

Chikungunya, Dengue or Zika virus response plan St. Tammany Parish Mosquito Abatement District

Local Risk

St. Tammany Parish has established populations of Chikungunya (CHIKV), Dengue (DENV), and Zika virus (ZIKV) vector species *Aedes aegypti* and *Ae. albopictus* (Figure 1). Focal populations of *Ae. aegypti* and widespread populations of *Ae. albopictus* in St. Tammany mean that there is some risk of local transmission of these viruses. These vectors are active seasonally from April to November in St. Tammany. Despite the presence of mosquitoes that are capable of transmitting these viruses, the risk of widespread local outbreaks of CHIKV, DENV, or ZIKV in St. Tammany is low due to relatively limited human contact with these mosquitoes. STPMAD is prepared to perform surveillance and mosquito control in response to imported or locally acquired human cases of CHIKV, DENV, and/or ZIKV. At this time, we do not expect widespread transmission of CHIKV, DENV, or ZIKV in St. Tammany Parish.

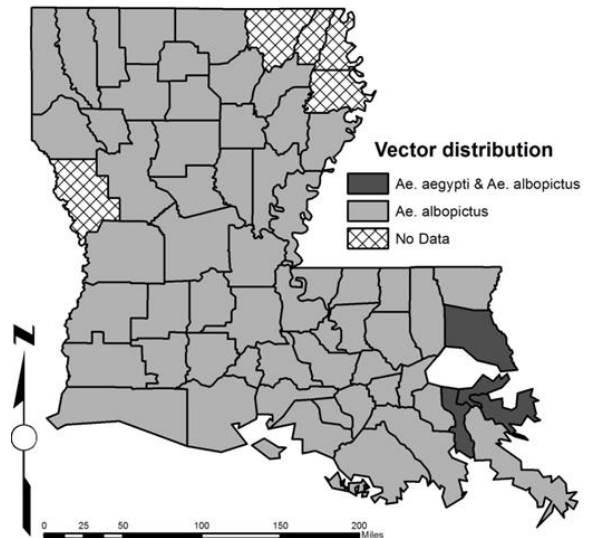


Figure 1. Distribution of Zika virus vectors across Louisiana. Note *Ae. aegypti* is present in a focal area of south Slidell only in St. Tammany Parish.

Disclaimer

The elements of this document should serve as a suggested basis for control decisions, but should not preclude the consideration of additional contextual circumstances that may arise. We withhold the right to change any part of this document or response plan based on the local conditions at the time in which the control decisions are made.

I. Prior to local importation of CHIKV, DENV, or ZIKV STPMAD will:

1. Continue routine monitoring of the abundance and presence of CHIKV, DENV, and ZIKV vectors *Ae. aegypti* and *Ae. albopictus* by human landing counts, host-seeking traps, BG Sentinel, Mosquito Magnet, Nasci vegetation aspirators, Prokopac aspirators, Gravid Aedes traps, and ovitraps.
2. Perform a baseline container-inhabiting Aedes spp. survey in select neighborhoods to: 1) determine the potential abundance of vector habitat, 2) educate the public about risk reduction, and 3) perform a “dry run” of door-to-door source reduction
3. Design and pilot a residential source reduction program called “Mosquito Proof Your Life”, which will work at the neighborhood level to educate and empower residents to reduce their risk of mosquito-transmitted diseases.

4. Initiate communications and planning meetings with partner agencies within and outside parish government including:
 - a. St. Tammany Parish President's office
 - b. St. Tammany Parish Homeland Security
 - c. Tulane National Primate Research Center
 - d. Louisiana Mosquito Control Association
 - e. Louisiana Arbovirus Working Group
 - f. New Orleans Mosquito, Termite, and Rodent Control Board

II. In the event of notification of an imported human case of CHIKV, DENV, or ZIKV...

A. In the region or neighboring parish

STPMAD will (pending availability of resources):

1. Offer assistance with vector surveillance to assess the risk of local transmission to mosquito vectors and/or determine whether local mosquito transmission has occurred.
2. Offer assistance with existing educational material.
3. Discuss the possibility of using STPMAD mosquito control tools including airplane, and truck sprays.

B. In St. Tammany Parish

STPMAD will:

1. Create a map of the area in the vicinity of the human case. Highlight areas within 200m of the human case residence to focus surveillance and control activities.
2. Immediately begin vector surveillance in the vicinity of the human case to assess the risk of local transmission to mosquito vectors and/or determine whether local mosquito transmission has occurred. This should be conducted prior to mosquito control operations in the area. Surveillance should be conducted twice weekly at this site for at least 2 weeks or as indicated by trap data.
 - Aspirate mosquito specimens for CHIKV/DENV/ZIKV testing (Prokopac and Nasci aspirators)
 - Collect mosquitoes in traps (Mosquito Magnet and BG Sentinel 2) for CHIKV/DENV/ZIKV testing
3. Consider appropriate vector control activities in the vicinity of the human case.
 - Aerial application of mosquito adulticides
 - Special mix truck application of mosquito adulticides
 - Aerial application of mosquito larvicides
 - Door-to-door source reduction
4. Communicate among appropriate partners.
 - Parish president's office
5. Engage residents in door-to door general mosquito education and source reduction.
 - use existing general mosquito avoidance flyer or door hanger

III. In the event of notification of a locally acquired human case of CHIKV, DENV, or ZIKV...

A. In the region or neighboring parish

STPMAD will (pending availability of resources):

1. Offer assistance with vector surveillance to assess the risk of continued local transmission to mosquito vectors and the geographic extent of local transmission.
2. Offer assistance with existing educational material.
3. Discuss the possibility of using STPMAD mosquito control tools including airplane, and truck sprays.

B. In St. Tammany Parish

STPMAD will:

1. Create a map of the area in the vicinity of the human case. Highlight areas within 500m of the human case residence to focus surveillance and control activities.
2. Immediately begin vector surveillance in the vicinity of the human case to assess the risk of continued local transmission to mosquito vectors and/or determine the geographic extent of transmission. This should be conducted prior to mosquito control operations in the area. Surveillance should be conducted twice weekly at this site for at least 2 weeks or as indicated by trap data.
 - Aspirate mosquito specimens for CHIKV/DENV/ZIKV testing (Prokopac and Nasci aspirators)
 - Collect mosquitoes in traps (Mosquito Magnet and BG Sentinel 2) for CHIKV/DENV/ZIKV testing
3. Immediately begin vector control activities in the vicinity of the human case.
 - Aerial application of mosquito adulticides
 - Special mix truck application of mosquito adulticides
 - Aerial application of mosquito larvicides
 - Door-to-door source reduction
4. Communicate among appropriate partners.
 - Parish president's office
 - LA Office of Public Health
5. Engage residents in door-to door general mosquito education and source reduction.
 - Use CHIKV/DENV/ZIKV targeted messaging (e.g. flyer or door hanger)