

**Zika Virus:  
Information for Local  
Elected Officials**

**Satellite Conference and Live Webcast  
Friday, June 10, 2016  
10:00 – 11:00 a.m. Central Time**

Produced by the Alabama Department of Public Health  
Video Communications and Distance Learning Division

**Faculty**

**Tom Miller, MD  
State Health Officer**

**Mary McIntyre, MD  
Assistant State Health Officer  
for Disease Control and Prevention  
State Epidemiologist**

**Alabama Department of Public Health**

**Faculty**

**Andy Mullins, MPA  
Director  
Center for Emergency Preparedness**

**Rachel Beck  
Public Health Senior Environmentalist  
Baldwin County Animal Control Center  
Alabama Department of Public Health**

**Faculty**

**Cheryl Clay  
Public Health Senior Environmentalist  
Vector Control for City of Huntsville  
Madison County Health Department**

**Jerry Folse  
Vector Services Director  
Mobile County Health Department  
Alabama Department of Public Health**

**Why We Are Here?**

**Zika Virus Vectors:  
Aedes Mosquitoes**

- *Aedes species mosquitoes*
  - *Ae aegypti* more efficient vectors for humans
  - *Ae albopictus*



**U.S. and U.S. Territories  
Zika Cases As of June 1, 2016**

- U.S. States
  - Travel-associated cases reported: 618
  - Locally acquired vector-borne cases reported: 0
  - Total: 618
    - Sexually transmitted: 11
    - Guillain-Barré syndrome: 1

**U.S. and U.S. Territories  
Zika Cases As of June 1, 2016**

- U.S. Territories
  - Travel-associated cases reported: 4
  - Locally acquired cases reported: 1,110
  - Total: 1,114
    - Guillain-Barré syndrome: 8

**Zika Action Plan  
Alabama**



**Andy Mullins  
Director  
Center for Emergency Preparedness**

**Risk Categories**

0. Preparation - Vector Present or Possible in Jurisdiction
1. Mosquito Season - *Aedes aegypti* or *Aedes albopictus* mosquito biting actively
2. Confirmed Local Transmission - Single case or cases clustered in a single household / community in a county or jurisdiction

**Risk Categories**

3. Widespread Local Transmission - Multiple locations within a county / jurisdiction
4. Local Transmission in Multiple Counties - Expand response activities regionally or statewide

**Response Activities**

- Within each Risk Category there are six targeted areas for response activities:
  - Communication
  - Surveillance
  - Laboratory Testing
  - Vector Control
  - Pregnant Woman Outreach
  - Blood Safety

### **Initial Response Activities**

- **Andy Mullins has been appointed as the State's Point of Contact to coordinate the Zika Response Efforts**
- **ADPH has activated its Incident Management System to manage this event**
  - **Andy Mullins - Incident Manager**
  - **Mary McIntyre - Chief Health Officer**
  - **Harrison Wallace - Scientific Response Manager**

### **Progress in Alabama**

- **ADPH has worked with State EMA and the State Coordinating Group to provide information to stakeholders**
- **Assessment of mosquito control programs across the state**
- **Surveillance plan and tools have been developed and are in place to monitor suspect cases of Zika in Alabama**

### **Progress in Alabama**

- **ADPH Bureau of Clinical Labs has the capability to test for Zika in humans**

### **In Process in Alabama**

- **Education Program for the general public on how to protect themselves from mosquito bites**
- **Bureau of Clinical Labs is increasing its capacity to test for Zika virus**
- **Education is being provided to health care providers, especially those in travel clinics**

### **In Process in Alabama**

- **Educational presentations are being conducted as opportunities are available**
- **Consultations are being provided to providers on the need to test specific patients**

### **In Process in Alabama**

- **24 hour staff availability**
- **Courtesy yard inspections**
- **Educational coloring books to elementary students**
- **Health care provider consultation**
- **Case surveillance and follow up**
- **In-state testing**

### Current Gaps

- Assessment of entities conducting mosquito surveillance
- Statewide mosquito control coordination plan
- Capacity for mosquito control activities
- Additional persons to do courtesy yard inspections
- Pregnancy Registry

### Contact Information

Andy Mullins, MPA  
 Director  
 Center for Emergency Preparedness  
 Alabama Department of Public Health  
 Andy.Mullins@adph.state.al.us  
 (334) 206-7933



Cheryl Clay  
 Public Health Senior Environmentalist  
 Vector Control for City of Huntsville  
 Madison County Health Department

### Egg Stage

- The eggs can survive drying out for up to 8 months - even over the winter in the southern United States
- The eggs look like tiny specs of dirt to the naked eye
- It only takes a very small amount of water to attract the female



### Aedes albopictus

- Typically, the *Aedes albopictus* only flies a few blocks during their lifetime, usually not more than 50 yards in 1 day
- They prefer to bite during the day, but will bite at anytime

### Aedes albopictus

- They typically live near people and can be found inside homes, buildings, and businesses where windows and doors are left open and not provided with fine mesh screens

### Ae. aegypti and Ae. albopictus

- Due to their flight behavior, mosquito fog trucks have limited effect on these species
- This is why it is very important to remove breeding sources from around the home



### Rain Barrels

- Closed system, or provide screening small enough to exclude adult mosquitoes

### Vegetation

- Keep weeds and grass cut to minimize adult mosquito resting areas
- If adult mosquitoes are present and all breeding environments have been removed, barrier and space sprays purchased from local retailers that carry pesticides may be beneficial or a private pest control company

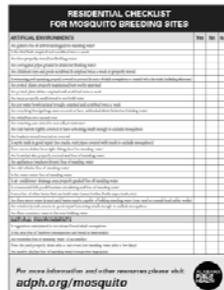
### Bureau of Environmental Services

- Zika Guide for environmentalists, municipalities, county commissions, and the general public (recently updated)



### Bureau of Environmental Services

- Checklist for residents to complete their own yard inspections
- Resources available on website



### Bureau of Environmental Services

- Zika Coloring book distributed to pre - K through 3rd grade students in public schools statewide and other schools if requested



### Bureau of Environmental Services

- Spanish version available
- Both versions are available on website



### Public Education Madison County Health Department

- Offer courtesy yard inspections for residents with mosquito problems
- Distribute door hangers in susceptible neighborhoods
- News media interviews



Inside Huntsville – Government Channel

### Public Education Madison County Health Department

- Community partner email distribution list:
  - Neighborhood Associations, Community Groups, News Media, Government Officials, and Parks and Recreation
- Pass on the information through email, NextDoor, Facebook, and newsletters

### Public Education Madison County Health Department

- Mosquito Education Curriculum
  - 4th graders
  - Mosquito lifecycle, breeding environments, bite prevention

### Baldwin County Mosquito Control

- Surveillance
- Source Reduction
- Larvicide
- Adulticide
- Outreach and Education

### Adulticide Spraying Thresholds Include:

- 25 Adults per trap per night
- 10 Adults of a vector species per trap per night
- A landing count of 5 adults per minute
- 3 service requests per zone in a 14 - day period (Zone remains open for 14 days)

**Contact Information**

**Rachel Beck**  
**Public Health Senior Environmentalist**  
**Baldwin County Health Department**  
**(251) 972-6834**

**Jerry Folse**  
**Vector Services Director**  
**Mobile County Health Department**



**Mosquito and Rodent Control**

- **Combine surveillance and inspection activities with the judicious use of pesticides and public education to minimize the impact rodent and insect pests have on the community**



**Comprehensive Program**

- **Mosquito Control**
  - Survey and Mapping
  - Inspection (Service requests and breeding sites)
  - Mosquito Surveillance
  - Arboviral Surveillance
  - Larviciding
  - Adulticiding
  - Public Health Education

**Resources**

- 1 Director
- 1 Entomologist
- 11 Inspectors
- 2 Clerks
- 10-12 Temporary Workers




**Resources**

- 14 Adulticiding Trucks, 8 Larviciding Trucks, 3 Rodent Inspection Trucks, and 7 Inspection / Surveillance Vehicles
- 1 Airplane, 2 Boats, 1 Amphibious Vehicle, and 1 All Terrain Cycle
- Back Pack Blowers, Hand-held Foggers, Etc. for spot treatments




**Mosquito Surveillance**

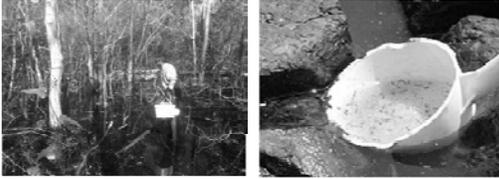
- Monitor mosquito populations in the country
  - 16 Permanent Light Trap Stations
  - Portable Light Traps (CO2 Enhanced Light Traps), 10 Variable Sites
  - Gravid Traps, 8
  - Landing Rate Stations
  - Citizen Complaints

**Mosquito Surveillance**

- Door to Door Surveys
- Larval Dip Counts



**Mosquito Surveillance**  
Larviciding Control of Immature Mosquitoes



- Most Cost Effective Means of Mosquito Control
- Over 2,000 Monitored Breeding Sites
  - Ditches, Swamps, Low Areas, Spoils Disposal Sites

**Adulticiding**  
**Adult Mosquito Control**

- Aerosol application (ULV-Ultra Low Volume) of insecticides for the control of mosquitoes used throughout the year
- Areas are targeted by inspection and surveillance activities
- Resmethrin, Malathion, Permethrin and Sumethrin



**Adulticiding**  
**Aerial Spraying**

- Conducted primarily in coastal areas inaccessible to spray trucks
- Spraying needed to combat LARGE HATCH-OFFS of Salt Marsh mosquitoes



**Adulticiding**  
**Aerial Spraying**

- Are performed at dusk to coincide with peak activity period for adult mosquitoes
- All MCHD Aerial spray routes are FAA approved



**Thank You  
And Make Sure You  
Are a Part of the  
Solution**

**Summary**

**Primary Prevention Measures**

- There is no commercially available vaccine to prevent Zika virus (but several in clinical trials)
- Focus on prevention of mosquito exposure
- Those with active infection should be advised to avoid exposure to mosquitoes to avoid further spread



**Primary Prevention Measures**

- Avoid being bitten (mostly daytime feeder)
  - Use repellent on skin (sunscreen first, then repellent)
  - Wear long-sleeved shirt and long pants
  - Spray permethrin or DEET repellents on clothing (DEET >20%)
  - Stay in places with screens or air conditioning

**Primary Prevention Measures**

- Empty fluid-filled containers on a weekly basis



**What Do We Need From You?**

- Identification of resources that you can provide
- Collaboration with other local groups and with state agencies
- Become familiar with not just public but private resources in your area that may be needed if local transmission occurs

**Comments / Questions**

**Contact Information**

- Visit [www.adph.org/mosquito](http://www.adph.org/mosquito) for the most updated information