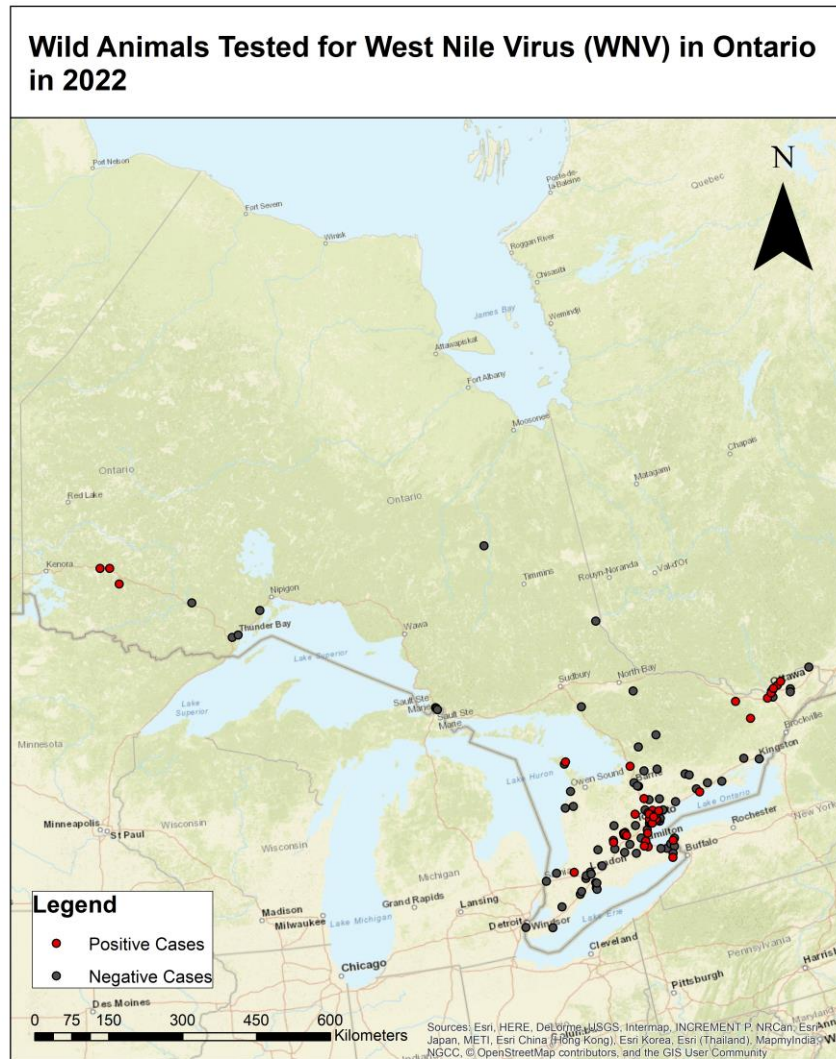




## CWHC Ontario/Nunavut Dead Bird West Nile Virus Testing Summary for 2022

The CWHC Ontario/Nunavut Region has tested 170 birds for the presence of West Nile Virus (WNV) in 2022. This year, marked the first detection of highly pathogenic avian influenza (HPAI/H5N1) in the province, and because of this our bird surveillance efforts drastically increased. This increase is directly reflected by the number of birds tested this year in comparison to previous years. All bird species were first screened for HPAI prior to testing for WNV. All corvids were screened for both HPAI and WNV upon admission to CWHC. All corvids and raptors submitted to the CWHC during the season were tested along with any other birds with known susceptibility, exhibiting neurological signs, or showing lesions consistent with WNV. Of the 170 tested, 49 confirmed positive for the virus by real-time RT-PCR.



**Figure 1.** Location of birds tested for West Nile Virus in Ontario in 2022. Red locations tested positive, blue tested negative.



Corvid species accounted for most of the birds which tested positive for West Nile virus. Out of the 49 confirmed positives, 31 of these were corvid species. However, there were also several other species of birds that tested positive. The earliest detection in 2022 was a red-tailed hawk found on June 21, 2022 in Port Colborne. This year, no songbirds were found to be positive for WNV but there were 3 ring-billed gulls that tested positive. This is a continued trend from previous years, since we are seeing waterfowl/shorebirds continuing to test positive for West Nile virus but seeing fewer cases this year.

**Table 1.** Species breakdown for birds testing positive for West Nile virus in 2022.

Species	Tested	Positive
<b>Corvids</b>		
American Crow	52	27
Blue Jay	15	2
Common Raven	4	2
<b>Raptors</b>		
American Kestrel	1	0
Bald Eagle	3	0
Barred Owl	2	0
Broad-winged Hawk	1	0
Cooper's Hawk	7	2
Eastern Screech Owl	6	0
Great-horned Owl	9	1
Long-eared Owl	1	0
Merlin	7	4
Northern Goshawk	1	1
Osprey	2	0
Red-tailed Hawk	22	7
Sharp-shinned Hawk	2	0
Snowy Owl	1	0
<b>Songbirds</b>		
American Robin	4	0
Common Grackle	1	0
Mourning Dove	1	0
<b>Waterfowl &amp; Waterbirds</b>		
Belted Kingfisher	1	0
Double-crested Cormorant	9	0
Herring Gull	2	0
Ring-billed Gull	5	3
<b>Other</b>		
Loggerhead Shrike	10	0
Ruffed Grouse	1	0
<b>Totals</b>	<b>170</b>	<b>49</b>



**Table 2.** Species, date, and locations for dead birds tested by PCR for West Nile virus in 2022.

<b>Specimen Common Name</b>	<b>Date Found</b>	<b>City</b>	<b>WNV Test Diagnosis</b>
Red-Tailed Hawk	2022-05-18	Thorold	Negative
American Crow	2022-05-19	Ameliasburg	Negative
Broad-Winged Hawk	2022-05-21	Upsala	Negative
Blue Jay	2022-05-21	St. Thomas	Negative
Barred Owl	2022-05-23	Seeley's Bay	Negative
American Crow	2022-05-23	Carrying Place	Negative
Blue Jay	2022-05-24	Sebringville	Negative
American Crow	2022-06-02	Sault Ste. Marie	Negative
American Crow	2022-06-03	Ottawa	Negative
American Crow	2022-06-03	Limoges	Negative
Bald Eagle	2022-06-06	Norwich	Negative
Blue Jay	2022-06-06	Hawkesbury	Negative
American Crow	2022-06-07	Port Hope	Negative
Snowy Owl	2022-06-08	Paisley	Negative
Great Horned Owl	2022-06-10	Aurora	Negative
Eastern Screech-Owl	2022-06-11	Niagara-on-the-Lake	Negative
Red-Tailed Hawk	2022-06-11	Southgate	Negative
American Crow	2022-06-13	Guelph	Negative
Merlin	2022-06-14	Thunder Bay	Negative
American Crow	2022-06-14	Embrun	Negative



Eastern Screech-Owl	2022-06-15	Lion's Head	Negative
Great Horned Owl	2022-06-16	Wardsville	Negative
American Crow	2022-06-16	Guelph	Negative
Long-Eared Owl	2022-06-17	Shannonville	Negative
Double-Crested Cormorant	2022-06-19	Hamilton	Negative
American Crow	2022-06-19	Barrie	Negative
American Crow	2022-06-19	Guelph	Negative
Red-Tailed Hawk	2022-06-20	St. Catharines	Negative
American Crow	2022-06-20	Ottawa	Negative
American Crow	2022-06-20	Kingston	Negative
Red-Tailed Hawk	2022-06-21	Port Colborne	<b>Positive</b>
American Crow	2022-06-21	Brant	Negative
Eastern Screech-Owl	2022-06-22	Tiverton	Negative
American Crow	2022-06-22	Pelham	Negative
Blue Jay	2022-06-23	Tay	Negative
Loggerhead Shrike	2022-06-23	Cambridge	Negative
Loggerhead Shrike	2022-06-23	Cambridge	Negative
Ring-Billed Gull	2022-06-24	Toronto	Negative
Blue Jay	2022-06-26	Dorset	Negative
Common Raven	2022-06-27	Milford Bay	Negative
American Crow	2022-06-27	Guelph	Negative
Common Grackle	2022-06-28	Goodwood	Negative



Common Raven	2022-06-28	Guelph	Negative
American Crow	2022-07-02	Sault Ste. Marie	Negative
Red-Tailed Hawk	2022-07-04	Toronto	Negative
Red-Tailed Hawk	2022-07-04	Stratford	Negative
Osprey	2022-07-04	Ennismore	Negative
Blue Jay	2022-07-04	Delaware	Negative
Blue Jay	2022-07-05	Sarnia	Negative
Mourning Dove	2022-07-05	Toronto	Negative
American Crow	2022-07-06	Powassan	Negative
Loggerhead Shrike	2022-07-06	Cambridge	Negative
Bald Eagle	2022-07-10	West Lorne	Negative
American Crow	2022-07-14	Guelph	Negative
Cooper's Hawk	2022-07-15	Georgetown	Negative
American Kestrel	2022-07-15	Ottawa	Negative
American Crow	2022-07-18	Midhurst	Negative
Loggerhead Shrike	2022-07-18	Brechin	Negative
Loggerhead Shrike	2022-07-19	Newburgh	Negative
Belted Kingfisher	2022-07-20	Toronto	Negative
American Crow	2022-07-21	Brantford	Negative
Cooper's Hawk	2022-07-22	Lion's Head	<b>Positive</b>
Blue Jay	2022-07-23	LaSalle	Negative
American Crow	2022-07-24	Orillia	Negative



Double-Crested Cormorant	2022-07-25	Sauble Beach	Negative
Merlin	2022-07-25	Mississauga	Negative
American Crow	2022-07-26	Ottawa	Positive
American Crow	2022-07-27	Toronto	Positive
Loggerhead Shrike	2022-07-27	Newburgh	Negative
Merlin	2022-07-28	Toronto	<b>Positive</b>
American Crow	2022-07-29	Thunder Bay	Negative
Cooper's Hawk	2022-07-30	Vaughan	<b>Positive</b>
American Crow	2022-07-30	Toronto	<b>Positive</b>
Loggerhead Shrike	2022-07-30	Cambridge	Negative
Loggerhead Shrike	2022-07-30	Cambridge	Negative
Loggerhead Shrike	2022-08-02	Cambridge	Negative
Red-Tailed Hawk	2022-08-03	Toronto	<b>Positive</b>
Bald Eagle	2022-08-03	French River	Negative
Great Horned Owl	2022-08-04	Cobourg	Negative
Blue Jay	2022-08-04	King City	Negative
American Crow	2022-08-05	Caledon	<b>Positive</b>
Double-Crested Cormorant	2022-08-05	Toronto	Negative
Merlin	2022-08-06	Toronto	<b>Positive</b>
Ring-Billed Gull	2022-08-06	Toronto	<b>Positive</b>
Merlin	2022-08-07	Toronto	Negative
Red-Tailed Hawk	2022-08-07	Lincoln	Negative



American Crow	2022-08-08	Temiskaming Shores	Negative
Cooper's Hawk	2022-08-08	Barrie	Negative
Common Raven	2022-08-09	Dryden	<b>Positive</b>
Sharp-Shinned Hawk	2022-08-09	Castleton	Negative
American Crow	2022-08-10	Toronto	<b>Positive</b>
Double-Crested Cormorant	2022-08-10	Toronto	Negative
Double-Crested Cormorant	2022-08-10	Toronto	Negative
Double-Crested Cormorant	2022-08-10	Toronto	Negative
Double-Crested Cormorant	2022-08-10	Toronto	Negative
American Crow	2022-08-11	Hamilton	<b>Positive</b>
Red-Tailed Hawk	2022-08-13	Niagara-on-the-Lake	<b>Positive</b>
American Crow	2022-08-13	Richmond Hill	<b>Positive</b>
American Crow	2022-08-13	Waterloo	<b>Positive</b>
Great Horned Owl	2022-08-13	Brantford	Negative
American Crow	2022-08-15	Burlington	<b>Positive</b>
American Crow	2022-08-15	Ottawa	<b>Positive</b>
American Crow	2022-08-15	Waterloo	<b>Positive</b>
Bald Eagle	2022-08-15	Port Colborne	Negative
Merlin	2022-08-16	Hamilton	<b>Positive</b>
Merlin	2022-08-16	Kenora	<b>Positive</b>
American Crow	2022-08-16	Bradford West Gwillimbury	<b>Positive</b>
Red-Tailed Hawk	2022-08-16	London	Negative



American Crow	2022-08-17	Guelph	<b>Positive</b>
Ring-Billed Gull	2022-08-18	Toronto	Negative
American Crow	2022-08-20	Chelmsford	<b>Positive</b>
Common Raven	2022-08-22	Oxdrift	<b>Positive</b>
American Crow	2022-08-23	Guelph	<b>Positive</b>
American Crow	2022-08-24	Guelph	<b>Positive</b>
Loggerhead Shrike	2022-08-25	Cambridge	Negative
Double-Crested Cormorant	2022-08-25	Plympton-Wyoming	Negative
Herring Gull	2022-08-26	Port Stanley	Negative
Northern goshawk	2022-08-27	Greater Madawaska	<b>Positive</b>
Blue Jay	2022-08-27	Oakville	<b>Positive</b>
Double-Crested Cormorant	2022-08-27	Union	Negative
Cooper's Hawk	2022-08-28	Plattsville	Negative
American Crow	2022-08-29	Ottawa	<b>Positive</b>
American Crow	2022-08-29	Waterloo	<b>Positive</b>
Red-Tailed Hawk	2022-08-29	Wheatley	Negative
American Crow	2022-08-30	Toronto	<b>Positive</b>
American Crow	2022-08-30	Ottawa	<b>Positive</b>
American Crow	2022-08-31	Cobourg	<b>Positive</b>
Ring-Billed Gull	2022-09-03	Vaughan	<b>Positive</b>
Blue Jay	2022-09-03	Puslinch	Negative
Great Horned Owl	2022-09-04	Pelham	Negative





Red-Tailed Hawk	2022-09-07	Welland	Negative
Blue Jay	2022-09-07	Newmarket	Negative
American Crow	2022-09-08	Ottawa	<b>Positive</b>
Red-Tailed Hawk	2022-09-10	Springbank	<b>Positive</b>
Red-Tailed Hawk	2022-09-12	Dutton	Negative
American Crow	2022-09-14	Guelph	<b>Positive</b>
Blue Jay	2022-09-16	Niagara-on-the-Lake	<b>Positive</b>
Ring-Billed Gull	2022-09-21	Toronto	<b>Positive</b>
Eastern Screech-Owl	2022-09-21	Toronto	Negative
American Crow	2022-09-22	London	<b>Positive</b>
Red-Tailed Hawk	2022-09-23	Toronto	<b>Positive</b>
American Crow	2022-09-23	Waterloo	<b>Positive</b>
Eastern Screech-Owl	2022-09-26	London	Negative
American Crow	2022-09-27	Guelph	<b>Positive</b>
Osprey	2022-09-27	Komoka	Negative
Red-Tailed Hawk	2022-09-28	Toronto	<b>Positive</b>
Great Horned Owl	2022-09-28	Oshawa	Negative
Blue Jay	2022-10-01	Mississauga	Negative
Eastern Screech-Owl	2022-10-01	Fergus	Negative
Blue Jay	2022-10-03	Chatham	Negative
Red-Tailed Hawk	2022-10-04	St. Thomas	Negative
American Robin	2022-10-04	Burlington	Negative



American Robin	2022-10-04	Burlington	Negative
Great Horned Owl	2022-10-05	Sault Ste. Marie	Negative
Red-Tailed Hawk	2022-10-09	London	Negative
Cooper's Hawk	2022-10-11	Cobourg	Negative
Red-Tailed Hawk	2022-10-12	Toronto	Negative
Ring-Billed Gull	2022-10-12	Stratford	Negative
Cooper's Hawk	2022-10-14	Niagara Falls	Negative
Great Horned Owl	2022-10-15	Paris	<b>Positive</b>
Great Horned Owl	2022-10-17	Niagara-on-the-Lake	Negative
American Crow	2022-10-20	Waubashene	<b>Positive</b>
American Robin	2022-10-20	Toronto	Negative
Red-Tailed Hawk	2022-10-21	Peterborough	Negative
Red-Tailed Hawk	2022-10-24	Toronto	<b>Positive</b>
Red-Tailed Hawk	2022-10-25	Moonbeam	Negative
Barred Owl	2022-10-26	Kingston	Negative
Cooper's Hawk	2022-10-26	London	Negative
Ruffed Grouse	2022-10-27	Bailieboro	Negative
American Crow	2022-10-30	Fort Erie	Negative

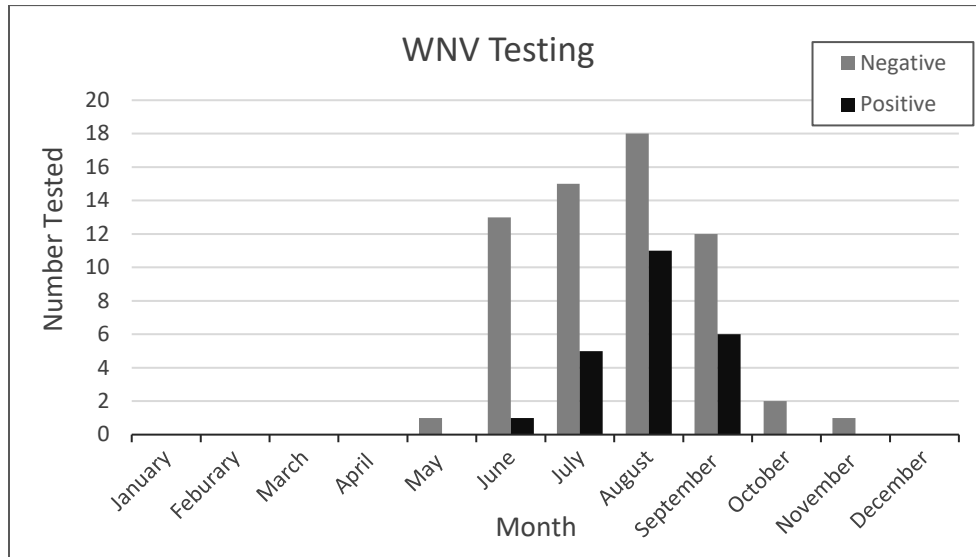


Figure 2. WNV testing completed by month in 2021.

Note: This report is only accurate to date of publishing and only accounts for mortalities that occurred in 2022. Any cases submitted during 2022 that died during a previous year have been removed.