



# Tarrant County Public Health West Nile Virus Update



**TCPH Arbovirus Activity Report**  
**MMWR Week 40 (September 28 – October 4, 2014)**  
**Report Date: October 8, 2014**

- A total of 3,935 mosquito pools have been 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 294 pools have tested positive for WNV in 2014 (286 from Tarrant County and 8 from Johnson County); Of those 294 positive pools, 288 tested positive at NTRL & 6 tested positive at non-NTRL labs; Cities with positive mosquito pools include:
 

- Arlington (12)	- Edgecliff (2)	- Hurst (23)	- Richland Hills (13)
- Bedford (43)	- Euless (35)	- Keller (12)	- Southlake (14)
- Benbrook (1)	- Fort Worth (29)	- Kennedale (1)	- Unincorporated (12)
- Burleson <sup>†</sup> (8)	- Grand Prairie (4)	- Mansfield (7)	- Watauga (4)
- Colleyville (25)	- Grapevine (21)	- N. Richland Hills (21)	
- DFW Airport (4)	- Haltom City (1)	- Pantego (2)	
- To date in 2014 there have been 6 imported human CHIKV disease cases, 11 human cases of WNV disease (5 WNF; 6 WNND), no DENV cases, and no SLEV cases reported in Tarrant County.
- More information can be found at: [Take Control, Stop West Nile Virus](#)

<sup>†</sup>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 36-40, 2014**

Week	Aug 31 - Sep 6	Sep 7 - Sep 13	Sep 14 - Sep 20	Sep 21 - Sep 27	Sep 28 - Oct 4	YTD
MMWR Week	36	37	38	39	40	
Total traps placed in Tarrant County	150	178	173	170	160	4,040
Average number of female <i>Culex</i> species per trap	72.9	66.4	97.5	106.2	97.0	54.0
Number of mosquito pools tested <sup>1</sup>	167	183	177	186	192	3,935
Number of positive mosquito pools (NTRL; Non-NTRL) <sup>2</sup>	33;0	38;3	28;0	36;1	26;1	280;6
Confirmed WNV human cases (WNF; WNND) <sup>3</sup>	0;0	1;1	1;0	0;1	0;0	5;6
Presumptive WNV viremic blood donors	0	2	1	1	0	5
WNV infection rate per 1,000 <i>Cx. quinquefasciatus</i> <sup>4</sup>	6.79	6.86	4.27	5.30	4.42	
WNV infection rate per 1,000 <i>Cx. restuans</i> <sup>4</sup>	0.00	0.00	0.00	2.55	0.00	
Weekly vector index <sup>5</sup>	0.493	0.454	0.414	0.539	0.423	

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

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

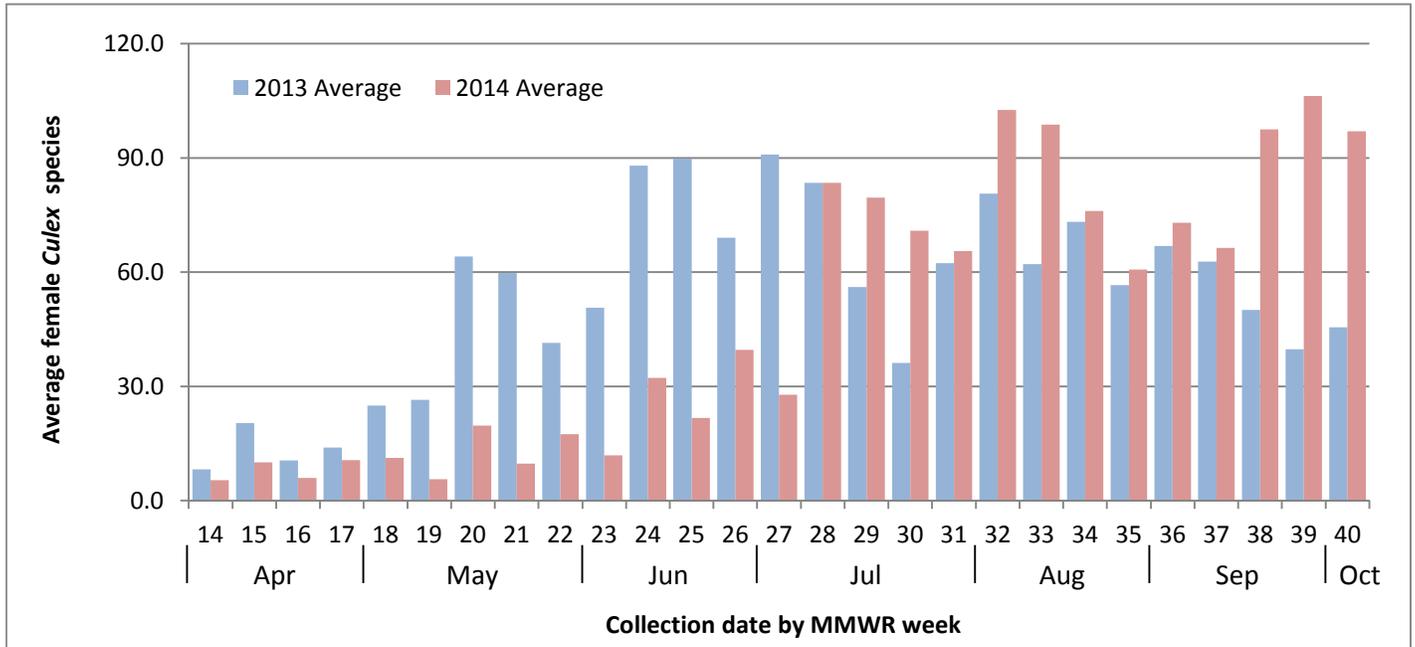
<sup>4</sup> Calculated using a Maximum Likelihood Estimation (MLE). Biggerstaff, Brad J. PooledInfRate, Version 4.0: a Microsoft® Office Excel® Add-In to compute prevalence estimates from pooled samples. Centers for Disease Control and Prevention, Fort Collins, CO, U.S.A., 2009

<sup>5</sup> 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

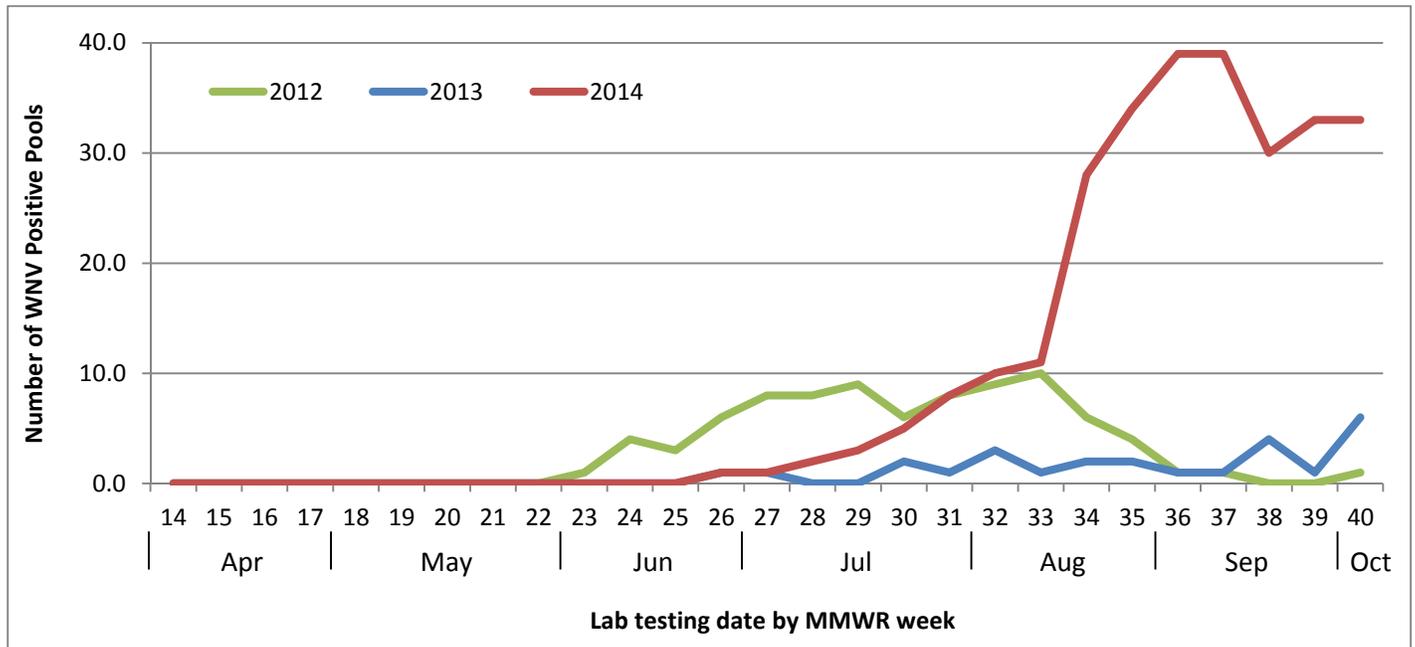
Data source: Tarrant County Public Health

Figure 1. Average number of female *Culex* species per trap, Tarrant County, Weeks 14-40, 2013-2014



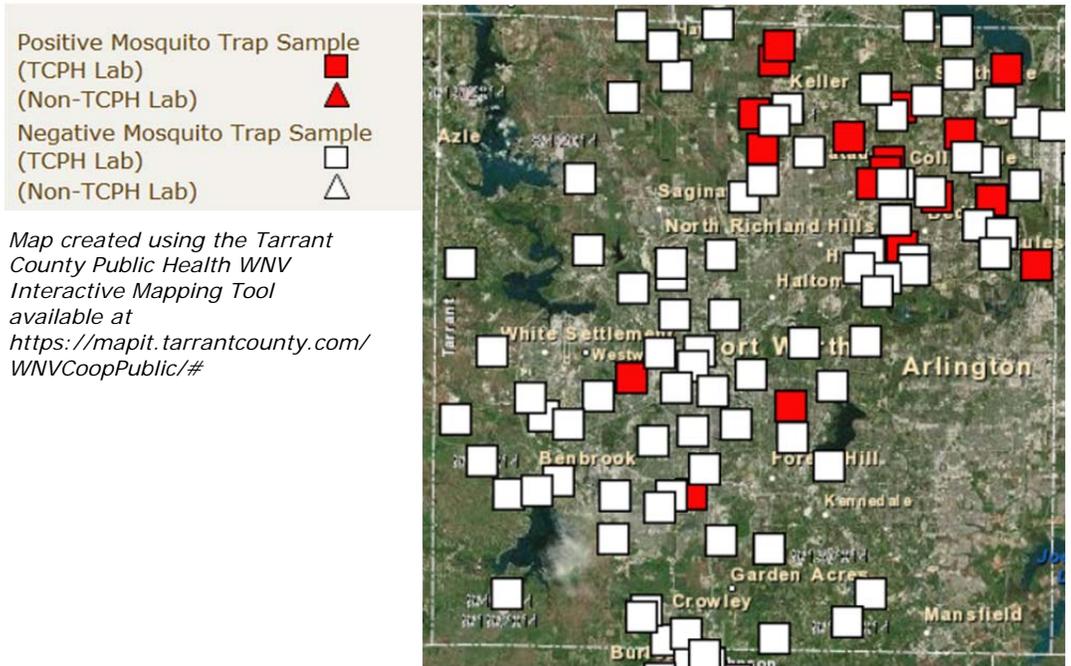
Data source: Tarrant County Public Health

Figure 2. Number of WNV positive mosquito pools by lab testing date, North Texas Regional Laboratory, Weeks 14-40, 2012-2014



Data source: Tarrant County Public Health

Figure 3. West Nile Virus mosquito trap results, Tarrant County, Week 40, 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 October 7, 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	109	6 WNF; 3 WNND	0	3	0	0	0	0
Denton	23	1 WNF; 1 WNND	0	5	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	8	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	1	0 WNF; 0 WNND	0	0	0	0	0	0
Somervell	0	0 WNF; 0 WNND	0	0	0	0	0	0
Tarrant	276	5 WNF; 6 WNND	0	6	0	0	0	0
Wise	0	0 WNF; 0 WNND	0	0	0	0	0	0
<b>North Texas Total</b>	<b>421</b>	<b>14 WNF; 10 WNND</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>
<b>All Texas Counties</b>	<b>1,953</b>	<b>68 WNF; 124 WNND</b>	<b>0</b>	<b>38</b>	<b>0</b>	<b>15</b>	<b>7</b>	<b>1</b>

\* All reported CHIKV & DENV human cases are imported

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