



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

**Arbovirus Final Surveillance Report**  
**MMWR Week Sep 26-Oct 2, 2021**

**Week 39 Summary**

- 156 mosquito pools\* have been tested in NTRL from week 39
    - Year-to-date NTRL has tested a total of 3981 mosquito pools
  - 16 mosquito pools tested positive for WNV this week:
    - Arlington (1) Bedford (1) Benbrook (1) Burleson\* (3) Colleyville (1) Crowley (1) Fort Worth\* (2) Keller (2) Mansfield (1) North Richland Hills (1) Pantego (1) Unincorporated (1)
  - There has been 1 imported human case of Dengue, and 0 cases of SLE or Zika in 2021.
    - There has been 7 human cases of West Nile disease.
  - Average number of mosquitoes/trap include:
    - *Culex* spp: 50.6
    - *Aedes aegypti*: 3.9
    - *Aedes albopictus* 3.2
- 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 371 positive in 2021.

Arlington (19) Bedford (4) Benbrook (3) Burleson \*(52) Colleyville (14) Crowley (22) DFW Airport\*(5) Euless (7) Fort Worth\* (65) Grand Prairie\* (35) Grapevine (14) Haltom City (2) Hurst (8) Keller (17) Kennedale (2) Lakeside (3) Mansfield\* (27) North Richland Hills (30) Pantego (3) Richland Hills (2) Southlake (14) Unincorporated (22) Watauga (1)

\* May include data from outside Tarrant County

**Table 1. MLE<sup>(1)</sup> and VI<sup>(2)</sup> for County Quadrants, Week 38 and 39**

	County Quadrant	# gravid traps	Ave F <i>Culex</i> spp	Positive pools	MLE (Lower-Upper Limit)	VI
Week 38	Northeast	77	35.9	15.0	8.67 (5.11-13.96)	0.311
	Northwest	32	59.3	4.0	4.08 (1.34-9.81)	0.242
	Southeast	46	75.4	4.0	4.05 (1.33-9.70)	0.305
	Southwest	22	103.2	3.0	4.81 (1.31-12.98)	0.496
Week 39	Northeast	70	40.6	13.0	7.36 (4.14-12.29)	0.299
	Northwest	30	40.5	2.0	2.55 (0.46-39.47)	0.103
	Southeast	40	41.3	3.0	2.89 (0.77-7.86)	0.119
	Southwest	34	40.7	1.0	1.08 (0.06-5.24)	0.044

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



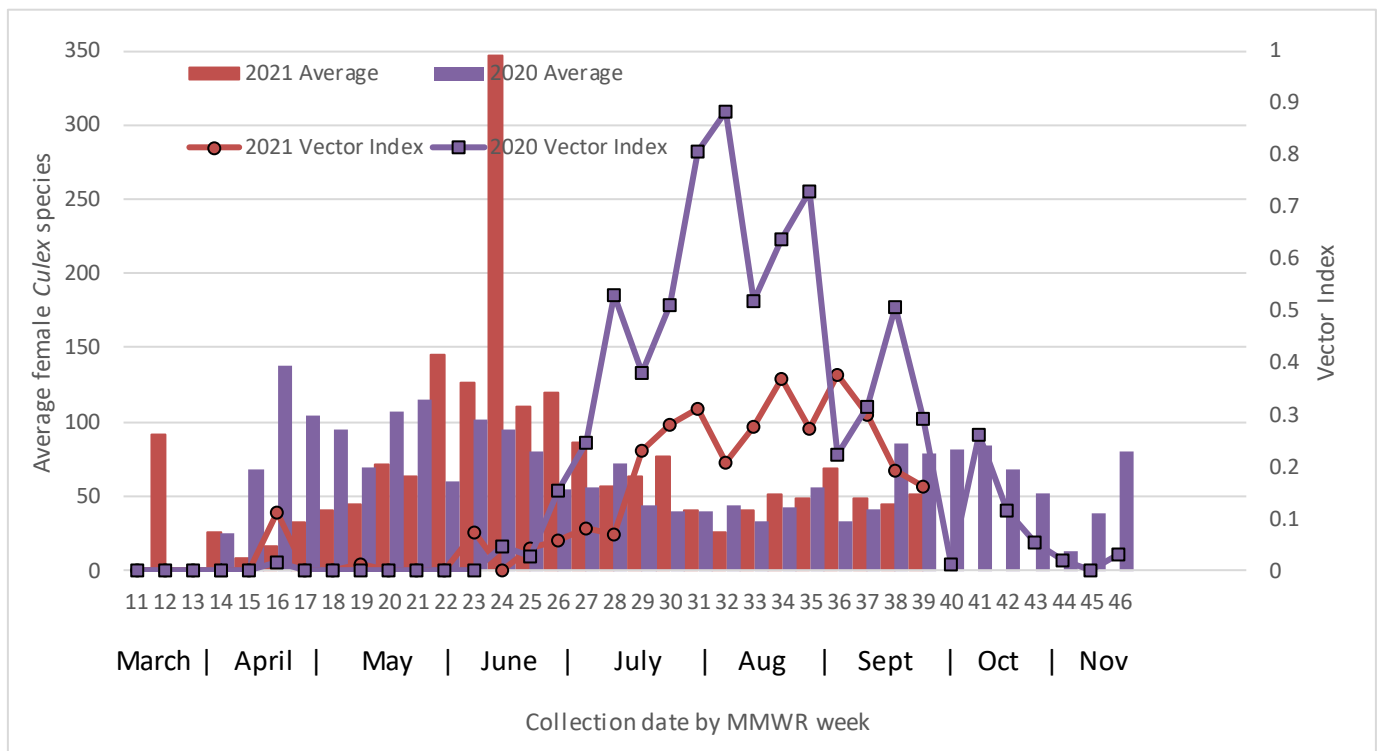
**BE MOSQUITO FREE**  
 PREVENT. PROTECT. TAKE CONTROL.

**Cumulative Data for the Tarrant County Region, Weeks 36-39**

Week	Sep 5- Sep 11	Sep 12- Sep 18	Sep 19- Sep 25	Sep 26-Oct 2	YTD
MMWR Week	36	37	38	39	
Total number of gravid traps set in Tarrant Region	176	177	174	141	3745
Average number of <i>Culex</i> spp per gravid trap	68.4	49.1	44.9	50.6	65.2
Number of mosquito pools tested <sup>1</sup> (NTRL; non-NTRL)	176;20	183;21	175;17	156;13	3981;373
Number of positive mosquito pools (NTRL; non-NTRL) <sup>1</sup>	32;2	29;2	23;1	16;0	336;35
Confirmed WNV human cases (WNF; WNND) <sup>2</sup>	1;1	0;1	0;0	0;0	4;3
WNV infection rate per 1,000 <i>Culex</i> spp <sup>3</sup>	5.50	6.09	4.26	3.23	
Weekly vector index <sup>4</sup>	0.376	0.299	0.191	0.163	
Total BG Sentinel traps set in Tarrant Region	30	33	33	31	801
Average number of female <i>Aedes aegypti</i> per BG trap	2.6	3.7	4.7	3.9	3.1
Average number of female <i>Aedes albopictus</i> per BG trap	5.6	2.7	3.3	3.2	4.7

<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**

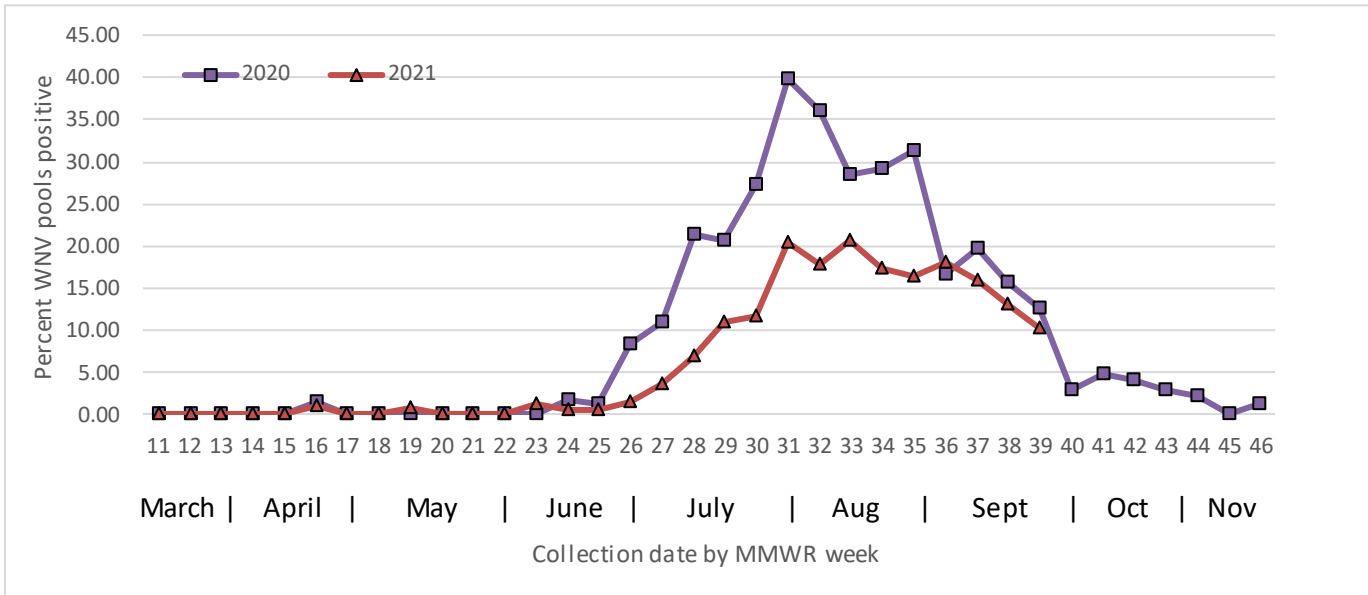


Data Source: Tarrant County Public Health



**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 October 5, 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	44	0 WNF; 0 WNND	0	0	0	1	0	0	0	0
Dallas	322	3 WNF; 11 WNND	0	0	0	0	0	0	0	0
Denton	52	0 WNF; 1 WNND	0	0	0	0	0	0	0	0
Johnson	52	0 WNF; 0 WNND	0	0	0	0	0	0	0	0
<b>Non-Tarrant North Texas</b>	<b>470</b>	<b>3</b> <b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>All Texas Counties</b>	<b>1348</b>	<b>2</b> <b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>32</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](#)