



**Arbovirus Final Surveillance Report  
MMWR Week Jul 4-Jul 10, 2021**

**Week 27 Summary**

- 165 mosquito pools\* have been tested in NTRL from week 27
  - Year-to-date NTRL has tested a total of 1862 mosquito pools
- 8 mosquito pools tested positive for WNV this week:
  - Bedford (1) Burleson\* (2) Colleyville (1) Grapevine (1) Grand Prairie\* (2) Mansfield (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: 82.5
  - *Aedes aegypti*: 4.2
  - *Aedes albopictus* 5.3

NTRL– North Texas Regional Lab  
WNV= West Nile virus; CHIKV= chikungunya virus; DENV= dengue virus; SLEV St. Louis encephalitis virus \* May include data from outside Tarrant County

**Cumulative Positive WNV Pools per Municipality**

There have been a total of 30 positive in 2021.

Bedford (1) Burleson \*(3) Colleyville (1) Crowley (1) DFW Airport\*(1) Grand Prairie\* (16) Grapevine (3) Mansfield\* (1) North Richland Hills (2) Unincorporated (1)

\* May include data from outside Tarrant County

**Table 1. MLE<sup>(1)</sup> and VI<sup>(2)</sup> for County Quadrants, Week 26 and 27**

	County Quadrant	# gravid traps	Ave F <i>Culex</i> spp	Positive pools	MLE (Lower-Upper Limit)	VI
Week 26	Northeast	61	116.6	2.0	1.35 (0.24-98.33)	0.060
	Northwest	25	121.2	0.0	0.00 (0.00-3.93)	0.000
	Southeast	38	235.9	0.0	0.00 (0.00-2.74)	0.000
	Southwest	16	45.6	0.0	0.00 (0.00-6.19)	0.000
Week 27	Northeast	71	106.2	4.0	1.78 (0.58-35.30)	0.135
	Northwest	25	73.3	0.0	0.00 (0.00-4.47)	0.000
	Southeast	40	198.1	1.0	0.65 (0.04-47.21)	0.097
	Southwest	22	77.2	0.0	0.00 (0.00-4.06)	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



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**Cumulative Data for the Tarrant County Region, Weeks 24-27**

Week	Jun 13- Jun 19	Jun 20- Jun 26	Jun 27- Jul 3	Jul 4-Jul 10	YTD
MMWR Week	24	25	26	27	
Total number of gravid traps set in Tarrant Region	148	151	140	158	1680
Average number of <i>Culex</i> spp per gravid trap	345.2	109.6	119.8	82.5	74.3
Number of mosquito pools tested <sup>1</sup> (NTRL; non-NTRL)	161;21	159;21	144;19	165;23	1862;164
Number of positive mosquito pools (NTRL; non-NTRL) <sup>1</sup>	1;2	1;2	2;2	6;2	14;16
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	0.37	0.47	0.92	
Weekly vector index <sup>4</sup>	0.000	0.041	0.057	0.076	
Total BG Sentinel traps set in Tarrant Region	35	34	25	29	410
Average number of female <i>Aedes aegypti</i> per BG trap	3.6	5.9	2.6	4.2	1.4
Average number of female <i>Aedes albopictus</i> per BG trap	15.3	7.0	4.6	5.3	3.6

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

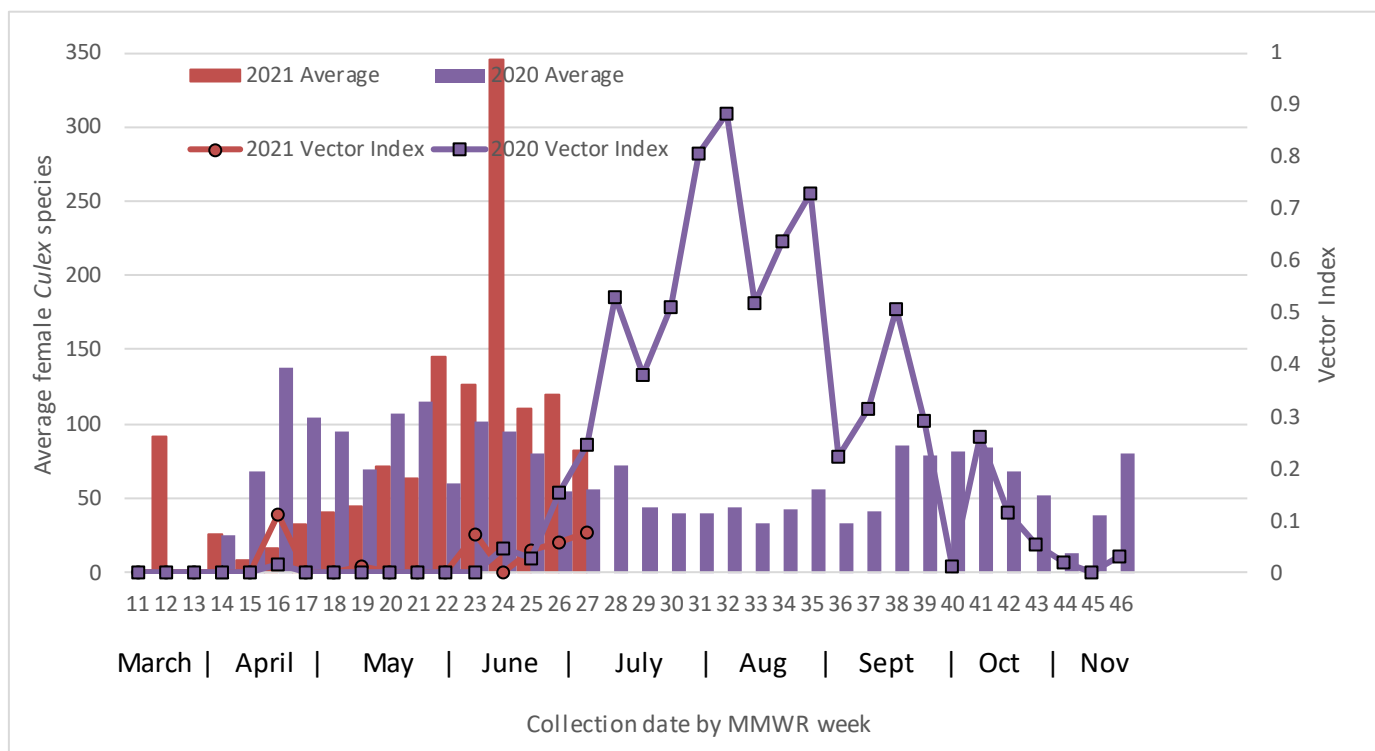
<sup>2</sup> Based on onset of illness date for cases reported to Tarrant County Public Health; WNF=West Nile Fever; WNND = West Nile Neuroinvasive Disease

<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**

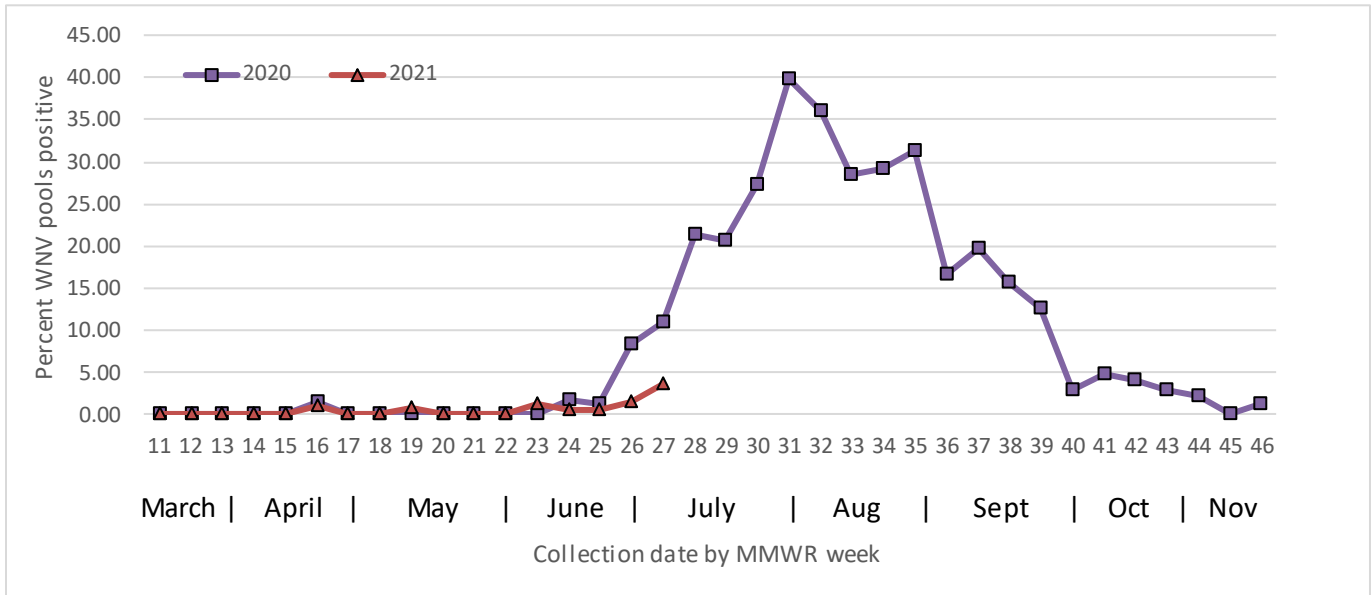


Data Source: Tarrant County Public Health



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**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 July 13, 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	4	0 WNF; 0 WNND	0	0	0	0	0	0	0	0
Dallas	20	0 WNF; 0 WNND	0	0	0	0	0	0	0	0
Denton	15	0 WNF; 0 WNND	0	0	0	0	0	0	0	0
Johnson	3	0 WNF; 0 WNND	0	0	0	0	0	0	0	0
<b>Non-Tarrant North Texas</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>All Texas Counties</b>	<b>125</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](#)
- [WNV Interactive Mapping Tool](#)

Environmental Protection Agency:

- [Insect Repellent Information](#)

Center for Disease Control and Prevention:

- [Zika Travel Information](#)