



NC DEPARTMENT OF
**HEALTH AND
HUMAN SERVICES**
Division of Public Health

North Carolina Mosquito Surveillance Update

Weeks 29 – 30: 07/19/2026 – 08/01/2026

Table 1. Mosquito Surveillance Summary

Key Points

- To date in 2026, one human endemic mosquito-borne disease case (LACV) and 27 imported disease cases (malaria and DENV) have been reported in North Carolina, with no cases reported during the past two weeks.
- All malaria and DENV cases reported in 2026 have been associated with international travel. See page 2 for additional information.
- Eight mosquito samples tested positive for WNV at the North Carolina State Laboratory of Public Health during the past two weeks. Positive samples were submitted from Forsyth, Mecklenburg, and Cabarrus counties. See pages 4-5 for additional information.
- No human cases of WNV, EEE, or CHIKV, nor any equine cases of WNV or EEE, have been reported in 2026.
 - No human EEE cases have been reported in NC since 2024.
- No WNV-positive [wastewater samples](#) have been detected since testing began in 2025.

Surveillance Measure	Weeks 29 – 30	Year-to- Date
West Nile virus (WNV) Neuroinvasive Cases	0	0
WNV-Positive Human Blood Donor	0	0
La Crosse virus (LACV) Neuroinvasive Cases	0	1
Eastern Equine Encephalitis (EEE) Cases	0	0
Imported Malaria Cases	0	21
Imported Dengue (DENV) Cases	0	6
Imported Chikungunya (CHIKV) Cases	0	0
WNV-Positive Horses	0	0
EEE-Positive Horses	0	0
Number of Mosquito Samples Tested (1-50 individual mosquitoes per sample)	138	237
WNV-Positive Mosquito Samples	8	9

Report specifications:

- Abundance is measured as the total number of mosquitoes collected divided by the total number of trap nights. Local vector control programs funded by the State of North Carolina have 30 days to submit mosquito surveillance data, which may result in fluctuations in reported counts.
- NC reports only neuroinvasive disease caused by WNV, EEE, or LACV and therefore, total case numbers may not be directly comparable with other states that also report non-neuroinvasive disease.
- Cases include those classified as confirmed or probable, per the [surveillance case definitions](#), and are only among NC residents.
- County data are based on the patient's home address at the time of reporting, not necessarily the county or state where they were infected.
- Additional data can be found on the [North Carolina Disease Data Dashboard \(NCD3\)](#) and in [previous annual surveillance summaries](#).
- Annual North Carolina population estimates as of July 1, 2025, were obtained from the U.S. Census Bureau.
- Please note that case classification criteria are subject to change and counts may fluctuate based on these changes.
- Case counts are subject to change as cases remain under investigation. Case counts are assigned according to a hierarchy that uses the earliest available date: symptom onset date, specimen collection date, or the date of initial reporting to public health. As additional information becomes available, the total number of reported cases may increase from what is presented here.

Note: Refer to the appendix on page 11 for information on the medically important mosquito species of North Carolina, as well as distribution maps of mosquito disease vectors.

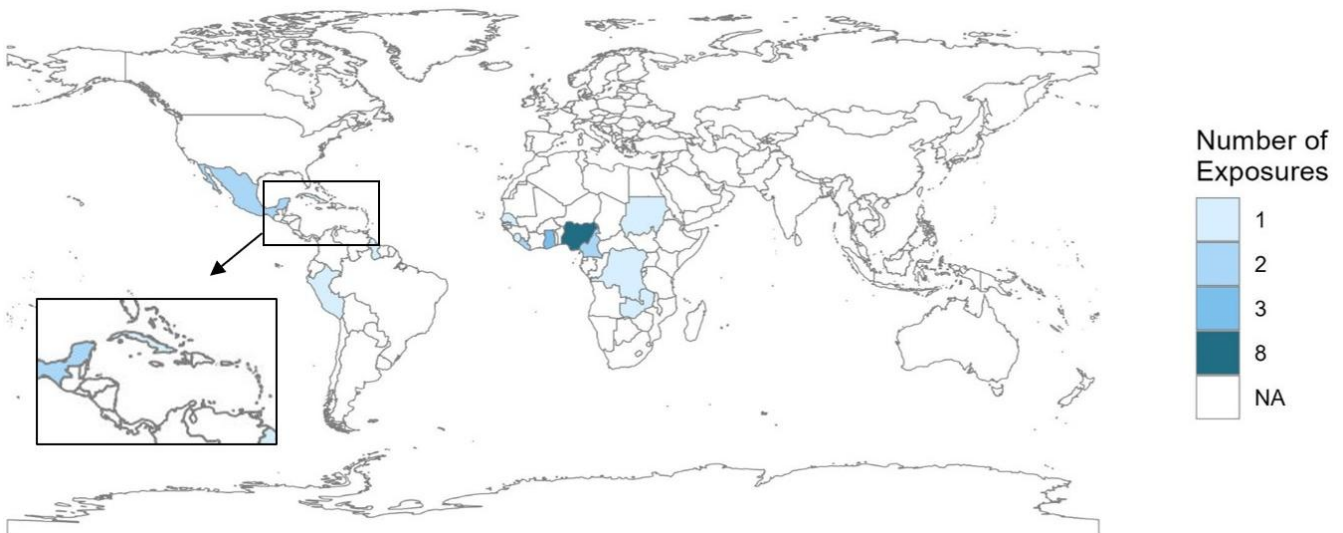
Mosquito-Borne Disease Cases

Neuroinvasive La Crosse Virus (LACV) Incidence Rate* by County, NC, 2026



Neuroinvasive LACV cases have only been reported from Transylvania County to date in 2026. There were no LACV cases reported in NC during the past two weeks. Swain, Transylvania and Jackson counties have the three [highest LACV incidence rates* in the country](#) between 2003 and 2025. Most NC cases occur in southwest counties along the Tennessee and Georgia borders where the virus is amplified through [transmission between mosquitoes and wildlife reservoirs](#), such as squirrels and chipmunks.

Imported Disease Exposure Countries, NC Cases, 2026

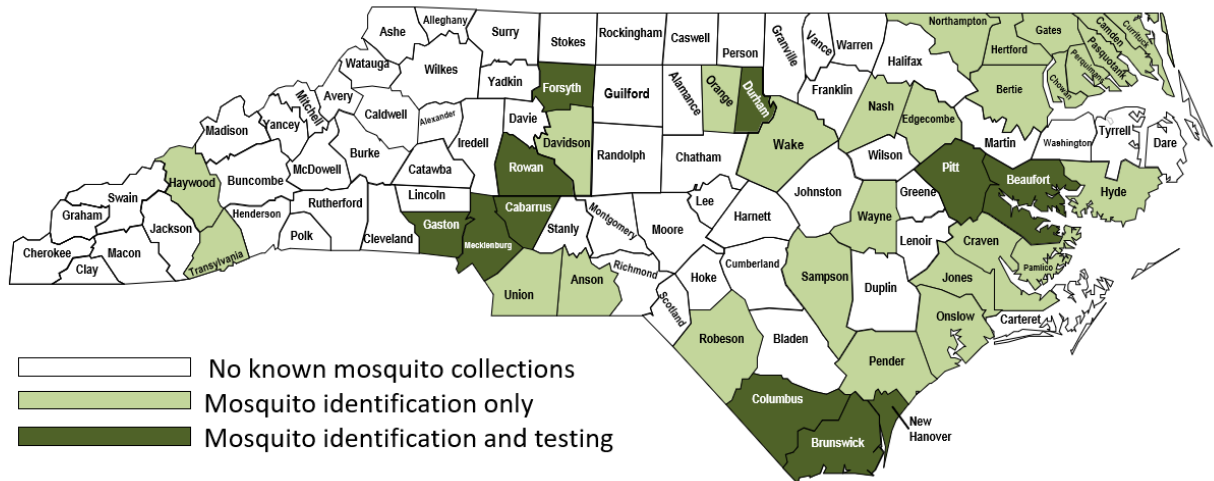


All malaria and dengue virus (DENV) cases reported in 2026 have been associated with international travel. There were no malaria or DENV cases reported in NC during the past two weeks. Mexico has been identified as the primary exposure country for DENV cases (n=2) and Nigeria as the primary exposure country for malaria cases (n=8). No Chikungunya virus (CHIKV) cases have been reported in NC in 2026.

*Rate calculated per 100,000 residents

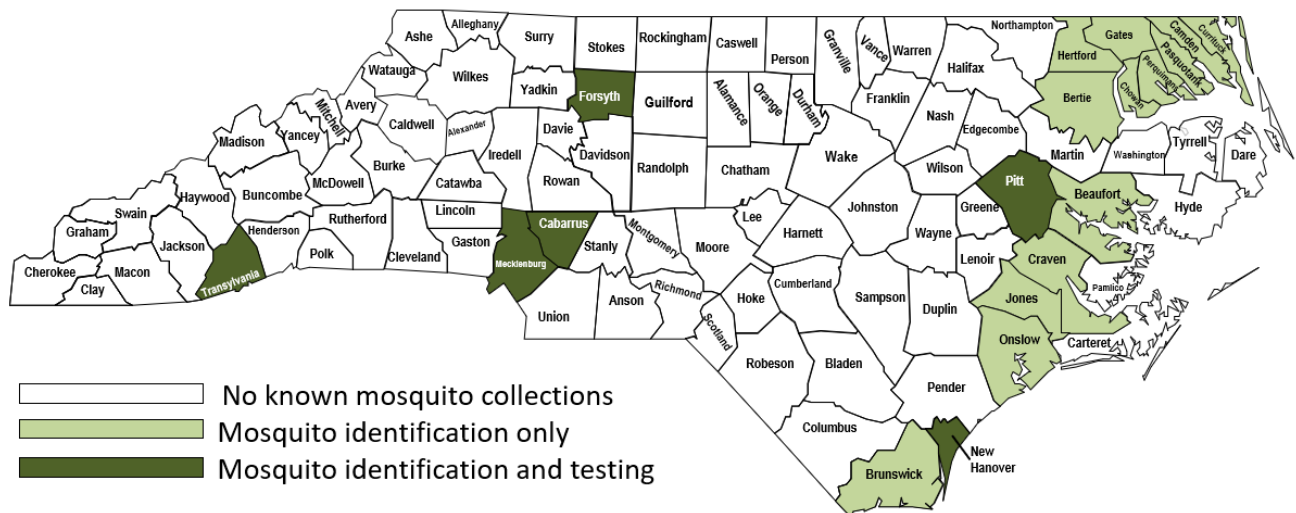
Mosquito Surveillance

NC Counties Collecting Mosquito Surveillance Data, 2021-2025



Mosquito identification is primarily done by counties with established vector control programs, but surveillance is also done on a case-by-case basis during disease outbreaks. Counties may receive state funding to collect and identify mosquitoes each month. State and federal funding also supports mosquito testing at the North Carolina State Laboratory of Public Health (NCSLPH); the number of counties that participate in this activity and the number of mosquitoes tested each year varies. All mosquito samples submitted to the NCSLPH are tested for West Nile Virus (WNV). Testing for additional pathogens (such as LACV and Eastern Equine Encephalitis [EEE]) is performed only at the request of the Local Health Department.

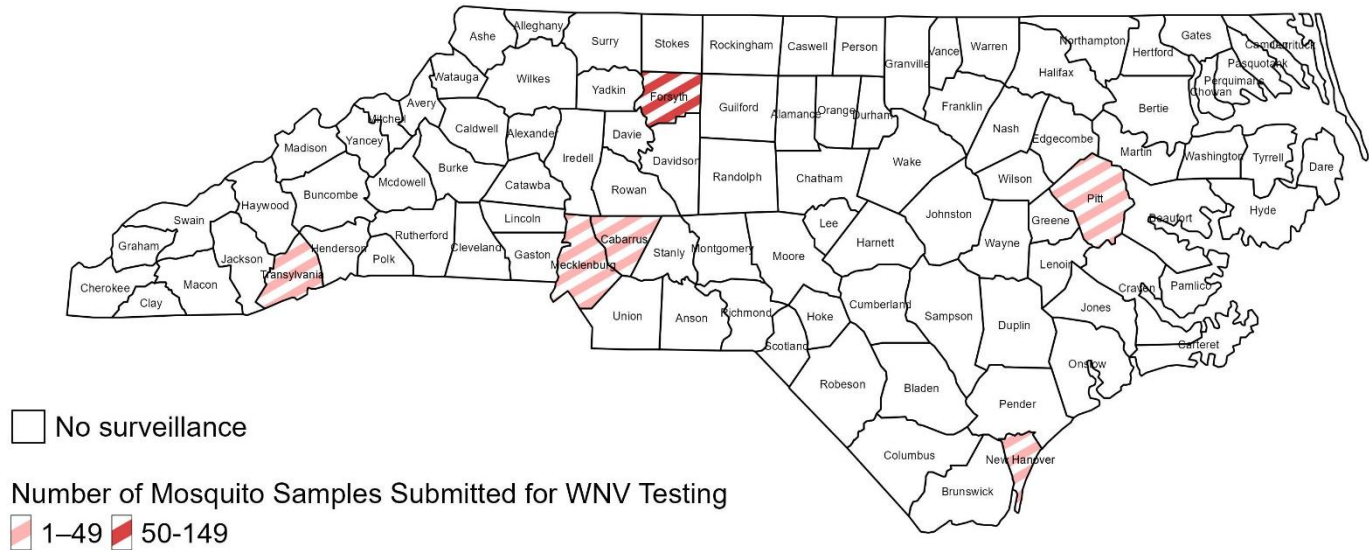
NC Counties Conducting Mosquito Surveillance, 2026



Mosquito testing for the 2026 season began in July at the NCSLPH. To date, five counties have submitted samples for testing at NCSLPH, while 13 others have collected mosquitoes only for identification. Transylvania County has submitted samples for testing to Western Carolina University (WCU). During the past two weeks, Cabarrus and New Hanover counties began mosquito testing at the NCSLPH, and Onslow County initiated mosquito identification efforts for Onslow and Jones counties.

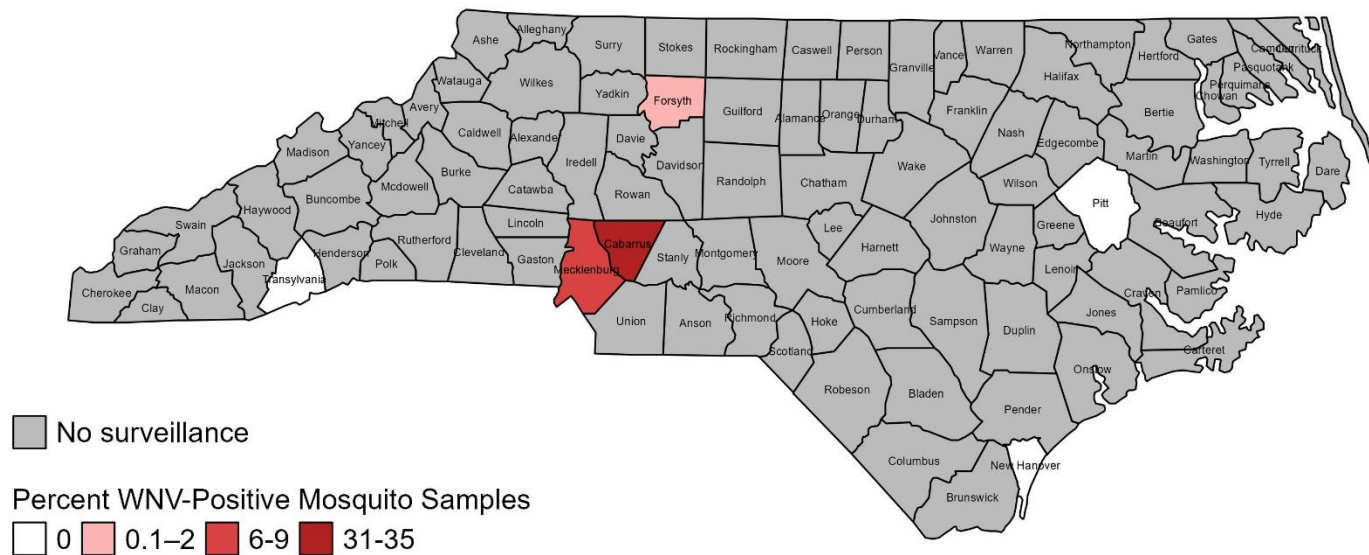
Mosquito Surveillance

WNV Mosquito Surveillance Testing Submissions, NC, 2026



A total of 237 samples (each containing 1–50 mosquitoes) have been tested for WNV, with five tested at WCU, and the remaining 232 samples processed at the NCSLPH. Tested mosquitoes were collected from June 2, 2026, through July 28, 2026 (weeks 22–30). Forsyth County has submitted the highest number of samples so far this year for WNV testing (n=125).

WNV Mosquito Surveillance Testing Results, NC, 2026



Although Cabarrus County shows a high proportion of WNV-positive mosquito samples, only twelve samples have been submitted for testing. However, the statewide* year-to-date WNV positivity rate of 3.8% suggests elevated vector infection activity compared with the 2023–2025 statewide* year-to-date positivity rate range of 0% to 0.8%. The table below provides the collection/test dates, species, and trap types for each mosquito sample that has tested positive for WNV so far in 2026.

* Refer to the maps on page 3 for the corresponding counties included.

Mosquito Surveillance

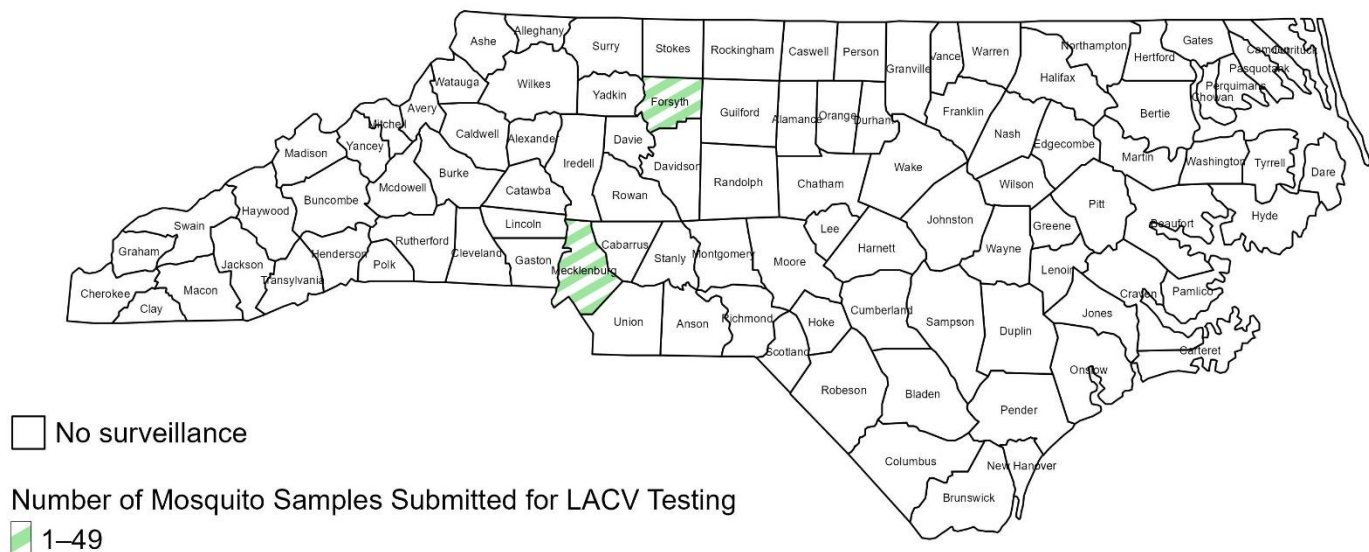
Positive WNV Mosquito Samples by County, NC, 2026

County	Collection Date	Test Date	Trap Type	Species	Mosquitoes in Sample
Cabarrus	7/8/2026	7/30/2026	GRVD-CDC	Culex	1
Cabarrus	7/16/2026	7/30/2026	GRVD-CDC	Aedes albopictus	5
Cabarrus	7/16/2026	7/30/2026	GRVD-CDC	Culex	3
Cabarrus	7/20/2026	7/30/2026	GRVD-CDC	Aedes albopictus	7
Forsyth	7/15/2026	7/24/2026	GRVD-RC	Culex pipiens/quinqüefasciatus	9
Mecklenburg	7/14/2026	7/17/2026	BGSENT	Culex pipiens	13
Mecklenburg	7/17/2026	7/30/2026	GRVD-CDC	Culex pipiens	2
Mecklenburg	7/28/2026	7/30/2026	GRVD-CDC	Culex pipiens	31
Mecklenburg	7/28/2026	7/30/2026	BGSENT	Culex pipiens	2

Cabarrus County's positive sample collected on July 8, 2026, is the earliest recorded WNV-positive sample in NC since 2003. Prior to 2026, the earliest recorded positive was collected on July 11, 2017. NCDHHS is currently collaborating with Cabarrus and Mecklenburg counties to issue a press release addressing the elevated vector infection activity observed this year. Recent press releases are provided below for reference.

NEW [Public Health Urges Precaution after West Nile Virus Detected in Mecklenburg County](#)

LACV Mosquito Surveillance Testing Submissions and Results, NC, 2026

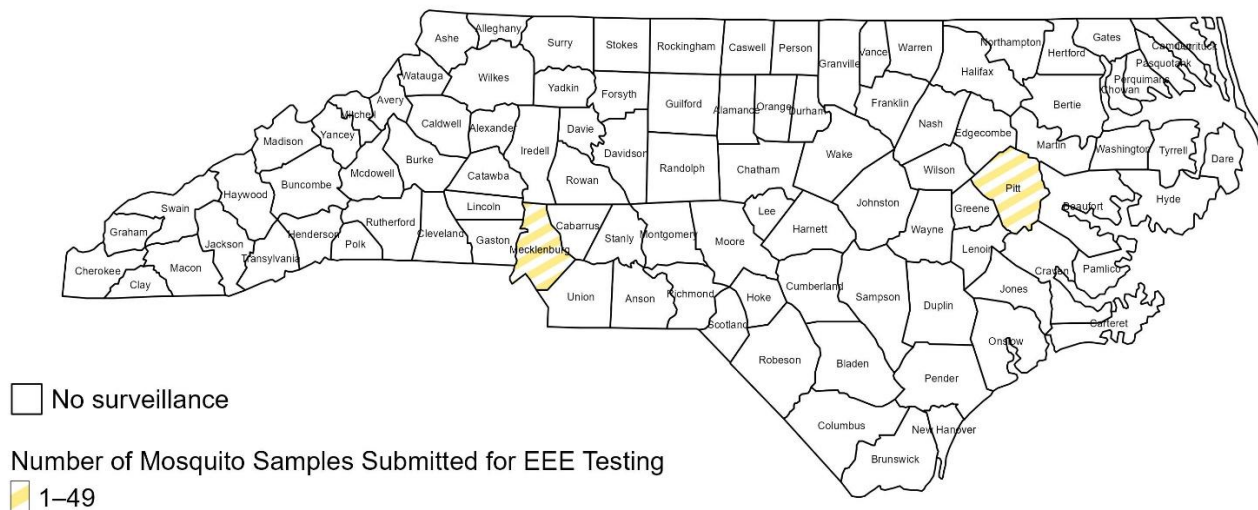


To date in 2026, 60 mosquito samples (1-50 individual mosquitoes per sample) have been tested at the NCSLPH for LACV, including 48 samples during the past two weeks (5 from Forsyth and 43 from Mecklenburg). No LACV-positive mosquito samples have been detected. This result is expected given that LACV infection rates in mosquitoes are typically below 0.1% statewide*.

* Refer to the maps on page 3 for the corresponding counties included.

Mosquito Surveillance

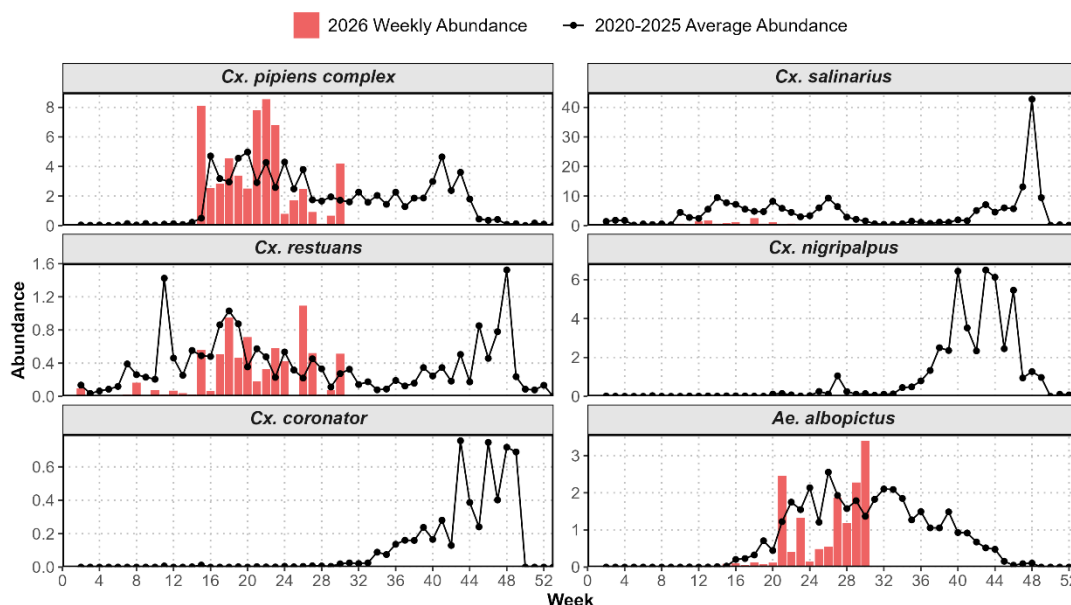
EEE Mosquito Surveillance Testing Submissions and Results, NC, 2026



To date in 2026, 72 mosquito samples (1-50 individual mosquitoes per sample) have been tested at the NCSLPH for EEE, including 43 samples during the past two weeks. Most of these samples were submitted by Mecklenburg County (n=49), while Pitt County has contributed 23 samples. No EEE-positive mosquito samples have been detected. This result is expected given that the most recent EEE-positive sample was reported in 2021.

Disease-Specific Endemic Mosquito Species

NC Statewide* Weekly and 5-Year Average Abundance of WNV Vector Mosquitoes

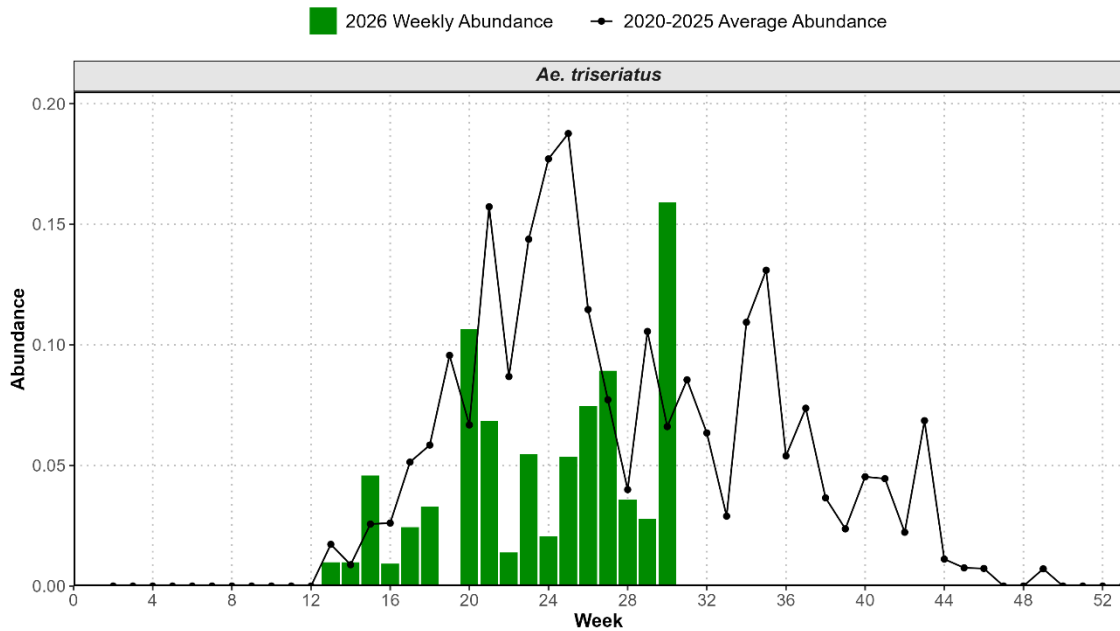


Year-to-date collections (may or may not be tested) suggest decreased activity among most WNV vector species in NC compared with the past five years, except for *Aedes albopictus* and *Culex pipiens* complex, which suggest increased activity. During weeks 29 and 30 of 2026, mosquito abundance (mosquitoes collected per trap night) was at or below the five-year average for *Cx. coronator*, *Cx. salinarius*, and *Cx. nigripalpus*. *Ae. albopictus* abundance was above average in both weeks, while above-average abundance for *Cx. pipiens* complex and *Cx. restuans* species occurred only in week 30.

* Refer to the maps on page 3 for the corresponding counties included.

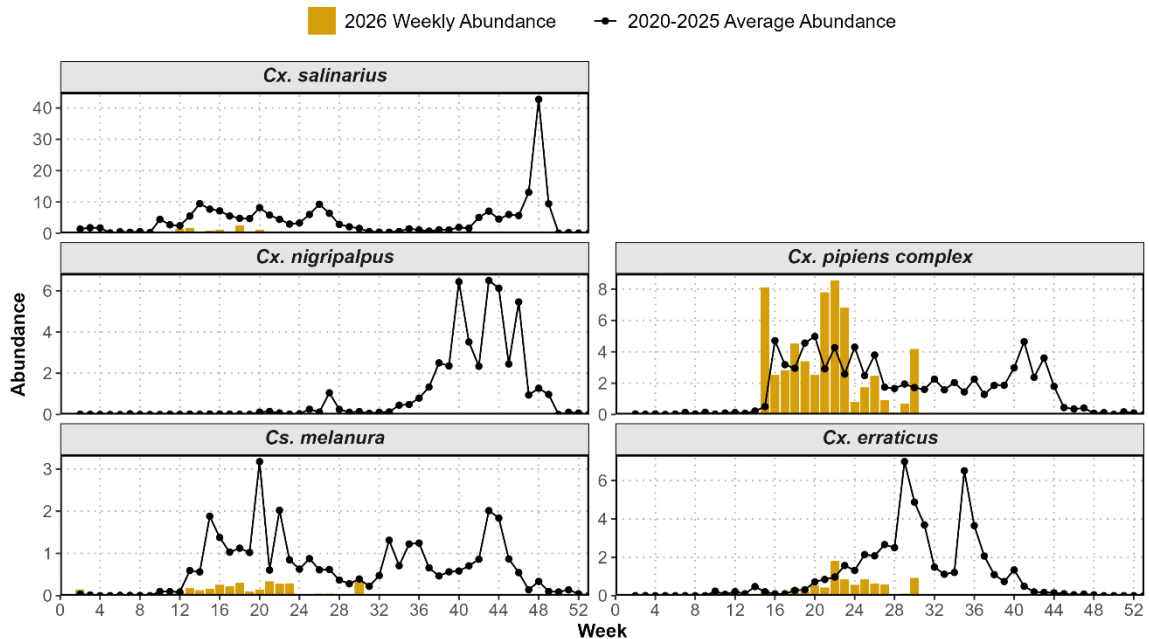
Disease-Specific Endemic Mosquito Species

NC Statewide* Weekly and 5-Year Average Abundance of LACV Vector Mosquitoes



Year-to-date collections (may or may not be tested) of the LACV vector, *Aedes triseriatus*, suggest decreased activity compared with the previous five years. In 2026, mosquito abundance was below average in week 29 but rose sharply to above average in week 30.

NC Statewide* Weekly and 5-Year Average Abundance of EEE Vector Mosquitoes

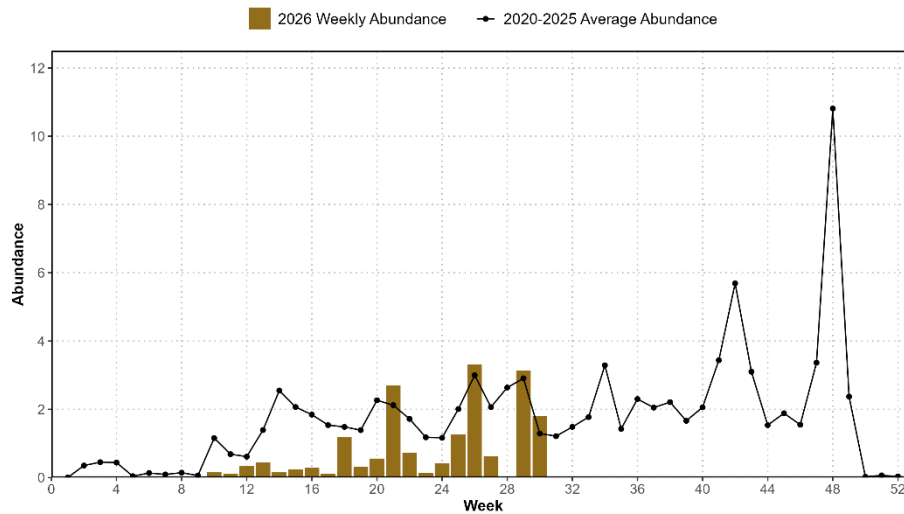


Year-to-date collections (may or may not be tested) suggest reduced activity among most EEE vector species in NC compared with the past five years, apart from *Cx. pipiens complex*, which shows increased activity. Between weeks 29 and 30 of 2026, mosquito abundance was lower-than or equal to the five-year average for all species except *Cx. pipiens complex*, which displayed above-average abundance in week 30.

* Refer to the maps on page 3 for the corresponding counties included.

Habitat-Specific Endemic Mosquito Species

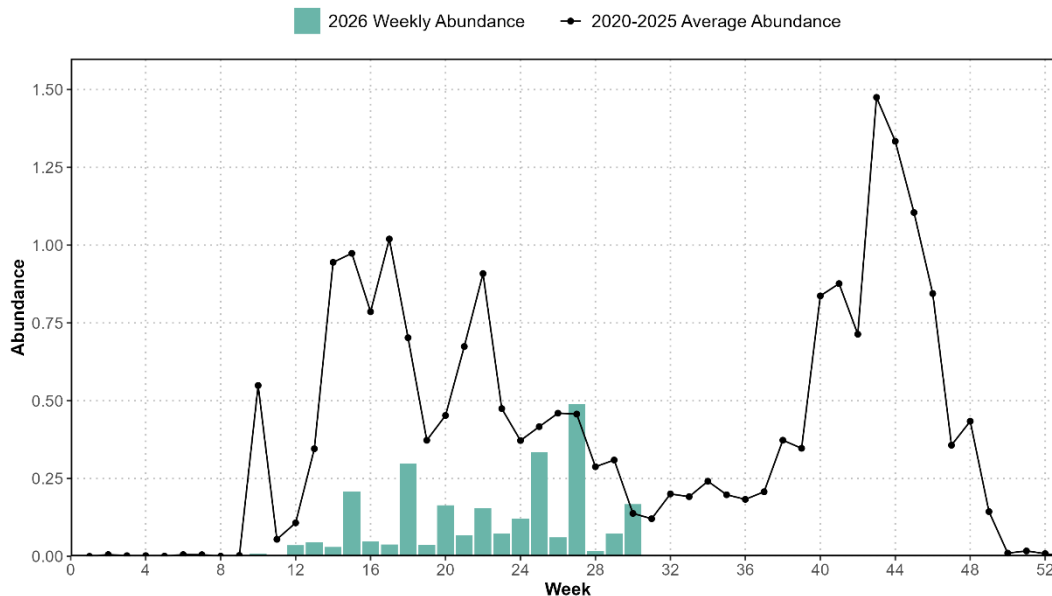
NC Statewide* Weekly and 5-Year Average Abundance of Saltmarsh Habitat Mosquitoes



Saltmarsh Habitat Species:
<i>Ae. cantator</i>
<i>Ae. sollicitans</i>
<i>Ae. taeniorhynchus</i>
<i>An. bradleyi</i>
<i>Cx. salinarius</i>

[Salt marshes](#) are coastal wetlands that flood and drain with ocean tides. Saltmarsh mosquitoes were first collected in week two in the previous five years, while they were first collected in week 10 in 2026. Saltmarsh mosquito abundance in weeks 29 and 30 was slightly higher than average in 2026, whereas abundance in week 28 was lower-than-average. Saltmarsh mosquito abundance has remained low in 2026 compared with the previous five years. The increase in the five-year average between weeks 40 and 48 coincides with the Atlantic hurricane season.

NC Statewide* Weekly and 5-Year Average Abundance of Floodwater Habitat Mosquitoes



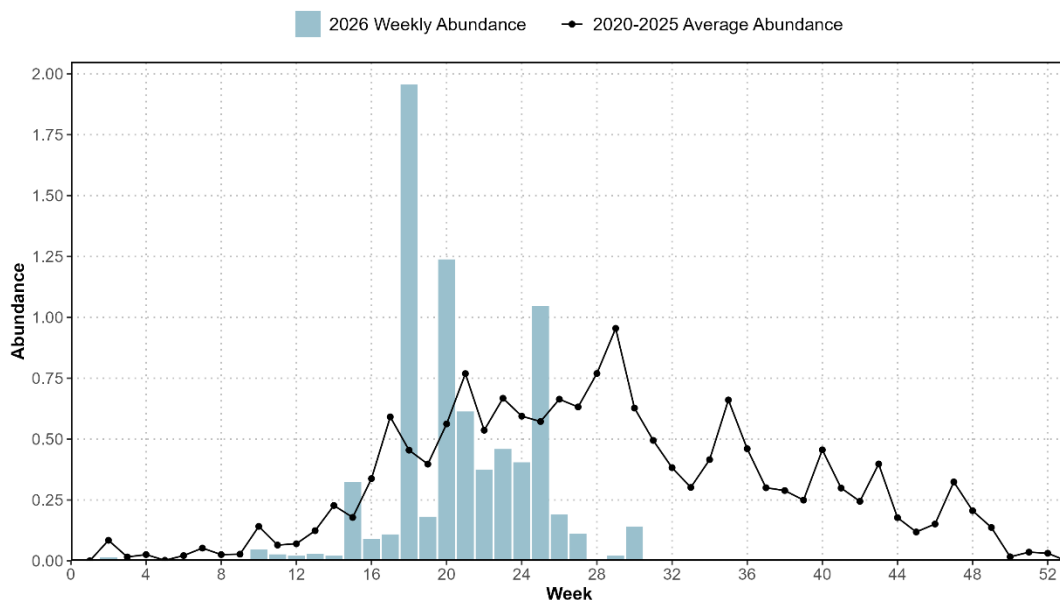
Floodwater Habitat Species:
<i>Ae. mitchellae</i>
<i>Ae. sticticus</i>
<i>Ae. trivittatus</i>
<i>Ae. vexans</i>
<i>An. diluvialis</i>
<i>Cx. nigripalpus</i>
<i>Ps. ciliata</i>
<i>Ps. columbiae</i>
<i>Ps. cyanoescens</i>
<i>Ps. discolor</i>
<i>Ps. howardii</i>

[Floodwater habitats](#) are flat to uneven landscapes, such as pastures, roadside ditches and neighborhood detention basins, that often flood. Floodwater mosquito abundance in week 29 was lower than average in 2026, while abundance in week 30 slightly exceeded the average. Floodwater habitat mosquitoes did not exhibit a typical spring peak in 2026, likely due to drought conditions experienced across the state. The increase in the five-year average between weeks 40 and 48 coincides with the Atlantic hurricane season.

* Refer to the maps on page 3 for the corresponding counties included.

Habitat-Specific Endemic Mosquito Species

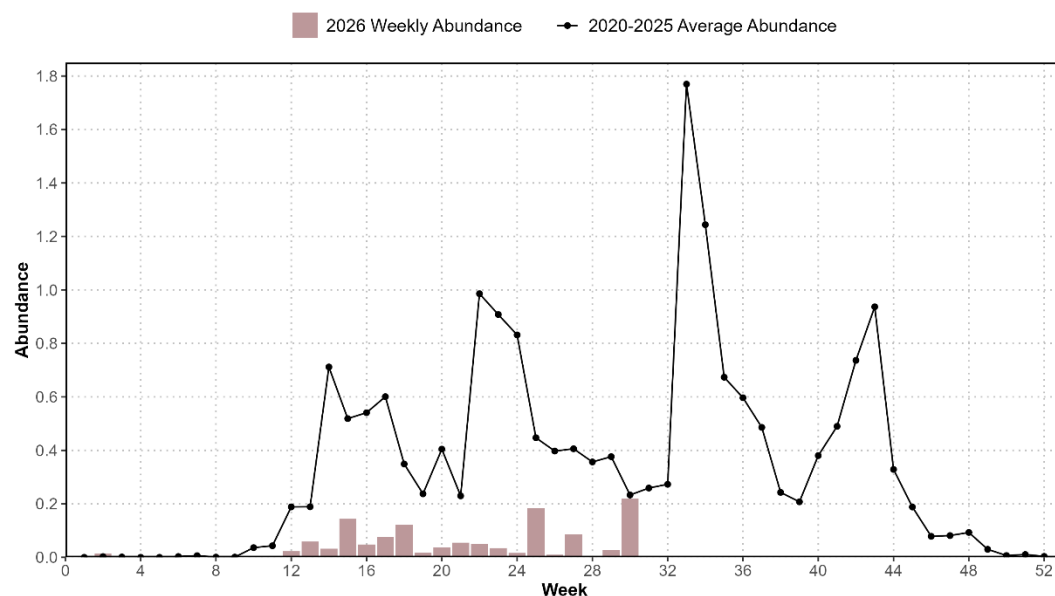
NC Statewide* Weekly and 5-Year Average Abundance of Standing Water Habitat Mosquitoes



Standing water habitats are permanent or semi-permanent stagnant bodies of water. Standing water habitat mosquitoes were first collected in week two of 2026, as in the previous five years. Mosquito abundance in weeks 29 and 30 was substantially lower than average in 2026. Aside from uncharacteristic spikes in weeks 18, 20 and 25, standing water mosquito abundance has been lower in 2026 compared to the previous five years.

Standing Water Habitat Species:
<i>Ae. cinereus</i>
<i>An. atropos</i>
<i>An. crucians</i>
<i>An. georgianus</i>
<i>An. maverlius</i>
<i>An. punctipennis</i>
<i>An. quadrimaculatus</i>
<i>An. smaragdinus</i>
<i>An. walkeri</i>
<i>Cq. perturbans</i>
<i>Cs. inornata</i>
<i>Cx. coronator</i>
<i>Cx. erraticus</i>
<i>Cx. peccator</i>
<i>Cx. pilosus</i>
<i>Cx. territans</i>
<i>Ur. lowii</i>
<i>Ur. sapphirina</i>

NC Statewide* Weekly and 5-Year Average Abundance of Woodland Pool Habitat Mosquitoes



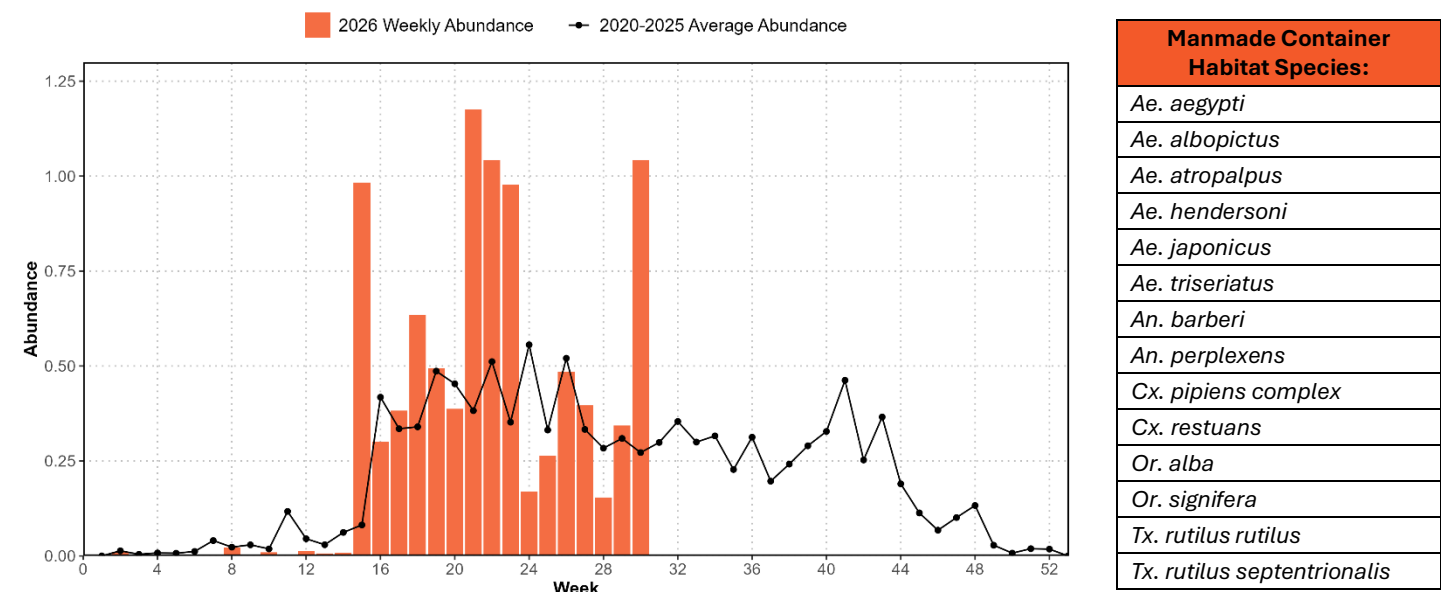
Woodland pools are small, seasonal forest wetlands that hold water in spring or fall but usually dry by late summer or during droughts. Surveillance first collected these mosquitoes in week two of 2026 compared to week seven in the previous five years. This year's woodland pool habitat mosquito abundance has been substantially lower than average, likely due to drought conditions experienced across the state. Week 30 is the first week in 2026 since week 9 in which woodland pool mosquito abundance nearly equaled the five-year average.

Woodland Pool Habitat Species:
<i>Ae. atlanticus</i>
<i>Ae. atlanticus/tormentor</i>
<i>Ae. aurifer</i>
<i>Ae. canadensis</i>
<i>Ae. dupreei</i>
<i>Ae. fulvus pallens</i>
<i>Ae. grossbecki</i>
<i>Ae. infirmatus</i>
<i>Ae. thibaulti</i>
<i>Ae. tormentor</i>
<i>Cs. melanura</i>
<i>Ps. ferox</i>
<i>Ps. horrida</i>
<i>Ps. mathesoni</i>

* Refer to the maps on page 3 for the corresponding counties included.

Habitat-Specific Endemic Mosquito Species

NC Statewide* Weekly and 5-Year Average Abundance of Manmade Container Habitat Mosquitoes



Container habitats include natural or man-made containers commonly found in residential areas. Container habitat mosquitoes were first collected in week two of 2026, as in the previous five years. Mosquito abundance in both weeks 29 and 30 exceeded the five-year average. Container mosquito abundance in 2026 has mostly been above average since week 15.

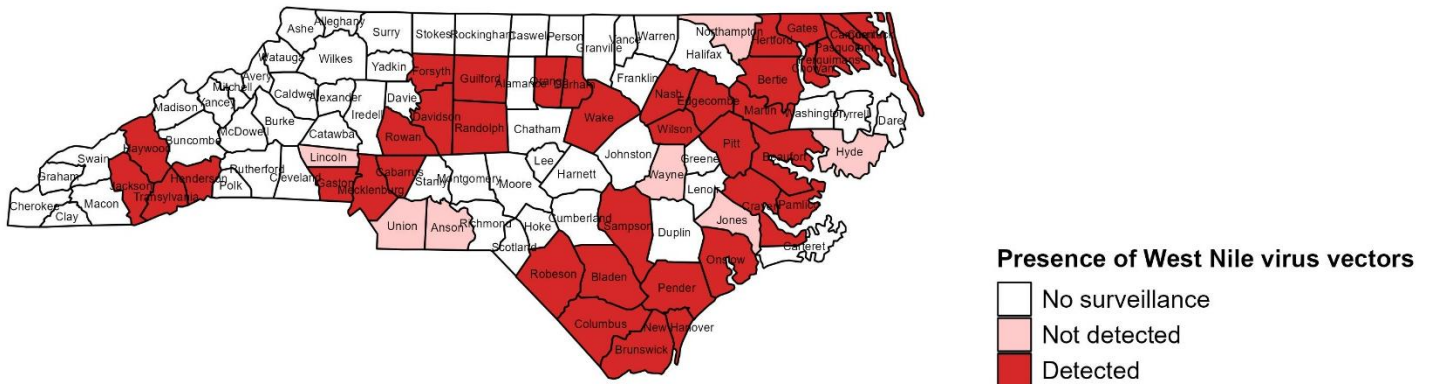
* Refer to the maps on page 3 for the corresponding counties included.

Appendix

Medically Important Mosquito Species of NC

Mosquito Species	Disease(s)	Primary Hosts	Adult Habitat	Larval Habitat	Biting Time
Eastern Treehole Mosquito (<i>Aedes triseriatus</i>)	LACV	Small mammals, humans	Hardwood forest & residential	Treeholes & small man-made containers	Daytime
Asian Tiger Mosquito (<i>Aedes albopictus</i>)	WNV & LACV	Humans, birds, mammals & other (opportunistic)	Thick vegetation; urban to rural	Small natural and man-made containers	Daytime
Northern and Southern House Mosquito (<i>Culex pipiens complex</i>)	WNV & EEE	Birds, mammals, and humans	Urban; suburban; homes	Small stagnant pools; Man-made containers	Dusk & night
Florida SLE Mosquito (<i>Culex nigripalpus</i>)	WNV & EEE	Birds, mammals, humans, & reptiles	Thick vegetation; urban to rural	Large stagnant vegetated pools	Dusk to dawn
Unbanded Saltmarsh Mosquito (<i>Culex salinarius</i>)	WNV & EEE	Birds, humans, mammals & other	Lowland forest, open marshes; homes	Large fresh to brackish pools and marshes	Sunset to early night
<i>Culex erraticus</i>	WNV & EEE	Birds in spring; mammals and humans in late summer and fall	Thick vegetation; urban to rural	Large stagnant pools with heavy vegetation	Dusk to dawn
Black-tailed Mosquito (<i>Culiseta melanura</i>)	EEE	Passerine birds	Hardwood swamps	Acidic stagnant pools in swamps or bogs	Sunset to sunrise
White-dotted Mosquito (<i>Culex restuans</i>)	WNV	Birds in spring; mammals and humans in late summer and fall	Hardwood forest & residential	Shaded stagnant water with decaying vegetation	Two hours past dusk to dawn

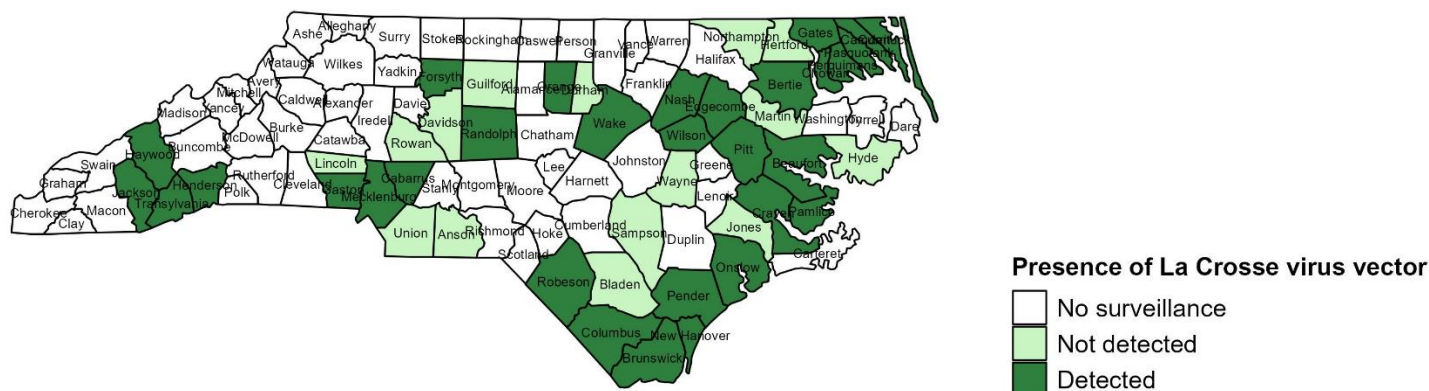
NC Distribution of WNV Mosquito Vectors, 2017-2025



Mosquito species capable of transmitting WNV to humans, consisting of *Aedes albopictus*, *Cx. pipiens complex*, *Cx. nigripalpus*, *Cx. salinarius*, *Cx. coronator*, and *Cx. restuans*, have been documented statewide in reports published through 2010. Since 2017, at least one of these species has been detected in 39 of the 46 counties conducting active surveillance.

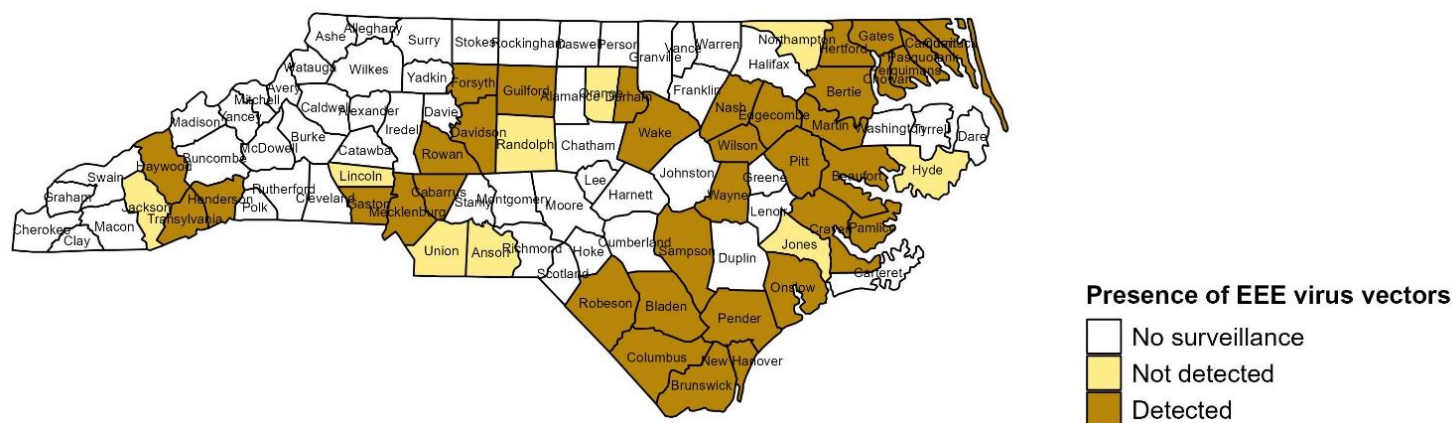
Medically Important Mosquito Species of NC

NC Distribution of LACV Mosquito Vectors, 2017-2025



The primary LACV mosquito vector (*Aedes triseriatus*) has been detected in every region of the state since 2017. However, mosquitoes from western NC counties with the highest LACV human disease rates are not routinely collected or tested because county-level vector surveillance programs are limited in this region.

NC Distribution of EEE Mosquito Vectors, 2017-2025



Mosquito species capable of transmitting EEE in humans, consisting of *Culex erraticus*, *Cx. nigripalpus*, *Cx. pipiens complex*, *Cx. salinarius*, and *Culiseta melanura* (primary vector), have been detected in 37 of the 46 counties conducting active surveillance from 2017 to 2025. The virus primarily affects the Tidewater and Inner Coastal Plain regions, where favorable habitats support viral amplification in local bird populations.