



**Arbovirus Final Surveillance Report  
MMWR Week Jul 10-Jul 16, 2022**

**Week 28 Summary**

- 178 mosquito pools\* have been tested in NTRL from week 28
  - Year-to-date NTRL has tested a total of 2386 mosquito pools
- 3 mosquito pools tested positive for WNV this week:
  - Arlington (1) Grand Prairie\* (1) Watauga (1)
- There have been 0 imported human cases of SLE or Zika in 2022. There has been 1 case of Dengue Fever.
  - There have been 0 human cases of West Nile disease.
- Average number of mosquitoes/trap include:
  - *Culex* spp: 34.7
  - *Aedes aegypti*: 2.0
  - *Aedes albopictus* 0.8

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 has been a total of 8 positive in 2022.

Arlington (1) Bedford (1) Grand Prairie\* (4) North Richland Hills (1) Watauga (1)

\* May include data from outside Tarrant County

**Table 1. MLE<sup>(1)</sup> and VI<sup>(2)</sup> for County Quadrants, Week 27 and 28**

	County Quadrant	# gravid traps	Ave F <i>Culex</i> spp	Positive pools	MLE (Lower-Upper Limit)	VI
Week 27	Northeast	66	39.9	0.0	0.00 (0.00-1.15)	0.000
	Northwest	29	29.3	0.0	0.00 (0.00-2.66)	0.000
	Southeast	40	72.0	1.0	0.77 (0.05-1.86)	0.056
	Southwest	27	34.0	0.0	0.00 (0.00-2.78)	0.000
Week 28	Northeast	67	32.2	1.0	0.53 (0.03-1.28)	0.019
	Northwest	22	30.3	0.0	0.00 (0.00-3.31)	0.000
	Southeast	42	35.4	2.0	1.89 (0.34-3.09)	0.067
	Southwest	29	37.0	0.0	0.00 (0.00-2.41)	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 25-28

Week	Jun 19- Jun 25	Jun 26-Jul 2	Jul 3-Jul 9	Jul 10-Jul 16	YTD
MMWR Week	25	26	27	28	
Total number of gravid traps set in Tarrant Region	169	167	162	160	2132
Average number of <i>Culex</i> spp per gravid trap	65.1	58.6	42.8	34.7	35.9
Number of mosquito pools tested <sup>1</sup> (NTRL; non-NTRL)	173;13	180;10	172;9	178;12	2386;133
Number of positive mosquito pools (NTRL; non-NTRL) <sup>1</sup>	0;0	1;1	0;1	2;1	4;4
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	0.21	0.24	0.72	
Weekly vector index <sup>4</sup>	0.000	0.012	0.010	0.025	
Total BG Sentinel traps set in Tarrant Region	27	24	28	29	404
Average number of female <i>Aedes aegypti</i> per BG trap	4.7	4.5	2.8	2.0	2.9
Average number of female <i>Aedes albopictus</i> per BG trap	5.1	3.0	4.2	0.8	2.6

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

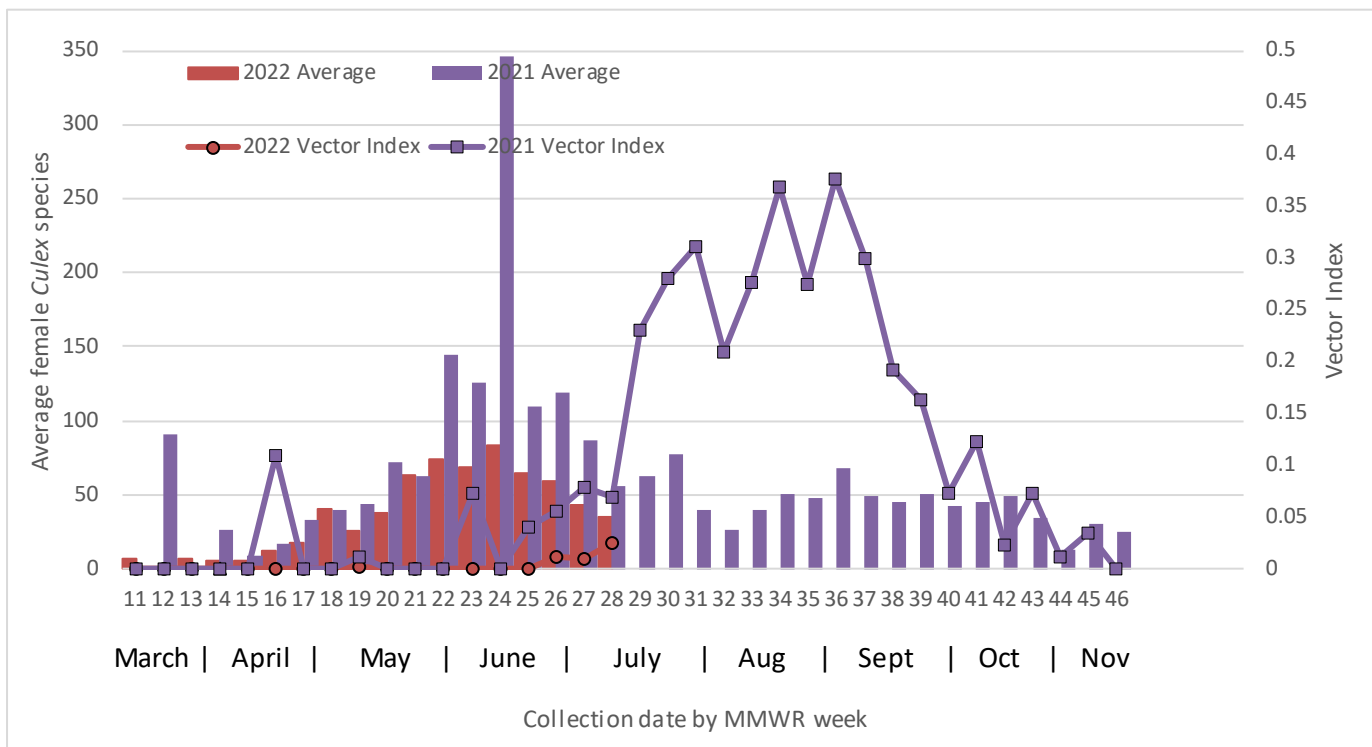
<sup>2</sup> Based on onset of illness date for cases reported to Tarrant County Public Health; WNF=West Nile Fever; WNND = West Nile Neuroinvasive Disease

<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, 2021-2022**

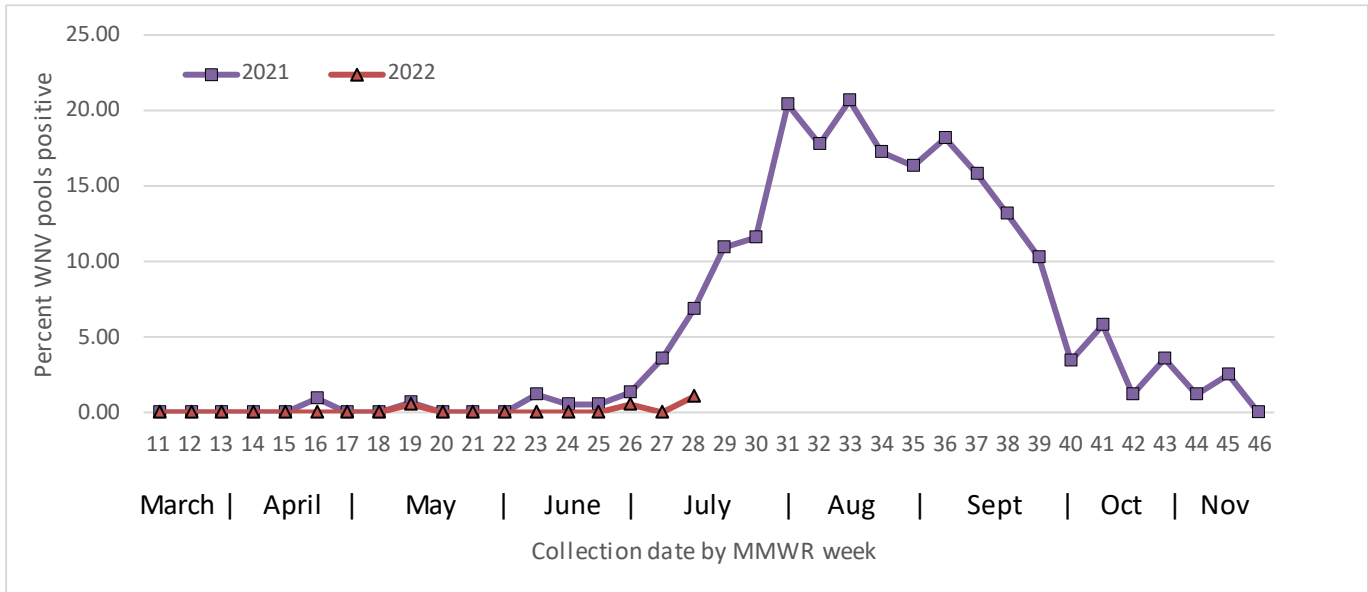


Data Source: Tarrant County Public Health



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

**Figure 2. Percentage of Mosquito Pools Positive for WNV by Collection Date, Tarrant County, 2021-2022**



Data Source: Tarrant County Public Health

**Table 3. North Texas Arbovirus Activity as Reported by Texas DSHS on July 19, 2022**

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; 1 WNND	0	0	0	0	0	0	0	0
Dallas	5	0 WNF; 0 WNND	0	0	0	2	0	0	0	0
Denton	2	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
<b>Non-Tarrant North Texas</b>	<b>11</b>	<b>0</b>	<b>1</b>		<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>All Texas Counties</b>	<b>65</b>	<b>0</b>	<b>1</b>		<b>0</b>	<b>6</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](#)