



Tarrant County Public Health West Nile Virus Update



TCPH Arbovirus Activity Report MMWR Week 35 (August 24 – August 30, 2014) Report Date: September 3, 2014

- 193 mosquito pools submitted during MMWR Week 35; 39 pools with collection dates during Week 35 tested positive for WNV – Arlington (2), Bedford (5), Burleson (3)[†], Colleyville (2), Edgecliff Village (1), Euless (4), Fort Worth (4), Grapevine (2), Haltom City (1), Hurst (1), Keller (1), Mansfield (1), North Richland Hills (5), Richland Hills (1), Southlake (3), Unincorporated (2), Watauga (1). 7 pools with collection dates during Week 36* tested positive for WNV – Burleson (1)[†], Grapevine (5), Southlake (1); All pools tested negative for SLEV
- 3,030 mosquito pools submitted in 2014; All pools have tested negative for SLEV; 125[†] pools have tested positive for WNV in 2014:
 - Arlington (3) - Edgecliff (1) - Keller (4) - Watauga (1)
 - Bedford (28) - Euless (16) - Mansfield (2)
 - Benbrook (1) - Fort Worth (8) - North Richland Hills (9)
 - Burleson[†] (4) - Grapevine (10) - Richland Hills (5)
 - Colleyville (14) - Haltom City (1) - Southlake (5)
 - DFW Airport (3) - Hurst (7) - Unincorporated (3)
- 1 imported case of CHIKV disease, 2 human WNV cases (1 WNF, 1 WNND), and no human DENV or SLEV cases were reported during Week 35. To date in 2014 there have been 2 imported CHIKV disease cases, 2 human WNND cases, 1 human WNF case, no DENV cases, and no SLEV cases reported in Tarrant County.
- More information can be found at: [Take Control, Stop West Nile Virus](#)

*Positive pools collected in week 36 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 121
 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 31-35, 2014

Week	Jul 27 - Aug 2	Aug 3 - Aug 9	Aug 10 - Aug 16	Aug 17 - Aug 23	Aug 24 - Aug 30	YTD
MMWR Week	31	32	33	34	35	
Total traps placed in Tarrant County	189	177	190	171	189	3,343
Average number of female <i>Culex</i> species per trap	65.5	108.2	103.6	74.5	62.1	47.2
Number of mosquito pools tested ¹	163	186	184	169	193	3,030
Number of positive mosquito pools (NTRL; Non-NTRL) ²	10;0	8;0	17;1	27;0	36;0	121
Confirmed WNV human cases (WNF; WNND) ³	0;1	0;0	0;0	0;0	1;1	1;2
Presumptive WNV viremic blood donors	0	0	0	0	1	1
WNV infection rate per 1,000 <i>Cx. quinquefasciatus</i> ⁴	1.58	1.24	2.42	4.53	5.37	
Weekly vector index ⁵	0.103	0.133	0.248	0.334	0.332	

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

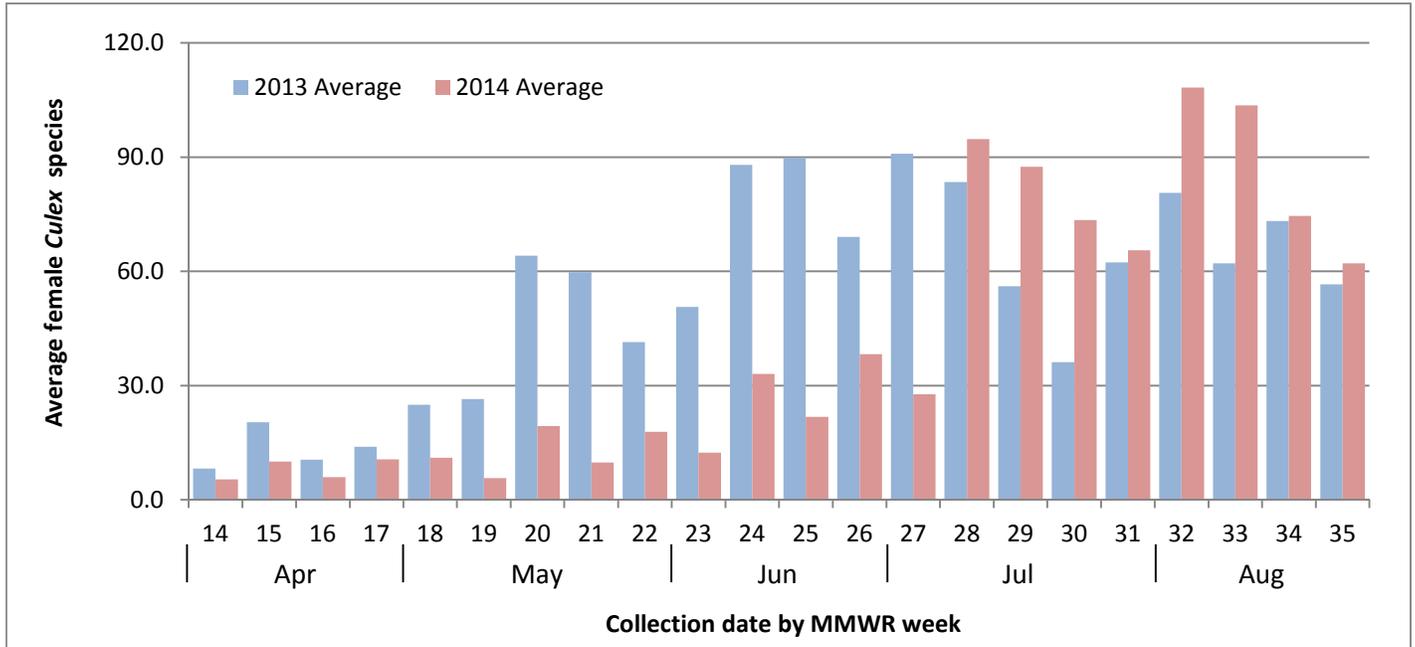
⁴ Calculated using a Maximum Likelihood Estimation (MLE). Biggerstaff, Brad J. PooledInfRate, Version 4.0: a Microsoft® Office Excel® Add-In to compute prevalence estimates from pooled samples. Centers for Disease Control and Prevention, Fort Collins, CO, U.S.A., 2009

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

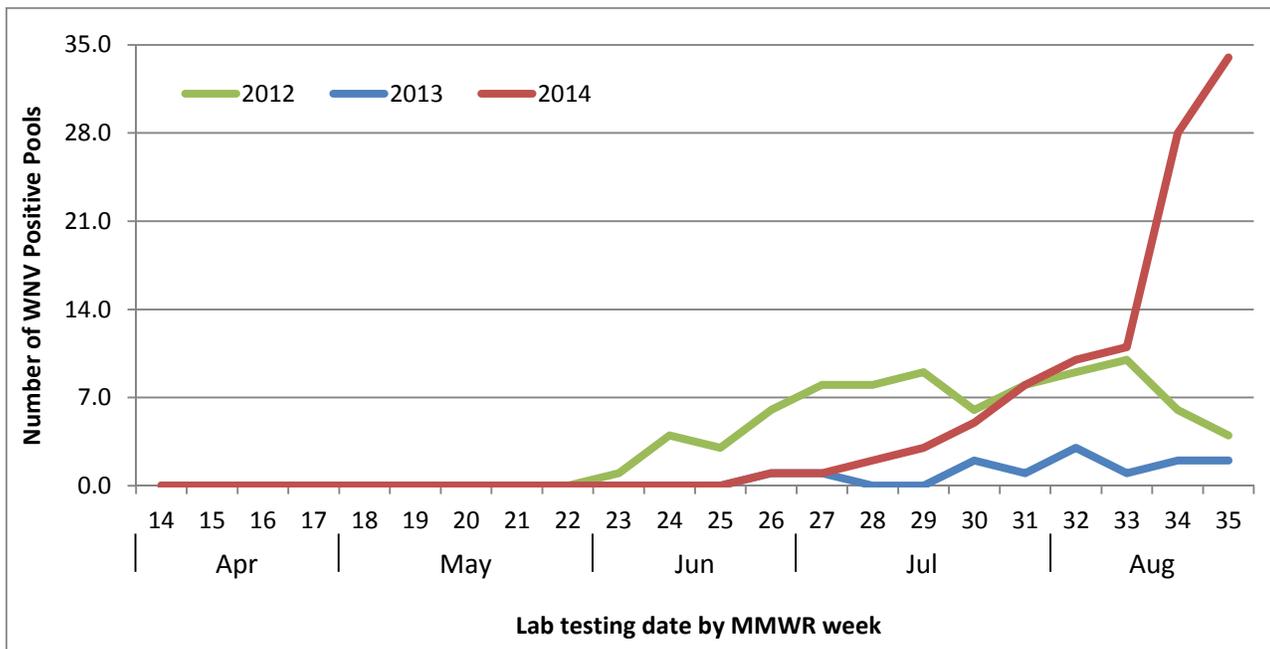
Data source: Tarrant County Public Health

Figure 1. Average number of female *Culex* species per trap, Tarrant County, Weeks 14-35, 2013-2014



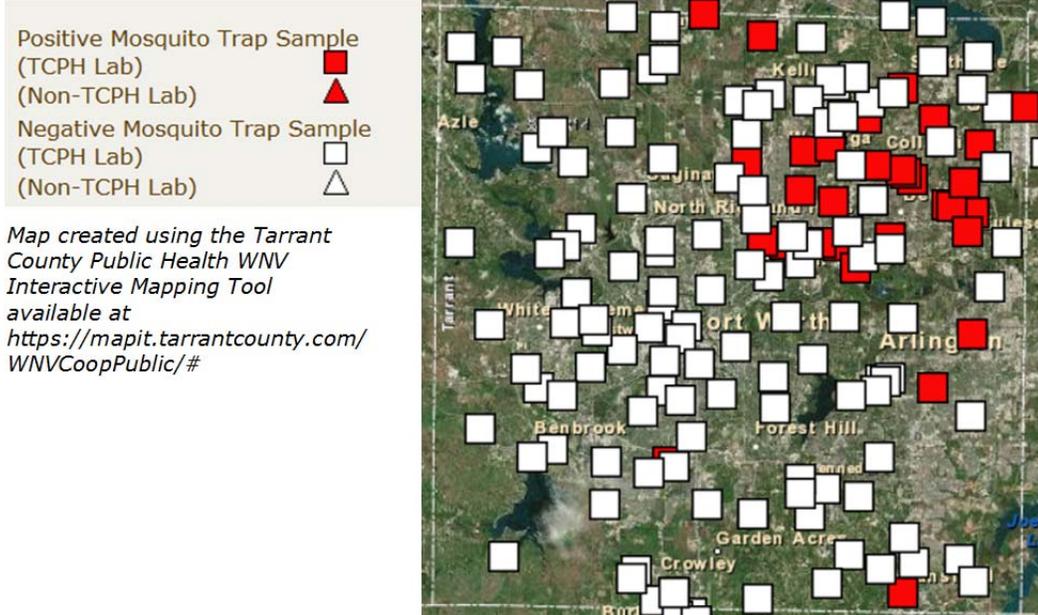
Data source: Tarrant County Public Health

Figure 2. Number of WNV positive mosquito pools by lab testing date, Tarrant County, Weeks 14-35, 2012-2014



Data source: Tarrant County Public Health

Figure 3. West Nile Virus mosquito trap results, Tarrant County, Week 35, 2014



Map created using the Tarrant County Public Health WNV Interactive Mapping Tool available at <https://mapit.tarrantcounty.com/WNVCoopPublic/#>

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 activity as reported by Texas DSHS on September 2, 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	1	0 WNF; 0 WNND	0	1	0	0	0	0
Dallas	40	4 WNF; 1 WNND	0	2	0	0	0	0
Denton	8	0 WNF; 0 WNND	0	0	0	0	0	0
Ellis	0	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	0	0
Johnson	0	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	69	0 WNF; 1 WNND	0	2	0	0	0	0
Wise	0	0 WNF; 0 WNND	0	0	0	0	0	0
North Texas Total	118	6 WNF; 2 WNND	0	5	0	0	0	0
All Texas Counties	1,480	20 WNF; 29 WNND	0	18	0	7	4	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