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Appendix A

Health Protection and Promotion Act
Loi sur la protection et la promotion de la santé

ONTARIO REGULATION 199/03

Amended to O. Reg. 322/04

CONTROL OF WEST NILE VIRUS

This Regulation is made in English only.

Determination if action required

1. A medical officer of health shall make a determination whether action is required by a municipality to decrease the risk of West Nile Virus to persons either inside or outside the health unit served by the medical officer of health, based upon a local risk assessment in accordance with the document entitled *West Nile Virus Preparedness and Prevention Plan for Ontario*, published by and available from the Ministry of Health and Long-Term Care, dated May 28, 2004. O. Reg. 231/03, s. 1; O. Reg. 322/04, s. 1.

Notice to municipality

2. (1) Where the medical officer of health has determined that action is required, he or she may give notice to the municipality of the required action. O. Reg. 199/03, s. 2 (1).

(2) In determining required actions under subsection (1), the medical officer of health shall have regard to,

- (a) the document mentioned in section 1; and
- (b) the generally accepted practices in the field of public health with regard to decreasing the risk of West Nile virus to persons. O. Reg. 199/03, s. 2 (2).

Must comply

3. A municipality shall comply with any requirements set out in the notice. O. Reg. 199/03, s. 3.

What may be required

4. Action required under this Regulation may include, without being limited to,
- (a) requirements respecting source reduction measures;
 - (b) requirements respecting surveillance;
 - (c) requirements respecting public awareness campaigns about personal protection;
 - (d) requirements respecting the control measures for larviciding and adulticiding set out in Table 1; and
 - (e) requirements respecting the time within which the action shall be taken. O. Reg. 199/03, s. 4.

2004 WEST NILE VIRUS IN THE REGION OF PEEL

TABLE 1
LARVICIDING AND ADULTICIDING IN ONTARIO — WEST NILE VIRUS RESPONSE

“Triggers” based on surveillance of WNV positive humans, birds, mosquito pools or mammals (horses)

Current-Year WNV findings in Health Unit or municipality	Last Year's WNV findings in Health Unit or municipality	Preparatory Status (Larval surveys, mosquito trapping, mapping, training, etc.)	Larviciding ACTION	Adulticiding ACTION
No West Nile virus found yet	No West Nile virus found; virus found in adjacent Health Unit(s)	Not yet done	Do the preparatory work, then larvicide where indicated	Not indicated
No virus found yet	Virus found	Not yet done	Do the preparatory work, then larvicide where indicated	Not indicated
No virus found yet	Virus found	Done last year and under way this year	Larvicide where indicated	Not indicated
Virus found in <u>non</u> -human (dead bird, mosquito pool or mammal) — isolated or as a “hot spot”	Virus found or not found	Done or under way this year	If a “hot spot” and larvae are present, larvicide around this “hot spot” (if not too late in the season)	Adulticide a 3-km “Zone” ONLY IF there are high-risk indicators of transmission to humans*
<u>Human</u> case(s) — one or a few in a space-time “cluster”	Virus found or not found	Done or under way this year	Larvicide around the case or cluster if larvae are present (and if not too late in season)	Adulticide a 3-km radius Zone around the case or cluster
Human cases continue to occur; continued high-risk indicators*	Virus found or not found	Done or under way this year	Larvicide widely where larvae are found (if not too late in season)	Adulticide 3-km Zones — may be contiguous or overlapping

Note: Public education efforts and non-pesticide means of mosquito source reduction should be in place, and increased as increasing evidence of virus is found (especially human cases) in the current year.

* High-risk indicators of transmission to humans: increasing dead bird sightings; high mosquito infection rates; abundant bridge vector populations; increasing mammal (horse) cases; proximity of mosquito breeding sites to human populations (especially large population centres) and weather conditions that favour mosquito breeding.

1. These are minimum activity standards. Medical Officers of Health may increase the Zone size to be treated or take additional mosquito control actions, if justified by scientific data or recommendations.
2. Medical Officer of Health will maintain a means to record, investigate, and report any confirmed or likely adverse or unintended human health effects attributed to mosquito control actions, and will report any non-human environmental adverse effects that he or she knows about to the Ministry of the Environment and/or other relevant local or provincial authorities.

O. Reg. 199/03, Table 1.

taken from:

http://www.e-laws.gov.on.ca/DBLaws/Regs/English/030199_e.htm

Appendix B

**Health Protection and Promotion Act
Loi sur la protection et la promotion de la santé**

ONTARIO REGULATION 558/91

Amended to O. Reg. 97/03

SPECIFICATION OF COMMUNICABLE DISEASES

This Regulation is made in English only.

1. The following diseases are specified as communicable diseases for the purposes of the Act:

Acquired Immunodeficiency Syndrome (AIDS)

Amebiasis

Anthrax

Botulism

Brucellosis

Campylobacter enteritis

Chancroid

Chickenpox (Varicella)

Chlamydia trachomatis infections

Cholera

Cytomegalovirus infection, congenital

Diphtheria

Encephalitis, primary viral

Food poisoning, all causes

Gastroenteritis, institutional outbreaks

Giardiasis

Gonorrhoea

Group A Streptococcal disease, invasive

Haemophilus influenzae b disease, invasive

Hemorrhagic fevers, including,

i. Ebola virus disease

ii. Marburg virus disease

iii. Other viral causes

Hepatitis, viral,

i. Hepatitis A

ii. Hepatitis B

iii. Hepatitis D (Delta hepatitis)

iv. Hepatitis C

Influenza

Lassa Fever

Legionellosis

Leprosy

Listeriosis

Lyme Disease

Malaria

Measles

Meningitis, acute,

i. bacterial

ii. viral

iii. other

Meningococcal disease, invasive

Mumps

Ophthalmia neonatorum

Paratyphoid Fever

Pertussis (Whooping Cough)

Plague

Pneumococcal disease, invasive

Poliomyelitis, acute

Psittacosis/Ornithosis

Q Fever

Rabies

Respiratory infection outbreaks in institutions

Rubella

Rubella, congenital syndrome

Salmonellosis

Severe Acute Respiratory Syndrome (SARS)

Shigellosis

Smallpox

Syphilis

Transmissible Spongiform Encephalopathy, including,

- i. Creutzfeldt-Jakob Disease, all types
- ii. Gerstmann-Sträussler-Scheinker Syndrome
- iii. Fatal Familial Insomnia
- iv. Kuru

Trichinosis

Tuberculosis

Tularemia

Typhoid Fever

Verotoxin-producing E. coli infections

West Nile Virus Illness,

- i. West Nile Virus Fever
- ii. West Nile Virus Neurological Manifestations

Yellow Fever

Yersiniosis

O. Reg. **558/91**, s. 1; O. Reg. 204/95, s. 1; O. Reg. 380/01, s. 1; O. Reg. 431/01, s. 1; O. Reg. 80/03, s. 1;
O. Reg. 97/03, s. 1.

2. Omitted (revokes other Regulations). O. Reg. **558/91**, s. 2

taken from:

http://www.e-laws.gov.on.ca/DBLaws/Regs/English/910558_e.htm

Appendix C

Health Protection and Promotion Act
Loi sur la protection et la promotion de la santé

ONTARIO REGULATION 559/91

Amended to O. Reg. 96/03

SPECIFICATION OF REPORTABLE DISEASES

This Regulation is made in English only.

1. The following diseases are specified as reportable diseases for the purposes of the Act:

Acquired Immunodeficiency Syndrome (AIDS)

Amebiasis

Anthrax

Botulism

Brucellosis

Campylobacter enteritis

Chancroid

Chickenpox (Varicella)

Chlamydia trachomatis infections

Cholera

Cryptosporidiosis

Cyclosporiasis

Cytomegalovirus infection, congenital

Diphtheria

Encephalitis, including,

i. Primary, viral

ii. Post-infectious

iii. Vaccine-related

iv. Subacute sclerosing panencephalitis

v. Unspecified

Food poisoning, all causes

Gastroenteritis, institutional outbreaks

Giardiasis, except asymptomatic cases

Gonorrhoea

Group A Streptococcal disease, invasive

Group B Streptococcal disease, neonatal

Haemophilus influenzae b disease, invasive

Hantavirus pulmonary syndrome

Hemorrhagic fevers, including,

i. Ebola virus disease

- ii. Marburg virus disease
- iii. Other viral causes
 - Hepatitis, viral,
 - i. Hepatitis A
 - ii. Hepatitis B
 - iii. Hepatitis C
 - iv. Hepatitis D (Delta hepatitis)
 - Herpes, neonatal
 - Influenza
 - Lassa Fever
 - Legionellosis
 - Leprosy
 - Listeriosis
 - Lyme Disease
 - Malaria
 - Measles
 - Meningitis, acute,
 - i. bacterial
 - ii. viral
 - iii. other
 - Meningococcal disease, invasive
 - Mumps
 - Ophthalmia neonatorum
 - Paratyphoid Fever
 - Pertussis (Whooping Cough)
 - Plague
 - Pneumococcal disease, invasive
 - Poliomyelitis, acute
 - Psittacosis/Ornithosis
 - Q Fever
 - Rabies
 - Respiratory infection outbreaks in institutions
 - Rubella
 - Rubella, congenital syndrome
 - Salmonellosis
 - Severe Acute Respiratory Syndrome (SARS)
 - Shigellosis
 - Smallpox
 - Syphilis
 - Tetanus

Transmissible Spongiform Encephalopathy, including,

- i. Creutzfeldt-Jakob Disease, all types
- ii. Gerstmann-Sträussler-Scheinker Syndrome
- iii. Fatal Familial Insomnia
- iv. Kuru

Trichinosis

Tuberculosis

Tularemia

Typhoid Fever

Verotoxin-producing E. coli infection indicator conditions, including Haemolytic Uraemic Syndrome (HUS)

West Nile Virus Illness,

- i. West Nile Virus Fever
- ii. West Nile Virus Neurological Manifestations

Yellow Fever

Yersiniosis

O. Reg. 559/91, s. 1; O. Reg. 205/95, s. 1; O. Reg. 129/96, s. 1; O. Reg. 381/01, s. 1; O. Reg. 432/01, s. 1; O. Reg. 81/03, s. 1; O. Reg. 96/03, s. 1.

2. Omitted (revokes other Regulations). O. Reg. 559/91, s. 2.

taken from:

http://www.e-laws.gov.on.ca/DBLaws/Regs/English/910559_e.htm

Appendix D

WEST NILE VIRUS WEEK CODES FOR 2004
Week includes dates from Sunday to Saturday

Week Number	Dates Included
18	May 2 - May 8
19	May 9 - May 15
20	May 16 - May 22
21	May 23 - May 29
22	May 30 - June 5
23	June 6 - June 12
24	June 13 - June 19
25	June 20 - June 26
26	June 27 - July 3
27	July 4 - July 10
28	July 11 - July 17
29	July 18 - July 24
30	July 25 - July 31
31	Aug 1 - Aug 7
32	Aug 8 - Aug 14
33	Aug 15 - Aug 21
34	Aug 22 - Aug 28
35	Aug 29 - Sept 4
36	Sept 5 - Sept 11
37	Sept 12 - Sept 18
38	Sept 19 - Sept 25
39	Sept 26 - Oct 2
40	Oct 3 - Oct 9
41	Oct 10 - Oct 16
42	Oct 17 - Oct 23
43	Oct 24 - Oct 30
44	Oct 31 - Nov 6

2004 WEST NILE VIRUS IN THE REGION OF PEEL

Appendix E

2004 WNV Risk Assessment

Assessment week:

Date completed:

Completed by:

Surveillance Factor	Assessment	Benchmark	Assigned Value
1. Seasonal temperature	1	Two week mean daily temperature below normal (>2°)	
	3	Two week mean daily temperature at or near normal (±2°)	
	5	Two week mean daily temperature above normal (>2°)	
2. Adult mosquito vector abundance Determined by trapping adults, identifying them to species, and comparing numbers to those previously documented for an area	2	Vector abundance well below average (<50%) (or <25% of 2002 data)	
	4	Vector abundance below average (50%-90%) (or 25%-50% of 2002 data)	
	6	Vector abundance average (90%-150%) (or 50%-75% of 2002 data)	
	8	Vector abundance above average (150%-300%) (or 75%-150% of 2002 data)	
	10	Vector abundance well above average (>300%) (or >150% of 2002 data)	
3. Virus isolation rate in vector mosquito species Tested in pools of 50. Expressed as minimum infection rate (MIR) per 1000 female mosquitoes tested (or 10 pools). A single positive pool with < 500 total <i>Culex</i> cannot score higher than 6.	2	MIR/1000 = 0	
	6	MIR/1000 = > 0 - 5	
	8	MIR/1000 = > 5 - 10	
	10	MIR/1000 = > 10	
4. Human Cases of WNV (Probable and Confirmed)	1	No human cases in province or neighbouring US states	
	2	≤ 10 human cases in neighbouring US states, and none in province	
	3	One human case acquired in province or 11-99 in neighbouring US states	
	4	Multiple human cases acquired in province, or ≥ 100 in neighbouring US states	
	5	One or more human cases acquired in region/area	
5. Local WNV activity (do not score if bird testing has stopped, unless benchmark factor is met for a score of 5)	1	No WNV in birds, horses, or mosquitoes in province	
	2	One or more positive crows or mosquitoes in province	
	3	One to three positive crows locally	
	4	Multiple positive crows (>3) or an equine case locally	
	5	A rapid increase in dead bird (crow) sightings or 2 or more equine cases in the specific and local area.	
6. Time of Year (score only if virus activity detected in region/area)	1	Before June 15 or after September 15	
	3	Between June 15 and July 15, or between September 1 and September 15	
	5	Between July 15 and September 1	
7 Proximity to urban or suburban regions (score only if virus activity detected in region/area)	1	Virus activity in remote areas	
	2	Virus activity in rural areas	
	3	Virus activity in small towns	
	4	Virus activity in suburban/urban areas	
	5	Virus activity in suburban/urban areas with positive mosquito traps and previous infection rates >5 per 100,000 for a previous season	
Risk Assessment Level		Total	
		Divide total by 7 if summing surveillance factors 1-5 Divide total by 9 if summing surveillance factors 1-7 Divide total by 6 if summing surveillance factors 1-4 Divide total by 8 if summing surveillance factors 1-4 and 6,7 Average	

Appendix F

Definition of Terms

Ataxia: difficulty coordinating movement or body functions

Encephalitis: inflammation of the brain

Host: an animal or plant having received a parasite which then resides within the animal or plant

Hot Spot: in WNV programs, a collection of two or more local positive findings among dead birds, mosquito pools or mammals, as opposed to an isolated finding

Malaise: bodily discomfort, especially without development of a specific disease

Meningitis: inflammation of the lining of the brain or spinal cord

Myalgia: muscle soreness or pain

Sighting: a report of a dead crow received from the public with species being confirmed by animal control authorities at time of carcass pick-up

Vector: carrier of disease or infection from one organism to another

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