Greetings From VIRGINIA
Local Arboviral Cases and Zoonotic Indicators in Virginia in 2017

- 13 Human WNV Cases
- 3 WNV Positive Blood Donors
- 1 WNV Positive Equine
- 5 WNV Positive Crows
- 2 EEE Positive Emus
2017 WNV Surveillance
Mosquito Pools & Positives

Total of 13,352 pools tested for WNV & EEE in 2017

12,323 pools tested for WNV
787 tested Positive for WNV

Top 3 mosquito species:
Cx. pipiens/restuans
Ae. albopictus
Ae. Vexans

Cs. melanura (made the top 3 in the Hampton Roads area)
Chesapeake and Suffolk’s combining numbers = 564,456
Positive WNV Mosquito Pools

<table>
<thead>
<tr>
<th>Location</th>
<th>Positive WNV + Mosquito Pools</th>
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<tbody>
<tr>
<td>Chesapeake</td>
<td>7</td>
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<tr>
<td>Fairfax Co.</td>
<td>300</td>
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<tr>
<td>Henrico Co.</td>
<td>94</td>
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<td>Norfolk</td>
<td>58</td>
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<tr>
<td>Prince William Co.</td>
<td>273</td>
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<td>Roanoke</td>
<td>18</td>
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<td>Roanoke Co</td>
<td>4</td>
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<td>Suffolk</td>
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<tr>
<td>Virginia Beach</td>
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</table>
2017 Positives WNV Chicken Sera

- Chickens:
  - 15+ Hampton Roads Area
    - 5 Chesapeake
    - 3 Norfolk
    - 6 Suffolk
    - 1 Virginia Beach
  - Hampton Roads is the only area that test Sentinel Chickens in Virginia.
2017 EEE Surveillance
Mosquito Pools & Positives

Total of 13,352 pools tested for WNV & EEE in 2017

3,024 pools tested for EEE
25 tested Positive for EEE

Chesapeake – 6
Suffolk – 19

Cs. melanura (made the top 3 in the Hampton Roads area)
Chesapeake and Suffolk’s combining numbers = 564,456
2017 Positives EEE Chicken Sera

- **Chickens**
  - 9+ Hampton Roads Area
    - 4 Chesapeake
    - 4 Suffolk
    - 1 Virginia Beach
  - Hampton Roads is the only area that test Sentinel Chickens in Virginia.
Aerial Sprays

**Chesapeake Mosquito Control** = Spring 2017
Larvaciding
7,824 total acres sprayed

**Portsmouth Mosquito Control**
Larvaciding
2,250 total acres sprayed

**Adulticiding**
20,000 total acres sprayed
*This included city and federal properties.
Utilizing both private and military aircraft.*
Aedes albopictus mosquito testing for the Zika Preparedness and Response Plan through The Division of Consolidated Laboratory Services (DCLS), Fairfax County Health Department, and National Center of Biodefense and Infectious Diseases, George Mason University.

A total of 1,287 pools of Ae. albopictus (46,699 mosquitoes) were tested for Zika virus by RT-PCR in 2017, with **no positives**. Most of these pools were collected in Northern VA, except 2 pools that came from Virginia Beach.

*Total pool numbers reported by the Virginia Department of Health

**Mosquito Collection Localities:**
Fairfax Co. - 966
Prince William Co. - 333
Virginia Beach – 2

*Actual pool numbers reported from Localities

**All Pools Tested Negative**
Tick Borne Arboviral Diseases in Virginia in 2017

**Anaplasmosis** = 12 cases (it is likely that most of these cases are really Ehrlichiosis cases but the patients were only tested for Anaplasmosis [both conditions are serologically cross-reactive on the diagnostic tests that are uses on most patients]);

**Babesiosis** – 0 cases

**Ehrlichiosis** – 93 cases

**Ehrlichiosis/Anaplasmosis** = 3 cases (patients that were tested for both and the results were both positive and undistinguishable);

**Lyme Disease** = 1,503 cases (this # is close to our highest annual count for Lyme cases [1,539 cases] seen in 2015

**Spotted Fever Rickettsiosis** = 278 cases (this # close to previous years; it’s possible that many of these cases are actually Ehrlichiosis cases misdiagnosed as Rocky Mountain Spotted Fever (RMSF) in patients who either tested for Ehrlichiosis to early in their course of illness to test positive, but tested positive on the test for RMSF, or patients who are only tested for RMSF [at any time, anywhere from 6% to 10% of the VA population would test positive for RMSF because citizens are frequently exposed to non-disease causing spotted fever group Rickettsiae through lone star tick bites, and exposure to any SFGR causes cross-reactive positives on RMSF test results];

**Tularemia** = 1 case (tularemia can be transmitted by many different methods but is sometimes transmitted by mite and tick bites).
Cases of Imported Chikungunya, Dengue and Zika in Virginia in 2017.

- Chikungunya: 4 cases
- Dengue Fever: 9 cases
- Zika Fever: 7 cases
2017 Virus Activity

• Chikungunya
  – 4 imported cases: All patients had traveled in South Asia or Western Pacific Island nations (2-Bangladesh, 1-Pakistan, 1-Indonesia)

• Dengue Fever
  – 9 Imported cases: including one case of severe dengue (dengue hemorrhagic fever): All patients had traveled in South Asia or Western Pacific Island nations (6- India, 1- Myanmar, 1-Thailand, & 1-Philippines)

• Zika
  – 7 imported cases: All patients had traveled in the tropical Americas
    (3- Mexico, 1- Bonaire, 1- Costa Rica, 1- Cuba, & 1- Honduras)

All Imported Cases
Virginia Organizations

Virginia Mosquito Control Association’s 2018 Board

President
George Wojcik

President Elect
LaToya White

Vice President
Andy Lima

Secretary/Treasurer
Past President
Jeff Hottenstein

MAMCA Representative
Elizabeth (Betsy) Hobson

Sustaining Member Representative
Ted Bean

For more information on the VMCA, visit: www.mosquito-va.org

Tidewater Mosquito Vector Control Council’s 2018 Board

TMVCC President And Representative
Michelle Slosser

Vice President
Chris Hohnholt

Secretary
Michael Bowry
72nd Annual Meeting of the Virginia Mosquito Control Association
Hilton Virginia Beach Oceanfront
February 6th – 8th 2019

So make your plans now to attend…
Thank You!

Questions
Acknowledgements:

Laboratories:
The Division of Consolidated Laboratory Services (DCLS)
PA Dept. of Health Laboratory
PA Dept. of Environmental Protection Laboratory
Fairfax County Dept. of Health Laboratory
VDH – Division of Surveillance and Investigation
VDH – Regional and District Epidemiology Staff

Individuals:
Dr. David Gaines with Virginia Dept. of Health (VDH) – Division of Environmental Epidemiology

Surveillance Programs:
Chesapeake Mosquito Control
Fairfax County Dept. of Health – Vector Borne Diseases Program
Hampton Mosquito Control
Henrico County Mosquito Control
Norfolk Mosquito Control
Portsmouth Mosquito Control
Prince William County Mosquito & Pest Management
Suffolk Mosquito Control
Virginia Beach Mosquito Control
Virginia Dept. of Health (VDH) – Division of Environmental Epidemiology
York County Health Department