

Mosquito Control

Paige Lockburner



Sussex County Office of Mosquito Control

“dedicated to reducing mosquito populations to protect public health and facilitate the enjoyment of the natural resources of the County.”

- IPM approach to controlling mosquitoes
 - Knowledge-based
 - Surveillance Driven
 - Resource-limited



3 Full Time Employees

Commercial Applicator Pesticide Licenses
Certified ID specialists

4 Seasonal Employees

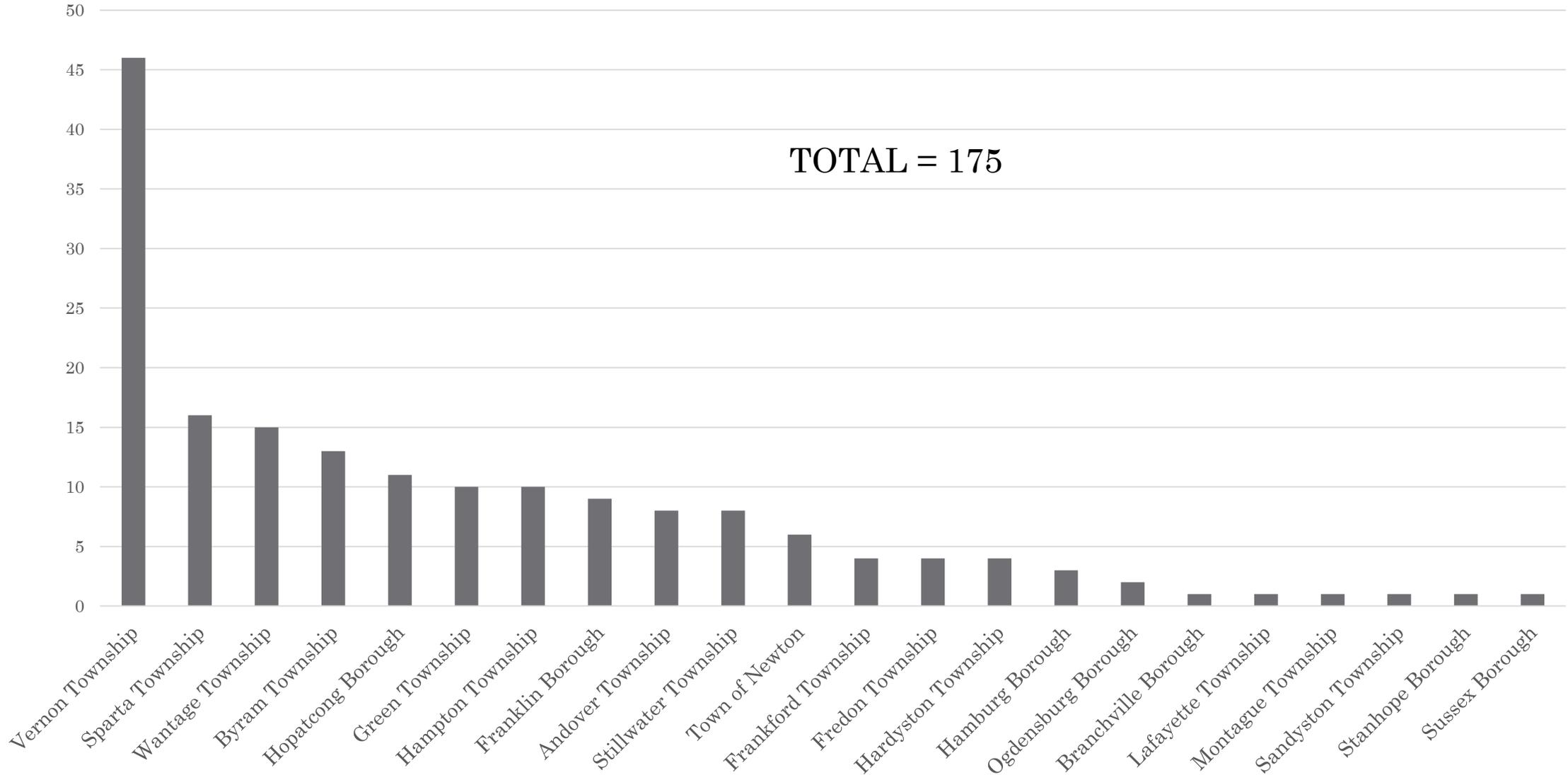
Operator Pesticide Licenses

Full Time Lab

ID specialist to ID mosquitoes to species

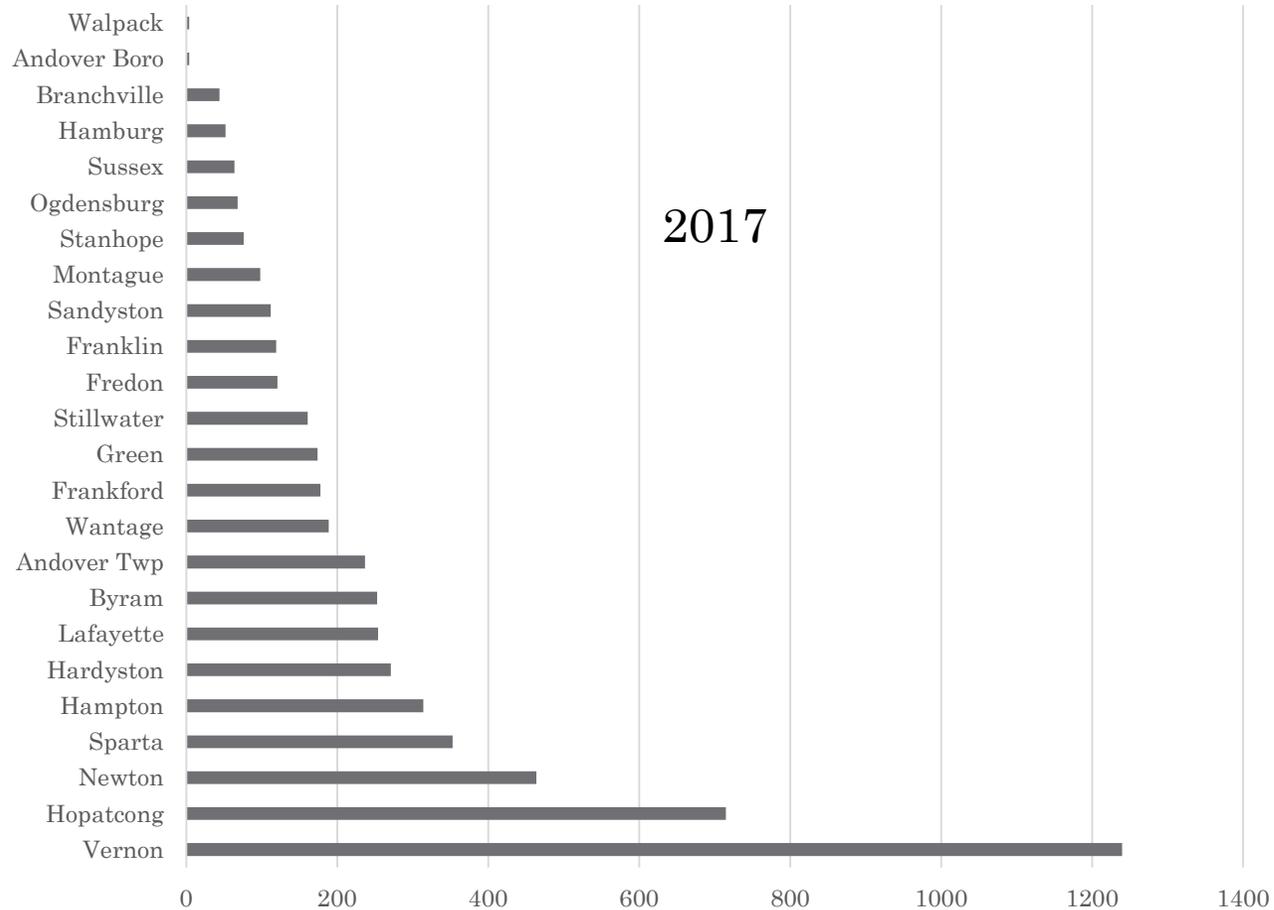
Complaints

2017



Mosquito Control Inspections and Treatments

- Natural habitats - Swamps, marsh, woodland pools
- Man-made habitats - containers, abandoned houses, swimming pools, detention basins
- Treatments are made by inspectors



Disease Surveillance

Test Mosquitoes for:

West Nile Virus
Eastern Equine Encephalitis
La Crosse Encephalitis
Jamestown Canyon

Dengue
Zika
Chikungunya

2017

1,715 collections - 410 pools - 7,405 mosquitoes

40 positive pools of 1,780 mosquitoes



Disease Surveillance - Traps



Resting Box

Set at the beginning of the season
Collected 2/week



NJ Light Trap



Bio-Sentinel

Bio-Control: Fathead Minnows

- Stock fish provided by State Fish Hatchery
 - Abandoned swimming pools
- State Office of Mosquito Control Coordination – DEP
- Typically Stock 1/year
- Monitor throughout season

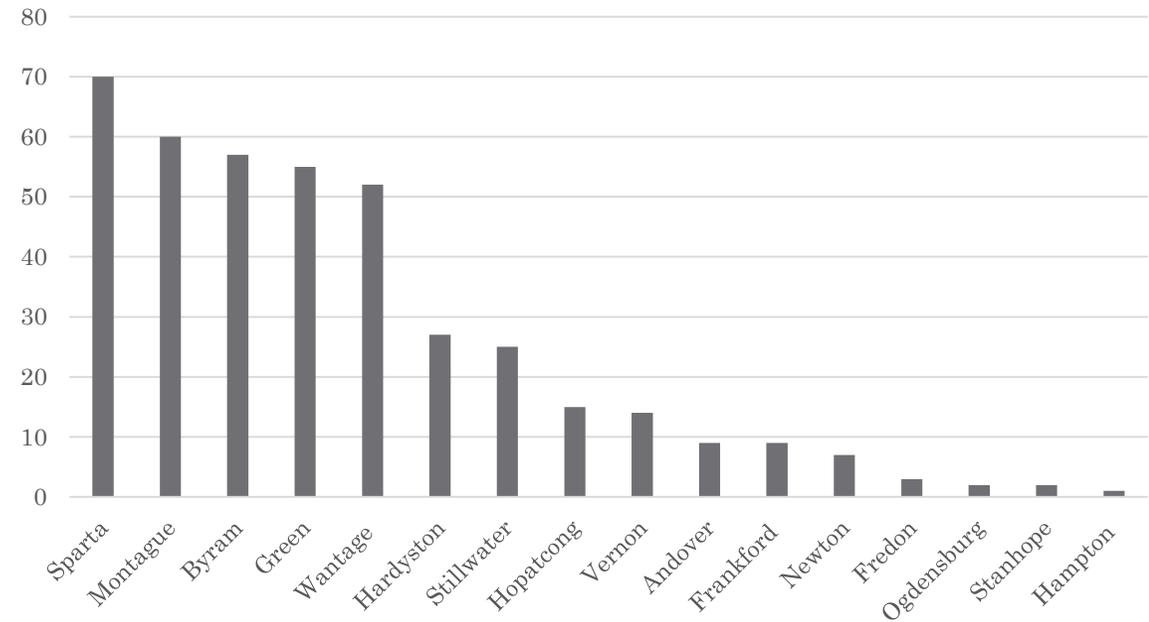


Source Reduction: Tire Collections

- Collaboration with Sussex County Clean Communities



2017



Aerial Applications

+ 4,700 acres, 60 sites, that could potentially produce large amounts of mosquito larvae

~2,000 acres are treated routinely, 40-50 sites

1 day to inspect

1-2 days to treat

1 day to re-inspect



Storm Drains

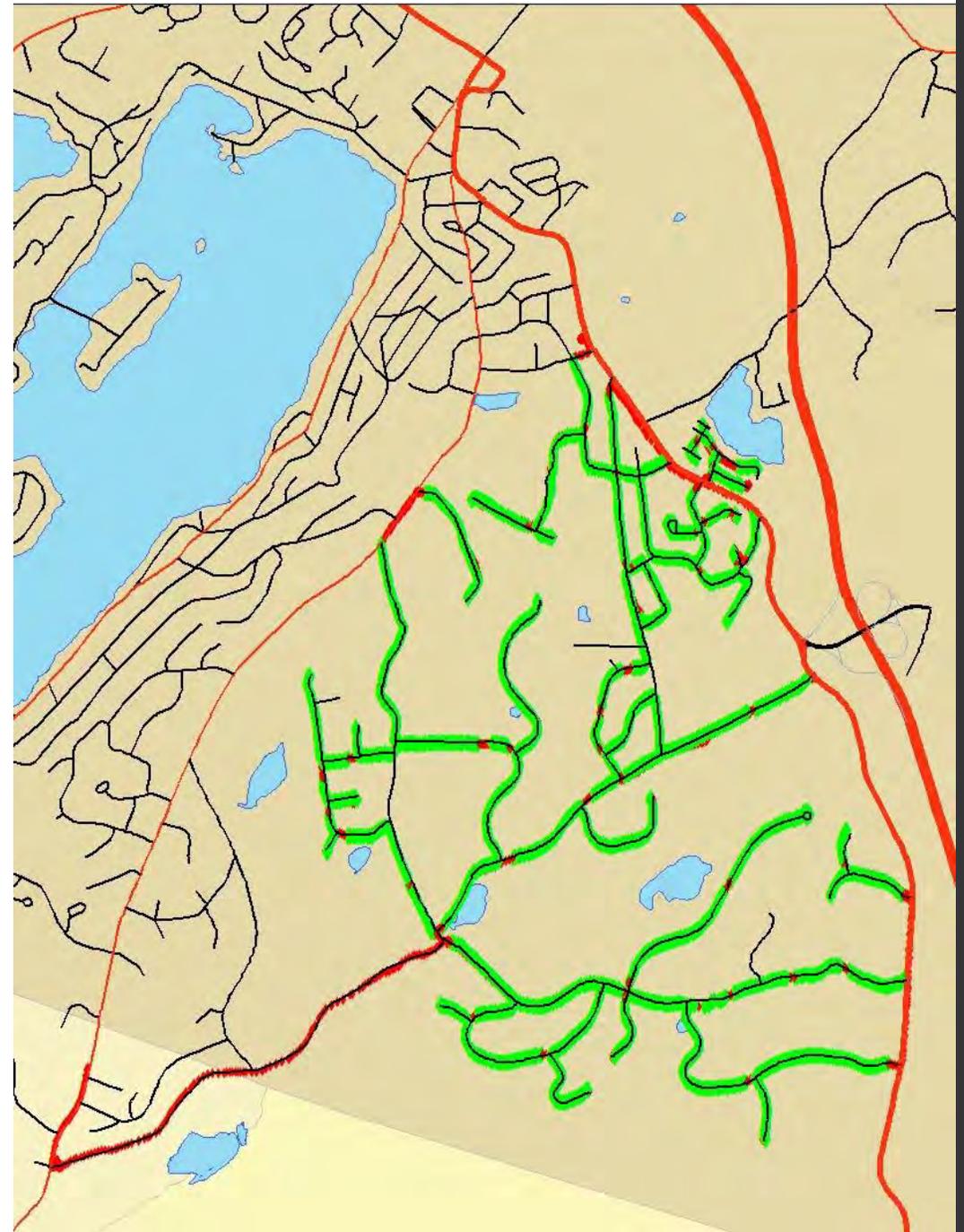
- Hold stagnant water
- Mosquitoes involved with virus transmission utilize this habitat
- Cuts down on disease vector populations

2017
County Total: 8,428



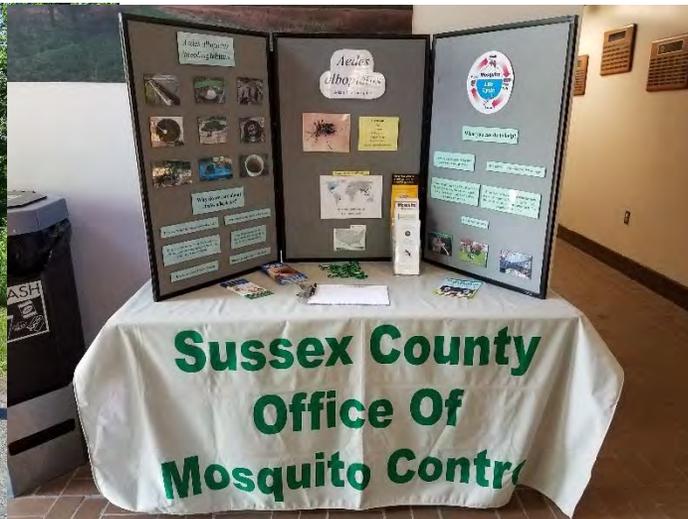
Adulticide Applications

- 26 applications in 2017
- 13 Municipalities
- Rotate products



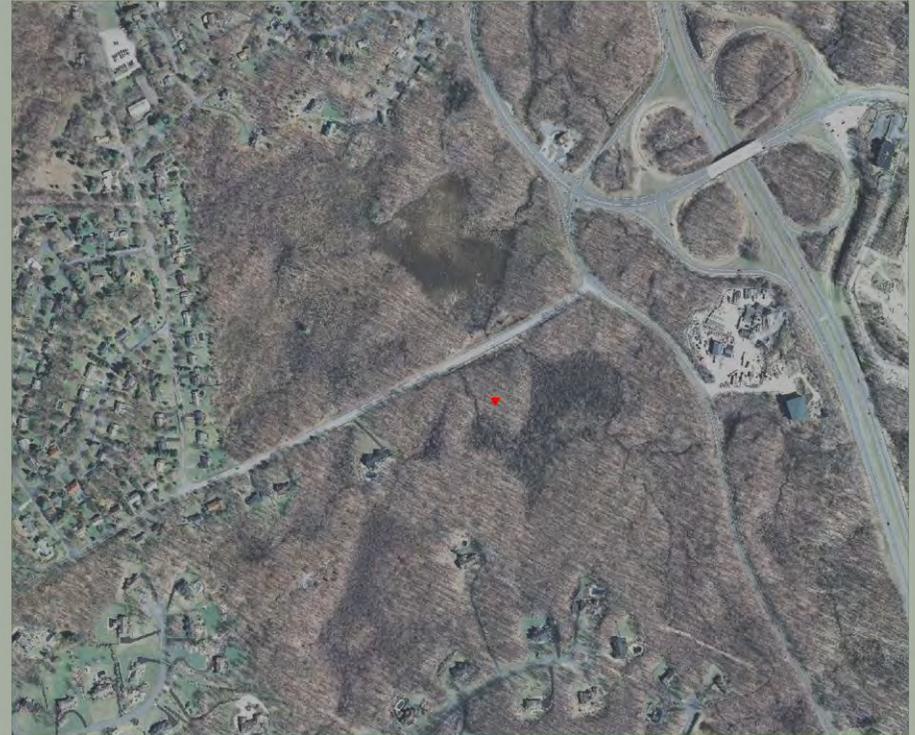
Public Relations

- Participate in Community Days
- Fair Display in County Building
- Present upon request
 - Vernon Senior Center
 - School Events
- Travelling *Aedes albopictus* Display
 - Municipal Buildings
 - Libraries
- Collaborate with other agencies
 - Road side clean ups
 - MRC
 - SCMUA Earth Day



New Mosquito For Sussex County Found in Sparta!

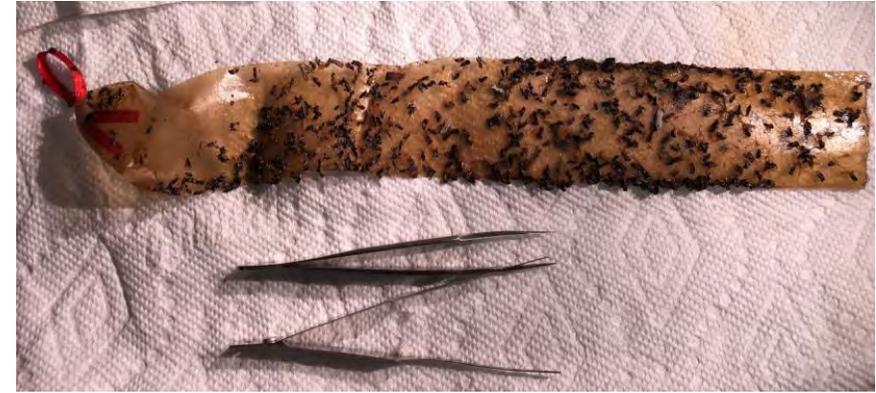
Aedes atlanticus



Black Fly Research

Objective: Use adult black flies as a sentinel

- 40 pre - selected lake spillways
- Set Sticky traps to collect adult blackflies
- Adult samples were separated into 20 pools
- All were found negative



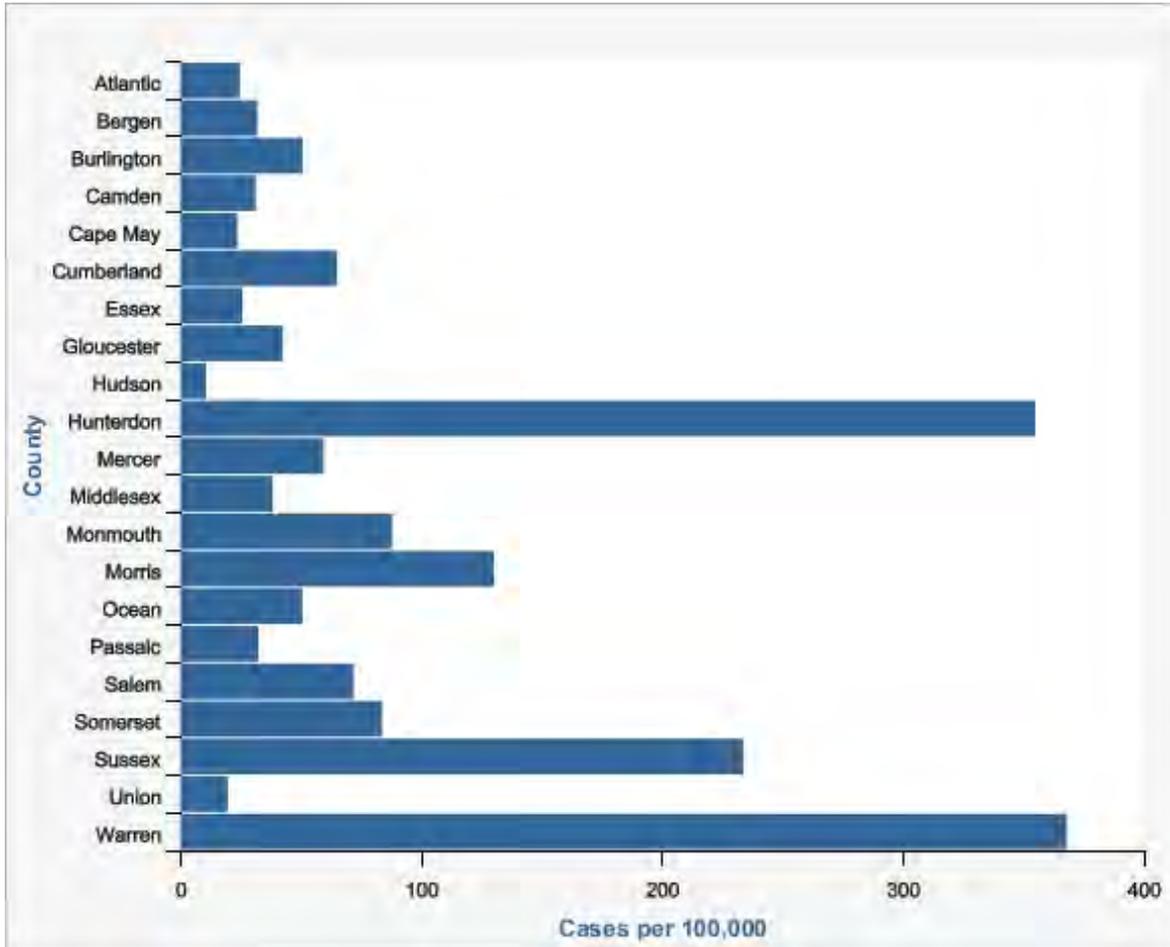
What else can we do with this data?

Help our lake communities decrease black fly nuisance



Ticks in Sussex County

Lyme Disease Incidence Rates by County, NJ, 2017



WE ID TICKS!

New Jersey Tick Blitz



- Center for Vector Biology at Rutgers University and Monmouth County Tick-borne Diseases Laboratory
- Funding from Northeast IPM Center
- Participants: 21 county mosquito control agencies
 - Workshop
 - 1 day “Tick Blitz”
 - Ticks sent to Rutgers University

Hoping to identify distribution of:

American dog ticks

Spotted fever rickettsia

Gulf coast tick

Invasive longhorned tick

