

## Canada - Influenza A viruses of high pathogenicity (Inf. with) (non-poultry including wild birds) (2017-) - Follow-up report 6

### GENERAL INFORMATION

COUNTRY/TERRITORY OR ZONE	ANIMAL TYPE	DISEASE CATEGORY	EVENT ID
COUNTRY/TERRITORY	TERRESTRIAL	Listed disease	4438
DISEASE	CAUSAL AGENT	GENOTYPE / SEROTYPE / SUBTYPE	START DATE
Influenza A viruses of high pathogenicity (Inf. with) (non-poultry including wild birds) (2017-)	Highly pathogenic avian influenza virus	H5N1	2022/04/03
REASON FOR NOTIFICATION	DATE OF LAST OCCURRENCE	CONFIRMATION DATE	EVENT STATUS
Unusual host species	-	2022/05/02	On-going
END DATE	SELF-DECLARATION		
-	NO		

### REPORT INFORMATION

REPORT NUMBER	REPORT ID	REPORT REFERENCE	REPORT DATE
Follow-up report 6	FUR_158383	-	2023/02/24
REPORT STATUS	NO EVOLUTION REPORT		
Validated	-		

### EPIDEMIOLOGY

#### SOURCE OF EVENT OR ORIGIN OF INFECTION

- Contact with wild species
- Unknown or inconclusive

#### EPIDEMIOLOGICAL COMMENTS

We report the first cases of H5N1 highly pathogenic avian influenza (HPAI) virus in raccoons in Canada as well as additional cases in skunks, red foxes and a mink. We reported in a previous follow up report, a case of H5N1 highly pathogenic avian influenza (HPAI) virus in an Atlantic White-Sided Dolphin in Québec which is not captured in WAHIS. Additional unusual species are reported grouped by province. The geographical marker is on the capital. For detailed and current information on high pathogenicity avian influenza cases in wildlife, please consult : [http://www.cwhc-rcsf.ca/avian\\_influenza.php](http://www.cwhc-rcsf.ca/avian_influenza.php)

### QUANTITATIVE DATA SUMMARY

#### MEASURING UNIT

Animal

Species	Susceptible Cases	Deaths	Killed and	Slaughtered/ Killed for	Vaccinated
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				Disposed of	commercial use	
striped skunk (wild)	NEW -	14	9	-	-	-
	TOTAL -	32	13	5	-	-
american mink (wild)	NEW -	1	1	-	-	-
	TOTAL -	2	1	1	-	-
harbor seal (wild)	NEW -	-	-	-	-	-
	TOTAL -	16	16	-	-	-
raccoon (northern raccoon) (wild)	NEW -	2	1	-	-	-
	TOTAL -	2	1	-	-	-
american black bear (black bear) (wild)	NEW -	-	-	-	-	-
	TOTAL -	2	1	1	-	-
red fox (wild)	NEW -	2	2	-	-	-
	TOTAL -	33	23	7	-	-
all species	NEW -	19	13	-	-	-
	TOTAL -	87	55	14	-	-

## DIAGNOSTIC DETAILS

### CLINICAL SIGNS

YES

### METHOD OF DIAGNOSTIC

Diagnostic test

Test name	Laboratory	Species sampled	Number of outbreaks sampled	First result date	Latest result date	Result
Gene sequencing	National Centre for Foreign Animal Disease (NCFAD), Winnipeg, Manitoba	Red Fox, Raccoon (Northern raccoon), American Mink, Harbor Seal, American Black Bear (black bear), Striped Skunk	29	2022/05/01	2023/02/22	Positive
Real-time reverse transcription polymerase chain reaction (rRT-PCR)	National Centre for Foreign Animal Disease (NCFAD), Winnipeg, Manitoba	Red Fox, Raccoon (Northern raccoon), Harbor Seal, American Black Bear (black bear), American Mink, Striped Skunk	29	2022/05/02	2023/02/22	Positive

## CONTROL MEASURES

### CONTROL MEASURES AT EVENT LEVEL

### DOMESTIC ANIMALS

### WILD ANIMALS

## NEW OUTBREAKS

OB\_114384 - PEI-2022-HPAIM-003 - PRINCE EDWARD ISLAND - MAMMALS

### OUTBREAK REFERENCE

### START DATE

### END DATE

### DETAILED CHARACTERISATION

FIRST ADMINISTRATIVE DIVISION	SECOND ADMINISTRATIVE DIVISION	THIRD ADMINISTRATIVE DIVISION	EPIDEMIOLOGICAL UNIT
Prince Edward Island	Queens	Charlottetown	Not applicable
LOCATION	Latitude, Longitude	OUTBREAKS IN CLUSTER	Measuring unit
Prince Edward Island - mammals	46.25 , -63.11 (Approximate location)	-	Animal

AFFECTED POPULATION DESCRIPTION

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Species (latin name)	Wildlife type	Susceptible	Cases	Deaths	Killed and Disposed of	Slaughtered/ Killed for commercial use	Vaccinated
striped skunk (wild)	NEW	-	1	1	-	-	-
wild	TOTAL	-	1	1	-	-	-

METHOD OF DIAGNOSTIC

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CONTROL MEASURES DIFFERENT FROM EVENT LEVEL

MEASURES NOT IMPLEMENTED	ADDITIONAL MEASURES
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OB\_114386 - PEI-2023-HPAIM-001 - PRINCE EDWARD ISLAND - MAMMALS 2023

OUTBREAK REFERENCE	START DATE	END DATE	DETAILED CHARACTERISATION
PEI-2023-HPAIM-001	2023/01/01	-	Clade: 2.3.4.4b - Lineage: Reassortment Eurasian and North American

FIRST ADMINISTRATIVE DIVISION	SECOND ADMINISTRATIVE DIVISION	THIRD ADMINISTRATIVE DIVISION	EPIDEMIOLOGICAL UNIT
Prince Edward Island	Queens	Charlottetown	Not applicable
LOCATION	Latitude, Longitude	OUTBREAKS IN CLUSTER	Measuring unit
Prince Edward Island - mammals 2023	46.25 , -63.11 (Approximate location)	-	Animal

AFFECTED POPULATION DESCRIPTION

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Species (latin name)	Wildlife type	Susceptible	Cases	Deaths	Killed and Disposed of	Slaughtered/ Killed for commercial use	Vaccinated
striped skunk (wild)	NEW	-	2	2	-	-	-
wild	TOTAL	-	2	2	-	-	-

METHOD OF DIAGNOSTIC

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CONTROL MEASURES DIFFERENT FROM EVENT LEVEL

MEASURES NOT IMPLEMENTED	ADDITIONAL MEASURES
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OB\_114383 - ON-2023-HPAIM-001 - ONTARIO - MAMMALS 2023

OUTBREAK REFERENCE	START DATE	END DATE	DETAILED CHARACTERISATION
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ON-2023-HPAIM-001	2023/01/01	-	Clade: 2.3.4.4b - Lineage: Reassortment Eurasian and North American
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FIRST ADMINISTRATIVE DIVISION	SECOND ADMINISTRATIVE DIVISION	THIRD ADMINISTRATIVE DIVISION	EPIDEMIOLOGICAL UNIT
Ontario	Toronto	Toronto	Not applicable

LOCATION	Latitude, Longitude	OUTBREAKS IN CLUSTER	Measuring unit
Ontario - mammals 2023	43.6497 , -79.3751 (Approximate location)	-	Animal

**AFFECTED POPULATION DESCRIPTION**

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Species (latin name)	Wildlife type	Susceptible	Cases	Deaths	Killed and Disposed of	Slaughtered/ Killed for commercial use	Vaccinated
raccoon (northern	NEW	-	1	-	-	-	-
raccoon) (wild) wild	TOTAL	-	1	-	-	-	-

**METHOD OF DIAGNOSTIC**

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**CONTROL MEASURES DIFFERENT FROM EVENT LEVEL**

MEASURES NOT IMPLEMENTED	ADDITIONAL MEASURES
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OB\_110745 - SK-2022-HPAIM - SASKATCHEWAN - MAMMALS

OUTBREAK REFERENCE	START DATE	END DATE	DETAILED CHARACTERISATION
SK-2022-HPAIM	2022/10/17	2022/12/31	-

FIRST ADMINISTRATIVE DIVISION	SECOND ADMINISTRATIVE DIVISION	THIRD ADMINISTRATIVE DIVISION	EPIDEMIOLOGICAL UNIT
Saskatchewan	Division No. 6	Regina	Not applicable

LOCATION	Latitude, Longitude	OUTBREAKS IN CLUSTER	Measuring unit
Saskatchewan - mammals	50.43 , -104.62 (Approximate location)	-	Animal

**AFFECTED POPULATION DESCRIPTION**

Cluster: Gene segments PB2, PB1, NP and NS belonging to North American lineage and gene segments PA, HA, NA and M belonging to Eurasian lineage

Species (latin name)	Wildlife type	Susceptible	Cases	Deaths	Killed and Disposed of	Slaughtered/ Killed for commercial use	Vaccinated
striped skunk	NEW	-	3	3	-	-	-
(wild) wild	TOTAL	-	3	3	-	-	-
red fox (wild) wild	NEW	-	1	1	-	-	-
	TOTAL	-	1	1	-	-	-

**METHOD OF DIAGNOSTIC**

Diagnostic test

**CONTROL MEASURES DIFFERENT FROM EVENT LEVEL**

MEASURES NOT IMPLEMENTED	ADDITIONAL MEASURES
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OB\_110748 - MB-2022-HPAIM - MANITOBA - MAMMALS

OUTBREAK REFERENCE	START DATE	END DATE	DETAILED CHARACTERISATION
MB-2022-HPAIM	2022/11/14	2022/12/31	-
FIRST ADMINISTRATIVE DIVISION	SECOND ADMINISTRATIVE DIVISION	THIRD ADMINISTRATIVE DIVISION	EPIDEMIOLOGICAL UNIT
Manitoba	Division No. 11	Winnipeg	Not applicable
LOCATION	Latitude, Longitude	OUTBREAKS IN CLUSTER	Measuring unit
Manitoba - mammals	49.91 , -97.14 (Approximate location)	-	Animal

#### AFFECTED POPULATION DESCRIPTION

Cluster: Gene segments PB2, PB1, PA and NP belonging to North American lineage and gene segments HA, NA, M and NS belonging to Eurasian lineage

Species (latin name)	Wildlife type	Susceptible	Cases	Deaths	Killed and Disposed of	Slaughtered/ Killed for commercial use	Vaccinated
striped skunk (wild)	NEW	-	3	3	-	-	-
wild	TOTAL	-	3	3	-	-	-

#### METHOD OF DIAGNOSTIC

Diagnostic test

#### CONTROL MEASURES DIFFERENT FROM EVENT LEVEL

MEASURES NOT IMPLEMENTED	ADDITIONAL MEASURES
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OB\_111945 - YT-2022-HPAIM - YUKON - MAMMALS

OUTBREAK REFERENCE	START DATE	END DATE	DETAILED CHARACTERISATION
YT-2022-HPAIM	2022/05/21	2022/12/31	Clade: 2.3.4.4b - Lineage: Reassortment Eurasian and North American
FIRST ADMINISTRATIVE DIVISION	SECOND ADMINISTRATIVE DIVISION	THIRD ADMINISTRATIVE DIVISION	EPIDEMIOLOGICAL UNIT
Yukon	Yukon	Whitehorse	Not applicable
LOCATION	Latitude, Longitude	OUTBREAKS IN CLUSTER	Measuring unit
Yukon - mammals	60.72 , -135.03 (Approximate location)	-	Animal

#### AFFECTED POPULATION DESCRIPTION

Cluster : Gene segments PB2 and NP belonging to North American lineage and gene segments PB1, PA, HA, NA, M and NS belonging to Eurasian lineage

Species (latin name)	Wildlife type	Susceptible	Cases	Deaths	Killed and Disposed of	Slaughtered/ Killed for commercial use	Vaccinated
red fox (wild)	NEW	-	1	1	-	-	-
wild	TOTAL	-	1	1	-	-	-

#### METHOD OF DIAGNOSTIC

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#### CONTROL MEASURES DIFFERENT FROM EVENT LEVEL

MEASURES NOT IMPLEMENTED	ADDITIONAL MEASURES
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UPDATED OUTBREAKS

## OB\_106295 - ON-2022-HPAIM - ONTARIO - MAMMALS

OUTBREAK REFERENCE	START DATE	END DATE	DETAILED CHARACTERISATION
ON-2022-HPAIM	2022/04/03	2022/12/31	Clade: 2.3.4.4b - Lineage: Reassortment Eurasian and North American
FIRST ADMINISTRATIVE DIVISION	SECOND ADMINISTRATIVE DIVISION	THIRD ADMINISTRATIVE DIVISION	EPIDEMIOLOGICAL UNIT
Ontario	Toronto	Toronto	Not applicable
LOCATION	Latitude, Longitude	OUTBREAKS IN CLUSTER	Measuring unit
Ontario - mammals	43.6497 , -79.3751	-	Animal

## AFFECTED POPULATION DESCRIPTION

Multiple locations in Southern and Eastern Ontario Cluster: Gene segments PB2, PB1, PA and NP belonging to North American lineage and gene segments HA, NA, M and NS belonging to Eurasian lineage

Species (latin name)	Wildlife type	Susceptible	Cases	Deaths	Killed and Disposed of	Slaughtered/ Killed for commercial use	Vaccinated
striped skunk (wild)	NEW	-	-	-	-	-	-
wild	TOTAL	-	1	1	-	-	-
american mink (wild)	NEW	-	1	1	-	-	-
wild	TOTAL	-	1	1	-	-	-
raccoon (northern	NEW	-	1	1	-	-	-
raccoon) (wild) wild	TOTAL	-	1	1	-	-	-
red fox (wild) wild	NEW	-	-	-	-	-	-
	TOTAL	-	4	4	-	-	-

## METHOD OF DIAGNOSTIC

Diagnostic test

## CONTROL MEASURES DIFFERENT FROM EVENT LEVEL

MEASURES NOT IMPLEMENTED ADDITIONAL MEASURES

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## OB\_106292 - QC-2022-HPAIM - QUÉBEC - MAMMALS

OUTBREAK REFERENCE	START DATE	END DATE	DETAILED CHARACTERISATION
QC-2022-HPAIM	2022/05/30	2022/12/31	-
FIRST ADMINISTRATIVE DIVISION	SECOND ADMINISTRATIVE DIVISION	THIRD ADMINISTRATIVE DIVISION	EPIDEMIOLOGICAL UNIT
Québec	Communauté-Urbaine-de-Québec	Québec	Not applicable
LOCATION	Latitude, Longitude	OUTBREAKS IN CLUSTER	Measuring unit
Québec - mammals	46.8138 , -71.2183 (Approximate location)	-	Animal

## AFFECTED POPULATION DESCRIPTION

Multiple regions from Québec : Côte Nord, Bas-Saint-Laurent and Gaspésie. We also report HPAI in a Atlantic White-Sided Dolphin from Bas St-Laurent (data not captured in WAHIS) Fully Eurasian lineage (Bears and one seal) Reassortment EU&NA (4 seals and dolphin) Cluster: Gene segments PB2, PB1, PA and NP belonging to North American lineage and gene segments HA, NA, M and NS belonging to Eurasian lineage.

Species (latin name)	Wildlife	Susceptible	Cases	Deaths	Killed and	Slaughtered/ Killed for	Vaccinated
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	type				Disposed of	commercial use	
harbor seal (wild) wild	NEW	-	-	-	-	-	-
	TOTAL	-	5	5	-	-	-
american black bear	NEW	-	-	-	-	-	-
(black bear) (wild) wild	TOTAL	-	2	1	1	-	-

#### METHOD OF DIAGNOSTIC

Diagnostic test

#### CONTROL MEASURES DIFFERENT FROM EVENT LEVEL

MEASURES NOT IMPLEMENTED	ADDITIONAL MEASURES
-	-
OB_106294 - NS-2022-HPAIM - NOVA SCOTIA - MAMMALS	

OUTBREAK REFERENCE	START DATE	END DATE	DETAILED CHARACTERISATION
NS-2022-HPAIM	2022/06/28	2022/12/31	Clade 2.3.4.4b - Lineage: Fully Eurasian
FIRST ADMINISTRATIVE DIVISION	SECOND ADMINISTRATIVE DIVISION	THIRD ADMINISTRATIVE DIVISION	EPIDEMIOLOGICAL UNIT
Nova Scotia	Halifax	Halifax	Not applicable
LOCATION	Latitude, Longitude	OUTBREAKS IN CLUSTER	Measuring unit
Nova Scotia - mammals	44.6466 , -63.5764 (Approximate location)	-	Animal

#### AFFECTED POPULATION DESCRIPTION

Location: Cape Breton Fully Eurasian lineage

Species (latin name)	Wildlife type	Susceptible	Cases	Deaths	Killed and Disposed of	Slaughtered/ Killed for commercial use	Vaccinated
red fox (wild)	NEW	-	-	-	-	-	-
wild	TOTAL	-	1	1	-	-	-

#### METHOD OF DIAGNOSTIC

Diagnostic test

#### CONTROL MEASURES DIFFERENT FROM EVENT LEVEL

MEASURES NOT IMPLEMENTED	ADDITIONAL MEASURES
-	-
OB_106293 - AB-2022-HPAIM - ALBERTA - MAMMALS	

OUTBREAK REFERENCE	START DATE	END DATE	DETAILED CHARACTERISATION
AB-2022-HPAIM	2022/05/11	2022/12/31	-
FIRST ADMINISTRATIVE DIVISION	SECOND ADMINISTRATIVE DIVISION	THIRD ADMINISTRATIVE DIVISION	EPIDEMIOLOGICAL UNIT
Alberta	Division No. 11	Edmonton	Not applicable
LOCATION	Latitude, Longitude	OUTBREAKS IN CLUSTER	Measuring unit
Alberta - mammals	53.5373 , -113.4905 (Approximate location)	-	Animal

#### AFFECTED POPULATION DESCRIPTION

Multiple locations in Alberta Clusters: Gene segments PB2 and NP belonging to North American lineage and gene segments PB1, PA, HA, NA, M and NS belonging to Eurasian lineage (5 skunks and 1 red fox) Gene segments PB2, PB1, NP and NS belonging to North American lineage and gene segments PA, HA, NA and M belonging to Eurasian lineage (12 skunks and 2 red foxes)

Species (latin name)	Wildlife type	Susceptible	Cases	Deaths	Killed and Disposed of	Slaughtered/ Killed for commercial use	Vaccinated
striped skunk (wild)	wild	NEW	-	5	-	-	-
	TOTAL	-	17	3	-	-	-
red fox (wild)	wild	NEW	-	-	-	-	-
	TOTAL	-	3	-	-	-	-

METHOD OF DIAGNOSTIC

Diagnostic test

CONTROL MEASURES DIFFERENT FROM EVENT LEVEL

MEASURES NOT IMPLEMENTED	ADDITIONAL MEASURES
-	-