



Department  
of Health



# Mosquito-borne Illness Weekly Report Sep 25 - Oct 01 (MMWR Week 39)

2022



## NYSDOH STATEWIDE MOSQUITO-BORNE DISEASE ACTIVITY REPORT December 22, 2022

The New York State Department of Health (NYSDOH) collects, compiles, and analyzes information on mosquito-borne disease activity in New York State (NYS) and produces this weekly report. Data in this report reflects testing performed by both NYSDOH's Wadsworth Center Laboratories (WC) and the New York City Department of Health and Mental Hygiene's (NYCDOHMH) Public Health Laboratory (PHL).

### *Weekly Summary* (September 25 - October 01)

- WNV:
  - 5 WNV-positive pools have been identified in NYS, outside of NYC. **(Rockland 1, Suffolk 4)**
  - WNV-positive mosquito activity has been reported in 5 NYC counties. **(Bronx, Kings, New York, Queens, Richmond)**
  - 4 human cases of WNV infection have been reported, outside of NYC. **(Erie 1, Nassau 1, Suffolk 1, Westchester 1)**
  - 0 equine cases of WNV infection have been reported.
  - 0 presumptive viremic donors have been reported, outside of NYC.<sup>1</sup>
- EEE:
  - 1 EEE-positive mosquito pool has been identified. **(Oswego 1)**
  - 0 human cases of EEEV infection have been reported.
  - 0 equine cases of EEEV infection have been reported.
  - 0 caprine cases of EEEV infection have been reported.<sup>2</sup>
  - 0 ratite cases of EEEV infection have been reported.<sup>3</sup>
- ZIKV:
  - *Aedes albopictus* has been identified in 0 additional counties outside of NYC. *Aedes aegypti* has not been identified anywhere in the state.
  - 0 mosquito pools have been positive for Zika virus.
  - 0 human cases of ZIKV infection have been reported to NYSDOH. No cases of local mosquito-borne transmission (LMBT) have been identified.<sup>4</sup>
- CHIKV, DENV, and Malaria<sup>5</sup>:
  - 1 human case of CHIKV infection has been reported to NYSDOH **(Nassau 1)**. 0 cases of LMBT have been identified.
  - 1 human case of DENV infection has been reported to NYSDOH **(Erie 1)**. 0 cases of LMBT have been identified.
  - 4 human cases of malaria infection have been reported to NYSDOH **(Onondaga 1, Rockland 1, Westchester 2)**. 0 cases of LMBT have been identified.

**Year to Date Summary**  
**(01/01/2022 - 10/01/2022)**

- WNV:
  - 329 WNV-positive pools have been identified in NYS, outside of NYC.
  - WNV-positive mosquito activity has been reported in 5 NYC counties. (**Bronx, Kings, New York, Queens, Richmond**)
  - 32 human cases of WNV infection have been reported, outside of NYC.
  - 0 equine cases of WNV infection have been reported.
  - 5 presumptive viremic donors have been reported, outside of NYC.<sup>1</sup>
- EEE:
  - 21 EEE-positive mosquito pools have been identified.
  - 0 human cases of EEEV infection have been reported.
  - 5 equine cases of EEEV infection have been reported.
  - 0 caprine cases of EEEV infection have been reported.<sup>2</sup>
  - 0 ratite cases of EEEV infection have been reported.<sup>3</sup>
- ZIKV:
  - *Aedes albopictus* has been identified in 3 counties outside of NYC. *Aedes aegypti* has not been identified anywhere in the state.
  - 0 mosquito pools have been positive for Zika virus.
  - 1 human case of ZIKV infection has been reported to NYSDOH. No cases of local mosquito-borne transmission (LMBT) have been identified.<sup>4</sup>
- CHIKV, DENV, and Malaria<sup>5</sup>:
  - 3 human cases of CHIKV infection have been reported to NYSDOH. 0 cases of LMBT have been identified.
  - 15 human cases of DENV infection have been reported to NYSDOH. 0 cases of LMBT have been identified.
  - 38 human cases of malaria infection have been reported to NYSDOH. 0 cases of LMBT have been identified.

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<sup>1</sup> Presumptive viremic donors (PVDs) are people who had no symptoms at the time of donating blood (people with symptoms are deferred from donating) through a blood collection agency, but whose blood tested positive in preliminary tests when screened for the presence of West Nile virus. Some PVDs do go on to develop symptoms after donation, at which point they would be included in the count of human disease cases by their state.

<sup>2</sup> Caprine – of, relating to, or being a goat.

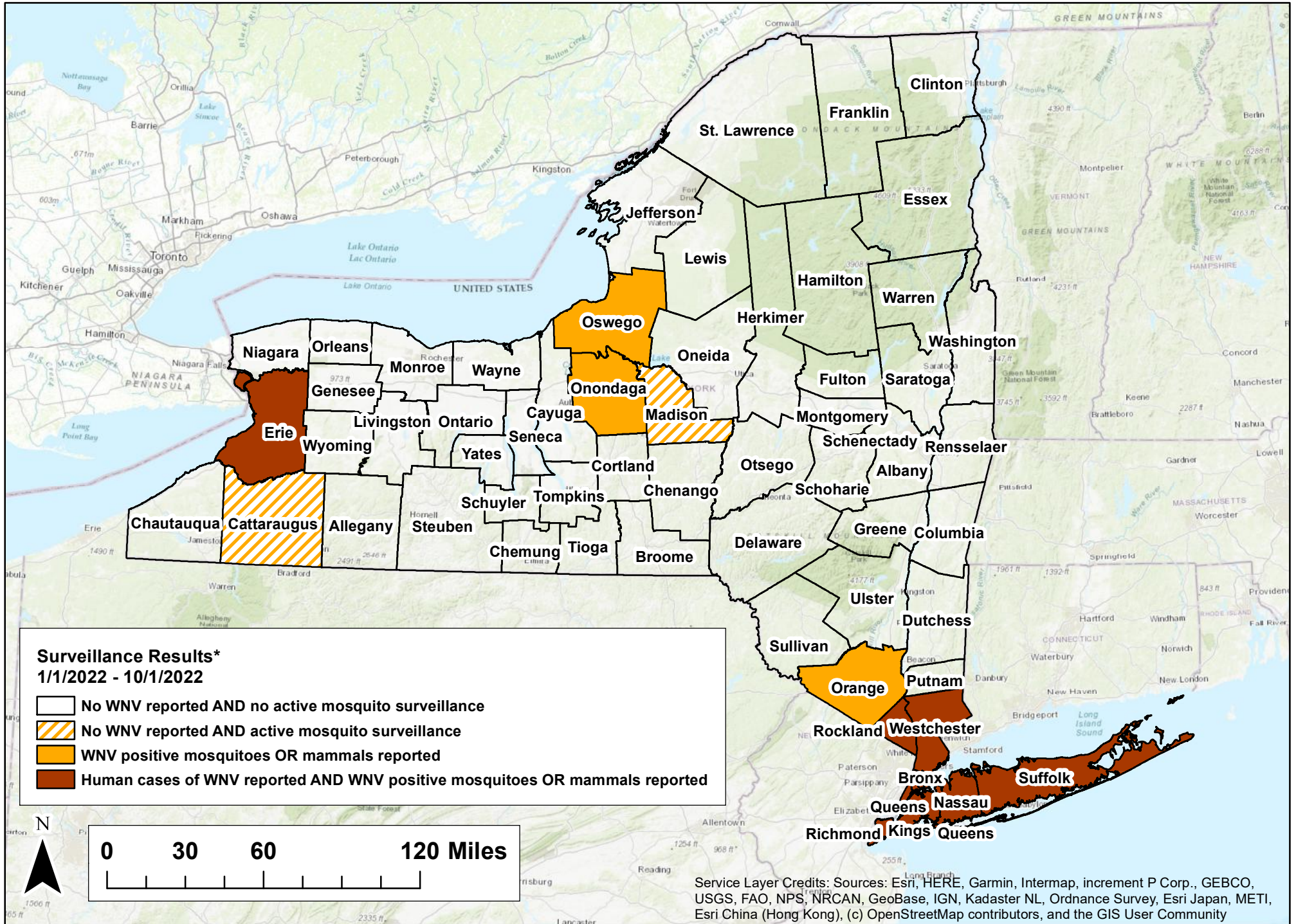
<sup>3</sup> Ratite – (of a bird) having a flat breastbone without a keel, and so unable to fly.

<sup>4</sup> Local mosquito-borne transmission is defined by the absence of the following epidemiological risk factors: recent travel to a country or region with known active ZIKV transmission OR sexual contact with a recent traveler from these areas; recent blood transfusion; recent laboratory exposure to ZIKV; or mother-to-child transmission during pregnancy. NYCDOHMH directly reports human cases of ZIKV infection to CDC.

<sup>5</sup> NYCDOHMH directly reports human cases of CHIKV, DENV and malaria infection to CDC.



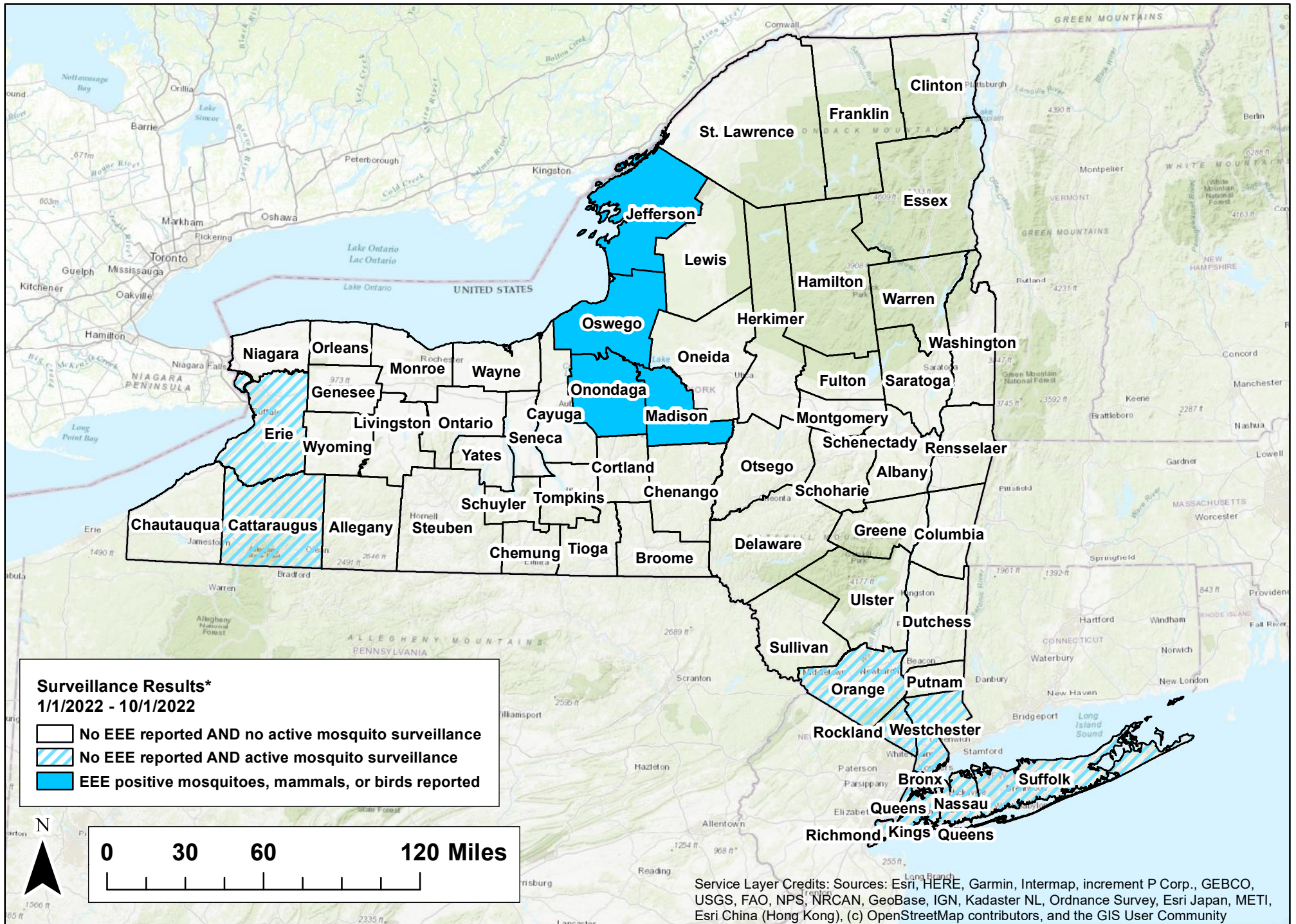
# 2022 West Nile Surveillance Summary



\*The number of WNV positive mosquitoes, mammal infections, or human cases depends, in part, on the amount of surveillance and testing performed in each county, and is not necessarily associated with the degree of WNV risk.  
 -- Map shows results reported through date range indicated.



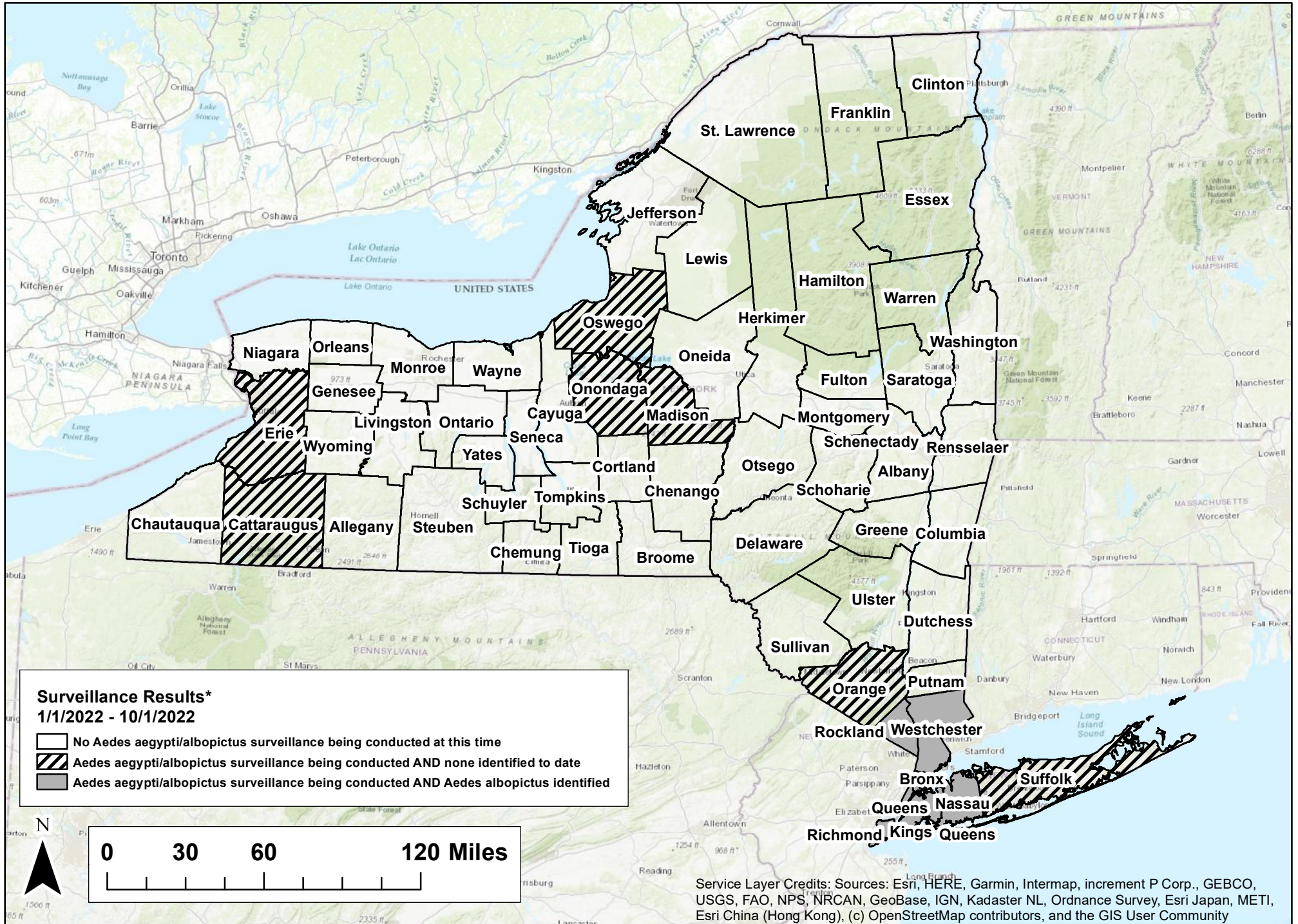
# 2022 Eastern Equine Encephalitis Virus Surveillance Summary



\*The number of EEE positive mosquitoes, mammal infections, or human cases depends, in part, on the amount of surveillance and testing performed in each county, and is not necessarily associated with the degree of EEE risk.  
-- Map shows results reported through date range indicated.

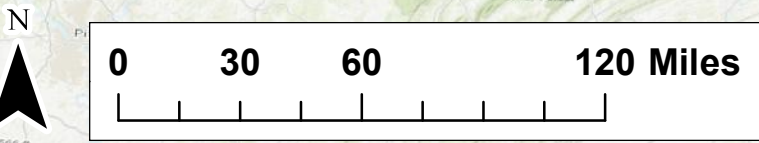


# 2022 Aedes aegypti/albopictus Surveillance Summary



**Surveillance Results\***  
1/1/2022 - 10/1/2022

- No Aedes aegypti/albopictus surveillance being conducted at this time
- Aedes aegypti/albopictus surveillance being conducted AND none identified to date
- Aedes aegypti/albopictus surveillance being conducted AND Aedes albopictus identified

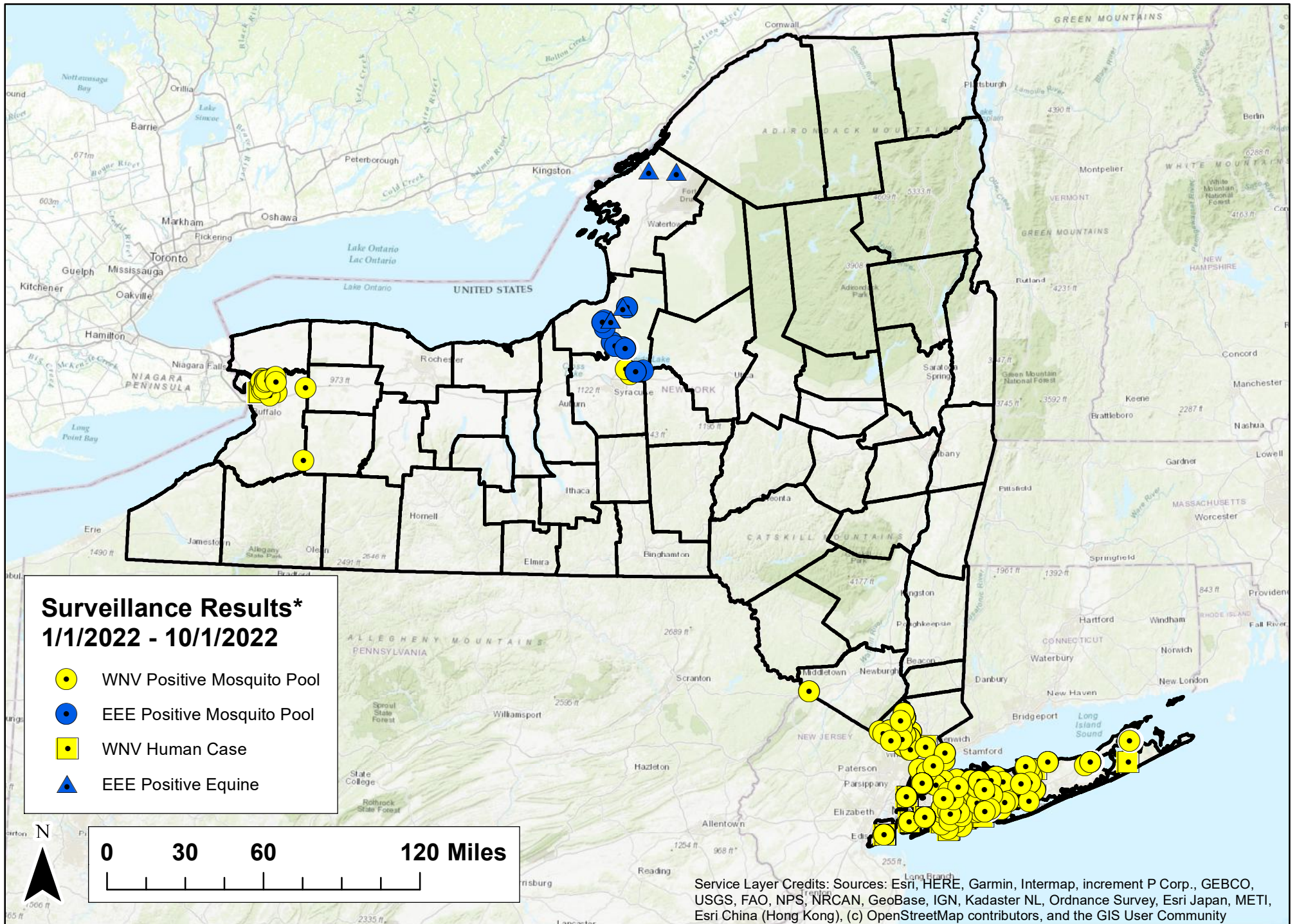


Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

\*The total number of Aedes aegypti or albopictus identified within a county depends on the amount of surveillance performed in each county, and is not necessarily associated with degree of Zika risk.  
-- Map shows results reported through date range indicated.

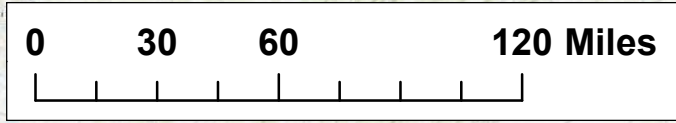


# 2022 Mosquito-borne Illness Summary



**Surveillance Results\***  
**1/1/2022 - 10/1/2022**

- WNV Positive Mosquito Pool
- EEE Positive Mosquito Pool
- WNV Human Case
- ▲ EEE Positive Equine



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

\*Current week positives are highlighted with a white halo around the respective specimen symbols.  
 -- Human cases represent local mosquito-borne transmission. Travel associated cases are not included.  
 -- NYC positive human cases are placed randomly in the patient's county of residence.  
 -- Map shows results reported through date range indicated.

New York State Arboviral Surveillance Summary (01/01/2022 - 10/01/2022)

Jurisdiction	West Nile Virus				
	Cases		Mosquito Pools		
	Human	Equine	WNV+ Pools	Total Pools	% Positivity
Albany	0	0	--	--	--
Allegany	0	0	--	--	--
Bronx *	1	0	203	--	--
Broome	0	0	--	--	--
Cattaraugus *	0	0	0	82	0.0
Cayuga	0	0	--	--	--
Chautauqua	0	0	--	--	--
Chemung	0	0	--	--	--
Chenango	0	0	--	--	--
Clinton	0	0	--	--	--
Columbia	0	0	--	--	--
Cortland	0	0	--	--	--
Delaware	0	0	--	--	--
Dutchess	0	0	--	--	--
Erie *	1	0	31	274	11.3
Essex	0	0	--	--	--
Franklin	0	0	--	--	--
Fulton	0	0	--	--	--
Genesee	0	0	--	--	--
Greene	0	0	--	--	--
Hamilton	0	0	--	--	--
Herkimer	0	0	--	--	--
Jefferson	0	0	--	--	--
Kings *	13	0	291	--	--
Lewis	0	0	--	--	--
Livingston	0	0	--	--	--
Madison *	0	0	0	139	0.0
Monroe	0	0	--	--	--
Montgomery	0	0	--	--	--
Nassau *	19	0	85	419	20.3
New York *	4	0	80	--	--
Niagara	0	0	--	--	--
Oneida	0	0	--	--	--
Onondaga *	0	0	3	492	0.6
Ontario	0	0	--	--	--
Orange *	0	0	2	235	0.9
Orleans	0	0	--	--	--
Oswego *	0	0	10	524	1.9
Otsego	0	0	--	--	--
Putnam	0	0	--	--	--
Queens *	12	0	509	--	--
Rensselaer	0	0	--	--	--
Richmond *	8	0	471	--	--
Rockland *	1	0	90	698	12.9
Saratoga	0	0	--	--	--
Schenectady	0	0	--	--	--
Schoharie	0	0	--	--	--
Schuyler	0	0	--	--	--
Seneca	0	0	--	--	--
St. Lawrence	0	0	--	--	--
Steuben	0	0	--	--	--
Suffolk *	8	0	95	1095	8.7
Sullivan	0	0	--	--	--
Tioga	0	0	--	--	--
Tompkins	0	0	--	--	--
Ulster	0	0	--	--	--
Warren	0	0	--	--	--
Washington	0	0	--	--	--
Wayne	0	0	--	--	--
Westchester *	3	0	13	151	8.6
Wyoming	0	0	--	--	--
Yates	0	0	--	--	--
<b>NYS (excluding NYC) TOTAL</b>	<b>32</b>	<b>0</b>	<b>329</b>	<b>4144</b>	<b>7.9</b>
<b>NYC*† TOTAL</b>	<b>38</b>	<b>--</b>	<b>1554</b>	<b>--</b>	<b>--</b>
<b>NYS TOTAL</b>	<b>70</b>	<b>0</b>	<b>1883</b>	<b>5698</b>	<b>33.0</b>

\* Jurisdiction conducting mosquito surveillance

† NYCDOHMH total mosquito pools represent positive totals only; negative pool data unavailable



New York State Arboviral Surveillance Summary (01/01/2022 - 10/01/2022)

Jurisdiction	Eastern Equine Encephalitis						
	Cases				Mosquito Pools		
	Human	Equine	Caprine	Ratite	EEE+ Pools	Total Pools	% Positivity
Albany	0	0	0	0	--	--	--
Allegany	0	0	0	0	--	--	--
Bronx *	0	0	0	0	0	--	--
Broome	0	0	0	0	--	--	--
Cattaraugus *	0	0	0	0	0	82	0.0
Cayuga	0	0	0	0	--	--	--
Chautauqua	0	0	0	0	--	--	--
Chemung	0	0	0	0	--	--	--
Chenango	0	0	0	0	--	--	--
Clinton	0	0	0	0	--	--	--
Columbia	0	0	0	0	--	--	--
Cortland	0	0	0	0	--	--	--
Delaware	0	0	0	0	--	--	--
Dutchess	0	0	0	0	--	--	--
Erie *	0	0	0	0	0	274	0.0
Essex	0	0	0	0	--	--	--
Franklin	0	0	0	0	--	--	--
Fulton	0	0	0	0	--	--	--
Genesee	0	0	0	0	--	--	--
Greene	0	0	0	0	--	--	--
Hamilton	0	0	0	0	--	--	--
Herkimer	0	0	0	0	--	--	--
Jefferson	0	2	0	0	--	--	--
Kings *	0	0	0	0	0	--	--
Lewis	0	0	0	0	--	--	--
Livingston	0	0	0	0	--	--	--
Madison *	0	0	0	0	1	139	0.7
Monroe	0	0	0	0	--	--	--
Montgomery	0	0	0	0	--	--	--
Nassau *	0	0	0	0	0	419	0.0
New York *	0	0	0	0	0	--	--
Niagara	0	0	0	0	--	--	--
Oneida	0	0	0	0	--	--	--
Onondaga *	0	0	0	0	5	492	1.0
Ontario	0	0	0	0	--	--	--
Orange *	0	0	0	0	0	235	0.0
Orleans	0	0	0	0	--	--	--
Oswego *	0	3	0	0	15	524	2.9
Otsego	0	0	0	0	--	--	--
Putnam	0	0	0	0	--	--	--
Queens *	0	0	0	0	0	--	--
Rensselaer	0	0	0	0	--	--	--
Richmond *	0	0	0	0	0	--	--
Rockland *	0	0	0	0	0	698	0.0
Saratoga	0	0	0	0	--	--	--
Schenectady	0	0	0	0	--	--	--
Schoharie	0	0	0	0	--	--	--
Schuyler	0	0	0	0	--	--	--
Seneca	0	0	0	0	--	--	--
St. Lawrence	0	0	0	0	--	--	--
Steuben	0	0	0	0	--	--	--
Suffolk *	0	0	0	0	0	1095	0.0
Sullivan	0	0	0	0	--	--	--
Tioga	0	0	0	0	--	--	--
Tompkins	0	0	0	0	--	--	--
Ulster	0	0	0	0	--	--	--
Warren	0	0	0	0	--	--	--
Washington	0	0	0	0	--	--	--
Wayne	0	0	0	0	--	--	--
Westchester *	0	0	0	0	0	151	0.0
Wyoming	0	0	0	0	--	--	--
Yates	0	0	0	0	--	--	--
<b>NYS (excluding NYC) TOTAL</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>4144</b>	<b>0.5</b>
<b>NYC*† TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1554</b>	<b>0.0</b>
<b>NYS TOTAL</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>5698</b>	<b>0.4</b>

\* Jurisdiction conducting mosquito surveillance

\*\* Caprine - of, relating to, or being a goat

\*\*\* Ratite - (of a bird) having a flat breastbone without a keel, and so unable to fly

† NYCDOHMH total mosquito pools represent positive totals only; negative pool data unavailable

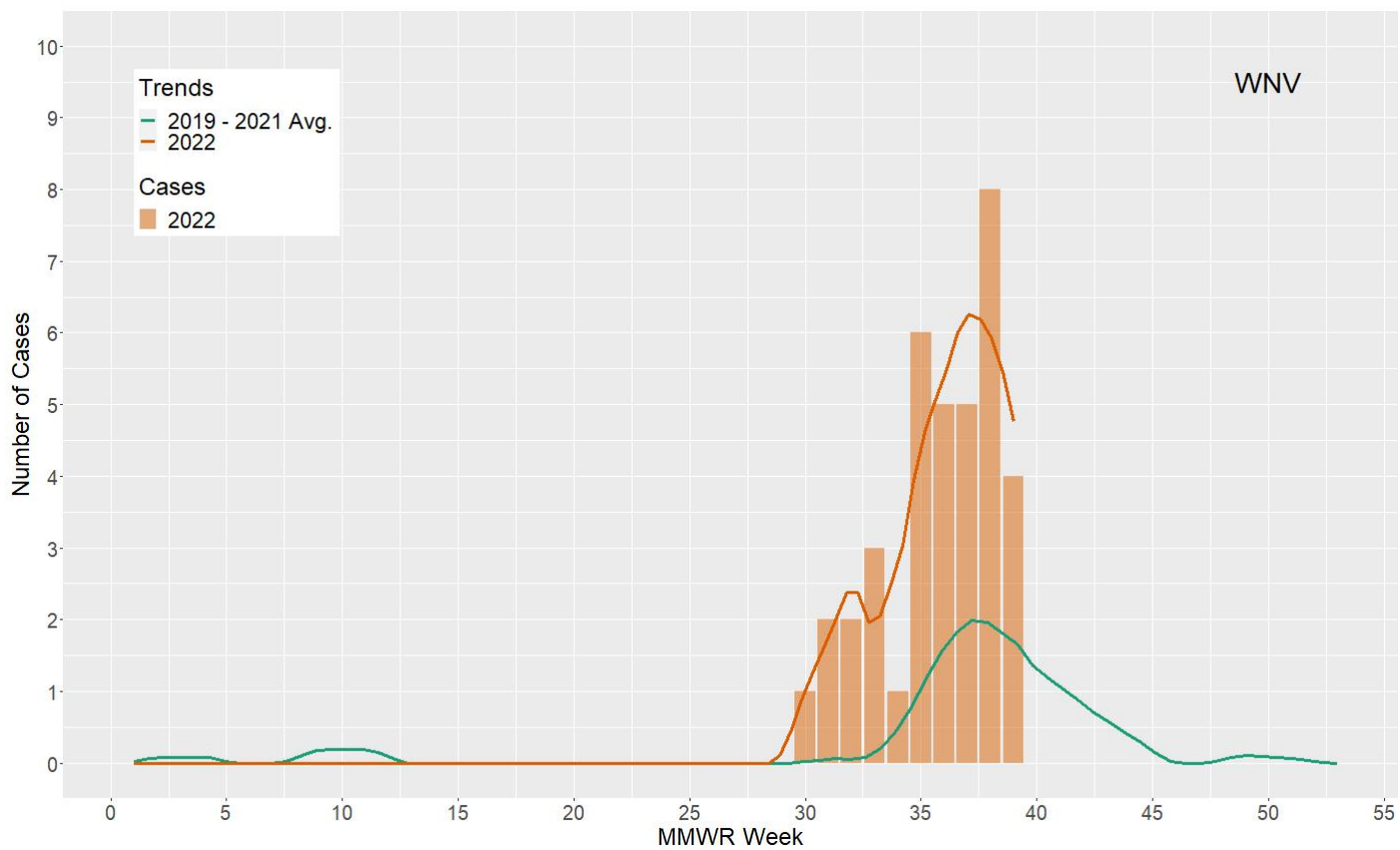


Fig 1. Current year and trend data for human WNV cases (excluding NYC)

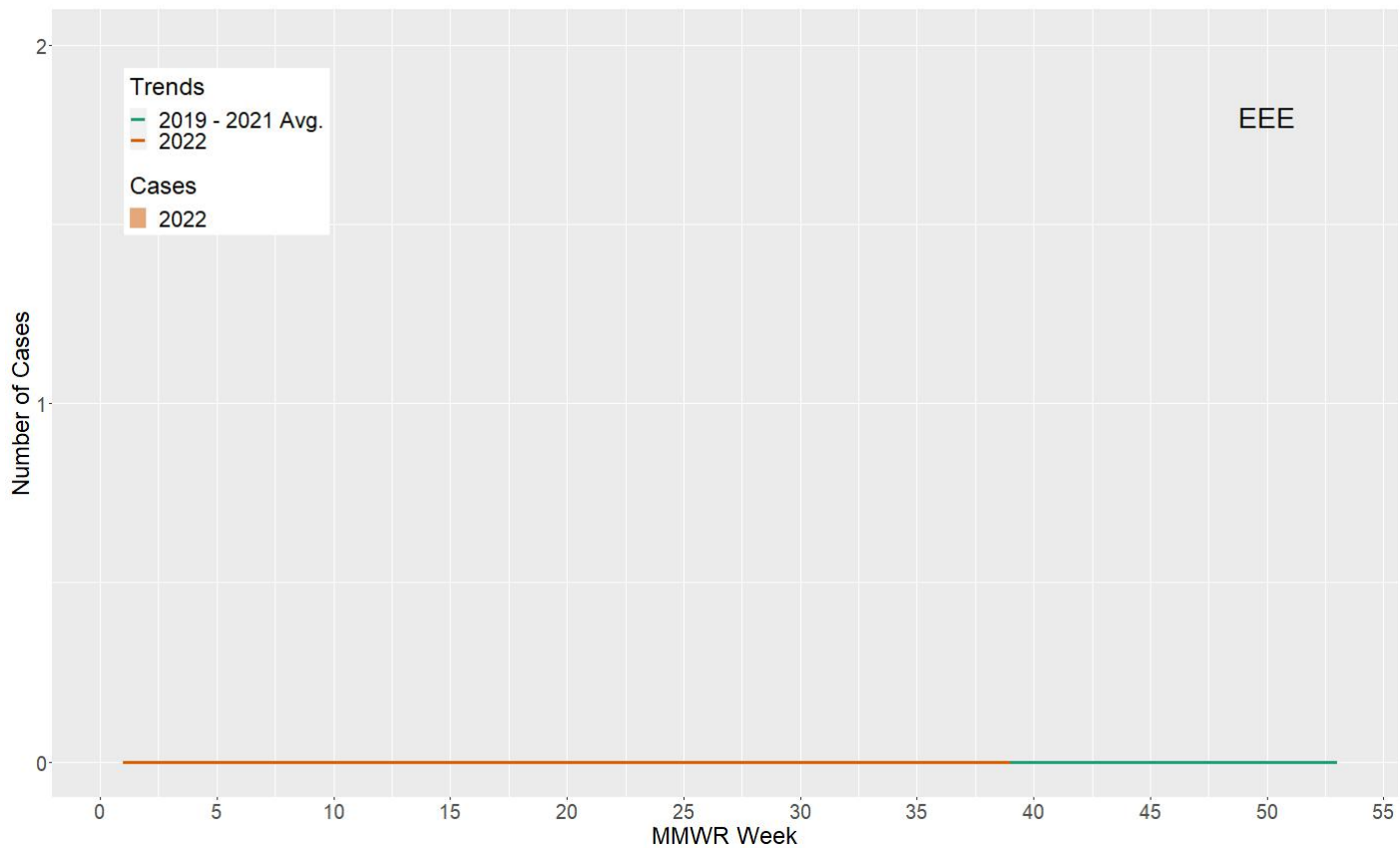


Fig 2. Current year and trend data for human EEE cases (excluding NYC)



New York State Arboviral Surveillance Summary (01/01/2022 - 10/01/2022)

Jurisdiction	Chikungunya			Dengue			Malaria			Zika		
	Human Cases		Positive Mosquito	Human Cases		Positive Mosquito	Human Cases		Positive Mosquito	Human Cases		Positive Mosquito
	Travel Associated	LMBT	Pools	Travel Associated	LMBT	Pools	Travel Associated	LMBT	Pools	Travel Associated	LMBT	Pools
Albany	1	0	--	0	0	--	2	0	--	0	0	--
Allegany	0	0	--	0	0	--	0	0	--	0	0	--
Bronx *	0	0	0	0	0	0	0	0	0	0	0	0
Broome	0	0	--	0	0	--	0	0	--	0	0	--
Cattaraugus *	0	0	0	0	0	0	0	0	0	0	0	0
Cayuga	0	0	--	0	0	--	0	0	--	0	0	--
Chautauqua	0	0	--	0	0	--	0	0	--	0	0	--
Chemung	0	0	--	0	0	--	0	0	--	0	0	--
Chenango	0	0	--	0	0	--	0	0	--	0	0	--
Clinton	0	0	--	0	0	--	0	0	--	0	0	--
Columbia	0	0	--	0	0	--	0	0	--	0	0	--
Cortland	0	0	--	0	0	--	0	0	--	0	0	--
Delaware	0	0	--	0	0	--	0	0	--	0	0	--
Dutchess	0	0	--	0	0	--	0	0	--	0	0	--
Erie *	0	0	0	1	0	0	6	0	0	0	0	0
Essex	0	0	--	0	0	--	0	0	--	0	0	--
Franklin	0	0	--	0	0	--	0	0	--	0	0	--
Fulton	0	0	--	0	0	--	0	0	--	0	0	--
Genesee	0	0	--	0	0	--	0	0	--	0	0	--
Greene	0	0	--	0	0	--	0	0	--	0	0	--
Hamilton	0	0	--	0	0	--	0	0	--	0	0	--
Herkimer	0	0	--	0	0	--	0	0	--	0	0	--
Jefferson	0	0	--	0	0	--	0	0	--	0	0	--
Kings *	0	0	0	0	0	0	0	0	0	0	0	0
Lewis	0	0	--	0	0	--	0	0	--	0	0	--
Livingston	0	0	--	0	0	--	0	0	--	0	0	--
Madison *	0	0	0	0	0	0	0	0	0	0	0	0
Monroe	0	0	--	2	0	--	3	0	--	0	0	--
Montgomery	0	0	--	0	0	--	0	0	--	0	0	--
Nassau *	1	0	0	5	0	0	3	0	0	0	0	0
New York *	0	0	0	0	0	0	0	0	0	0	0	0
Niagara	0	0	--	0	0	--	0	0	--	0	0	--
Oneida	0	0	--	0	0	--	0	0	--	0	0	--
Onondaga *	0	0	0	2	0	0	6	0	0	0	0	0
Ontario	0	0	--	0	0	--	0	0	--	0	0	--
Orange *	0	0	0	0	0	0	1	0	0	0	0	0
Orleans	0	0	--	0	0	--	0	0	--	0	0	--
Oswego *	0	0	0	0	0	0	0	0	0	0	0	0
Otsego	0	0	--	0	0	--	2	0	--	0	0	--
Putnam	0	0	--	0	0	--	0	0	--	0	0	--
Queens *	0	0	0	0	0	0	0	0	0	0	0	0
Rensselaer	0	0	--	0	0	--	1	0	--	0	0	--
Richmond *	0	0	0	0	0	0	0	0	0	0	0	0
Rockland *	0	0	0	0	0	0	2	0	0	0	0	0
Saratoga	0	0	--	0	0	--	0	0	--	0	0	--
Schenectady	0	0	--	0	0	--	0	0	--	0	0	--
Schoharie	0	0	--	0	0	--	0	0	--	0	0	--
Schuyler	0	0	--	0	0	--	0	0	--	0	0	--
Seneca	0	0	--	0	0	--	0	0	--	0	0	--
St. Lawrence	0	0	--	0	0	--	1	0	--	0	0	--
Steuben	0	0	--	0	0	--	0	0	--	0	0	--
Suffolk *	1	0	0	3	0	0	3	0	0	0	0	0
Sullivan	0	0	--	0	0	--	3	0	--	0	0	--
Tioga	0	0	--	0	0	--	0	0	--	0	0	--
Tompkins	0	0	--	1	0	--	1	0	--	0	0	--
Ulster	0	0	--	1	0	--	0	0	--	0	0	--
Warren	0	0	--	0	0	--	0	0	--	0	0	--
Washington	0	0	--	0	0	--	0	0	--	0	0	--
Wayne	0	0	--	0	0	--	0	0	--	0	0	--
Westchester *	0	0	0	0	0	0	4	0	0	1	0	0
Wyoming	0	0	--	0	0	--	0	0	--	0	0	--
Yates	0	0	--	0	0	--	0	0	--	0	0	--
NYS (excluding NYC) TOTAL	3	0	0	15	0	0	38	0	0	1	0	0
NYC† TOTAL	--	--	0	--	--	0	--	--	0	--	--	0
NYS TOTAL	3	0	0	15	0	0	38	0	0	1	0	0

\* Jurisdiction conducting mosquito surveillance

† NYCDOHMH directly reports human cases of ZIKV infection to CDC

# West Nile Virus Mosquito Pool Positivity by Species

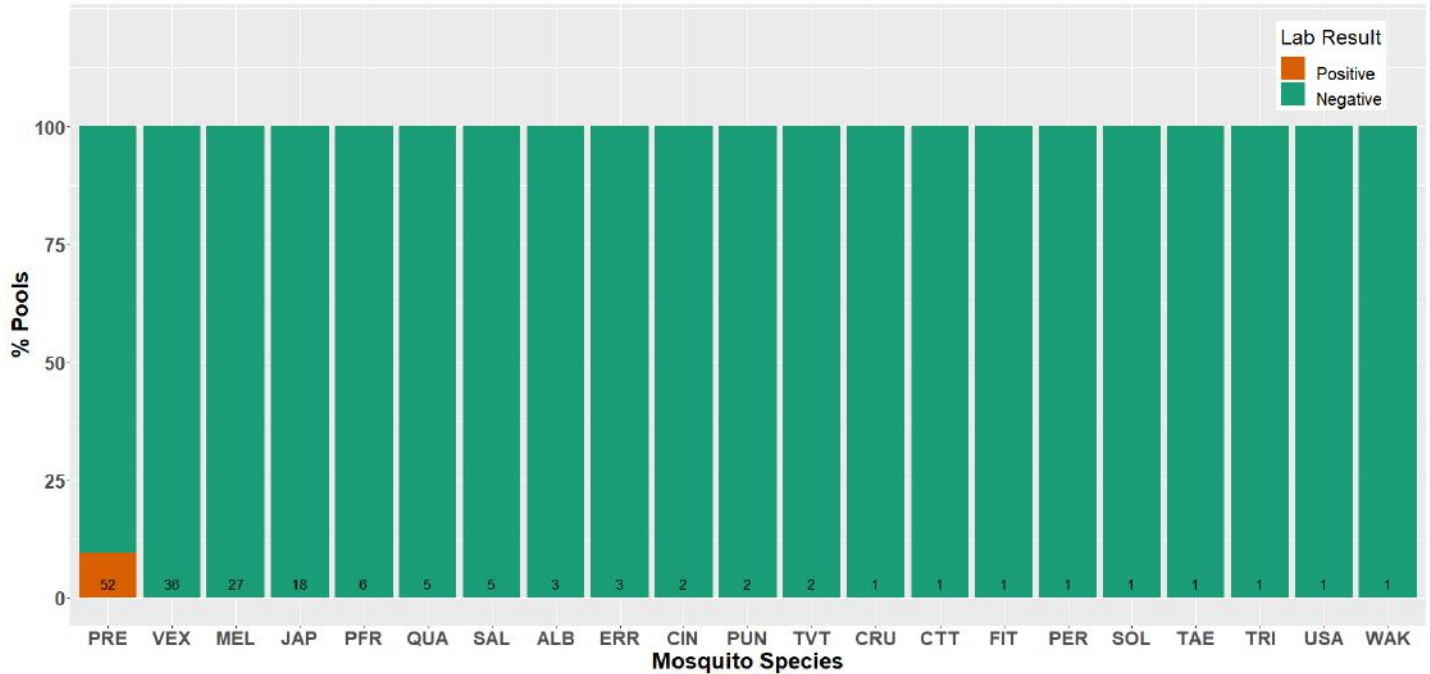


Fig 3. Weekly summary of West Nile Virus positivity by mosquito species. Numbers within each bar represent the number of total pools tested.

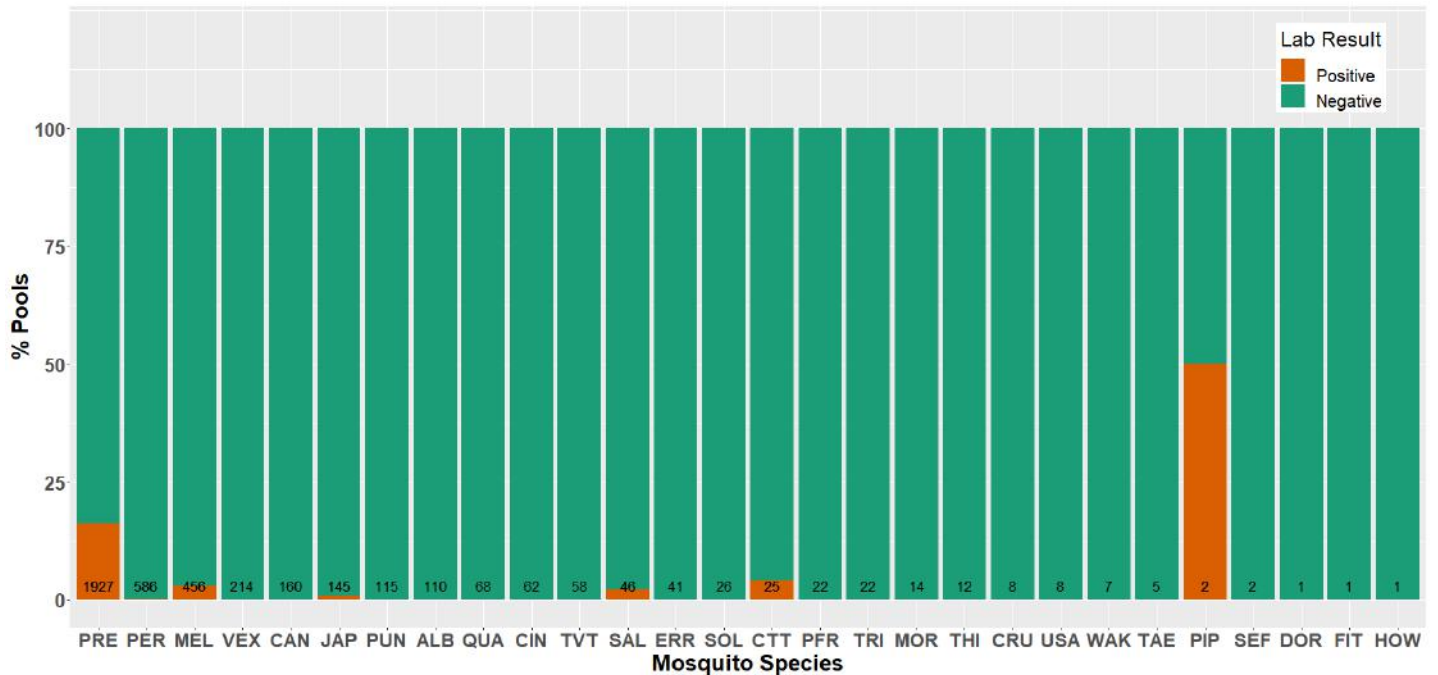


Fig 4. Year-to-date summary of West Nile Virus positivity by mosquito species. Numbers within each bar represent the number of total pools tested.

Abbreviation	Species	Abbreviation	Species	Abbreviation	Species
ALB	<i>Ae. albopictus</i>	ERR	<i>Cx. erraticus</i>	SEF	<i>Ae. stimulans</i> gr.
CIN	<i>Ae. cinereus</i>	PIP	<i>Cx. pipiens</i>	TAE	<i>Ae. taeniorhynchus</i>
VEX	<i>Ae. vexans</i>	PRE	<i>Cx. pipiens-restuans</i>	TRI	<i>Ae. triseriatus</i>
CRU	<i>An. crucians</i>	SAL	<i>Cx. salinarius</i>	TVT	<i>Ae. trivittatus</i>
PUN	<i>An. punctipennis</i>	CAN	<i>Ae. canadensis</i>	PFR	<i>Ps. ferox</i>
QUA	<i>An. quadrimaculatus</i>	CTT	<i>Ae. cantator</i>	HOW	<i>Ps. howardii</i>
WAK	<i>An. walkeri</i>	DOR	<i>Ae. dorsalis</i>	USA	<i>Ur. sapphirina</i>
PER	<i>Cq. perturbans</i>	FIT	<i>Ae. fitchii</i>	THI	<i>Ae. thibaulti</i>
MEL	<i>Cs. melanura</i>	JAP	<i>Ae. japonicus</i>		
MOR	<i>Cs. morsitans</i>	SOL	<i>Ae. sollicitans</i>		



# Eastern Equine Encephalitis Mosquito Pool Positivity by Species

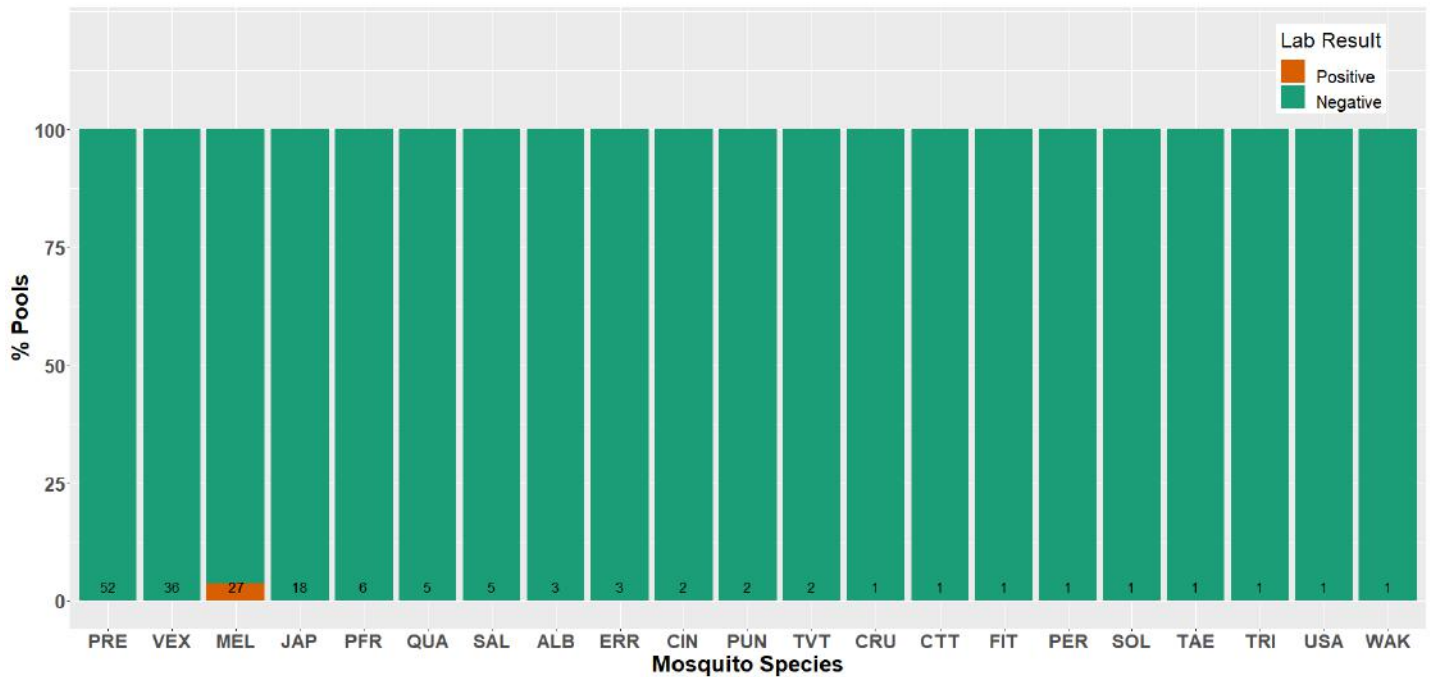


Fig 5. Weekly summary of Eastern Equine Encephalitis positivity by mosquito species. Numbers within each bar represent the number of total pools tested.

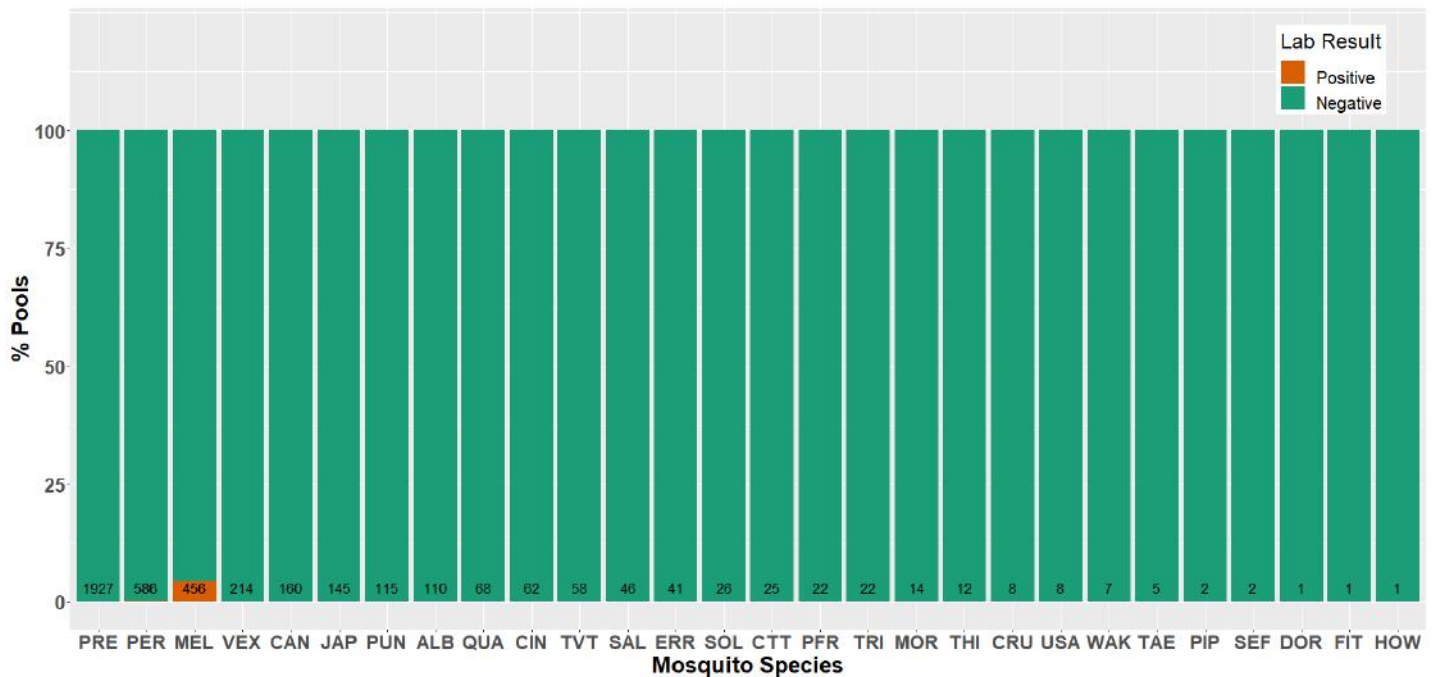


Fig 6. Year-to-date summary of Eastern Equine Encephalitis Virus positivity by mosquito species. Numbers within each bar represent the number of total pools tested.

Abbreviation	Species	Abbreviation	Species	Abbreviation	Species
ALB	<i>Ae. albopictus</i>	ERR	<i>Cx. erraticus</i>	SEF	<i>Ae. stimulans</i> gr.
CIN	<i>Ae. cinereus</i>	PIP	<i>Cx. pipiens</i>	TAE	<i>Ae. taeniorhynchus</i>
VEX	<i>Ae. vexans</i>	PRE	<i>Cx. pipiens-restuans</i>	TRI	<i>Ae. triseriatus</i>
CRU	<i>An. crucians</i>	SAL	<i>Cx. salinarius</i>	TVT	<i>Ae. trivittatus</i>
PUN	<i>An. punctipennis</i>	CAN	<i>Ae. canadensis</i>	PFR	<i>Ps. ferox</i>
QUA	<i>An. quadrimaculatus</i>	CTT	<i>Ae. cantator</i>	HOW	<i>Ps. howardii</i>
WAK	<i>An. walkeri</i>	DOR	<i>Ae. dorsalis</i>	USA	<i>Ur. sapphirina</i>
PER	<i>Cq. perturbans</i>	FIT	<i>Ae. fitchii</i>	THI	<i>Ae. thibaulti</i>
MEL	<i>Cs. melanura</i>	JAP	<i>Ae. japonicus</i>		
MOR	<i>Cs. morsitans</i>	SOL	<i>Ae. sollicitans</i>		

# Seasonality of Human Cases

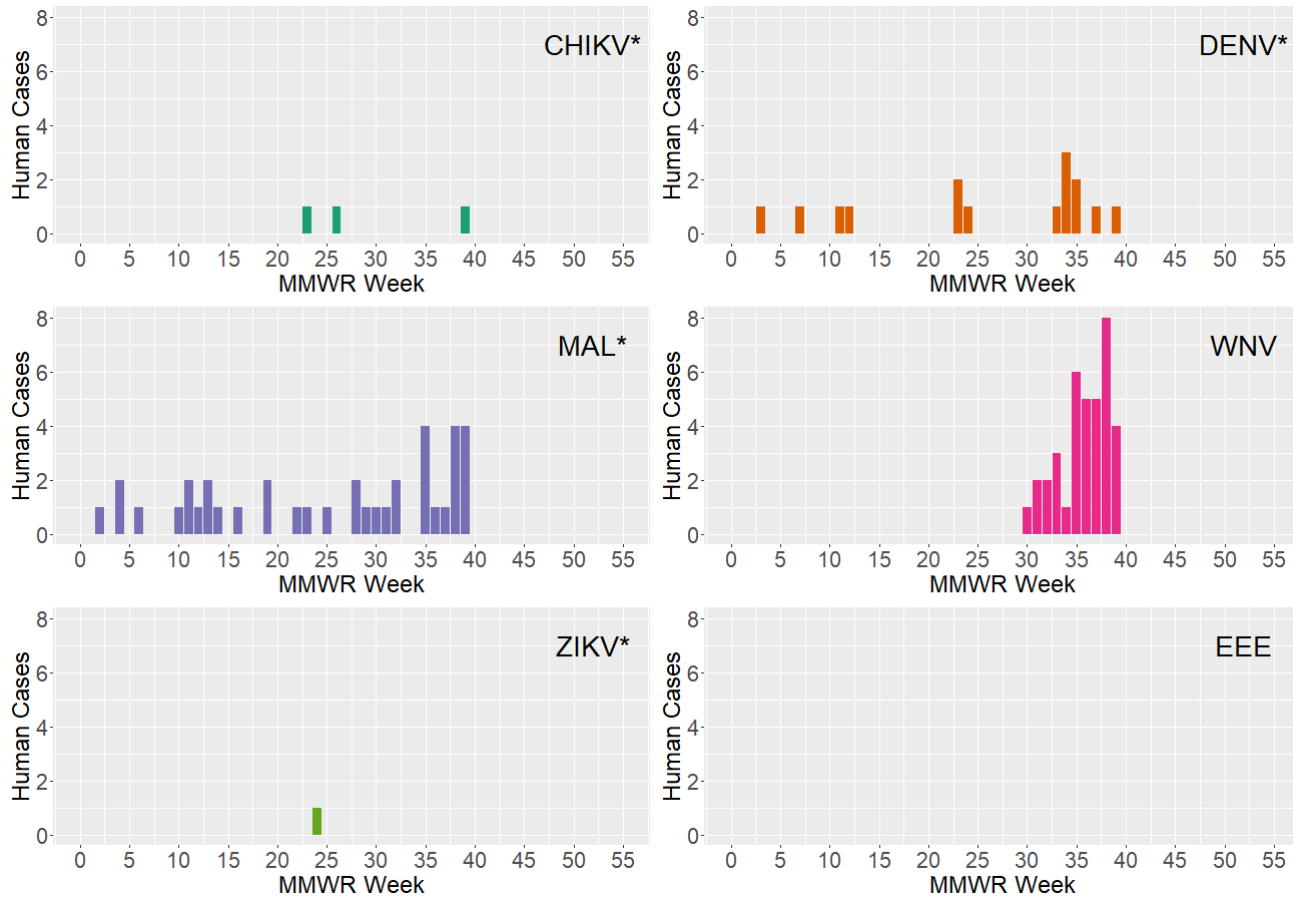


Fig 7. Seasonal patterns of human vector-borne disease cases (excluding NYC)

\* No cases of LMBT; all cases to date are travel-related.