Week 36 Summary

- 163 mosquito pools* have been tested in DC/DSHS from week 36
- Year-to-date DC/DSHS has tested a total of 3308 mosquito pools
- 28 mosquito pools tested positive for WNV this week:
  - Arlington (3) Benbrook (1) Burleson* (1) Colleyville (1) Euless (1) Fort Worth* (5)
  - Grapevine (2) Grand Prairie* (1) Hurst (2) Keller (2) Kennedale (2) North Richland Hills (2) Pantego (1) Southlake (1) Unincorporated (3)

- There have been 0 human cases of SLE, Zika, CHIK or Dengue in 2020.
- There have been 18 human cases of West Nile disease. 4 cases resulted in death
- Average number of mosquitoes/trap include:
  - Culex spp: 31.0
  - Aedes aegypti: 7.8
  - Aedes albopictus: 1.1

DC/DSHS *= Dallas County Laboratory Response Network and Department of State Health Services Arbovirus Lab
WNV *= West Nile virus; CHIKV *= chikungunya virus; DENV *= dengue virus; SLEV *= St. Louis encephalitis virus

* May encompass counties outside of Tarrant County

Tarrant County Region WNV Positive Year to Date Summary

There have been a total of 503 positive in 2020.

Arlington (65) Bedford (6) Benbrook (3) Burleson* (4) Colleyville (29) Crowley (3) DFW Airport* (1) Edgecliff Village (1) Euless (20) Fort Worth* (115) Grand Prairie* (13)

* May encompass counties outside of Tarrant County

Table 1. MLE(1) and VI(2) for County Quadrants, Week 35 and 36

<table>
<thead>
<tr>
<th>County Quadrant</th>
<th># gravid traps</th>
<th>Ave F Culex spp</th>
<th>Positive pools MLE (Lower-Upper Limit)</th>
<th>VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>78</td>
<td>35.6</td>
<td>30.0</td>
<td>22.13 (15.29-31.48)</td>
</tr>
<tr>
<td>Northwest</td>
<td>33</td>
<td>87.5</td>
<td>8.0</td>
<td>7.58 (3.57-14.58)</td>
</tr>
<tr>
<td>Southeast</td>
<td>47</td>
<td>65.3</td>
<td>13.0</td>
<td>11.16 (6.26-18.84)</td>
</tr>
<tr>
<td>Southwest</td>
<td>30</td>
<td>45.8</td>
<td>6.0</td>
<td>7.27 (3.03-15.17)</td>
</tr>
<tr>
<td>Week 36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>66</td>
<td>31.5</td>
<td>14.0</td>
<td>9.63 (5.54-15.83)</td>
</tr>
<tr>
<td>Northwest</td>
<td>25</td>
<td>30.8</td>
<td>1.0</td>
<td>1.62 (0.09-8.00)</td>
</tr>
<tr>
<td>Southeast</td>
<td>42</td>
<td>64.2</td>
<td>7.0</td>
<td>6.86 (3.01-13.84)</td>
</tr>
<tr>
<td>Southwest</td>
<td>29</td>
<td>32.5</td>
<td>3.0</td>
<td>4.48 (1.21-12.11)</td>
</tr>
</tbody>
</table>

Data source: Tarrant County Public Health

1. MLE= Maximum Likelihood Estimate or the estimate of the mosquito infection rate per mosquito species. 2. VI= Vector Index which is a measure of infectivity accounting for vector species composition, vector species population density, and proportion of vector population infected with WNV
Averages, MLE, and limits will be given for species with identified infection rates only and only for the latest two weeks. MLE, Lower and Upper Limits are based on a 95% confidence interval. All data in this table is based on collection date.

Calculated using a Maximum Likelihood Estimate (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
Cumulative Data for the Tarrant County Region, Weeks 33-36

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MMWR Week</td>
<td>33</td>
<td>34</td>
<td>35</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Total number of gravid traps set in Tarrant Region</td>
<td>234</td>
<td>218</td>
<td>224</td>
<td>198</td>
<td>4049</td>
</tr>
<tr>
<td>Average number of Culex spp per gravid trap</td>
<td>30.1</td>
<td>34.9</td>
<td>47.9</td>
<td>30.9</td>
<td>42.6</td>
</tr>
<tr>
<td>Number of mosquito pools tested (DC/DSHS; non-DC/DSHS)</td>
<td>186;27</td>
<td>192;20</td>
<td>192;17</td>
<td>163;15</td>
<td>3308;486</td>
</tr>
<tr>
<td>Number of positive mosquito pools (DC/DSHS; non-DC/DSHS)</td>
<td>53;2</td>
<td>56;1</td>
<td>60;1</td>
<td>27;1</td>
<td>490;13</td>
</tr>
<tr>
<td>Confirmed WNV human cases (WNF; WNND)</td>
<td>0;1</td>
<td>1;4</td>
<td>1;1</td>
<td>0;0</td>
<td>3;15</td>
</tr>
<tr>
<td>WNV infection rate per 1,000 Culex spp</td>
<td>15.76</td>
<td>14.77</td>
<td>13.10</td>
<td>6.74</td>
<td></td>
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<tr>
<td>Weekly vector index</td>
<td>0.563</td>
<td>0.518</td>
<td>0.669</td>
<td>0.209</td>
<td></td>
</tr>
<tr>
<td>Total BG Sentinel traps set in Tarrant Region</td>
<td>30</td>
<td>18</td>
<td>37</td>
<td>25</td>
<td>561</td>
</tr>
<tr>
<td>Average number of female Aedes aegypti per BG trap</td>
<td>10.6</td>
<td>5.3</td>
<td>6.5</td>
<td>7.8</td>
<td>2.6</td>
</tr>
<tr>
<td>Average number of female Aedes albopictus per BG trap</td>
<td>1.5</td>
<td>2.5</td>
<td>4.0</td>
<td>1.1</td>
<td>1.8</td>
</tr>
</tbody>
</table>

1 Based on mosquito collection date; DC/DSHS = Dallas County Laboratory Response Network and Department of State Health Services Arboviral Lab
2 Based on onset of illness date for cases reported to Tarrant County Public Health; WNF=West Nile Fever; WNND = West Nile Neurinvasive Disease
3 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 Culex spp includes pools of both Cx. restuans and Cx. quinquefasciatus
4 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 now includes pools from outside laboratories; Data subject to change due to on-going case investigations, mosquito collection, and testing

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**Figure 1. Average Number of Female Culex Species Per Trap and Vector Index by Collection Date, Tarrant County, 2019-2020**

Data Source: Tarrant County Public Health
Figure 2. Percentage of Mosquito Pools Positive for WNV by Collection Date, Tarrant County, 2019-2020

Table 3. North Texas Arbovirus Activity as Reported by Texas DSHS on September 8, 2020

<table>
<thead>
<tr>
<th>North Texas Counties</th>
<th>WNV</th>
<th>CHIKV</th>
<th>DENV</th>
<th>SLEV</th>
<th>Zika</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Positive Mosquito Pools</td>
<td>Human cases</td>
<td>Positive Mosquito Pools</td>
<td>Human cases</td>
<td>Positive Mosquito Pools</td>
</tr>
<tr>
<td>Collin</td>
<td>16</td>
<td>0 WNF; 0 WNND</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dallas</td>
<td>374</td>
<td>0 WNF; 0 WNND</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Denton</td>
<td>41</td>
<td>0 WNF; 0 WNND</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Johnson</td>
<td>5</td>
<td>0 WNF; 0 WNND</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Non-Tarrant North Texas</td>
<td>436</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

| All Texas Counties | 1085 | 10 | 17 | 0  | 2  | 0  | 7  | 14 | 0  | 0  |

*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– St. Louis encephalitis virus

For Additional Information Please Visit The Links Below:

Department of State Health Services:
- Arbovirus Activity Reports
- Texas Zika
- Eliminating Mosquito Breeding Sites
- Barrier Treatments for Mosquitoes
- Mosquitoes Love Water
- Mosquito Prevention Tool Kit

Tarrant County web pages:
- Be Mosquito Free
- Zika
- Vector Control

Environmental Protection Agency:
- Insect Repellent Information

Center for Disease Control and Prevention: