



Tarrant County Public Health West Nile Virus Update



TCPH Arbovirus Activity Report MMWR Week 38 (September 14 – September 20, 2014) Report Date: September 24, 2014

- 3,557 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 232 pools have tested positive for WNV in 2014 (225 from Tarrant County and 7 from Johnson County); Of those 232 positive pools, 228 tested positive at NTRL & 4 tested positive at non-NTRL labs; Cities with positive mosquito pools include:

- Arlington (7)	- Edgecliff (1)	- Hurst (19)	- Richland Hills (10)
- Bedford (37)	- Euless (27)	- Keller (8)	- Southlake (10)
- Benbrook (1)	- Fort Worth (18)	- Kennedale (1)	- Unincorporated (10)
- Burleson [†] (7)	- Grand Prairie (2)	- Mansfield (5)	- Watauga (2)
- Colleyville (23)	- Grapevine (19)	- N. Richland Hills (18)	
- DFW Airport (4)	- Haltom City (1)	- Pantego (2)	
- To date in 2014 there have been 5 imported human CHIKV disease cases, 8 human cases of WNV disease (3 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 1. WNV activity summary, Tarrant County, Weeks 34-38, 2014

Week	Aug 17 - Aug 23	Aug 24 - Aug 30	Aug 31 - Sep 6	Sep 7 - Sep 13	Sep 14 - Sep 20	YTD
MMWR Week	34	35	36	37	38	
Total traps placed in Tarrant County	173	194	162	189	184	3,893
Average number of female <i>Culex</i> species per trap	73.6	60.8	70.7	65.1	94.9	51.3
Number of mosquito pools tested ¹	169	193	167	183	177	3,557
Number of positive mosquito pools (NTRL; Non-NTRL) ²	27;0	36;0	33;0	38;3	28;0	221;4
Confirmed WNV human cases (WNF; WNND) ³	0;0	1;1	0;1	1;1	0;1	3;5
Presumptive WNV viremic blood donors	0	1	0	1	0	4
WNV infection rate per 1,000 <i>Cx. quinquefasciatus</i> ⁴	4.53	5.46	6.35	6.20	4.06	
Weekly vector index ⁵	0.330	0.330	0.447	0.403	0.384	

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

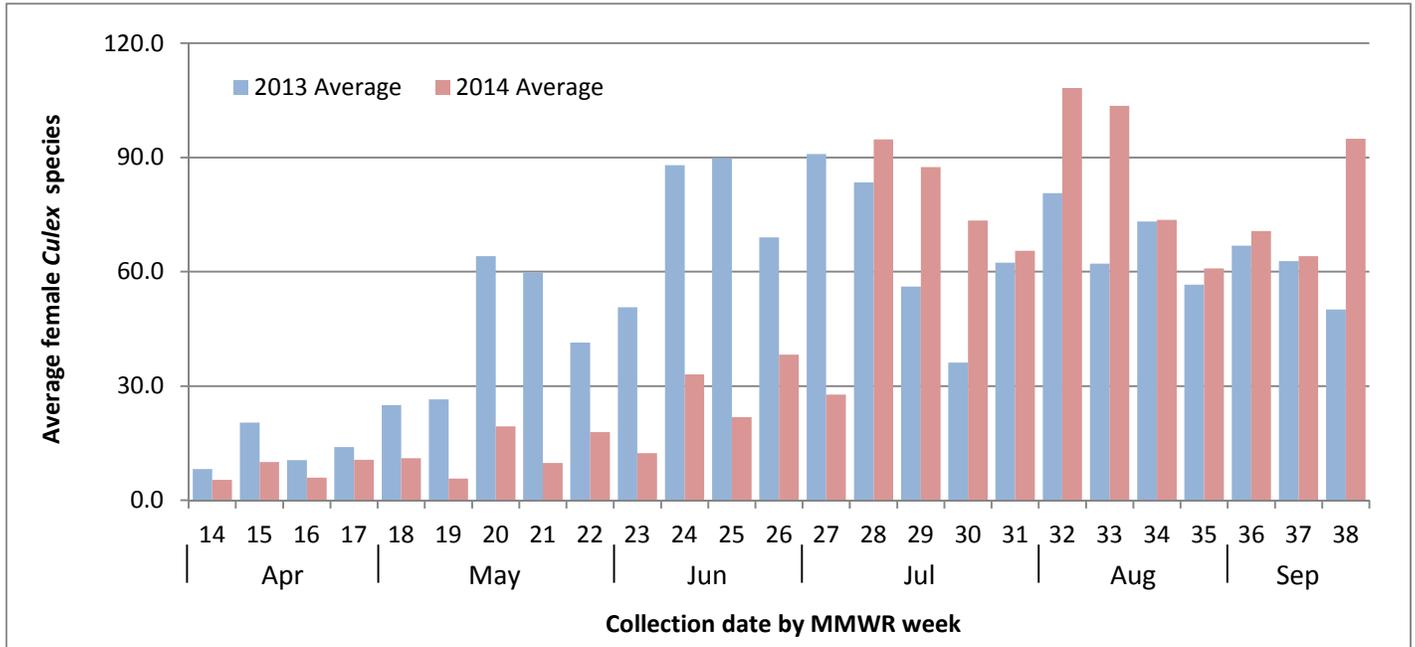
⁴ Calculated using a Maximum Likelihood Estimation (MLE). Biggerstaff, Brad J. PooledInfRate, Version 4.0: a Microsoft® Office Excel® Add-In to compute prevalence estimates from pooled samples. Centers for Disease Control and Prevention, Fort Collins, CO, U.S.A., 2009

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

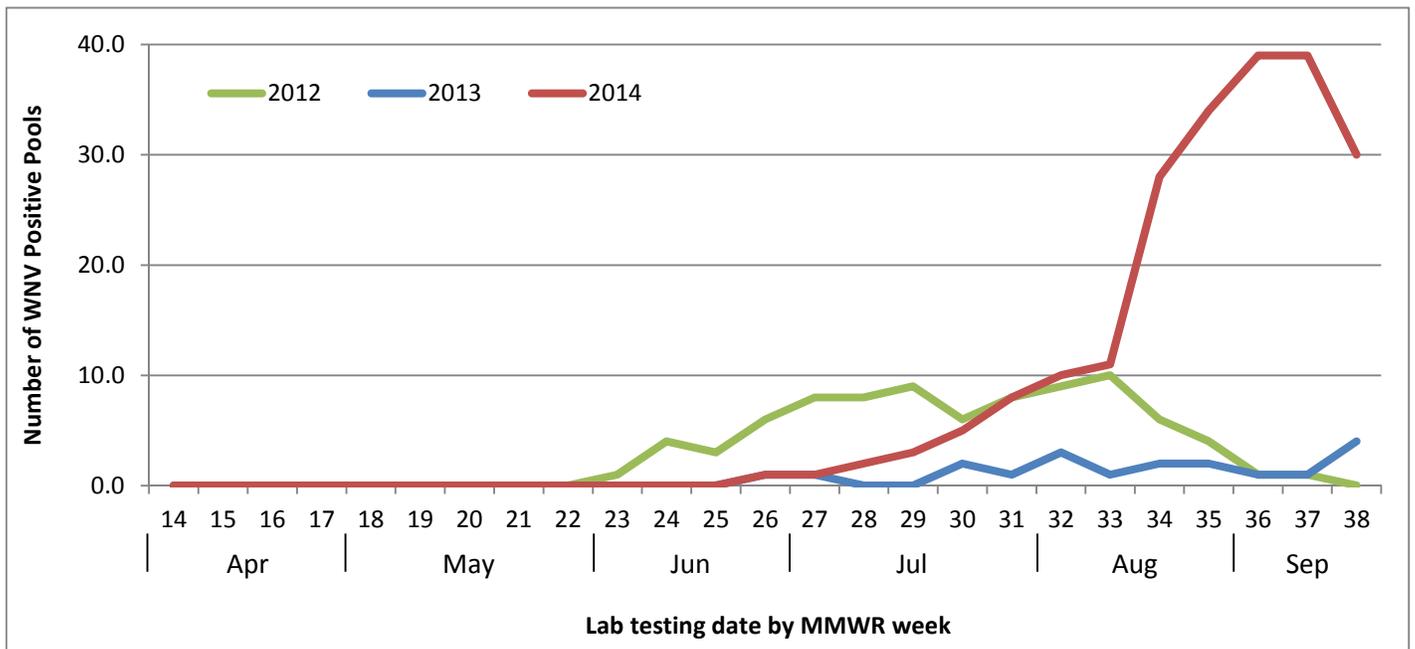
Data source: Tarrant County Public Health

Figure 1. Average number of female *Culex* species per trap, Tarrant County, Weeks 14-38, 2013-2014



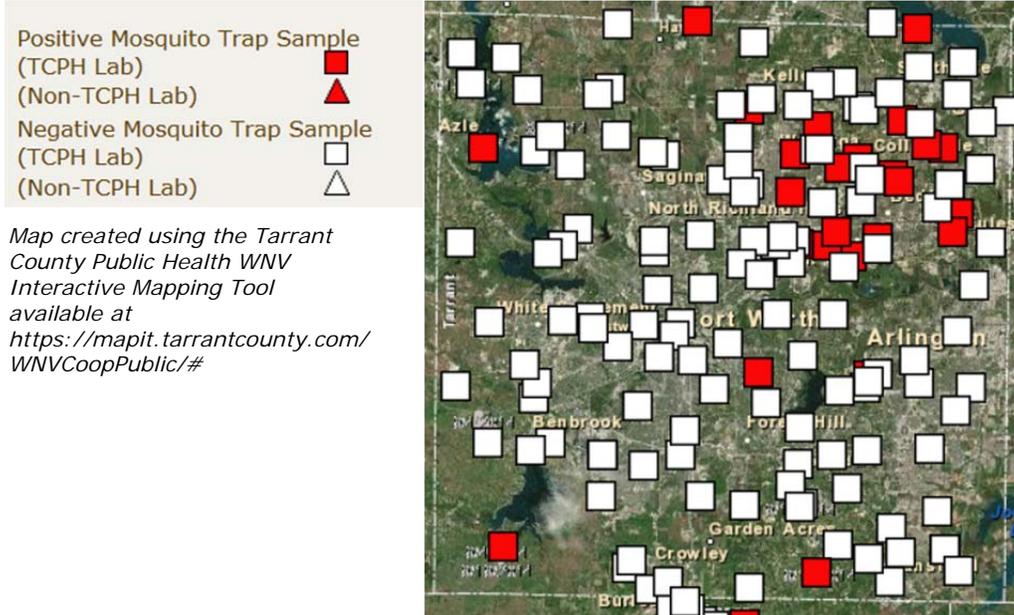
Data source: Tarrant County Public Health

Figure 2. Number of WNV positive mosquito pools by lab testing date, Tarrant County, Weeks 14-38, 2012-2014



Data source: Tarrant County Public Health

Figure 3. West Nile Virus mosquito trap results, Tarrant County, Week 38, 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 season activity as reported by Texas DSHS on September 23, 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	104	5 WNF; 3 WNND	0	2	0	0	0	0
Denton	18	1 WNF; 1 WNND	0	3	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	209	2 WNF; 5 WNND	0	4	0	0	0	0
Wise	0	0 WNF; 0 WNND	0	0	0	0	0	0
North Texas Total	340	10 WNF; 9 WNND	0	10	0	2	2	0
All Texas Counties	1,833	42 WNF; 82 WNND	0	30	0	13	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