



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION



Office of Water Management

Pennsylvania State Report

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February 20, 2020

DEP Vector Management, Harrisburg



pennsylvania

DEPARTMENT OF ENVIRONMENTAL
PROTECTION

PA Department of Environmental Protection

- Vector Management Programs
 - West Nile Virus Program
 - Tick Surveillance and Testing Program
 - Black Fly Suppression Program



West Nile virus in PA

Total Specimens Collected 2018

- 1.7 million
 - >300k
 - Increased flood water species
 - 19,682 pools tested
 - 6,981 positives (4,302-2012)

Total Specimens Collected 2019

- 1.3 million
 - Average year
 - 14,760 pools tested
 - 585 positives



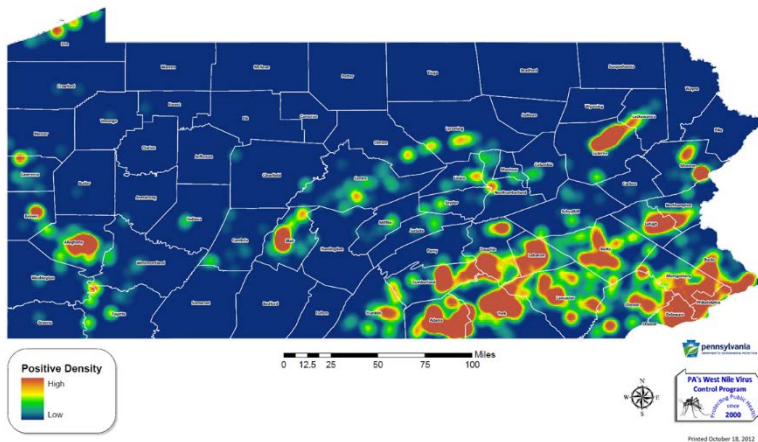
WNV Infection Comparison

2018

- Humans: 130, 8 deaths
- Mosquitoes: 6,776 pools
- Birds: 109
- Horses: 112

2019


- Humans: 7
- Mosquitoes: 584 pools
- Birds: 3
- Horses: 3



Mosquito-borne Disease-2019

- Other Mosquito-borne Illnesses
 - Eastern Equine Encephalitis
 - 10 cases
 - 4 horses;
 - 6 avian- 4 pheasants, 2 wild turkeys
 - 1 White-tailed Deer
 - No human cases
 - St. Louis Encephalitis (2nd year in a row)
 - Chester County





WNV-2020

- Mosquito Academy- 6th year
 - May 22-23 in McKean County
- Enhanced EEE monitoring
 - *Cs. melanura*- resting box surveillance
- Resistance Testing
 - All County programs will be testing for resistance using CDC Bottle Bioassays at the local level

Ticks 2018-2019

- Statewide surveillance conducted
 - Goal: 50 adult *Ixodes scapularis*/ county
- 4,314 adults collected from all 67 Counties- 250 sites
 - Tested for:
 - *Borrelia burgdorferi*- 56%
 - *Anaplasma phagocytophilum*- 13%
 - *Babesia microti*- 3%



Ticks 2019

- Spring/Summer nymphal *Ixodes* survey
 - Survey weekly May-August- 75 sites
 - 799 collected
 - *Borrelia burdorferi*- 23%
 - *Anaplasma phagocytophilum*- 4%
 - *Babesia microti*- 1%
 - Other species
 - *Dermacentor variabilis*
 - *Amblyomma americanum*
 - *Haemaphysalis longicornis*



Haemaphysalis longicornis

- Found as a result of the *Ixodes* nymphal survey
- 7 Counties- Southeastern Counties
 - Small pocket found in Franklin County
- Totals:
 - 167 Nymphs
 - 146 Adult females
 - 2,613 Larvae
- Specimens sent to Tick-borne Diseases Laboratory in NJ for strain confirmation
 - Results pending
- Nymphs and adults sent to CDC for pathogen testing
 - Results pending



Ticks 2019-2020



- *Ixodes scapularis* adult surveillance
 - All 67 Counties surveyed; minimum of 50 ticks per county
 - Samples pooled up to 10 ticks per pool
 - Testing ongoing for Deer Tick Virus and *Borrelia miyamotoi*- to date no positives
 - If positive samples are found, additional ticks will be tested individually
- Spring/Summer Surveillance- all counties (biweekly)
 - *Ixodes scapularis* nymphs
 - Non *Ixodes* survey



PA Black Fly Suppression Program

- “Gnats”- reproduce in PAs rivers and streams
 - Target species: *Simulium jenningsi*
- Larval/Pupal samples = 2,137 from 270 sites
- Adult samples = 2,372 from 524 sites
- 35 Counties participated in 2019
- 36 Aerial spray operations
- 48 Rivers and streams treated
 - 43,407 Gallons of VectoBac applied



Questions?

