

# ZIKA VIRUS INFO



- Facts on **Zika** Virus
- Disease Surveillance
- Notification of a Positive
- MCS Zika Response
- Guard Yourself Against Mosquito Bites & Disease
- MCS Normal Operations
- MCS Website



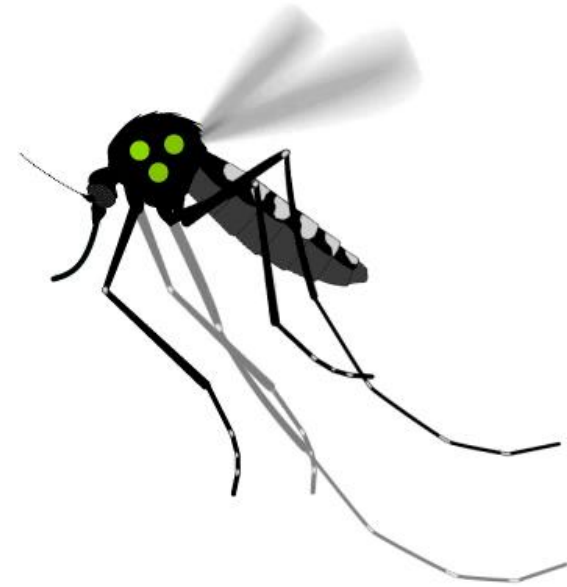
# What is Zika Virus?

## Virology

- Zika Virus is in the family flaviviridae.
- West Nile Virus, Chikungunya, and Dengue

## Mosquito Entomology:

- How the mosquito transmits
- Which mosquitoes can carry the disease



*Aedes aegypti*



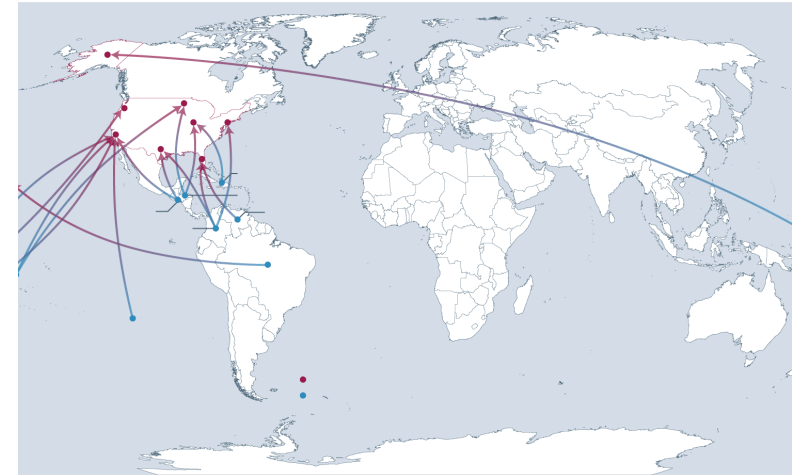
*Aedes albopictus*



## Am I at risk?

- Currently, the risk is low
- No transmission by mosquitoes yet in U.S.A.
- Travelers take precautions
- Currently found in parts of:
  - Africa
  - Caribbean
  - Southeast Asia
  - Pacific Islands
  - Central & South America
- **Transmission in**
  - Puerto Rico
  - U.S. Virgin Islands

## How it travels...



## Where it is...

## What are the symptoms?

- Muscle or joint pain
- Rash
- Headache (especially behind the eyes)
- Conjunctivitis

## Who will be affected?

- One in 5 will have symptoms
- Symptoms usually begin 2 to 7 days after infection
- Once person is infected, a period of 7 to 10 days for mosquito to acquire the virus



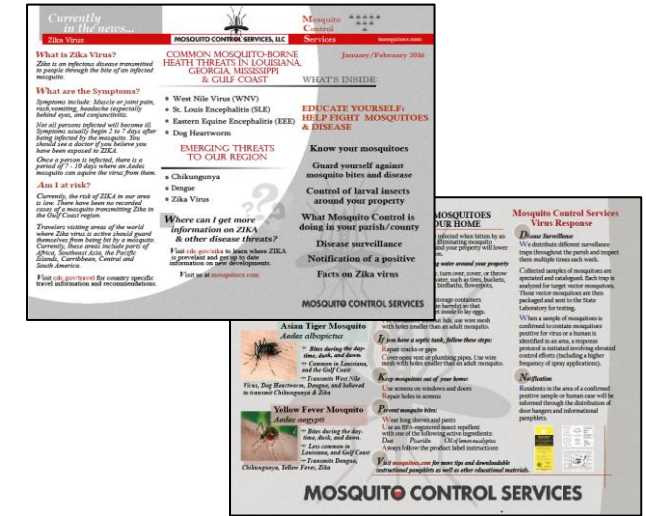
# What is Mosquito Control's Plan ?

## Additional Surveillance

- Looking for high populations of vector mosquitoes
- Parish wide use of multiple surveillance traps and methods
- Larva sampling
- Additional inspections
- Focused treatments
- Public education

## Threshold Treatments

- Thorough inspections
- Frequent adulticiding treatments
- Re-trapping
- Public information distribution





# Our response to a positive sample

- Confirmation by DHH and/or State Laboratory
- Initiate our predesigned protocol
  - Previously tested on Chikungunya cases in other districts
    - Inform public (pamphlets)
    - Frequent sprays at earlier period of the day
    - Inspectors door to door
    - Hand fogging
    - Trapping & sample testing
    - Currently testing new techniques

**Tracking Down Your Mosquito Problems**

Do you have mosquitoes in your house and yard? You may be getting your own answer. You and we may be tracking.

- St. Louis Encephalitis Mosquitoes
- Southern House Mosquitoes
- Asian Tiger Mosquitoes
- Yellow Fever Mosquitoes
- Tree Hole Mosquitoes
- West Nile Virus Mosquitoes
- Sporadic Mosquitoes

The solution is simple, cheap and pesticide-free. Check your yard for breeding in all locations indicated in this brochure, and follow the directions given.

Don't overfill a single small pool of water even if there are no mosquito larvae present—they will be there. A half-cup of water can produce enough mosquitoes to cause a problem.

Mosquito larvae and pupae will settle to the bottom of the container if disturbed. They are 1/8" to 1/2" long and look like the silkworm in the picture.

**Tell Free - Nationwide 1-800-256-1784**

**MOSQUITO CONTROL INC.**

**-LOUISIANA-**  
 Local Offices:  
 Jefferson Parish (504) 364-8884  
 St. Charles Parish (985) 783-2417  
 St. John Parish (985) 536-6530  
 Terrebonne Parish (337) 380-1429

**-MISSISSIPPI-**  
 Local Office:  
 Jackson County (228) 763-8937  
 Hancock County (228) 467-2429

1. Old tires are a favorite breeding site for mosquitoes. Discard them or put in a building if not possible, stack flat and cover the top of each stack.

2. Fresh rain water is great to drink and to water house plants. Mosquitoes like it too. Cover the barrels with house screens to prevent mosquitoes from laying eggs.

3. Unused or poorly maintained kiddie pools, ponds that hold water need to be drained. Empty pools or tanks weekly or add chlorine as required.

4. Horticultural bulbs, when the water inside rots, will breed mosquitoes. Check biweekly and flush with water to remove debris that are sometimes difficult to see among the plants in the soil.

5. Water-filled tree holes are favorite breeding sites. Check biweekly or weekly. Fill with sand or cement.

6. Voids under slabs can hold water for long periods of time. Seal openings with sand or concrete.

7. Mosquitoes in natural or manmade ponds can be prevented by removing any vegetation or debris with removal.

8. Bird baths, barbeque pits, car trays and other small containers that hold water can produce mosquitoes if not covered or turned upside down. Rinse frequently with water and bail out any water in a week.

9. Beams on trailers, dry stacks of wood and other debris can collect water and breed mosquitoes if not covered or turned upside down. Rinse frequently with water and bail out any water in a week.

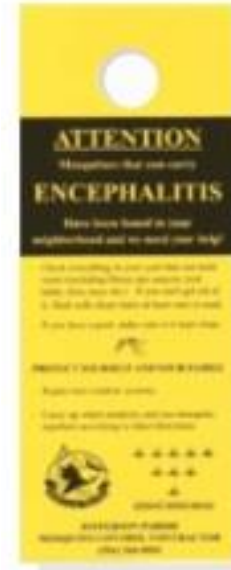
10. Potted plants with porous soil trays and other small containers that hold water can produce mosquitoes. Turn and remove the soil if possible or dump any unnecessary water.

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12. Drainage ditches with emergent vegetation are good breeding sites. Don't overwater plants. Remove the vegetation and remove the soil if possible or dump any unnecessary water.

13. Standing water in tree groves, the house and swales can breed mosquitoes. Fill and regrade if possible and keep grass mowed. Check under faucets.

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# Protect yourself against Mosquito Bites & Disease

## Eliminating mosquito breeding areas

- Once a week, empty, turn over containers.
- Tightly cover water storage containers
- For containers without lids, use wire mesh

## If you have a septic tank, follow these steps:

- Repair cracks or gaps
- Cover open vent or plumbing pipes

## Keep mosquitoes out of your home:

- Use screens on windows and doors
- Repair holes in screens

## Prevent mosquito bites:

- Wear long sleeves and pants
- Use an EPA-registered insect repellent with one of the following active ingredients:  
Deet, Picaridin, IR3535, Oil of lemon eucalyptus
- Always follow the product label instructions



## St. Charles Parish Facility

- Located on Rue La Cannes Road in Luling
- Stand alone facility and extra equipment
- Laboratory Facility performing efficacy & virus testing for all contracts
- Mixing facility for easy chemical rotation





# MCS PROGRAM PHASES



Aerial Application



Larvaciding



Encephalitis Surveillance



Surveillance



Ground Spraying



Public Education





## INSPECTION AND SURVEILLANCE

- GPS Mapping of Breeding Sites
- Rain Gauge Stations
- New Jersey Light Traps
- Gravid Traps/ CDC Traps
- Ovitrap Locations
- Landing Rate Sites



# LARVICIDING



- Mosquito Fish and Bio-Chemical Controls
- Catch Basin Treatments
- Ground Applications
- Aerial Applications



# GROUND ADULTICIDING

- Spray Trucks Fully Equipped with Flow Control and Truck Tracking
- ATV Equipped w/ ULV Sprayer and Larvacide Application tank
- Handheld ULVs & Thermo-foggers

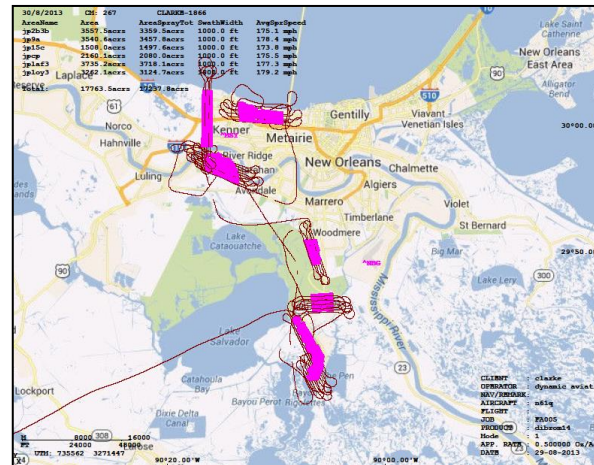


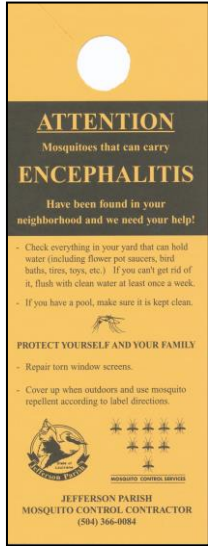


# AERIAL ADULTICIDING



- Twin- Engine Aircraft
- 2 Pilots; Night Vision Goggles
- Exempt from Dump Restriction
- Flight Master/ Ames 20 System





## DISEASE SURVEILLANCE

- Monitoring Disease Vector Populations Year Round
- MCS Laboratory is Backup to LSU Laboratory
- Proven Surveillance & Response Protocol
- Gravid Traps & CDC Traps





# PUBLIC EDUCATION PROGRAM

- Residential Inspections
- Informative Pamphlets
- PowerPoint Presentations
- Contracted Radio Spots



**INSPECTION AND MAPPING**

The solution to mosquito troubles begins by defining the problem. Mosquito Control Services, LLC, locates, maps, and categorizes important mosquito breeding sites, gathers rainfall information, monitors adult mosquito activity and operates a 24-hour toll-free hotline for public mosquito reports.

Data are collected year-round and are computer-processed to direct equipment and personnel for precise site-specific control.

**24-HOUR TOLL-FREE HOTLINE**  
504-366-0084

**CONTROL OF LARVAL INSECTS**

After the immature mosquitoes (larvae) are located in their water habitats, crews work to suppress their ability to become adults. Bio-chemical sprays containing bacteria or insect growth-regulating hormones are used to address the larvae.

If the location is suitable, Mosquito Control Services, LLC will transport mosquito fish to the breeding site. The fish then feed on mosquito larvae, providing a natural biological solution to the problem. These mosquito fish are provided to homeowners free of charge for use in private ponds, fountains and ornamental pools.

**SPRAY FREQUENCY AND LOCATION**

Areas are prioritized due to need and sprayed accordingly with the addition of some general maintenance spraying from time to time. Frequency of the truck spray operation varies depending on mosquito population as determined by data. Aerial applications are used when salt marsh or floodwater mosquito population reaches critical levels as determined by surveillance data, or to supplement ground control efforts. Infestation, surveillance, abatement, encephalitis monitoring, testing and site inspections generally occur during the daytime hours. Spraying via trucks and aircraft begin at dusk and continues for about 2-3 hours.

**ECO-FRIENDLY TECHNOLOGY**

While effective, chemical insecticides are not always the best solution. That's why the contractor opts for nature's technology whenever possible. Many of the sprays contain bacteria or insect growth-regulating hormones that have little or no effect on the environment and non-targeted organisms. Routine rotation of the control methods used helps reduce the possibility of the target insect population building a tolerance to the control methods and lessens the impact on the environment. Regardless of the control product used, biologists routinely perform laboratory and field tests to evaluate effectiveness and potential for the product to contribute to resistance by the insect.





## ADDITIONAL SERVICES

- Special Event Barrier Treatments
  - Truck & Backpack Applications
- Encephalitis and Efficacy Testing
  - Bottle Bio-Assays
  - Field Cage Tests
  - Larvacide Ditch Tests
- Droplet Testing
- ULV Spray Applications of Drains





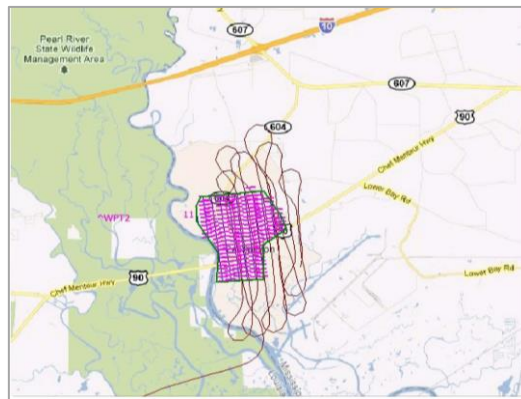
# From Research to Practice

We are proud to be a leader in procedural development

- Education
  - Hire trained biologists and entomologists
  - Attend National, Regional, and State conferences
  - Train public employees
  - Teach at State conferences and State training sessions
- We have used these resources to develop procedures
  - Expanded surveillance
  - Virus responses
  - Operational practices
- Results
  - Increase efficacy
  - Decrease liability



- Speed of Spray Trucks
- Ounces per minute
- Droplet characterization
- Rotation of chemicals



- Rotary Atomizers
- AgNav Spray System
- Onboard Weather system
- Field Tested




# WEBSITE REDEVELOPMENT

**MOSQUITO CONTROL SERVICES, LLC**


[privacy](#) | [terms & conditions](#) | [home](#)

- [About Us](#)
- [Government & Corporate Services](#)
- [Residential Information](#)
- [Contact Us](#)




Mosquito Control Services is an industry leader due to its science-based approach.

The effective control of mosquitoes is a technical, ecological and fiscal challenge. Mosquito Control Services provides targeted strategies that work to eliminate your mosquito problems, protect the environment and prevent potential liabilities. Our science-based strategy combines biological control with modern short-lived insecticides that are of little threat to the environment—giving you the best and most comprehensive mosquito control program available.




SERVICE REQUEST

SUBMIT REQUEST




ZIKA VIRUS INFO

**Encephalitis Notifications**




What does an encephalitis notification mean to me and my family? View the latest encephalitis information [here >>>](#)

**What Can I Do in My Backyard?**



You can help by taking a few precautions in your own backyard. [Learn more >>>](#)

**Information Request**



Need some additional information on the services we offer to governments and industries? Submit an information request [here >>>](#)


**STAT topic:**  
February 18, 2016  
Study Suggests Zika can cross the placenta, adding to evidence of microcephaly link ([Reuters](#))  
-statnews.com/series/zika-update


**What is Zika Virus?**  
*Zika is an infectious disease transmitted to people through the bite of an infected mosquito.*

**What are the Symptoms?**  
*Symptoms include: Muscle or joint pain, rash, vomiting, headache (especially behind eyes), and conjunctivitis.*  
*Not all persons infected will become ill. Symptoms usually begin 2 to 7 days after being infected by the mosquito. You should see a doctor if you believe you have been exposed to Zika.*  
*Once a person is infected, there is a period of 7 - 10 days where an Aedes mosquito can acquire the virus from them.*


**Am I at risk?**  
*Currently, the risk of Zika in our area is low. There have been no recorded cases of a mosquito transmitting Zika in the Gulf Coast region.*  
*Travelers visiting areas of the world where Zika virus is active should guard themselves from being bit by a mosquito. Currently, these areas include parts of Africa, Southeast Asia, the Pacific Islands, Caribbean, Central and South America.*

Click on your State to visit your Department of Health to get local updates!







Official Zika Facts.




Pregnancy & Zika: What is known.




Traveling? Check here to see where Zika currently is...



Know your mosquitoes  
Learn the life cycle



Learn to Prevent Bites & Mosquito Breeding



MOSQUITO CONTROL SERVICES, LLC