



Tarrant County Public Health West Nile Virus Update



TCPH Arbovirus Activity Report
MMWR Week 39 (September 21 – September 27, 2014)
Report Date: October 1, 2014

- 3,753 mosquito pools submitted to North Texas Regional Laboratory (NTRL) at Tarrant County Public Health (TCPH) in 2014; All pools have tested negative for SLEV.
- A total of 269 pools have tested positive for WNV in 2014 (261 from Tarrant County and 8 from Johnson County); Of those 269 positive pools, 264 tested positive at NTRL & 5 tested positive at non-NTRL labs; Cities with positive mosquito pools include:

- Arlington (11)	- Edgecliff (2)	- Hurst (21)	- Richland Hills (12)
- Bedford (40)	- Euless (35)	- Keller (11)	- Southlake (11)
- Benbrook (1)	- Fort Worth (23)	- Kennedale (1)	- Unincorporated (11)
- Burleson [†] (8)	- Grand Prairie (3)	- Mansfield (6)	- Watauga (3)
- Colleyville (24)	- Grapevine (21)	- N. Richland Hills (18)	
- DFW Airport (4)	- Haltom City (1)	- Pantego (2)	
- To date in 2014 there have been 6 imported human CHIKV disease cases, 10 human cases of WNV disease (5 WNF; 5 WNND), no DENV cases, and no SLEV cases reported in Tarrant County.
- More information can be found at: [Take Control, Stop West Nile Virus](#)

[†]Johnson County

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 2. WNV activity summary, Tarrant County, Weeks 35-39, 2014

Week	Aug 24 - Aug 30	Aug 31 - Sep 6	Sep 7 - Sep 13	Sep 14 - Sep 20	Sep 21 - Sep 27	YTD
MMWR Week	35	36	37	38	39	
Total traps placed in Tarrant County	194	162	189	184	175	4,073
Average number of female <i>Culex</i> species per trap	60.8	70.7	65.1	94.9	102.3	53.5
Number of mosquito pools tested ¹	193	167	183	177	186	3,743
Number of positive mosquito pools (NTRL; Non-NTRL) ²	36;0	33;0	38;3	28;0	36;1	256;5
Confirmed WNV human cases (WNF; WNND) ³	1;1	0;1	1;1	1;1	2;0	5;5
Presumptive WNV viremic blood donors	1	0	2	1	0	4
WNV infection rate per 1,000 <i>Cx. quinquefasciatus</i> ⁴	5.46	6.35	6.41	4.06	5.33	
WNV infection rate per 1,000 <i>Cx. restuans</i> ⁴	0.00	0.00	0.00	0.00	2.55	
Weekly vector index ⁵	0.330	0.447	0.403	0.384	0.523	

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

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

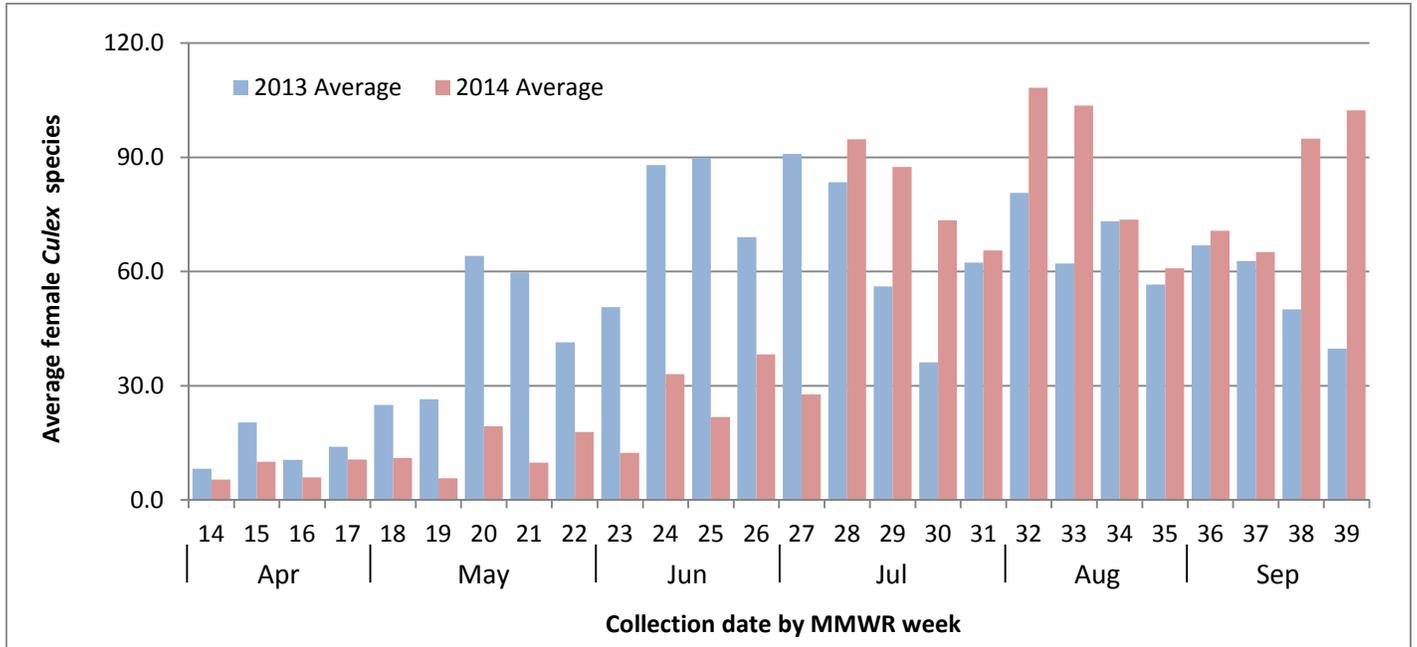
⁴Calculated using a Maximum Likelihood Estimation (MLE). Biggerstaff, Brad J. PooledInfRate, Version 4.0: a Microsoft® Office Excel® Add-In to compute prevalence estimates from pooled samples. Centers for Disease Control and Prevention, Fort Collins, CO, U.S.A., 2009

⁵Vector 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

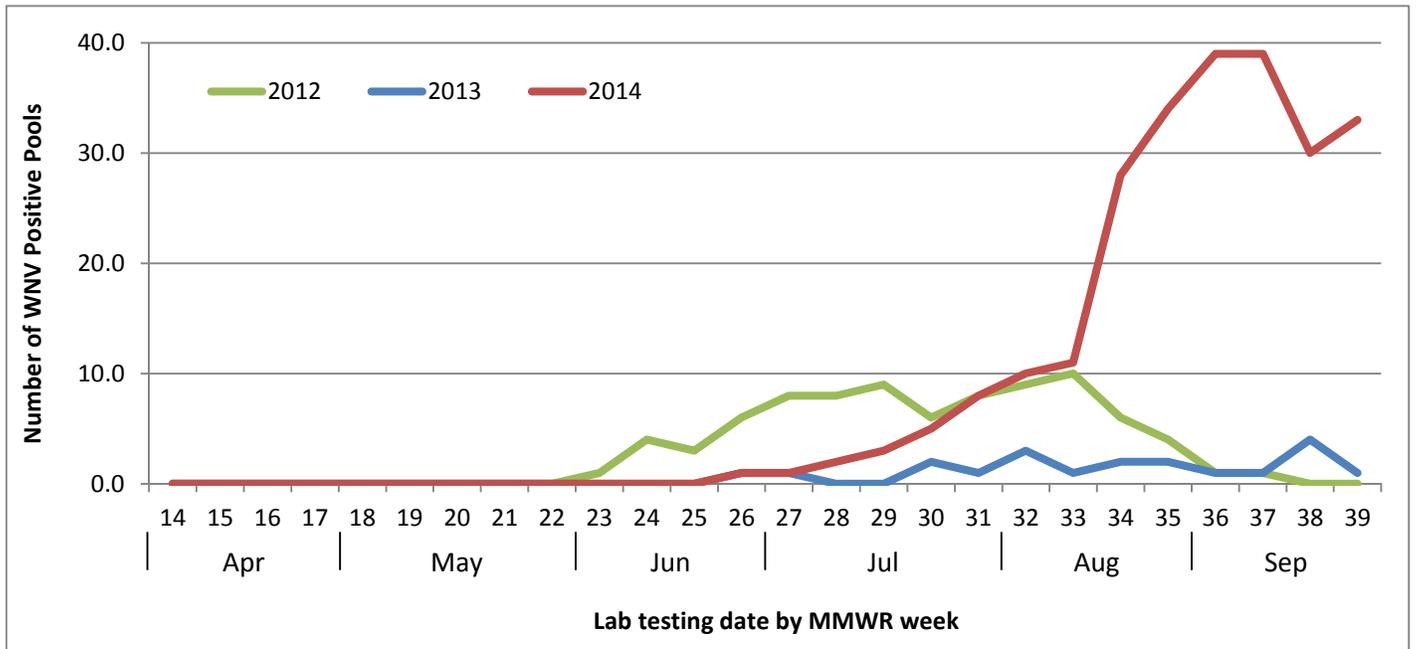
Data source: Tarrant County Public Health

Figure 1. Average number of female *Culex* species per trap, Tarrant County, Weeks 14-39, 2013-2014



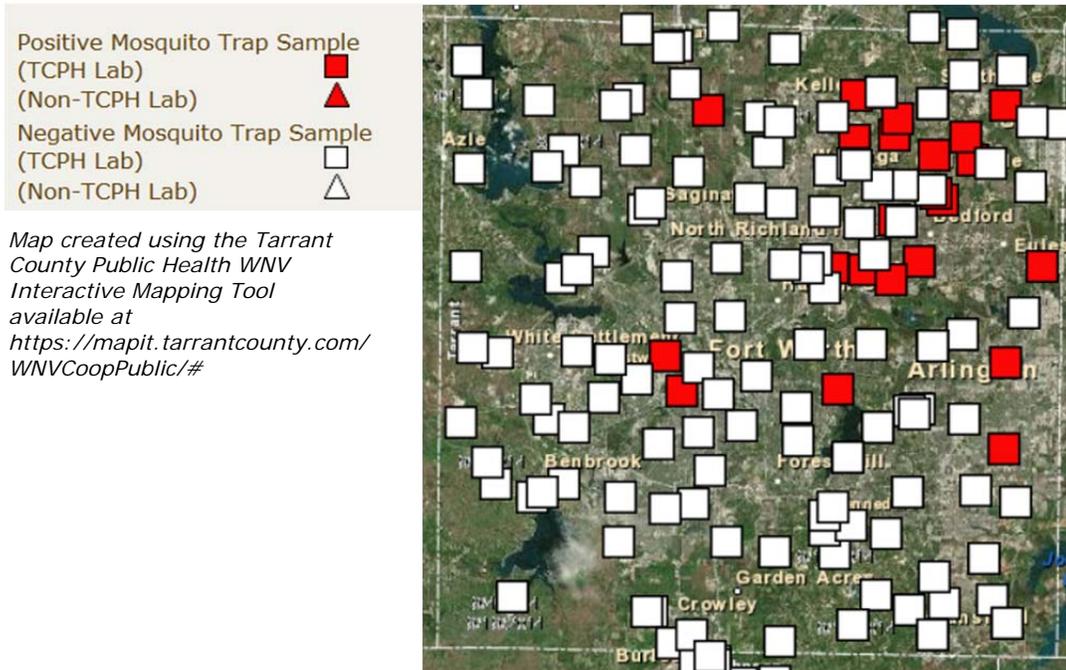
Data source: Tarrant County Public Health

Figure 2. Number of WNV positive mosquito pools by lab testing date, Tarrant County, Weeks 14-39, 2012-2014



Data source: Tarrant County Public Health

Figure 3. West Nile Virus mosquito trap results, Tarrant County, Week 39, 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 3. State-wide arbovirus season activity as reported by Texas DSHS on September 30, 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	108	6 WNF; 3 WNND	0	3	0	0	0	0
Denton	22	1 WNF; 1 WNND	0	4	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	2	0
Johnson	5	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	242	4 WNF; 5 WNND	0	6	0	0	0	0
Wise	0	0 WNF; 0 WNND	0	0	0	0	0	0
North Texas Total	381	13 WNF; 9 WNND	0	14	0	2	2	0
All Texas Counties	1,901	46 WNF; 100 WNND	0	36	0	14	6	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