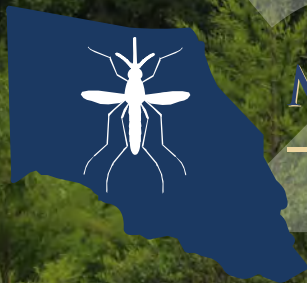


Monthly Report

MAY



MOSQUITO ABATEMENT
ST. TAMMANY PARISH

2019

From the Director:

A momentous May began with an unprecedented media and public outreach campaign and ended with first indication of active *West Nile virus* (WNV) transmission in mosquitoes in St. Tammany.

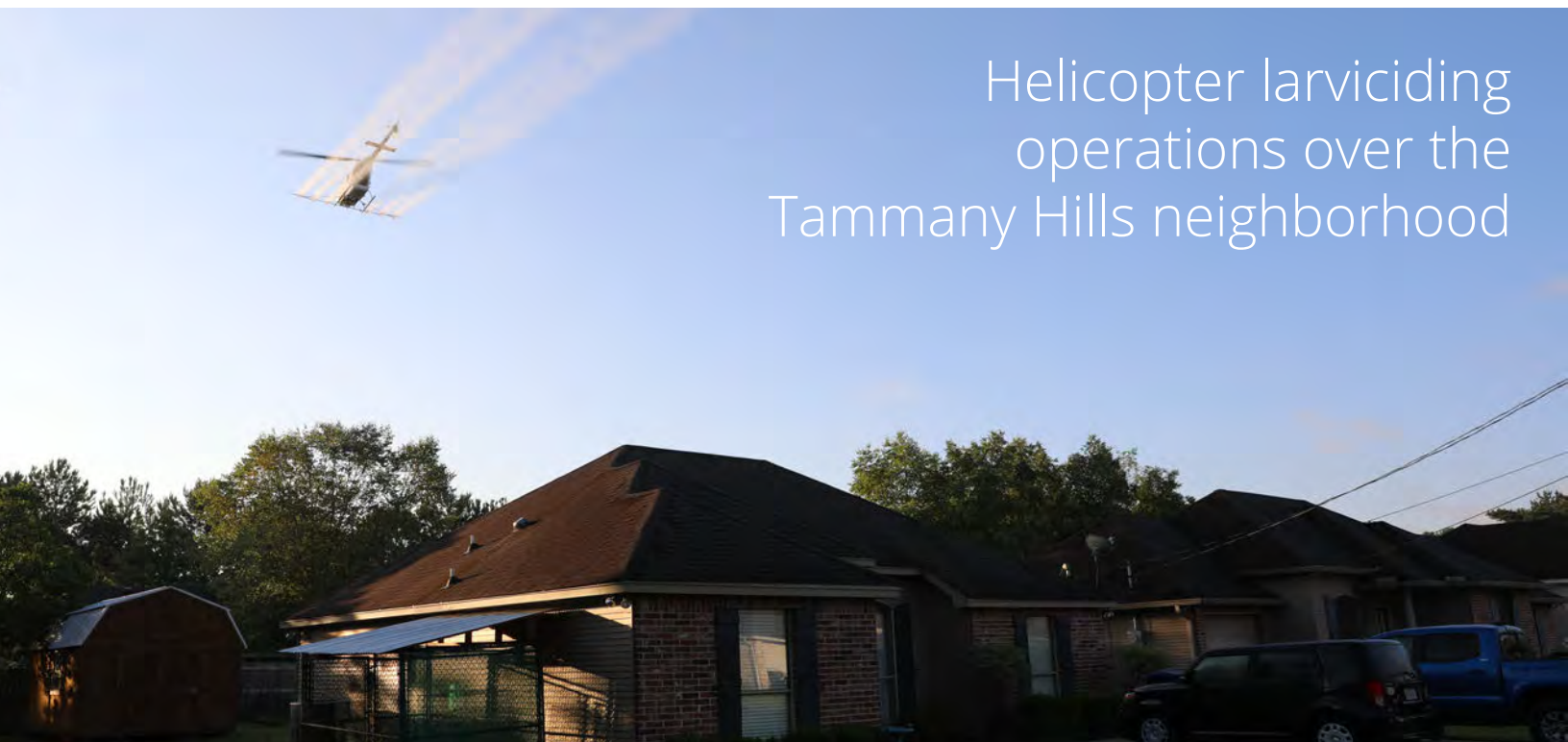
Beginning with a presentation to the St. Tammany Parish Council on May 2nd and a press conference on May 3rd, an extensive campaign focused on communicating our use of a helicopter to perform mosquito control operations. In the weeks prior to the first helicopter applications, residents received mailed flyers describing the treatments designed to kill larval mosquitoes. In addition, extensive posts to social media sites, including Next Door and Facebook, delineated the strategy and safety of this approach. Four helicopter applications with the larvicide *Bacillus thuringiensis israelensis* (Bti) were conducted weekly starting on May 21 and continuing through June 12, 2019. A preliminary review of the efficacy data of these applications suggest excellent control (up to 92%) in small containers, but reduced efficacy in heavily polluted roadside ditches that receive sewage effluent from residences. A more complete accounting of the efficacy evaluation of this product and application strategy will be included in next month's report.

The first WNV-infected mosquito pools in the state in 2019 were collected in a trap in the Tammany Hills neighborhood in south Covington on May 21. A second pool of WNV-infected southern house mosquitoes, *Culex quinquefasciatus*, were also collected at a site nearby the first pool on June 3. An all-out effort to respond to the identification of active WNV transmission in this area has included additional aerial and truck adulticide missions and additional truck-based and helicopter applications of larvicide products.

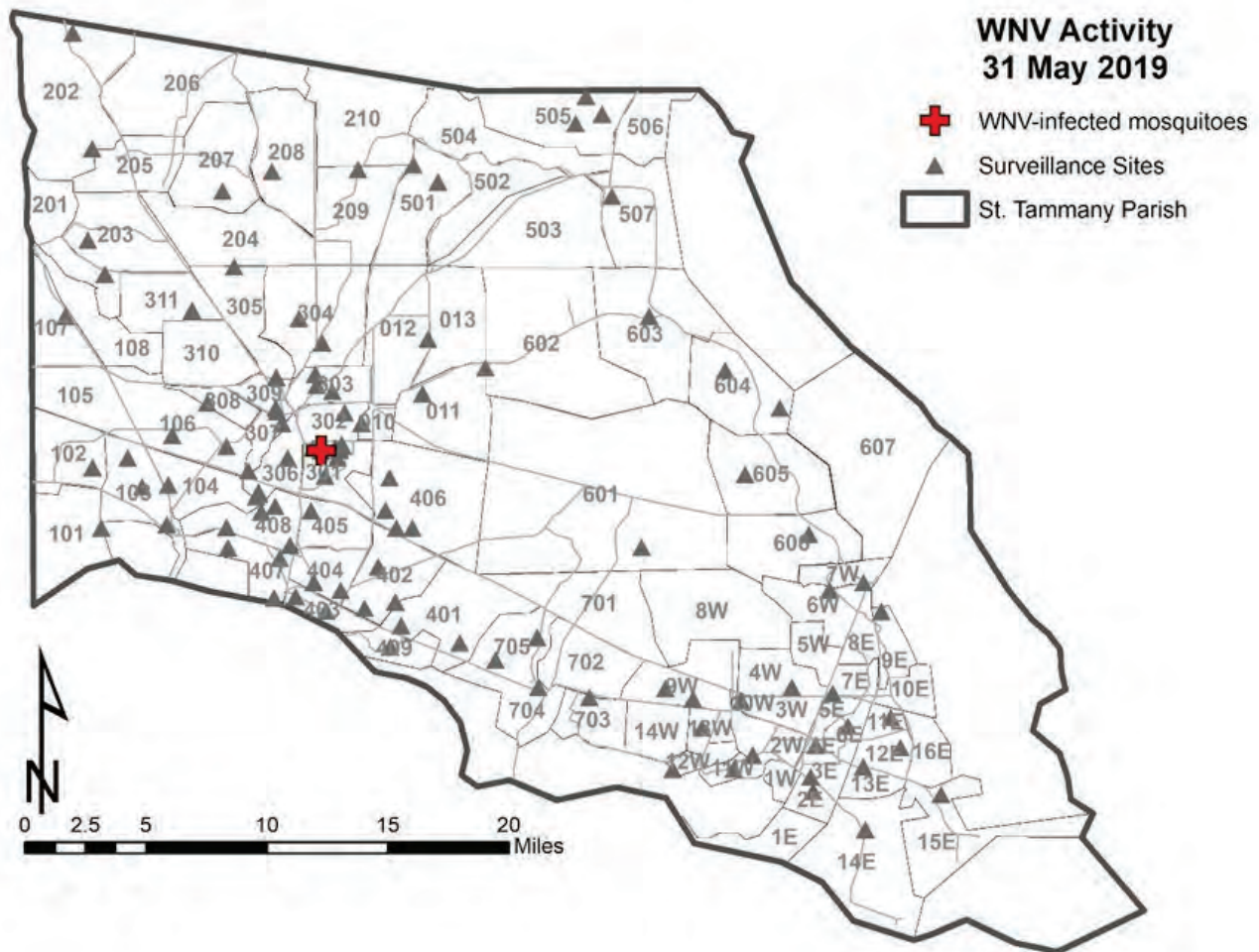
Now is the time of year to take precautions to minimize your risk of WNV infection by wearing CDC recommended mosquito repellent and emptying all water-holding containers around your home once a week. Another important step is to make certain your septic system is in proper working order, including having it pumped out if necessary and checking to make certain aerators are operable. Also, controlling the vegetation in the ditches helps to allow the larval control treatments to reach the water surfaces.



Helicopter larviciding
operations over the
Tammany Hills neighborhood



Arbovirus Report



One of the 349 pools of mosquitoes, tested from specimens collected in May, was positive for *West Nile virus* (WNV) infection. A total of 12,786 mosquitoes were collected and tested for WNV in May across St. Tammany Parish. Adult mosquitoes are collected using a variety of devices and tested in pools (or groups) via RT-PCR, by the Louisiana Arbovirus Disease Diagnostic Laboratory (LADDL) in Baton Rouge. The presence of WNV in mosquitoes indicates a focal risk of WNV infection to people in specific areas of St. Tammany Parish. The WNV-infected mosquito pool consisted of the primary vector, *Cx. quinquefasciatus*, collected on May 21 from the Tammany Hills neighborhood in south Covington.

The Louisiana Department of Health has not reported any human cases of WNV or any other arbovirus this year-to-date in St. Tammany.

West Nile virus Risk Level

the current risk advisory is:

High

Moderate

Slight

Low

Though the parish-wide WNV risk may be slight, focal areas likely are experiencing elevated risk. Residents are urged to take measures to minimize the risk of contracting WNV by avoiding mosquito bites by applying CDC recommended repellents, ensure sewage systems are operable, and vegetation is maintained in roadside ditches.



Mosquito Report



After a wet start to the month, a pronounced period of hot dry weather in mid-May contributed to the fouling of roadside ditch habitats. As the production of our primary WNV vector, the southern house mosquito, is associated with drought conditions, the more organically rich standing water is the more attractive and productive this habitat becomes for this mosquito. Consequently, average abundance of this mosquito has dramatically increased from 13 mean/trap night in April, to 58 mean/trap night in May. Across all species and traps a total of 71,401 mosquitoes were collected in May or an average of 241.2 per trap night (down 13.1% from April's average of 277.5 mosquitoes). The reduction in total mosquitoes and the average mosquito abundance per trap is the result of the reduction in the brackish water mosquito, *Cx. salinarius*. In its place the primary WNV vector, *Cx. quinquefasciatus*, has increased with nearly half (51%) of the mosquitoes collected in May in no-light CDC traps.

71,401 130 

 trapped in April service requests completed

 29.9%  457%

decrease in brackish marsh mosquito increase in southern house mosquito



What did we do about it?

Though the total and average number of all mosquitoes collected has decreased the dramatic increase of the primary WNV vector and the identification of WNV-infected mosquitoes has triggered increased abatement efforts. The adulticide spray trucks completed 163 spray missions (up from 129) treating 127,029 acres (up from 97,164 acres in April). The Twin Otter airplane completed eight aerial adulticide missions in May, providing relief from mosquitoes to 169,323.8 acres.

Two helicopter applications of *Bti* were performed in consecutive weeks in May, treating over 440 acres in the Tammany Hills neighborhood. Another two weeks of applications were also performed in early June.

Yours in health,


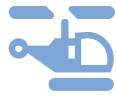
Kevin A. Caillouet, Ph.D., M.S.P.H.
Director

8  169,323.8  acres treated aerially

of aerial spray missions in May

127,029 163 

acres treated by ground # of ground spray missions in May

4  1760 

of helicopter spray missions in May and June acres treated in Tammany Hills

Figure 2. Weekly vector abundance (*Culex quinquefasciatus*) timeline through May 31st for St. Tammany Parish, LA. Current year (black line) comparisons to historical averages (dashed grey lines).

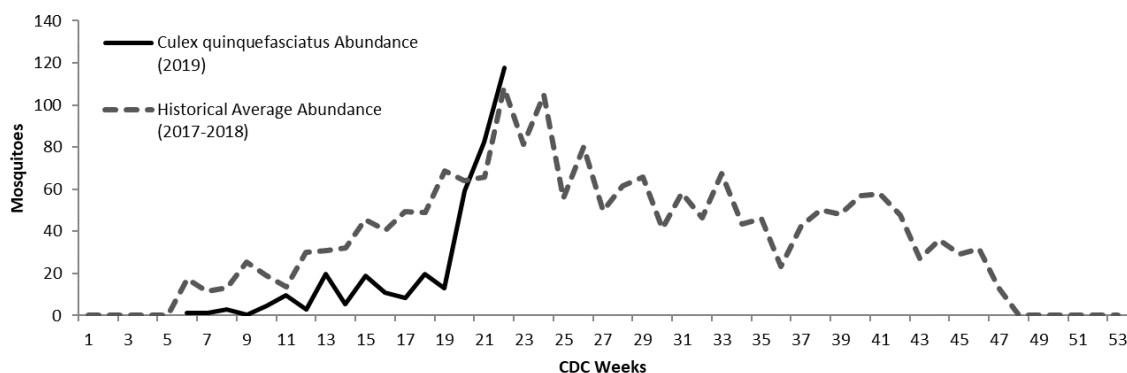


Table 1. Summary by species of mosquito pools submitted for arbovirus testing during May 2019 in St. Tammany Parish, LA.

Species	Pools		Mosquitoes		WNV-infected pools
	Number	%	Number	%	
<i>Aedes albopictus</i>	11	3.2	191	1.5	0
<i>Aedes vexans</i>	42	12.0	692	5.4	0
<i>Culex erraticus</i>	15	4.3	227	1.8	0
<i>Culex nigripalpus</i>	8	2.3	49	0.4	0
<i>Culex quinquefasciatus</i>	111	31.8	4,110	32.1	1
<i>Culex salinarius</i>	161	46.1	7,509	58.7	0
Mixed spp.	1	0.3	8	0.1	0

Table 2. Summary by collection method of mosquito pools submitted for arbovirus testing during May 2019 in St. Tammany Parish, LA.

Species	Pools		Mosquitoes		WNV-infected pools
	Number	%	Number	%	
BG Trap	2	0.6	200	1.6	0
NO LIGHT CO2-baited CDC light trap	275	78.8	9,117	71.3	1
CO2-baited CDC light trap	71	20.3	3,457	27.0	0
CDC Gravid trap	1	0.3	12	0.1	0

Table 3. Summary by week of mosquito pools submitted for arbovirus testing during May 2019 in St. Tammany Parish, LA.

Week of year	Pools		Mosquitoes		WNV-infected pools
	Number	%	Number	%	
18 (May 1 - 4)	42	12.0	1,402	11.0	0
19 (May 5 - 11)	88	25.2	2,746	21.5	0
20 (May 12 - 18)	104	29.8	3,733	29.2	0
21 (May 19 - 25)	113	32.4	4,705	36.8	1
22 (May 26 - 31)	2	0.6	200	1.6	0

Table 4. Summary of sites by week in May 2019 in which at least one pool of mosquitoes tested positive for infection by *West Nile virus*.

City	Site	Week					Monthly Total
		18	19	20	21	22	
Covington	Quincy Street	0	0	0	1	0	1