Mosquito Surveillance

(Team Effort: DEP and County Partners)

32,604 Surveillance Events

• 18,000 gravid traps
• 5,596 BG sentinel traps
• 8,684 dipping
• 145 CO₂-baited light traps
Mosquito Species Collected

- Identified 1.3 million adults specimens and 103K larvae
- 40 species identified

<table>
<thead>
<tr>
<th>Species</th>
<th>Adults collected</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Culex restuans</em></td>
<td>335,262</td>
</tr>
<tr>
<td><em>Culex pipiens-restuans</em></td>
<td>330,624</td>
</tr>
<tr>
<td><em>Culex pipiens</em></td>
<td>319,271</td>
</tr>
<tr>
<td><em>Aedes albopictus</em></td>
<td>147,418</td>
</tr>
<tr>
<td><em>Aedes japonicus</em></td>
<td>42,129</td>
</tr>
<tr>
<td><em>Aedes vexans</em></td>
<td>21,787</td>
</tr>
<tr>
<td><em>Culex salinarius</em></td>
<td>13,214</td>
</tr>
<tr>
<td><em>Aedes trivittatus</em></td>
<td>13,053</td>
</tr>
<tr>
<td><em>Aedes triseriatus</em></td>
<td>10,013</td>
</tr>
<tr>
<td><em>Psorophora ferox</em></td>
<td>9,547</td>
</tr>
</tbody>
</table>
West Nile Virus Mosquito Testing

- Tested 1,027,989 specimens in 21,682 pools
- 3,204 positive pools (2nd highest)
- 14.8% of pools were positive; MIR of 3.1
- *Culex spp.* represented 91% of specimens

<table>
<thead>
<tr>
<th>Species</th>
<th>MIR</th>
<th># positive</th>
<th># tested</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Culex pipiens</em></td>
<td>4.7</td>
<td>1,374</td>
<td>292,159</td>
</tr>
<tr>
<td><em>Culex restuans</em></td>
<td>3.0</td>
<td>915</td>
<td>305,659</td>
</tr>
<tr>
<td><em>Culex pipiens-restuans</em></td>
<td>2.8</td>
<td>877</td>
<td>315,628</td>
</tr>
<tr>
<td><em>Culex spp.</em></td>
<td>2.4</td>
<td>19</td>
<td>7,764</td>
</tr>
<tr>
<td><em>Culex salinarius</em></td>
<td>1.2</td>
<td>10</td>
<td>8,070</td>
</tr>
<tr>
<td><em>Aedes albopictus</em></td>
<td>0.1</td>
<td>9</td>
<td>81,774</td>
</tr>
</tbody>
</table>
WNV Non-Mosquito Testing Results

- 20 human cases (7th highest)
- 15 positive horses (4th highest)
- 42 positive dead birds (16 in 2016)
Other Arbovirus Testing Results

• La Crosse
  - 50 pools (Ae. triseriatus)- negative

• Zika
  - 41 Pools (2,293 Ae. albopictus)- negative
Lyme Disease

- No. 1 State in U.S. (Human Cases)
- Education and Awareness Campaign (Department of Health)
DEP Surveillance and Testing

Prevalence Rates
• Borrelia burgdorferi - 47%
• Anaplasma phagocytophilum - 3%
• Babesia microti - 3%
Powassan Virus

- Four Human Cases in 2017
- Northeastern PA
Powassan Virus Surveillance and Testing

Northeastern PA

- Collected 1,200 *Ixodes scapularis* from 15 Northeastern PA counties
- Test results are pending
Black Fly Suppression Program

- *Simulium jenningsi* Malloch
- *Simulium luggeri* Nicholson & Mickel
- *Simulium fibrinflatum* Twinn
- *Simulium anchistinum* Moulton & Adler
Black Fly Suppression Program

- 38 County Participation (three major river basins)
- New Jersey Participation (cost sharing of Delaware River)
Questions/Comments