



Arbovirus Final Surveillance Report
MMWR Week Jul 25-Jul 31, 2021

Week 30 Summary

- 172 mosquito pools* have been tested in NTRL from week 30
 - Year-to-date NTRL has tested a total of 2348 mosquito pools
- 22 mosquito pools tested positive for WNV this week:
 - Arlington (1) Burleson* (5) Crowley (1) Euless (1) Fort Worth* (2) Grand Prairie* (2) Keller (1) Mansfield (2) North Richland Hills (3) Southlake (1) Unincorporated (2)
- 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: 76.7
 - *Aedes aegypti*: 5.5
 - *Aedes albopictus* 8.3

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 84 positive in 2021.

Arlington (2) Bedford (1) Burleson *(15) Colleyville (2) Crowley (4) DFW Airport*(1) Euless (1) Fort Worth* (5) Grand Prairie* (22) Grapevine (6) Hurst (1) Keller (3) Mansfield* (9) North Richland Hills (6) Southlake (1) Unincorporated (4) Watauga (1)

* May include data from outside Tarrant County

Table 1. MLE⁽¹⁾ and VI⁽²⁾ for County Quadrants, Week 29 and 30

	County Quadrant	# gravid traps	Ave F <i>Culex</i> spp	Positive pools	MLE (Lower-Upper Limit)	VI
Week 29	Northeast	62	46.9	8.0	4.55 (0.00-8.61)	0.213
	Northwest	19	48.5	1.0	2.27 (0.14-11.00)	0.075
	Southeast	44	59.6	4.0	3.18 (1.05-7.63)	0.189
	Southwest	24	47.2	2.0	2.86 (0.51-9.53)	0.138
Week 30	Northeast	69	75.5	8.0	4.17 (1.96-7.94)	0.216
	Northwest	28	64.7	3.0	3.88 (1.03-10.64)	0.260
	Southeast	45	107.9	4.0	3.57 (1.18-8.55)	0.275
	Southwest	26	52.0	2.0	2.26 (0.41-7.49)	0.147

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. PooledInRate, 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



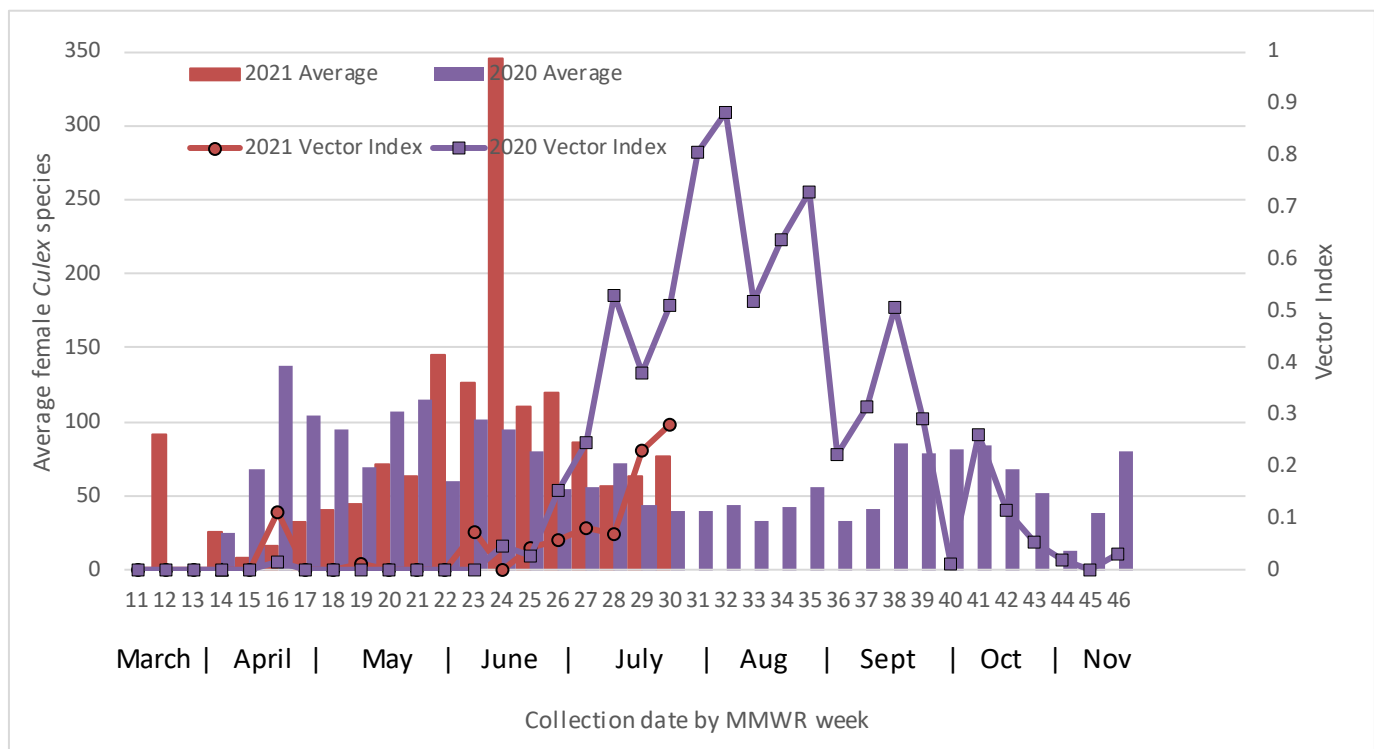
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Cumulative Data for the Tarrant County Region, Weeks 27-30

Week	Jul 4-Jul 10	Jul 11-Jul 17	Jul 18-Jul 24	Jul 25-Jul 31	YTD
MMWR Week	27	28	29	30	
Total number of gravid traps set in Tarrant Region	159	150	149	168	2149
Average number of <i>Culex</i> spp per gravid trap	86.3	56.3	62.7	76.7	73.1
Number of mosquito pools tested ¹ (NTRL; non-NTRL)	165;23	159;17	155;20	172;18	2348;219
Number of positive mosquito pools (NTRL; non-NTRL) ¹	6;2	11;1	17;3	20;2	62;22
Confirmed WNV human cases (WNF; WNND) ²	0;0	0;0	0;0	0;0	0;0
WNV infection rate per 1,000 <i>Culex</i> spp ³	0.92	1.24	3.66	3.67	
Weekly vector index ⁴	0.080	0.070	0.230	0.281	
Total BG Sentinel traps set in Tarrant Region	28	31	37	34	510
Average number of female <i>Aedes aegypti</i> per BG trap	4.3	8.3	6.0	5.5	2.2
Average number of female <i>Aedes albopictus</i> per BG trap	16.1	5.6	8.0	8.3	4.6

¹ Based on mosquito collection date; NTRL = North Texas Regional Laboratory
² Based on onset of illness date for cases reported to Tarrant County Public Health; WNF=West Nile Fever; WNND = West Nile Neuroinvasive Disease
³ 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.
⁴ 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

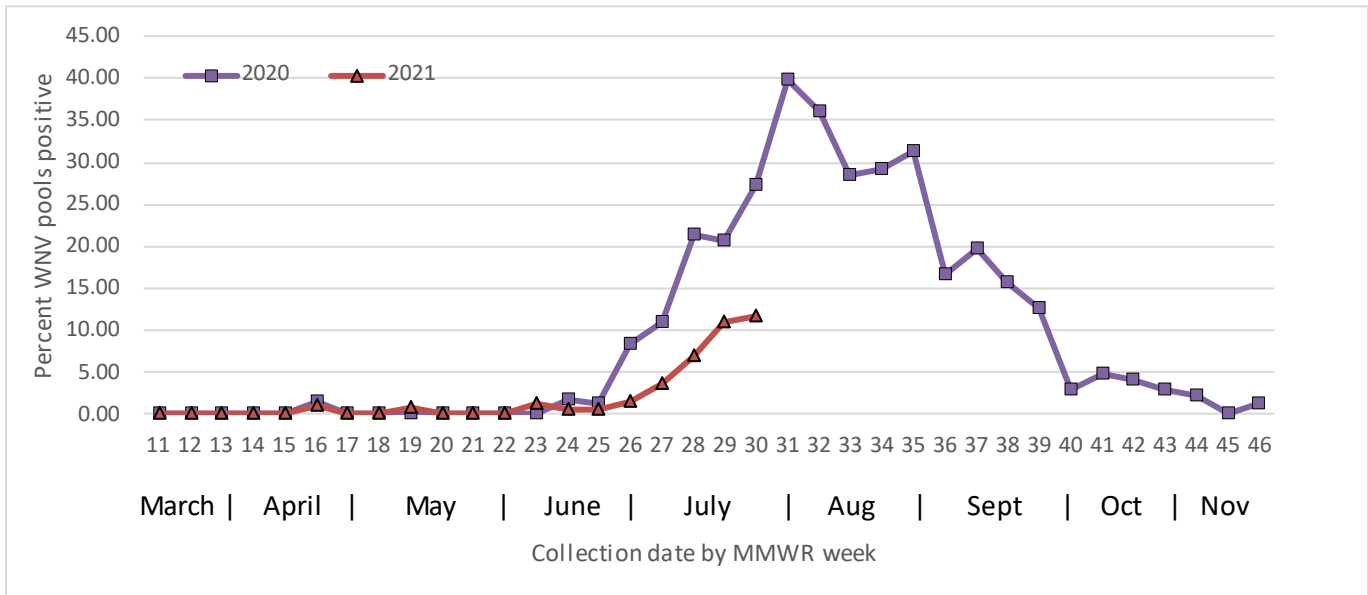


Data Source: Tarrant County Public Health



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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 August 3, 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	13	0 WNF; 0 WNND	0	0	0	0	0	0	0	0
Dallas	95	0 WNF; 1 WNND	0	0	0	0	0	0	0	0
Denton	22	0 WNF; 0 WNND	0	0	0	0	0	0	0	0
Johnson	15	0 WNF; 0 WNND	0	0	0	0	0	0	0	0
Non-Tarrant North Texas	145	0	1		0	0	0	0	0	0
All Texas Counties	395	0	1		0	0	3	1	0	0

*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](#)