of care on the part of the City. Mosquitoes are a fact of life in the North and have always created nuisance situations which citizens have had to contend with.

Mosquitoes as a nuisance problem is a related but separate issue from the problem of mosquito-transmitted West Nile Virus. Not all mosquito species carry West Nile Virus. Mosquitoes may pose a significant nuisance problem at a given site yet may not be carrying West Nile Virus at all if they are non-carrier species. It has yet to be established if Sudbury has breeding populations of the mosquito species that transmit West Nile Virus or if these species, if present here, in fact carry the disease. The SDHU's surveillance and monitoring activities in 2003 will be used in assessing human health risks associated with West Nile Virus in Sudbury.

Outlined below are the actions that shall be undertaken by the City to fulfill its role in being prepared for the possibility of West Nile Virus becoming a human health risk in the Sudbury area.

Sudbury and District West Nile Virus Community Partnership

The City of Greater Sudbury is a member of the Sudbury and District West Nile Virus Community Partnership (SDWNV Community Partnership) initiated and lead by the SDHU. Other members include the following:

- Ministry of the Environment
- Ministry of Natural Resources
- Nickel District Conservation Area
- specialists from Laurentian University

Through the SDWNV Community Partnership clear roles and responsibilities for all members are established along with information sharing protocols. Through its membership on the SDWNV Community Partnership the City obtains the latest developments on West Nile Virus and response plans by the SDHU and can coordinate any required actions in fulfillment of its municipal role in dealing with the West Nile Virus issue.

City West Nile Virus Working Group

To allow proper coordination and implementation of the *City WNV Plan*, a City West Nile Virus Working Group has been established with representation from all Departments. Sections and Groups with particularly key roles in implementing the *City WNV Plan* include Operations - Public Works, Supply and Services, Health and Safety, and Environmental Initiatives. The Working Group will include other City divisions as required.

Education and Training of City Employees

The City is responsible for informing its employees on matters relating the West Nile Virus. Employees must be informed on measures they can take to reduce their risk of contracting West Nile Virus. Measures for personal protection against mosquito bites (nuisance problem) for employees have been in place for several years starting at the former City of Sudbury and the Regional Municipality of Sudbury. The City provides all outside workers with the insect repellent for their personal use while on the job. This measure will continue.

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As a first step, an SDHU Information Session on West Nile Virus was provided to key City staff on May 13, 2003. General Managers were notified of this Information Session to allow them the opportunity to send key staff. The intent of this first Information Session was to establish a link between the City's Health and Safety Section and the SDHU on West Nile Virus matters and to allow an opportunity for information to filter from the key staff to other City employees under their charge.

Additional steps have been taken by the Health and Safety Section. Draft West Nile Virus Guidelines have been developed and once finalized will become part of the City's Health and Safety Policies and Procedures Manual and will be distributed to all employees via GroupWise. The West Nile Virus Guidelines for City employees address the following issues:

- 1) personal protection;
- 2) handling of dead birds;
- 3) elimination of surface water situations on City-owned lands when and where appropriate. City staff, especially those responsible for property maintenance, shall be made aware of and directed to eliminate potential mosquito breeding habitat (e.g., standing water) on City-owned lands under their charge. The intent is to use common sense and seize opportunities for quickly eliminating standing water from parks, operations yards, etc. as part of routine maintenance. The intent is not to conduct an exhaustive inventory of potential mosquito breeding habitat on all City-owned land or to undertake major drainage or engineered construction works to eliminate all standing water on City owned lands.

The Health and Safety Section, in collaboration with the SDHU, is preparing a comprehensive education and training plan for employees of the City.

Public Education

The *City WNV Plan* supports the SDHU's comprehensive public education campaign to inform citizens of the City on the issue of West Nile Virus. The education campaign will focus particularly on the message of personal protection from mosquito bites as being the primary means of protection against West Nile Virus should this disease become an issue here.

The SDHU will handle all calls from the public on health matters relating to West Nile Virus in the Sudbury area.

Source reduction (i.e., standing water control) on private property using preventative, common sense measures also figures prominently in the SDHU public education campaign and may be further supported by the City through the enactment of a Standing Water Control By-law as discussed below. The public education campaign should include commercial and industrial sites, especially those that have onsite stormwater retention facilities.

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Source Reduction on Private Land

Source reduction on private land will be accomplished mainly through the willing participation of Sudburians as they are informed by the SDHU public education campaign. The City may support the efforts of source reduction on private lands by enacting and enforcing a Standing Water Control By-law. Issues associated with the enactment and enforcement of standing water on private lands are currently under discussion between staff at the City and the SDHU. The matter will be presented to Council once a workable approach has been developed.

The City currently does not have a by-law that regulates standing water within the City. The City's existing Property Standards By-law does not address standing water. The intent of the by-law would not be to establish a framework that creates rivalries between neighbours over trivial standing water situations. Rather the intent would be to regulate standing water where gross negligence has led to an unreasonably large extent of mosquito breeding habitat that is contributing substantially to a potential health hazard yet could be easily rectified.

Municipal Preparation for Larviciding on Municipal Land

Should the SDHU's surveillance and monitoring activities reveal that West Nile Virus is present in the City of Greater Sudbury and poses a health risk for citizens a decision will need to be made as to whether or not to undertake larviciding (killing developing mosquitoes in standing water) in the City. The SDHU will make this determination and will notify the City to proceed with larviciding. Areas to be larvicided and the exact means of doing so will be determined by the SDHU and City in consultation with the extermination firm contracted by the City to conduct the larviciding.

The City's responsibility is to be prepared to larvicide appropriate locations on municipal land, if deemed necessary. Preparedness involves 1) having all the required information on hand to expeditiously obtain a permit to larvicide from the Ministry of the Environment and 2) have an appropriately licensed contractor on retainer in case larviciding is deemed necessary by the SDHU.

The City will work closely with the SDHU, the Ministry of the Environment, the Nickel District Conservation Authority and the Ministry of Natural Resources to ensure that permit application and support documents are in place should larviciding be deemed necessary by the SDHU. The Ministry of the Environment requires a separate application for permits for applying larvicide in each of the following features:

1. Catch basins/storm drains;
2. Ditches and Temporary Pools or Permanent Pools including stormwater management ponds;
3. Sewage and sludge storage lagoons; and
4. Wetlands

Features to be larvicided will be determined in close collaboration with the SDHU and the exterminator contracted by the City.

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The City will need to contract a firm to conduct mapping of surface water features using remote sensing technology. This mapping will be crucial to obtaining a permit from the MOE and to the proper planning and execution of a broader larviciding program should it become necessary.

The City will ensure that an appropriately licensed exterminator is on retainer in case larviciding of catchbasins and perhaps some stormwater management ponds is deemed necessary by the SDHU in 2003. The City will also ensure that the contractor has the necessary materials, personnel, equipment and insurance.

Financial Implications

The Province has stated that it will cover 100% of the cost of the larvicide and 50% of the cost of applying the larvicide with municipalities responsible for the remaining 50%.

The Board of Health of the Sudbury and District Health Unit recently passed a resolution at its April 17, 2003 meeting enhancing its 2003 budget for costs associated with West Nile Virus. The resolution, cover letter from the SDHU, and 2003 West Nile Virus Levy are included in Appendix 2.

Program costs are divided into two budget components: direct incremental costs of \$37,590 and contingency costs for larviciding and/or adulticiding should these actions be required of \$150,000.

In accordance with the Health Protection and Promotion Act, the City of Greater Sudbury has been billed for \$16,061 as its share of the Board of Health approved budget for the direct incremental costs related to West Nile Virus. Municipalities will only be billed their share of the Board of Health approved budget for contingency costs related to larviciding and /or adulticiding in the amount of \$75,000 should it be necessary to undertake these initiatives.

Additional costs to the City associated with preparedness and response to the West Nile Virus situation include:

- Mapping of surface water features in and around the City's 'populated' areas. A proposal from a firm to conduct the mapping of surface water features is expected on Tuesday, May 27th, 2003.

Conclusion

West Nile Virus has not been established as a human health risk in the Sudbury area. It is the responsibility of the SDHU, through its West Nile Virus Control Plan 2003, to assess the human health risk posed by West Nile Virus and to provide guidance as to the need for larviciding.

The *City WNV Plan* outlined above is a precautionary measure demonstrating City preparedness to deal in a responsible and timely manner with the possibility for this disease to manifest itself within City boundaries.

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APPENDIX 1



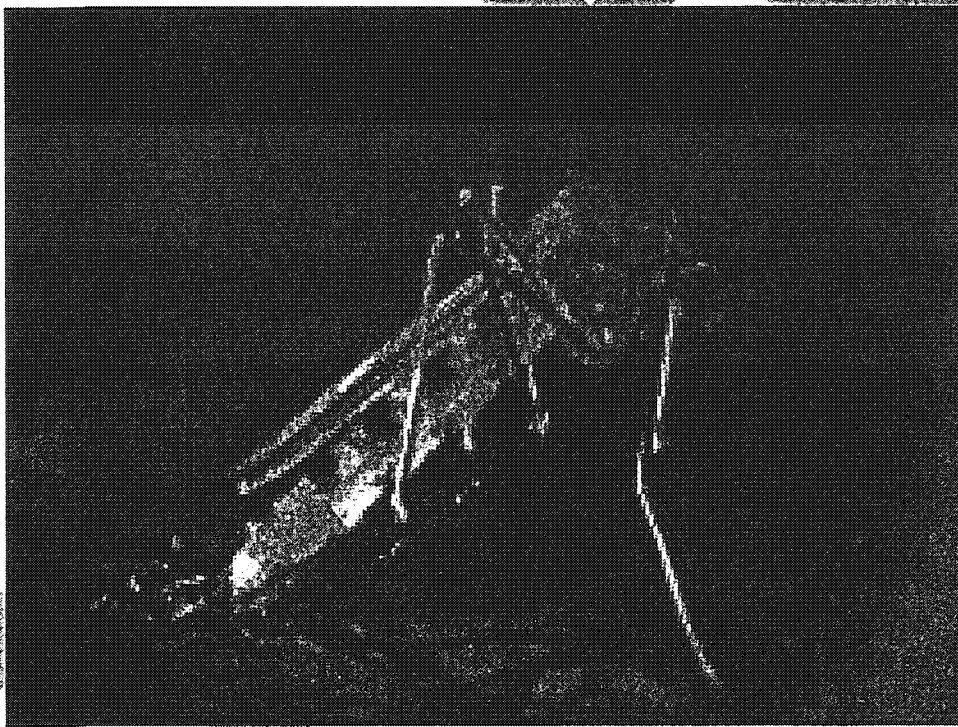
Sudbury & District

Health Unit

Service de
santé publique

Sudbury & District Health Unit

West Nile Virus Control Plan 2003



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Fax: (705) 677-9607
Website: www.sdhu.com

April 30, 2003

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Sudbury & District Health Unit Service de santé publique de Sudbury et du district

Overview

West Nile Virus control measures to-date have focused on reducing mosquito breeding sites on private and municipal property, and providing information to the public on how to prevent mosquito bites. In 2002, this information was disseminated to the public through pamphlets and the media.

Only two crows tested positive for West Nile virus in 2002 and there were no positive human cases. Based on this evidence the Sudbury & District Health Unit is pursuing a pragmatic approach through Public Education and Surveillance Activities.

Public education will emphasize personal protection and source reduction.

Public Education

Personal Protection

Citizens will be advised that the most effective method of personal protection from mosquito bites is to avoid places where mosquito densities are high and to avoid being out-of-doors at times of the day when mosquito activity is at its highest (dusk and dawn and during calm, warm, humid evenings).

If people find themselves in situations where they must be exposed to biting mosquitoes, there are several things they can do. First, they can minimize the exposed skin surface by wearing a hat or head net, long trousers, and a long-sleeved shirt. Some mosquitoes will bite through lightweight clothing, but the number of bites received is definitely reduced if most areas of the body are covered. When mosquito densities become very high or there is a risk of disease transmission, people may want to apply a mosquito repellent.

Most effective repellents contain DEET (N,N-diethyl-meta-toluamide). Commercial repellents contain varying concentrations of DEET, usually between 10 and 30%. In general, the higher the concentration of DEET in a product the longer the duration of protection with a single application. Thus the lower concentration products provide 1 or 2 hours of protection, whereas higher concentration products are effective for 4 to 6 hours. The duration of protection of lower concentration DEET products can match that of higher concentration products, if they are reapplied at regular intervals (e.g., hourly). The efficacy of any repellent will depend on weather conditions (i.e., strong wind speeds and high temperatures or relative humidity will decrease the duration of protection) and amount of physical activity of the user (i.e., sweating will result in rapid declines in protection times).

DEET-based repellents do have some minor drawbacks. DEET can be an irritant to some people and it may damage synthetic materials such as rayon, nylon or certain plastics. When applying repellents, always read the label instructions carefully and thoroughly apply the material to all exposed skin, including behind the ears. If people wish to avoid using DEET, there are few, if any, effective alternatives. Plant oils, such as oil of lavender or citronella, have been shown to be somewhat repellent to mosquitoes. However, most other plant oils are not available as commercial mosquito repellents. More detailed information concerning the selection and safe use of insect repellents can be obtained from **Health Canada's Pest Management Regulatory Agency (PMRA)** at:

http://www.hc-sc.gc.ca/hpb/lcdc/publicat/info/repell_e.html

There is a vast array of other products that are marketed to repel mosquitoes, most of which are totally ineffective. These include wristbands that contain an aromatic repellent, ultrasonic emitters, electric grids, electronic repellers, aromatic plants (the most common one is the so-called mosquito plant), incense coils, vitamins, and even mixtures of brewer's yeast and garlic. Research has shown that all of these methods are of little or no value in repelling mosquitoes.

Source Reduction

The best way to keep mosquitoes away is to clean up areas where they like to breed. Unlike birds or other insects, mosquitoes do not fly very far and tend to stay close to their breeding sites and normal habitat.

Artificial containers such as tires, buckets, birdbaths, etc. collect rainwater. Besides other sanitation concerns they are ideal mosquito breeding sites for certain species due to the lack of predators and may be especially productive when they are in a heavily vegetated area.

Every residential and commercial property owner should regularly inspect their property and buildings to determine if conditions are conducive to mosquito breeding and endeavour to eliminate those conditions. The public education campaign in 2003 will highlight the need for Sudbury & District residents and commercial/industrial property owners to eliminate mosquito-breeding sites on private property.

Cleanup will be accomplished through property owner education, or failing that through enforcement of existing property standards by-laws or public health legislation.

Mosquito Sources	How to Reduce Backyard Mosquitoes
Ponds	Stock with fish or use BTI; remove excess vegetation.
Swimming pools	Keep water off cover; maintain water quality at all times.
Tree holes	Fill hole with sand or mortar.
Plastic pools	Drain water when not in use, or cover so mosquitoes cannot lay eggs.
Containers	Empty water; store in an inverted position; dispose of; or cover.
Bird baths	Change water at least once a week.
Standing water	Eliminate by draining; fill in low areas.
Watering troughs	Stock with fish, or change water weekly.
Street gutter or catch basins	Keep litter and garden debris out of gutters; do not over water yard.
Septic tank fields	Ensure proper drainage so mosquitoes cannot lay eggs.
Roof gutters	Clean once a year to remove debris.
Rain Barrels	Cover with screening or empty weekly.
Irrigated lawns or fields	Avoid over-irrigation; Drain standing water.

Surveillance Activities

Surveillance Activities will include: 1) reports from the public of dead bird sightings and collection of appropriate birds for testing of West Nile virus, 2) reports from Sudbury & District Veterinary Association of WNV activity in animal populations especially horses 3) collection of mosquitoes throughout our region to monitor their numbers and the species present and 4) reports from physicians of human cases of West Nile illness.

Dead Bird Sightings

The public will be asked to report dead bird sightings. The species to be submitted for West Nile diagnosis are crows and ravens only. These sightings will be mapped in a database and monitored for increases, which could precede human cases. The enumeration and geographic distribution of positive birds will be monitored to assess the risk to human health. Health Inspectors will refer to the Canadian Cooperative Wildlife Health Centre Guelph's protocol for submission of dead birds, Ontario – 2003.

Veterinarian Reports

Health Unit staff will liaise with the Sudbury & District Veterinary Association to monitor for significant increases in WNV illness in animals especially horses. This information will be logged in a health unit database.

Collection of Mosquitoes

Health unit staff will sample mosquito populations at strategic locations. The purpose of this sampling is to enumerate and speciate the mosquito population. Initial sampling will occur where positive birds have been found, but the traps will be moved within the Health Unit catchment area to reflect new dead bird data. Using this data, the risk of exposure to humans can be more clearly defined.

Reports From Physicians

Making WNV illness both a reportable and communicable disease under the Health Protection and Promotion Act, effective May 1, 2003, will enhance human surveillance. This will mean that physicians will be required to report the specific diagnosis of the WNV illness to the local medical officer of health, who in turn, will report these cases to the province's Reportable Disease Information System (RDIS). With more specific knowledge of the burden of WNV illness in our respective communities, Dr. Penny Sutcliffe, Medical Officer of Health will be even better prepared to take whatever actions may be needed to protect public health.

Larviciding Contingency Plan

A larviciding program could be considered should the level of West Nile activity make a significant increase in our area. *At this point, surveillance data is needed to effectively design a larviciding program, if merited, for our municipalities.* Larviciding does not involve spraying of neighbourhoods and is designed to prevent larvae from hatching into adult mosquitoes. The larviciding program could focus on catch basins that are a high risk-breeding zone for *Culex pipiens/restuans*. Two types of larvicides are being proposed for use: methoprene and *Bacillus thuringiensis* (Bti). A larvicide program could minimize the need for more aggressive measures such as adulticide.

Larviciding programs conducted through early spring to mid summer in catch basins and other stagnant water bodies prevent *C. pipiens* and *C. restuans* larvae from developing into adults. This should reduce the number of adult mosquitoes that would otherwise amplify WNV in the bird population.

Larviciding programs conducted through late spring to early fall for the treatment of temporary pools, created by rainfall, prevent *A. vexans* larvae from developing into adult mosquitoes. This should reduce the number of adult mosquitoes and lower the risk of humans developing WNV from biting mosquitoes.

Adulticiding programs, which do involve spraying of neighborhoods to kill adult mosquitoes that are flying around, would only be indicated in 2003 if there were very large numbers of infected birds, mosquitoes and/or human cases.

Larvicides

Methoprene:

Methoprene (Altosid™) is very effective against *Culex* species and is recommended for use in catch basins, since catch basins contain a high density of *Culex* larvae. Presently in Canada, Methoprene only comes in pellets.

Methoprene is called an "insect growth regulator" or "biorational larvicide". This means it mimics a natural hormone in the insect and so prevents the larvae from maturing into adult mosquitoes. Methoprene has been registered by the United States Environmental Protection Agency (US EPA) since 1975 and Health Canada since 1977. The US EPA has placed methoprene in the "least toxic" category with regard to humans stating that it does not pose unreasonable risk to human health". Health Canada states that methoprene "poses little risk to people when used according to label directions". Methoprene has no known serious health risks. As well, the public should have no exposure to methoprene since the pellets will be placed mainly in catch basins, and methoprene dissipates rapidly in the environment once it is released from the pellets.

Methoprene is rapidly broken down by sunlight. It breaks down quickly in water and soil, and will not leach into groundwater. It is classified by the US EPA as not posing an unreasonable risk to wildlife or the environment. The effect of methoprene has been studied on a great number of species. It has been found to have no effect on bees or dragonflies. Methoprene has been found to be acutely toxic to some species of freshwater, estuarine and marine invertebrates such as crayfish. However, there appears to be few long lasting effects after treatment. Reports of frog abnormalities have been widely circulated but have not "stood up to scientific scrutiny". Most of the studies done on methoprene toxicity involve much higher concentrations than would be found using methoprene for mosquito control. The US EPA in 2001 concluded that exposure to methoprene will not reach levels toxic to aquatic non-target organisms.

Bacillus thuringiensis israelensis (Bti):

Bti (Vectobac™, Aquabac™, Teknar™) is the product that could be used in woodland lots, natural ponds and boggy areas. It will likely be used in a granular form that is applied by hand or using a hand-held applicator device. Aerial application may be considered for remote, otherwise inaccessible, bodies of water, which are found to be a source of "bridging vector" larvae.

Bti is a "microbial larvicide". This means it is a naturally occurring bacterium that produces a crystallized toxin. When the larvae eat the bacteria, the specific conditions in the mosquitoes stomach cause the crystallized toxin to be released resulting in the death of the larvae.

The US EPA has registered Bti since 1983. Bti is effective against mosquitoes and black flies, and may affect some midges. Extensive studies by the EPA have found that Bti is essentially

nontoxic to humans and so there are no concerns for human health effects. As well, extensive studies have shown that Bti does not pose a risk to wildlife, non-target species, or the environment, when used according to label directions.

Applications

Based on the importance of *Culex pipiens* and *Culex restuans* in the amplification of WNV, control strategies in Sudbury & District, if merited, would likely focus on the following habitats (in order of priority from highest to lowest):

Habitat	Recommended Control Strategy
Catch Basins/Storm Drains	Larvicide with Methoprene – use Bti for those that drain directly into environmentally sensitive areas.
Ditches and Temporary Pools or Permanent Pools Including Storm Water Management Ponds	Site-by-site assessment – physical alteration if feasible or Bti if it represents a significant mosquito-breeding site.
Sewage and Sludge Storage Lagoons	Site-by-site assessment – physical alteration if feasible or Bti if it represents a significant mosquito-breeding site.
Wetlands	Site-by-site assessment – Bti if it represents a significant mosquito-breeding site.

Catch Basins/Storm Drains

Methoprene products will be considered for application to catch basins/storm drains since these are high in organic content and suspended silt and it is unlikely that non-target aquatic organisms will be present (Note: *Bti* has limited efficacy in water bodies with high organic and silt content). Label rate for methoprene pellets is 0.7 g per catch basin (equivalent to a broadcast application rate of 11.2 kg/ha in water with a high organic matter content) based on an average surface water area of 0.6 m². Catch basins with an average surface water area greater than 0.6 m² would receive proportionately more of the methoprene pellets. A greater amount of methoprene pellets per catch basin is consistent with label directions if drainage from the catch basin is impeded and the water in the catch basin is backed up, above the level of the outlet pipe, on standing water in the sewer. This would be determined by a pre-treatment inspection.

A review of best practices indicates that an amount of up to 3.5 g of methoprene pellets may be applied in such situations and is consistent with label directions.

Ditches and Temporary Pools or Permanent Pools Including Storm Water Management Ponds

Bacillus thuringiensis var. israelensis (Bti) products will be considered for application in ditches and temporary pools or permanent pools including storm water management ponds since these water bodies may support non-target aquatic organisms (methoprene may have an impact on these organisms whereas *Bti* is very specific to mosquito larvae). The rate of application will be determined by the larval instar stage, target species etc. as indicated on product labels.

Sewage and Sludge Storage Lagoons

Methoprene products will be considered for application in sewage and sludge lagoons since these water bodies are high in organic content and it is unlikely that non-target aquatic organisms will be present (Note: *Bti* has limited efficacy in water bodies with high organic content).

A label rate for methoprene products of 11.2 kg/ha for broadcast application of pellets and 22.4 kg/ha of granules is in accordance with label directions for water with a high organic content.

Wetlands

Bacillus thuringiensis var. israelensis (Bti) products will be considered for permit approval in wetlands since these water bodies support non-target aquatic organisms (methoprene may have an impact on these organisms whereas *Bti* is very specific to mosquito larvae). The rate of application will be determined by the larval instar stage, target species, etc., as indicated on product labels.

The use of pesticides, either larvicides or adulticides, is governed by strict regulations by the Ministry of the Environment. Completed permit application forms and support documentation must be submitted to the Ministry of Environment Regional Pesticides Specialist responsible for Sudbury and District.

See Ministry of Environment website for further information on permit applications.
<http://www.ene.gov.on.ca/envision/gp/4319.htm>

Conclusion

Although it is impossible to predict the impact of West Nile Virus in future seasons, the unexpected experience in 2002 has demonstrated the potential burden of illness that can result from this virus where conditions (infected birds, significant bridging vector mosquitoes and human population densities) are most conducive to evolution of the disease. It remains to be seen whether there is evidence of a similar pattern of activity for 2003, taking into account the overwintering survival of infected mosquitoes and the susceptible bird population to sustain the amplification cycle.

The Sudbury and District experience in 2002 was very modest in comparison to the Greater Toronto area. The focus for this region will be on personal protection measures and reduced exposures and practical mosquito source control measures. There would need to be signs of a significant increase in potential for human cases to trigger a larvicide program to augment this public education campaign.

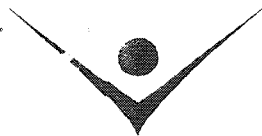
Decisions on where and when to larvicide will be made after careful consideration of the evidence of WNV infections in the bird and mosquito populations and the potential for significant human exposure.

Role of Municipalities

Establishing a steering committee for implementing the Mosquito Control Program and consider developing a mosquito control by-law which would give municipalities right to access private property for the purposes of mosquito control.

- ✓ Conduct an inventory of mosquito breeding sites within the municipality and provide a contingency plan for the elimination (where possible) of these sites.
- ✓ Prepare a plan to deal with standing water complaints from the public and furthermore, develop a plan to deal with standing water on municipal land.
- ✓ Obtaining provincial pesticide applicator licenses or retaining the services of a licensed Pest Control Operator.
- ✓ Fulfilling pesticide-use permit requirements.
- ✓ Purchasing of tools, supplies and equipment.
- ✓ Renting vehicles and other equipment.
- ✓ Training and assigning appropriate staff.
- ✓ Supporting the Sudbury & District Health Unit educational campaign on Personal Protection and Source Reduction.
- ✓ Providing educational resources to municipal staff about personal protection.
- ✓ Provide training and educational resources for municipal staff responsible for outdoor recreational activities i.e. day camps, playgrounds, etc.

APPENDIX 2



Sudbury & District

Health Unit

Service de
santé publique

Promotion
Prevention
Protection

April 24, 2003

Thom Mowry
City of Greater Sudbury
200 Brady Street
Box 5000, Station A
Sudbury ON P3A 5P3

**CITY OF
GREATER SUDBURY**

MAY 5 2003

**GENERAL MANAGER
CORPORATE SERVICES**

Dear Mr. Mowry:

With the emergence of West Nile virus, the demand for public health resources and personnel has increased. The Board of Health of the Sudbury & District Health Unit, along with other provincial health units petitioned the Ministry of Health & Long-Term Care to fund this additional responsibility under the "Mandatory Health Programs and Services Guidelines 100%. Late in March 2003, the Board of Health received notification that the Ministry will only fund West Nile virus program costs at 50%.

This decision made it necessary for the Board of Health to pass a resolution at its April 17, 2003 meeting enhancing its 2003 budget for costs associated with West Nile virus.

The resolution is attached for your reference. Please note that the program costs are divided into two budget components: direct incremental costs of \$37,590 and contingency costs for larviciding and/or adulticiding should these actions be required of \$150,000.

In accordance with the Health Protection and Promotion Act, the municipalities will be billed \$18,795 as their share of the Board of Health approved budget for the direct incremental costs related to West Nile virus. The municipalities will only be billed their share of the Board of Health approved budget for contingency costs related to larviciding and/or adulticiding in the amount of \$75,000 should it be necessary to undertake these initiatives.

Attached to this letter is a schedule detailing the levy for each municipality for the costs related to West Nile virus. An invoice will follow.

Sincerely

Paddy Buchanan
Acting Director, Corporate Services

Encl.

PB:np

cc. M. Mero
S. Johnson

An Accredited Teaching Health Unit
Centre agréé d'enseignement en santé



SUDBURY & DISTRICT BOARD OF HEALTH

MOVED BY: Ken Dupuis

No.: _____ -03

SECONDED BY: Willy Leveille

Date: April 17, 2003

WHEREAS there has been significant illness in Ontario and the United States related to West Nile virus; and

WHEREAS the demand on public health resources and personnel related to West Nile virus is expected to escalate in 2003; and

WHEREAS the detection of West Nile virus-positive birds in Sudbury during the summer of 2002 means that the Sudbury & District Health Unit must prepare to prevent human West Nile virus infection in 2003; and

WHEREAS preventing human West Nile virus infection requires costs associated with public communication and education campaigns and bird and mosquito surveillance programs; and

WHEREAS 2003 surveillance activities within the Sudbury & District Health Unit catchment area may detect significant risk to human health from West Nile virus; and

WHEREAS preventing human West Nile virus infection may involve costs to municipalities associated with larviciding and/or adulticiding; and

WHEREAS the Sudbury & District Health Unit can provide municipalities with access to 50% funding for larviciding and/or adulticiding; and

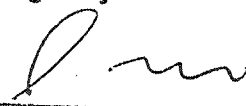
WHEREAS program activity related to West Nile virus is an additional responsibility under the Mandatory Health Programs and Services Guidelines; and

Whereas at its meeting of January 16, 2003, the Sudbury & District Board of Health passed a motion requesting that West Nile virus prevention and control activities be 100% provincially funded; and

Whereas the Ministry of Health and Long Term care confirmed on March 17, 2003 that West Nile virus expenditures are eligible for funding through the Ministry of Health and Long Term Care through its 50% grants to boards of health; and

Whereas the costs for the 2003 West Nile virus program are not included in the 2003 Sudbury & District Health Unit budget;

THEREFORE BE IT RESOLVED THAT this Board of Health enhances the 2003 budget for the Sudbury & District Health Unit in the amount of \$37,590 for direct incremental costs related to public communication and education campaigns and bird and mosquito surveillance programs and further, that this Board of Health approves a contingency budget of \$150,000 for activities related to larviciding and/or adulticiding.

Sudbury & District Board of Health
APR 17 2003
CARRIED

(Chair) <i>A</i>

SUDBURY & DISTRICT HEALTH UNIT

	Total	Municipal Share
2003 West Nile Virus Levy	37,590	18,795

	2000 Census Population*	% Population*	Levy
Assiginack	803	0.44%	82
Baldwin	592	0.32%	60
Barrie Island	47	0.03%	5
Billings	508	0.28%	52
Burpee	331	0.18%	34
Central Manitoulin	1,775	0.96%	181
St. Charles	1,294	0.70%	132
Chapleau	2,671	1.45%	272
French River	2,856	1.55%	291
Espanola	5,187	2.82%	529
Gordon	444	0.24%	45
Gore Bay	842	0.46%	86
Markstay-Warren	2,843	1.54%	290
Northeastern Manitoulin & the Islands	2,322	1.26%	237
Nairn & Hyman	427	0.23%	44
Killarney	460	0.25%	47
Sables-Spanish River	3,060	1.66%	312
Tehkummah	342	0.19%	35
Greater City of Sudbury	157,456	85.45%	16,061
Total	184,260	100.00%	18,795
 Per Capita Rate			 0.10

* Population data per September, 2000
Municipal Property Assessment Corporation

Request for Decision City Council



Type of Decision

Meeting Date	May 29, 2003				Report Date	May 16, 2003			
Decision Requested	<input checked="" type="checkbox"/>	Yes		No	Priority	<input checked="" type="checkbox"/>	High		Low
	Direction Only				Type of Meeting	<input checked="" type="checkbox"/>	Open		Closed

Report Title

Contract 2003-1, Paris Street Trunk Watermain, Walford Road to Fire Hall (Long Lake Road)

Policy Implication + Budget Impact

This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified.

Background Attached

Recommendation

That Contract 2003-1, Paris Street Trunk Watermain, Walford Road to Fire Hall (Long Lake Road), be awarded to R.M. Belanger Limited in the tendered amount of \$3,881,328.70, this being the lowest tender meeting all contract specifications, and that funding be provided as follows:

2003 Capital Program for Water Services	\$2,200,000
Capital Financing Reserve Fund, Water	1,047,000
2003 Capital Road Program	170,000
Capital Financing Reserve Fund, Roads	464,000

Recommendation Continued

Recommended by the General Manager

D. Bélisle
General Manager of Public Works

Recommended by the C.A.O.

M. Mieto
Chief Administrative Officer

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Date: May 16, 2003

Report Prepared By
<i>Allen P. Sweetman</i>
AI Sweetman, P.Eng. Sewer & Water Engineer

Division Review

Tenders for Contract 2003-1, Paris Street Trunk Watermain, Walford Road to Fire Hall (Long Lake Road), were opened at the Tender Opening Committee meeting at 2:30 p.m., local time, Thursday, May 8, 2003, as follows:

BIDDER	TOTAL \$ TENDERED AMOUNT
R.M. Belanger Limited	3,881,328.70
Interpaving Limited	3,936,923.33
Garson Pipe Contractors Limited	3,950,570.97
Teranorth Construction & Engineering Limited	4,063,155.94
Pioneer Construction Inc.	4,222,620.99

A review of the tenders received resulted in staff noting an extension and addition error in Interpaving Limited's tender resulting in a tendered amount of \$3,936,923.33.

The lowest tender meeting all contract specifications was submitted by R.M. Belanger Limited, in the tendered amount of \$3,881,328.70, this being the lowest tender meeting all contract specifications and is recommended for approval.

The Engineer's estimate for this tender is \$3,400,000.00 and this work is funded from:

2003 Capital Program for Water Services	\$2,200,000
Capital Financing Reserve Fund, Water	1,047,000
2003 Capital Road Program	170,000
Capital Financing Reserve Fund, Roads	464,000

Following approval for the use of reserves from the Capital Financing Reserve Fund, Water and the Capital Financing Reserve Fund, Roads, the water reserve will have a balance of \$5.0 million, while the roads reserve will have a balance of \$165,000.

Request for Decision City Council



Type of Decision

Meeting Date	May 29, 2003				Report Date	May 16, 2003			
Decision Requested	<input checked="" type="checkbox"/>	Yes		No	Priority	<input checked="" type="checkbox"/>	High		Low
	Direction Only				Type of Meeting	<input checked="" type="checkbox"/>	Open		Closed

Report Title

Contract 2003-2, Lasalle Boulevard Watermain Improvements (Auger to Sylvio)

Policy Implication + Budget Impact

<input checked="" type="checkbox"/>	This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified.
<input checked="" type="checkbox"/>	Background Attached


Recommendation

That Contract 2003-2, Lasalle Boulevard Watermain Improvements (Auger to Sylvio), be awarded to Garson Pipe Contractors Limited in the tendered amount of \$1,349,400.97 this being the lowest tender meeting all contract specifications, and that funding be provided as follows:

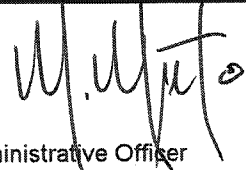
2003 Capital Program for Water Services	\$900,000
Capital Financing Reserve Fund, Water	450,000

Recommendation Continued

Recommended by the General Manager



D. Bélisle
General Manager of Public Works

Recommended by the C.A.O.


M. Mieto
Chief Administrative Officer

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Date: May 16, 2003

Report Prepared By
 Allan P. Sweetman AI Sweetman, P.Eng. Sewer & Water Engineer

Division Review

Tenders for Contract 2003-2, Lasalle Boulevard Watermain Improvements (Auger to Sylvio), were opened at the Tender Opening Committee meeting at 2:30 p.m., local time, Tuesday, May 6, 2003, as follows:

BIDDER	TOTAL \$ TENDERED AMOUNT
Garson Pipe Contractors Limited	1,349,400.97
R.M. Belanger Limited	1,360,274.95
Pioneer Construction Inc.	1,391,608.87
Holloway Equipment Rental Ltd.	1,488,664.25
Teranorth Construction & Engineering Limited	1,502,939.12

All tenders have been reviewed and found to be in order.

The lowest tender meeting all contract specifications was submitted by Garson Pipe Contractors Limited, in the tendered amount of \$1,349,400.97, this being the lowest tender meeting all contract specifications and is recommended for approval.

The Engineer's estimate for this tender was \$870,000. It is clear that construction costs have escalated significantly over the past year. Every tender called this spring has demonstrated increases from 20% to 50% above estimated costs and budgets. Fortunately, there are significant reserve funds in place to accommodate the cost increases. Funding for this project will be provided as follows.

2003 Capital Program for Water Services	\$900,000
Capital Financing Reserve Fund, Water	450,000

Following approval for the use of reserves from Capital Financing Reserve Fund, Water for this project, as well as the Paris Street Trunk Watermain project, the Capital Financing Reserve Fund, Water will have a balance of \$4.6 million.

Request for Decision City Council




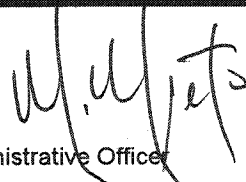
Type of Decision									
Meeting Date	May 29, 2003			Report Date	May 16, 2003				
Decision Requested	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	Priority	<input checked="" type="checkbox"/>	High	<input type="checkbox"/>	Low
	Direction Only			Type of Meeting	<input checked="" type="checkbox"/>	Open	<input type="checkbox"/>	Closed	

Report Title
Award of Contract, Transit Centre Addition/Renovations

Policy Implication + Budget Impact	
<input checked="" type="checkbox"/>	This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified.
<input checked="" type="checkbox"/>	Background Attached

Recommendation
That the contract for the Transit Centre Addition/Renovations be awarded to Capital Construction in the tendered amount of \$444,000.00, this being the lowest tender meeting all contract specifications.
Recommendation Continued

Recommended by the General Manager
 D. Bélisle General Manager of Public Works

Recommended by the C.A.O.
 M. Mieto Chief Administrative Officer

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