



**Arbovirus Final Surveillance Report**  
**MMWR Week May 9-May 15, 2021**

**Week 19 Summary**

- 143 mosquito pools\* have been tested in NTRL from week 19
  - Year-to-date NTRL has tested a total of 643 mosquito pools
- 2 mosquito pools tested positive for WNV this week:
  - Grapevine (1) Grand Prairie\* (1)
- There have been 0 human cases of SLE, Zika, CHIK or Dengue in 2021.
  - There have been 0 human cases of West Nile disease.
- Average number of mosquitoes/trap include:
  - *Culex* spp: 44.0
  - *Aedes aegypti*: 0.4
  - *Aedes albopictus* 0.7

NTRL– North Texas Regional Lab

WNV= West Nile virus; CHIKV= chikungunya virus; DENV= dengue virus; SLEV= St. Louis encephalitis virus \* May encompass counties outside of Tarrant County

**Cumulative Positive WNV Pools per Municipality**

There have been a total of 3 positive in 2021.

Crowley (1) Grand Prairie\* (1) Grapevine (1)

\* May encompass counties outside of Tarrant County

**Table 1. MLE<sup>(1)</sup> and VI<sup>(2)</sup> for County Quadrants, Week 18 and 19**

	County Quadrant	# gravid traps	Ave F <i>Culex</i> spp	Positive pools	MLE (Lower-Upper Limit)	VI
Week 18	Northeast	54	11.1	0.0	0.00 (0.00-10.72)	0.000
	Northwest	21	18.8	0.0	0.00 (0.00-31.34)	0.000
	Southeast	34	79.0	0.0	0.00 (0.00-8.18)	0.000
	Southwest	16	45.9	0.0	0.00 (0.00-65.54)	0.000
Week 19	Northeast	56	15.4	1.0	0.79 (0.05-6.18)	0.004
	Northwest	19	53.5	0.0	0.00 (0.00-10.87)	0.000
	Southeast	29	73.9	0.0	0.00 (0.00-7.48)	0.000
	Southwest	10	55.0	0.0	0.00 (0.00-20.42)	0.000

Data source: Tarrant County Public Health

1. MLE= Maximum Likelihood Estimate or the estimate of the mosquito infection rate per mosquito species. 2. VI= Vector Index which is a measure of infectivity accounting for vector species composition, vector species population density, and proportion of vector population infected with WNV

Averages, MLE, and limits will be given for species with identified infection rates only and only for the latest two week. MLE, Lower and Upper Limits are based on a 95% confidence interval. All data in this table is based on collection date.

Calculated using a Maximum Likelihood Estimation (MLE). Biggerstaff, Brad J. PooledInfRate, Version 4.0: a Microsoft® Office Excel® Add-In to compute prevalence estimates from pooled samples. Centers for Disease Control and Prevention, Fort Collins, CO, U.S.A., 2009



**BE MOSQUITO FREE**  
 PREVENT. PROTECT. TAKE CONTROL.

## Cumulative Data for the Tarrant County Region, Weeks 16-19

Week	Apr 18- Apr 24	Apr 25- May 1	May 2- May 8	May 9- May 15	YTD
MMWR Week	16	17	18	19	
Total number of gravid traps set in Tarrant Region	109	100	125	114	602
Average number of <i>Culex</i> spp per gravid trap	14.0	22.0	38.1	42.3	23.5
Number of mosquito pools tested <sup>1</sup> (NTRL; non-NTRL)	108;4	112;4	140;8	143;4	643;28
Number of positive mosquito pools (NTRL; non-NTRL) <sup>1</sup>	1;0	0;0	0;0	1;1	2;1
Confirmed WNV human cases (WNF; WNND) <sup>2</sup>	0;0	0;0	0;0	0;0	0;0
WNV infection rate per 1,000 <i>Culex</i> spp <sup>3</sup>	0.00	0.00	0.00	0.00	
Weekly vector index <sup>4</sup>	0.000	0.000	0.000	0.000	
Total BG Sentinel traps set in Tarrant Region	31	29	35	35	175
Average number of female <i>Aedes aegypti</i> per BG trap	1.0	0.4	0.7	0.4	0.3
Average number of female <i>Aedes albopictus</i> per BG trap	0.8	1.0	1.9	0.7	0.6

<sup>1</sup> Based on mosquito collection date; NTRL = North Texas Regional Laboratory

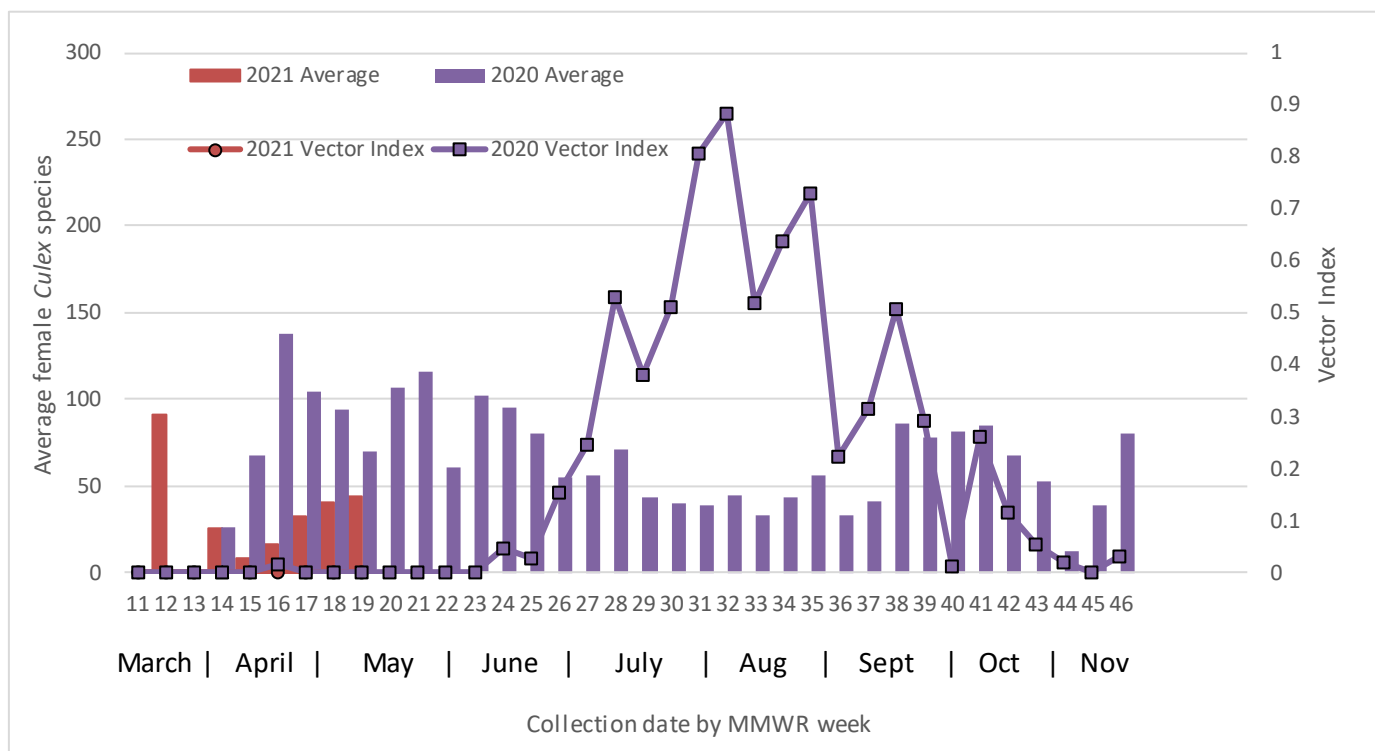
<sup>2</sup> Based on onset of illness date for cases reported to Tarrant County Public Health; WNF=West Nile Fever; WNND = West Nile Neuroinvasive Disease

<sup>3</sup> Calculated using a Maximum Likelihood Estimation (MLE). Biggerstaff, Brad J. PooledInfRate, Version 4.0: a Microsoft® Office Excel® Add-In to compute prevalence estimates from pooled samples. Centers for Disease Control and Prevention, Fort Collins, CO, U.S.A., 2009 *Culex* spp includes pools of both *Cx restuans* and *Cx quinquefasciatus*. These MLEs are calculated separately, per species and added together as per instructions by CDC.

<sup>4</sup> Vector Index is a measure of infectivity accounting for vector species composition, vector species population density, and proportion of vector population infected with WNV

Note: Infection rate and vector index calculations now includes pools from outside laboratories; Data subject to change due to on-going case investigations, mosquito collection, and testing. Data source: Tarrant County Public Health

**Figure 1. Average Number of Female *Culex* Species Per Trap and Vector Index by Collection Date, Tarrant County, 2020-2021**

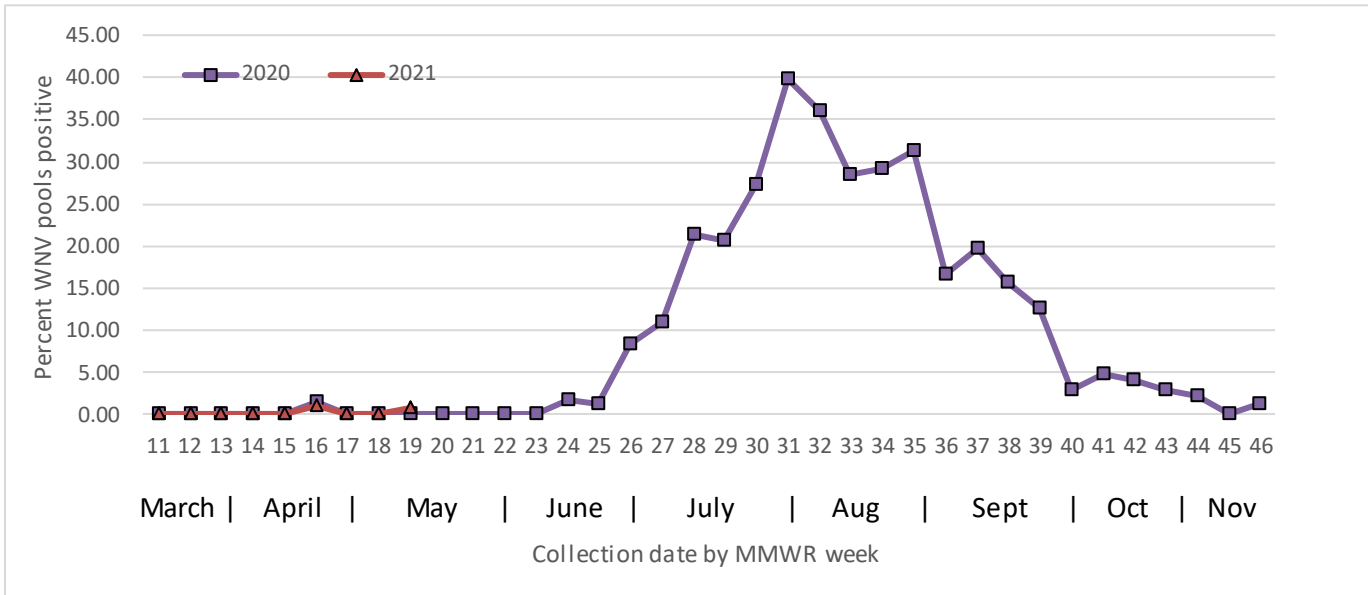


Data Source: Tarrant County Public Health



**BE MOSQUITO FREE**  
PREVENT. PROTECT. TAKE CONTROL.

**Figure 2. Percentage of Mosquito Pools Positive for WNV by Collection Date, Tarrant County, 2020-2021**



Data Source: Tarrant County Public Health

**Table 3. North Texas Arbovirus Activity as Reported by Texas DSHS on May 18, 2021**

North Texas Counties	WNV			CHIKV		DENV		SLEV		Zika	
	Positive Mosquito Pools	Human cases		Positive Mosquito Pools	Human Cases	Positive Mosquito Pools	Human Cases	Positive Mosquito Pools	Human Cases	Positive Mosquito Pools	Human Cases
Collin	0	0 WNF;	0 WNND	0	0	0	0	0	0	0	0
Dallas	0	0 WNF;	0 WNND	0	0	0	0	0	0	0	0
Denton	0	0 WNF;	0 WNND	0	0	0	0	0	0	0	0
Johnson	0	0 WNF;	0 WNND	0	0	0	0	0	0	0	0
Non-Tarrant North Texas	0	0	0	0	0	0	0	0	0	0	0
<b>All Texas Counties</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

\*All reported CHIKV, DENV, & Zika human cases are travel-related  
 WNV- West Nile virus; WNF- West Nile fever; WNND- West Nile neuroinvasive disease; CHIKV- Chikungunya virus;  
 DENV- Dengue virus; SLEV- St. Louis encephalitis virus

**For Additional Information Please Visit The Links Below:**

Department of State Health Services:

- [Arbovirus Activity Reports](#)
- [Texas Zika](#)

Tarrant County educational videos and documents:

- [Eliminating Mosquito Breeding Sites](#)
- [Barrier Treatments for Mosquitoes](#)
- [Mosquitoes Love Water](#)
- [Mosquito Prevention Tool Kit](#)

Tarrant County web pages:

- [Be Mosquito Free](#)
- [Zika](#)
- [Vector Control](#)

Environmental Protection Agency:

- [Insect Repellent Information](#)

Center for Disease Control and Prevention: