



# Arbovirus Surveillance Report: Nov 13 - Nov 19, 2016

## Tarrant County Public Health



**MMWR Week 46 (November 13 – November 19, 2016)**

**Report Date: November 23, 2016**

**Final Report of the Season**

- A total of 5,312 mosquito pools have been submitted to North Texas Regional Laboratory at Tarrant County Public Health in 2016; All pools have tested negative for SLEV.
- 557** pools have tested positive for WNV in Tarrant County. Cities with positive mosquito pools<sup>†</sup>:

Arlington	69	Edgecliff Village	1	Haltom City	7	Naval Rsrv Base	2	Sansom Park	6
Bedford	12	Eules	32	Haslet	12	N. Richland Hills	24	Southlake	22
Benbrook	7	Everman	1	Hurst	14	Pantego	16	Unincorporated	43
Burleson	2	Fort Worth	102	Keller	4	Richland Hills	11	Watauga	5
Colleyville	29	Grand Prairie	19	Kennedale	8	River Oaks	9	Westover Hills	14
Crowley	17	Grapevine	32	Lake Worth	5	Saginaw	2	Westworth Village	1
DFW Airport	12			Mansfield	15			White Settlement	2

- To date in 2016 there have been 43 human WNV cases (16 WNF & 27 WNND), 26 travel-related Zika cases, 2 CHIKV case, 1 DENV case, and no SLEV cases reported in Tarrant County.
- More information can be found at: [Tarrant County Mosquito-Borne Illness](#)

<sup>†</sup>Area of cities located within Tarrant 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 42-46, 2016**

Week	Oct 16 - Oct 22	Oct 23 - Oct 29	Oct 30 - Nov 5	Nov 6 - Nov 12	Nov 13 - Nov 19	YTD
<b>MMWR Week</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>	<b>46</b>	
Total traps placed in Tarrant County	204	192	188	100	12	6,257
Average number of female <i>Culex</i> mosquitoes per trap	36.1	45.2	48.6	44.8	5.4	64.6
Average number of female <i>Cx. quinquefasciatus</i> per trap	34.1	41.9	44.6	40.8	4.8	58.2
Average number of female <i>Cx. nigripalpus</i> per trap	0.3	0.4	0.0	0.1	0.0	0.1
Average number of female <i>Cx. restuans</i> per trap	1.0	1.3	0.9	1.6	0.0	4.3
Number of mosquito pools tested <sup>1</sup>	160	165	166	71	33	5,312
Number of positive mosquito pools (NTRL; Non-NTRL) <sup>2</sup>	6;0	2;0	2;0	2;0	0;0	530;27
Confirmed WNV human cases (WNF; WNND) <sup>3</sup>	0;1	0;1	2;0	0;0	0;0	16;27
Presumptive WNV viremic blood donors	0	0	1	0	0	4
WNV infection rate per 1,000 <i>Cx. quinquefasciatus</i> <sup>4</sup>	1.76	0.55	0.55	0.89	0.00	
WNV infection rate per 1,000 <i>Cx. nigripalpus</i> <sup>4</sup>	0.00	0.00	0.00	0.00	0.00	
WNV infection rate per 1,000 <i>Cx. restuans</i> <sup>4</sup>	0.00	0.00	0.00	0.00	0.00	
Weekly vector index <sup>5</sup>	0.060	0.023	0.025	0.036	0.000	

<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

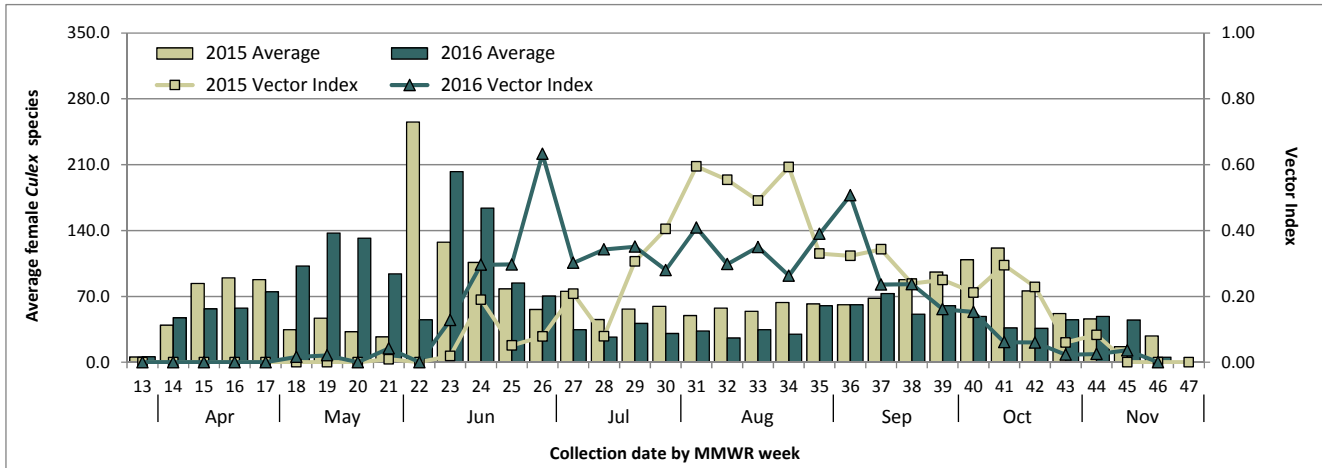
<sup>4</sup> Calculated using a Maximum Likelihood Estimation (MLE). Biggerstaff, Brad J. PooledInRate, Version 4.0: a Microsoft® Office Excel® Add-In to compute prevalence estimates from pooled samples. Centers for Disease Control and Prevention, Fort Collins, CO, U.S.A., 2009

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

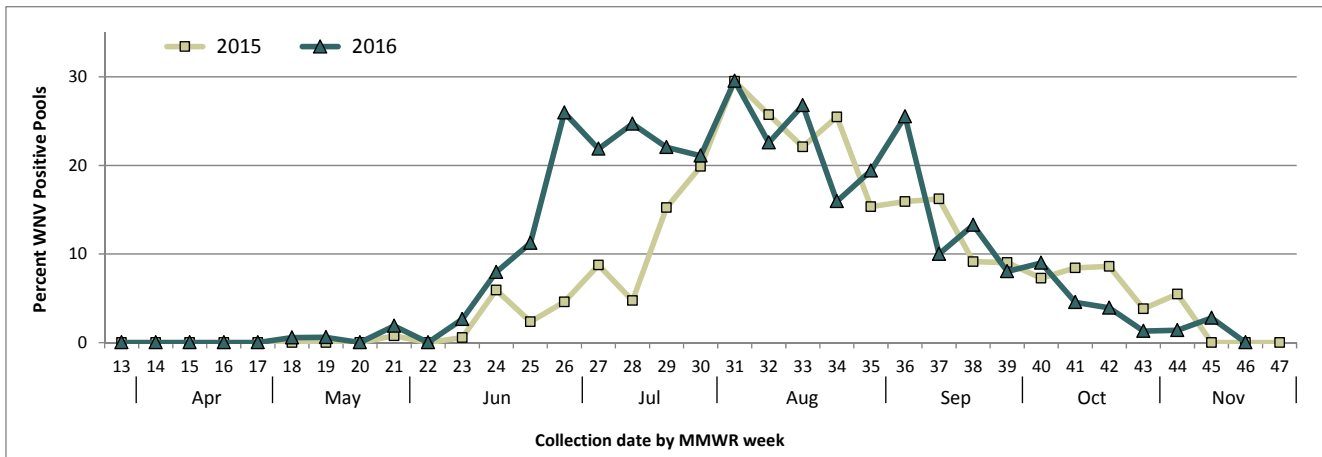
Data source: Tarrant County Public Health

**Figure 1. Average number of female *Culex* species per trap and vector index by collection date, Tarrant County, 2015-2016**



Data source: Tarrant County Public Health

**Figure 2. Percentage of mosquito pools positive for WNV by collection date, Tarrant County, 2015-2016**



Data source: Tarrant County Public Health

**Table 2. BG Sentinel trap activity, Tarrant County, Weeks 42-46, 2016**

Week	Oct 16 - Oct 22	Oct 23 - Oct 29	Oct 30 - Nov 5	Nov 6 - Nov 12	Nov 13 - Nov 19	YTD
MMWR Week	42	43	44	45	46	
Total BG Sentinel traps placed in Tarrant County	38	30	34	20	4	1,098
Average number of female <i>Aedes</i> mosquitoes per trap	3.8	1.8	2.5	2.4	9.3	6.2
Average number of female <i>Aedes aegypti</i> per trap	2.5	1.2	1.0	2.0	4.3	3.3
Average number of female <i>Aedes albopictus</i> per trap	0.4	0.6	0.9	0.1	0.3	1.7

Data source: Tarrant County Public Health

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**Table 3. State-wide arbovirus season activity as reported by Texas DSHS on Nov 22, 2016**

North Texas Counties	WNV		CHIKV*		DENV*		SLEV		Zika*	
	Positive Mosquito Pools	Human Cases	Positive Mosquito Pools	Human Cases	Positive Mosquito Pools	Human Cases	Positive Mosquito Pools	Human Cases	Positive Mosquito Pools	Human Cases
Collin	89	10 WNF; 11 WNND	0	3	0	3	0	0	0	5
Dallas	698	20 WNF; 35 WNND	0	2	0	6	0	0	0	44
Denton	78	10 WNF; 10 WNND	0	0	0	2	0	0	0	9
Ellis	31	0 WNF; 3 WNND	0	0	0	0	0	0	0	1
Hood	0	1 WNF; 0 WNND	0	0	0	0	0	0	0	0
Hunt	11	1 WNF; 4 WNND	0	0	0	0	0	0	0	0
Johnson	15	0 WNF; 3 WNND	0	0	0	0	0	0	0	0
Kaufman	0	0 WNF; 0 WNND	0	0	0	0	0	0	0	0
Parker	0	0 WNF; 2 WNND	0	0	0	0	0	0	0	1
Rockwall	21	0 WNF; 1 WNND	0	0	0	0	0	0	0	0
Somervell	0	0 WNF; 0 WNND	0	0	0	0	0	0	0	0
Tarrant	559	15 WNF; 28 WNND	0	2	0	1	0	0	0	26
Wise	0	0 WNF; 0 WNND	0	0	0	0	0	0	0	1
<b>North Texas Total</b>	<b>1,502</b>	<b>57 WNF; 97 WNND</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>87</b>
<b>All Texas Counties</b>	<b>1,767</b>	<b>95 WNF; 197 WNND</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>35</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>254</b>

\* All reported CHIKV, DENV, & Zika human cases are travel-related

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 (DSHS)