



Tarrant County Public Health West Nile Virus Update



TCPH Arbovirus Activity Report MMWR Week 37 (September 7 – September 13, 2014) Report Date: September 17, 2014

- 183 mosquito pools submitted during MMWR Week 37; 38 pools with collection dates during Week 37 tested positive for WNV – Arlington (1), Bedford (3), Colleyville (3), Euless (5), Fort Worth (3), Grapevine (3), Hurst (4), Keller (3), Mansfield (1), North Richland Hills (3), Pantego (1), Richland Hills (2), Southlake (3), Unincorporated (3); 10 pools with collection dates during Week 38* tested positive for WNV – Euless (2), Grapevine (3), Hurst (5); All pools tested negative for SLEV
- 3,380 mosquito pools submitted in 2014; All pools have tested negative for SLEV; 201[†] pools have tested positive for WNV in 2014:
 - Arlington (7)
 - Bedford (33)
 - Benbrook (1)
 - Burleson[†] (5)
 - Colleyville (20)
 - DFW Airport (4)
 - Edgecliff (1)
 - Euless (27)
 - Fort Worth (15)
 - Grapevine (16)
 - Haltom City (1)
 - Hurst (16)
 - Keller (7)
 - Kennedale (1)
 - Mansfield (4)
 - North Richland Hills (15)
 - Pantego (1)
 - Richland Hills (9)
 - Southlake (8)
 - Unincorporated (9)
 - Watuga (1)
- 2 human WNV cases (1 WNF, 1 WNND) and 1 imported human CHIKV disease case were reported during Week 37. 1 human WNV case (WNND) and 1 imported human CHIKV disease case were reported during Week 38*. To date in 2014 there have been 5 human WNND cases, 4 imported human CHIKV disease cases, 2 human WNF cases, no DENV cases, and no SLEV cases reported in Tarrant County.
- More information can be found at: [Take Control, Stop West Nile Virus](#)

*Positives from week 38 not included in tables/graphs/calculations because they fall outside the weeks covered in this report

[†]Johnson County positives not included in tables/graphs/calculations for Tarrant County; Tarrant County positive mosquito pool total is 196
CHIKV-Chikungunya Virus; DENV-Dengue Virus; SLEV-St. Louis Encephalitis Virus; WNV–West Nile Virus; WNF–West Nile Fever; WNND–West Nile Neuroinvasive Disease

Table 1. WNV activity summary, Tarrant County, Weeks 33-37, 2014

Week	Aug 10 - Aug 16	Aug 17 - Aug 23	Aug 24 - Aug 30	Aug 31 - Sep 6	Aug 31 - Sep 6	YTD
MMWR Week	33	34	35	36	37	
Total traps placed in Tarrant County	190	173	194	162	187	3,712
Average number of female <i>Culex</i> species per trap	103.6	73.6	60.8	70.7	64.3	49.3
Number of mosquito pools tested ¹	184	169	193	167	183	3,380
Number of positive mosquito pools (NTRL; Non-NTRL) ²	17;1	27;0	36;0	33;0	38;0	195;1
Confirmed WNV human cases (WNF; WNND) ³	0;0	0;0	1;1	0;1	1;1	2;5
Presumptive WNV viremic blood donors	0	0	1	0	1	2
WNV infection rate per 1,000 <i>Cx. quinquefasciatus</i> ⁴	2.42	4.53	5.37	6.14	6.09	
Weekly vector index ⁵	0.248	0.330	0.325	0.433	0.390	

¹ Based on lab testing date; ² Based on mosquito collection date; NTRL = North Texas Regional Laboratory

³ Based on onset of illness date for cases reported to Tarrant County Public Health; WNF=West Nile Fever; WNND = West Nile Neuroinvasive Disease

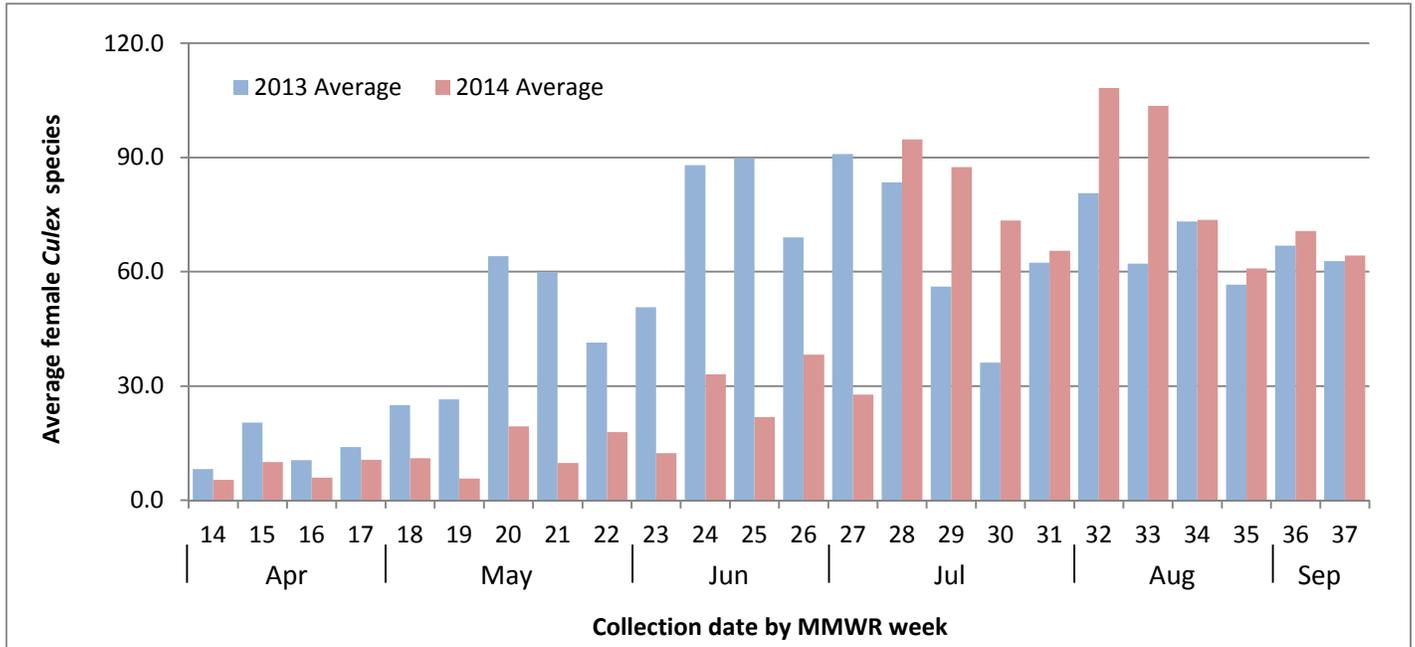
⁴ Calculated using a Maximum Likelihood Estimation (MLE). Biggerstaff, Brad J. PooledInfRate, Version 4.0: a Microsoft® Office Excel® Add-In to compute prevalence estimates from pooled samples. Centers for Disease Control and Prevention, Fort Collins, CO, U.S.A., 2009

⁵ 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 do not include positive pools from Non-NTRL laboratories; Data subject to change due to on-going case investigations, mosquito collection, and testing

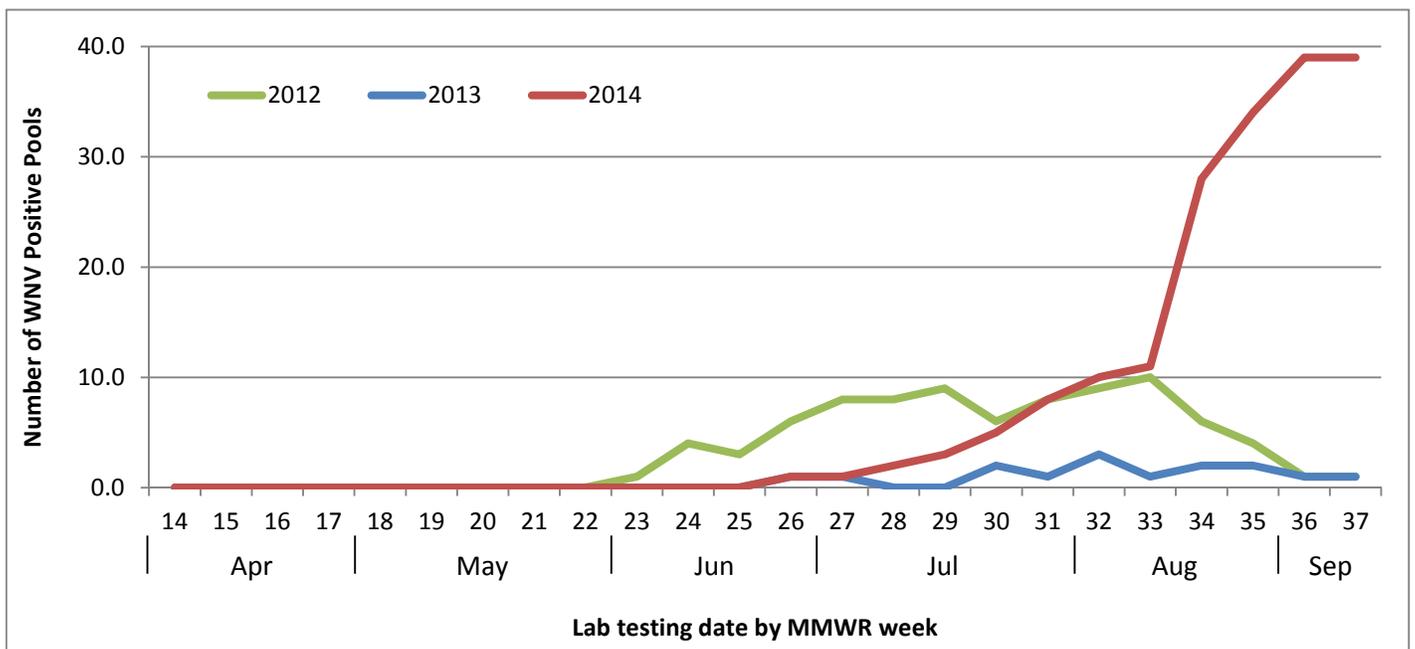
Data source: Tarrant County Public Health

Figure 1. Average number of female *Culex* species per trap, Tarrant County, Weeks 14-37, 2013-2014



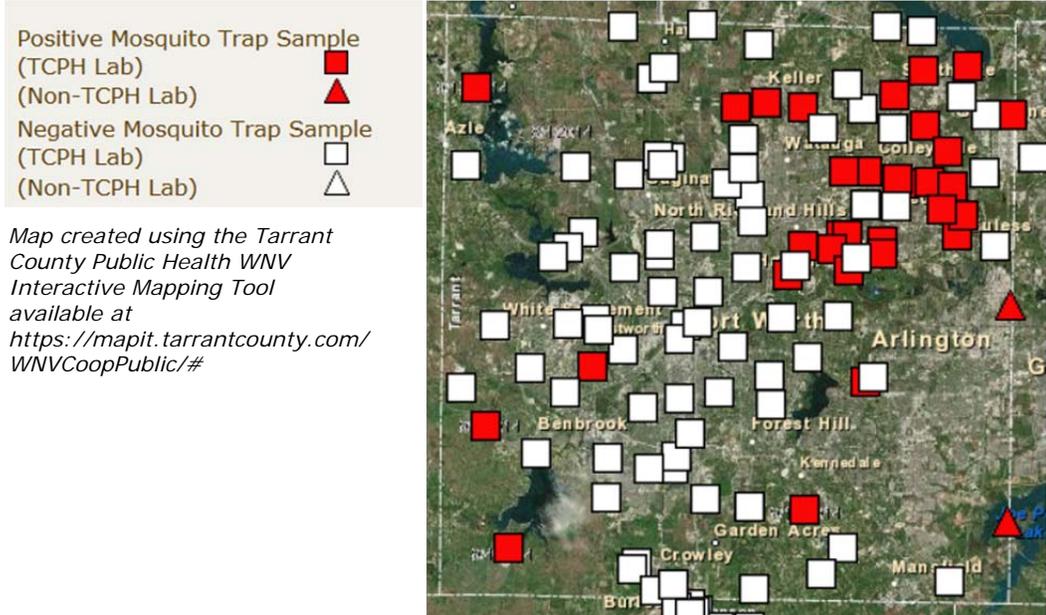
Data source: Tarrant County Public Health

Figure 2. Number of WNV positive mosquito pools by lab testing date, Tarrant County, Weeks 14-37, 2012-2014



Data source: Tarrant County Public Health

Figure 3. West Nile Virus mosquito trap results, Tarrant County, Week 37, 2014



Note: Map may not reflect all positives for the week due to data limitations at time of publication. An updated map is available online at <https://mapit.tarrantcounty.com/WNVCoopPublic/#>

Table 2. State-wide arbovirus season activity as reported by Texas DSHS on September 16, 2014

North Texas Counties	WNV		CHIKV		DENV		SLEV	
	Positive Mosquito Pools	Human Cases	Positive Mosquito Pools	Human Cases	Positive Mosquito Pools	Human Cases	Positive Mosquito Pools	Human Cases
Collin	2	0 WNF; 0 WNND	0	1	0	1	0	0
Dallas	101	4 WNF; 2 WNND	0	2	0	0	0	0
Denton	15	1 WNF; 1 WNND	0	1	0	1	0	0
Ellis	2	1 WNF; 0 WNND	0	0	0	0	0	0
Hood	0	0 WNF; 0 WNND	0	0	0	0	0	0
Hunt	0	0 WNF; 0 WNND	0	0	0	0	1	0
Johnson	3	0 WNF; 0 WNND	0	0	0	0	0	0
Kaufman	0	0 WNF; 0 WNND	0	0	0	0	0	0
Parker	0	1 WNF; 0 WNND	0	0	0	0	0	0
Rockwall	0	0 WNF; 0 WNND	0	0	0	0	0	0
Somervell	0	0 WNF; 0 WNND	0	0	0	0	0	0
Tarrant	181	2 WNF; 4 WNND	0	3	0	0	0	0
Wise	0	0 WNF; 0 WNND	0	0	0	0	0	0
North Texas Total	304	9 WNF; 7 WNND	0	7	0	2	1	0
All Texas Counties	1,777	33 WNF; 58 WNND	0	26	0	12	5	0

WNV - West Nile Virus; WNF - West Nile Fever; WNND - West Nile Neuroinvasive Disease; CHIKV - Chikungunya Virus; DENV - Dengue Virus; SLEV - Saint Louis Encephalitis Virus;

Data source: Texas Department of State Health Services