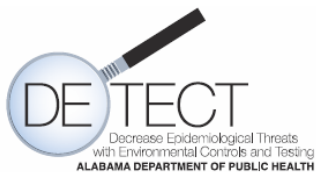


Mosquito Surveillance & Control State and Local Jurisdiction Preparedness

Kelly M. Stevens, M.S., Director of Infectious Diseases & Outbreaks Division
Vector Control Workshop: January 15-16, 2019



Objectives

Enhance Vector Surveillance & Control Capacity

- Discuss conducting mosquito surveillance and control jurisdictional capacity assessments
- Describe important stakeholders and partners
- Describe available training and educational resources
- Describe actions necessary to prepare for vector emergencies
- List state-specific resources

Assess Jurisdiction Demographics and Geography

- Type
 - State
 - County
 - City/Town
- Population
 - Number of people
 - Permanent or Seasonal
- Size
 - Acreage or square miles
- Specifics
 - Rural or Urban
 - Residential
 - Businesses
 - Metroparks/Zoos
 - Schools and Universities
 - Farming (animal and crop)

Assess Jurisdiction Budget and Program

- Budget
 - Payroll
 - Chemicals & equipment
 - Service contracts
- Staff
 - Part time
 - Full time
 - Specialists
 - Contract workers
- Program Components
 - Call logs/citizen service requests
 - Inspections
 - Mosquito surveillance
 - Disease surveillance
 - Mapping breeding sites
 - Larviciding
 - Adulticiding
 - Insecticide resistance testing
 - Record keeping

Assess Jurisdiction Surveillance and Control Resources

● Surveillance

- Mosquito traps
- Ovicups
- Aspirators
- Microscope
- Dippers
- Arboviral test supplies
- Bioassay test supplies

● Vector Control

- Fog/ULV Trucks
- Truck-mounted larviciding rigs
- Hand-held ULV/Foggers
- Backpack blowers/misters
- Pump Cans
- ATV/airboat
- Airplane/helicopter
- Larvicides
- Adulticides

Know Your Stakeholders and Partners

- State and Local Public Health
- State Department of Agriculture
- Extension Services/Systems
- Academia
- Vector Societies & Associations
- League of Municipalities and County Commissions
- Tourism
- Military
- Power Companies
- Mosquito Control Services/Industry
- Many more.....

Enhance Jurisdiction Capacity

● Training Resources

- Southeastern Center of Excellence in Vector Borne Diseases– Mosquito Training Course for Pest Managers <https://ifas-mosquitoceus.catalog.instructure.com/courses/mosqtraining>
- Mosquito Academy <https://www.nola.gov/mosquito/>
- Alabama Pesticide Applicator University <http://www.aces.edu/anr/pesticidemgt/university/>
- Florida Mosquito Control Association Dodds Short Courses https://www.floridamosquito.org/Public/Events/Event_Display.aspx
- State vector and mosquito association meetings/workshops
- American Mosquito Control Association
- Centers for Disease Control and Prevention

Enhance Jurisdiction Capacity

- State and Federal Regulations
 - Pesticide use and sales
 - Commercial Pesticide Applicator certification
 - ✦ General Standards
 - ✦ Ground (GRD)/Aerial Application
 - ✦ Public Health (PH) - county, state, federal or other governmental employees
 - ✦ Household Pest Control (HPC)
 - ✦ Mosquito Control Services (HPC, PH/GRD)

Enhance Jurisdiction Capacity – Guides/Resources

- Best Practices for Integrated Mosquito Management (AMCA)
https://cdn.ymaws.com/www.mosquito.org/resource/resmgr/docs/Resource_Center/Training_Certification/12.21_amca_guidelines_final.pdf
- <http://www.astho.org/Programs/Environmental-Health/Natural-Environment/Before-the-Swarm/>
- <http://www.astho.org/Programs/Environmental-Health/Natural-Environment/confrontsmosquito/>
- Guide for Environmentalists and Municipal Leaders, Residential checklists/forms Record keeping (various states)
- *Mosquitoes of the Southeastern United States*/Nathan D. Burkett-Cadena ©2013 The University of Alabama Press

Enhance Jurisdiction Preparedness & Response

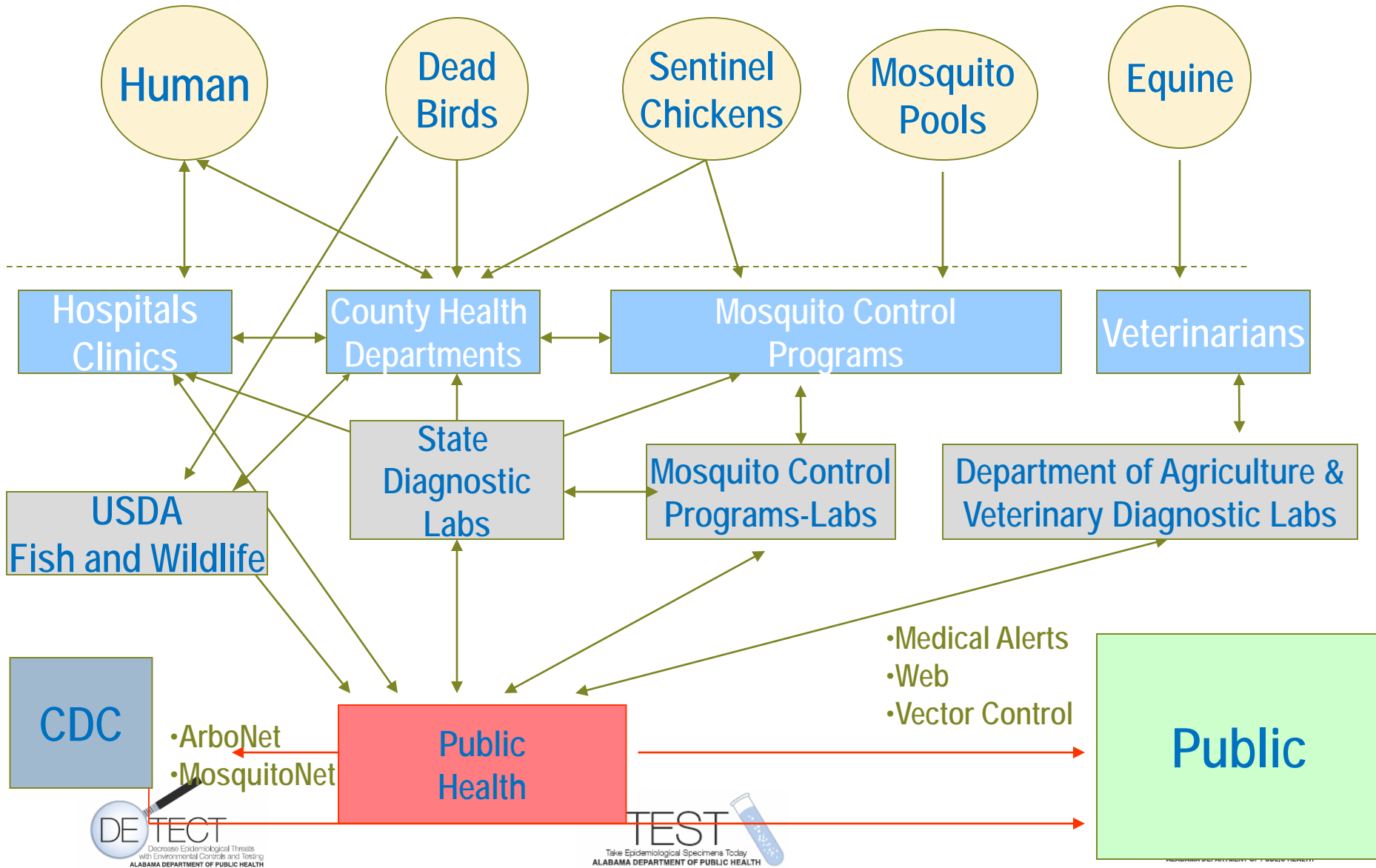
● Pre-season/storm preparedness

- Mapping & pre-treat
- Trapping
- Insecticide Resistance Testing
- Educate/Empower
 - ✦ Clean-up campaigns
 - ✦ Health Fairs
 - ✦ Tip/Toss/Treat
 - ✦ Bite Prevention
- MOUs/Contracts
- Record keeping

● Post-storm response

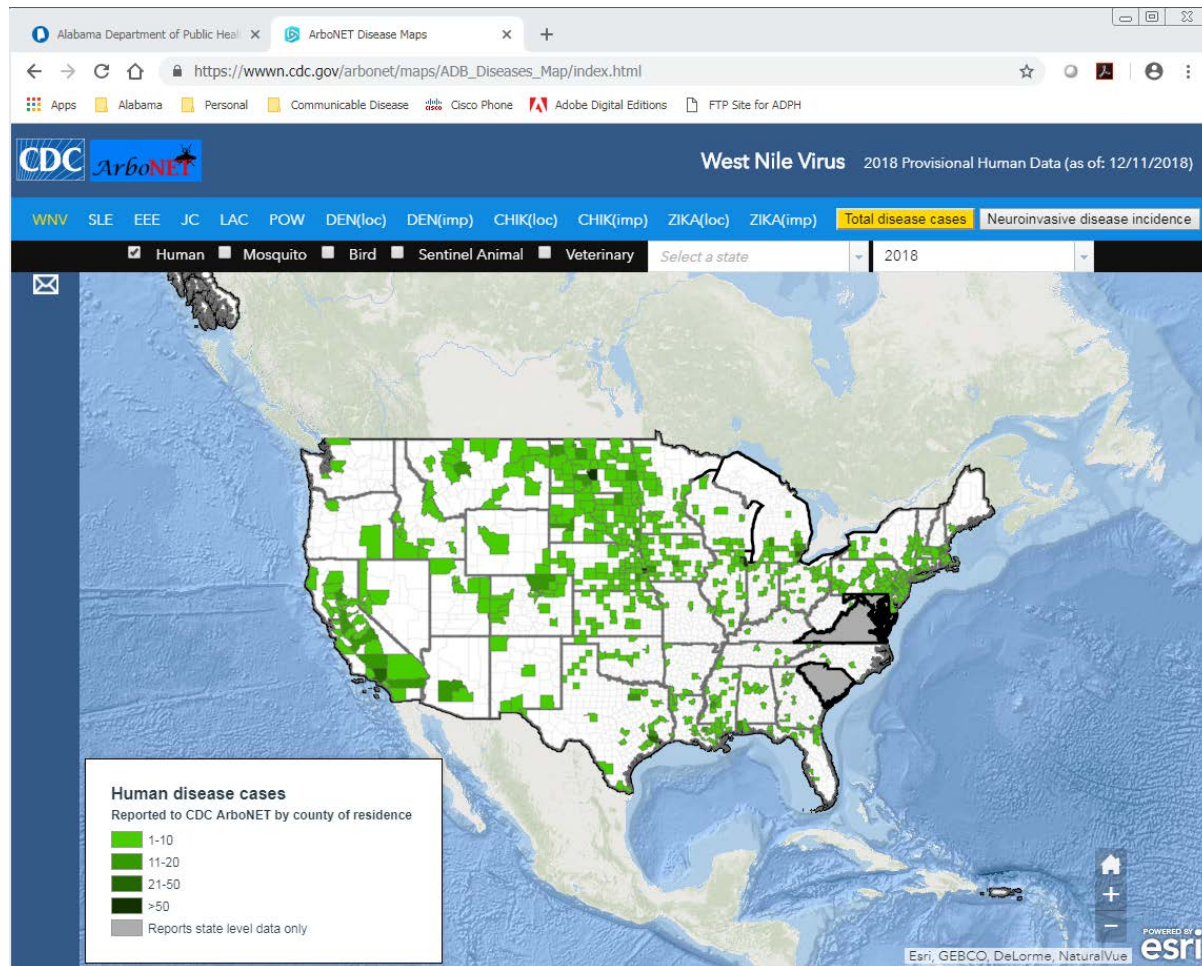
- Inspections & Tip/Toss/Treat
- Implement MOUs/Contracts
- FEMA
- Adulticiding & Larviciding
- Source reduction
- Educate/Empower
- Surveillance –pre and post treatment
- Repellent/larvicides distribution
- Record keeping

Mosquito-borne Disease Data Sources



Mosquito-borne Disease Surveillance

Zika
Chikungunya
Dengue
Yellow Fever
West Nile Virus
Eastern Equine Encephalitis
St. Louis Encephalitis
LaCrosse Encephalitis
Malaria



<https://diseasemaps.usgs.gov/mapviewer/>

Alabama

- Alabama Department of Public Health
 - <http://www.alabamapublichealth.gov/mosquito/index.html>
 - Savannah Duke, Public Health Entomologist
Savannah.Duke@adph.state.al.us
- Alabama Department of Agriculture & Industries
 - <http://agi.alabama.gov/>
- Alabama Cooperative Extension System
 - <https://www.aces.edu/main/>
- Alabama Vector Management Society
 - <http://alabamavms.org/>
- Alabama Pest Control Association
 - <http://www.alabamapca.org/>

Florida

- Florida Department of Health
 - <http://www.floridahealth.gov/>
- Florida Department of Agriculture
 - <https://www.freshfromflorida.com/>
- Florida Mosquito Control Association
 - <https://www.floridamosquito.org/>
- Florida Pest Management Association
 - <https://flpma.org/default.aspx>

Georgia

- Georgia Department of Public Health
 - <https://dph.georgia.gov/zoonoticvector-borneinfestations>
- Georgia Department of Agriculture
 - <http://agr.georgia.gov/pesticides.aspx>
- Georgia Mosquito Control Association
 - <http://www.gamosquito.org/>
- Georgia Pest Control Association
 - <https://gpca.org/>

Louisiana

- Louisiana Department of Public Health
 - <http://ldh.la.gov/index.cfm/page/539>
 - Kyle Moppert, M.S.; Public Health Entomologist 225-342-8950
Kyle.Moppert@la.gov
- Louisiana Department of Agriculture & Forestry
 - <http://www.ldaf.state.la.us/animal-health/veterinary-health-division/diseases/>
- Louisiana Mosquito Control Association
 - <http://www.lmca.us/>
- Louisiana Pest Management Association
 - <https://www.lpca.org/>

Mississippi

- Mississippi State Department of Health
 - https://msdh.ms.gov/msdhsite/_static/14,0,93.html
 - Healthyms.com
 - Wendy Varnado, PhD Entomologist wendy.varnado@msdh.ms.gov
 - Hunter Deerman, MS Entomologist james.deerman@msdh.ms.gov
- Mississippi Department of Agriculture & Commerce
 - <https://www.mdac.ms.gov/bureaus-departments/plant-industry/pesticide-program/>
- Mississippi Mosquito & Vector Control Association
 - <https://msmvca.wixsite.com/msmvca>
- Mississippi Pest Control Association
 - <http://mpca-ms.com/>

Tennessee

- Tennessee Department of Health
 - <https://www.tn.gov/health.html>
- Tennessee Department of Agriculture
 - <https://www.tn.gov/agriculture.html>
- Tennessee Mosquito & Vector Control Association
 - <http://www.tennmosquito.com>
- Tennessee Pest Management Association
 - <http://tennesseepestcontrolassociationinc.com/>

Texas

- Texas Department of State Health Services
 - <https://dshs.texas.gov/>
- Texas Department of Agriculture
 - <http://www.texasagriculture.gov/>
- Texas Mosquito Control Association
 - <http://www.texasmosquito.org/>
- Texas Pest Management Association
 - <http://www.texaspest.org/>

Questions???



Thank you!!!