

# Memorandum



CITY OF DALLAS

DATE June 5, 2015

TO Honorable Members of the Quality of Life & Environment Committee: Dwaine R. Caraway (Chair)  
Sandy Greyson (Vice Chair), Adam Medrano, Rick Callahan, Carolyn R. Davis, Lee M. Kleinman

SUBJECT Dallas County Health and Human Services Update: West Nile Virus

On Monday, June 08, 2015, the Quality of Life & Environment committee will receive an update on West Nile Virus from Dallas County Health and Human Services. The briefing is attached for your review.

Please contact me if you have any questions.

A handwritten signature in blue ink that reads "Joey Zapata".

Joey Zapata  
Assistant City Manager

## Attachment

c: Honorable Mayor and Members of the City Council  
A.C. Gonzalez, City Manager  
Warren M.S. Ernst, City Attorney  
Craig D. Kinton, City Auditor  
Rosa A. Rios, City Secretary  
Daniel F. Solis, Administrative Judge  
Ryan S. Evans, First Assistant City Manager

Eric D. Campbell, Assistant City Manager  
Jill A. Jordan, P.E., Assistant City Manager  
Mark McDaniel, Assistant City Manager  
Jeanne Chipperfield, Chief Financial Officer  
Sana Syed, Public Information Officer  
Elsa Cantu, Assistant to the City Manager – Mayor & Council

# DCHHS Update: West Nile Virus

June 8, 2015

**Zachary Thompson**

Director

Dallas County Health and Human Services

**Dr. Christopher Perkins**

Medical Director/Health Authority

Dallas County Health and Human Services



**DCHHS**  
*Safe families, healthy lives.*

Dallas County Health and Human Services

# West Nile Virus

DCHHS has requested the DSHS laboratory use PCR testing for mosquito samples submitted from Dallas County cities.

## Positive Mosquito Traps = 5

- 1 in Mesquite 75149
- 1 in DeSoto 75115
- 3 in Grand Prairie (2 in 75052; 1 in 75050)

## Confirmed Human Cases = 0

*\* Numbers reflect information received at time of publishing and are subject to change.*

# West Nile Virus

## Residential swimming pool in Dallas County





# West Nile Virus

## Cities that have picked up mosquito dunks

CITY	SCHEDULED PICK-UP DATE	PICK-UP TIME	NUMBER OF CASES
COCKRELL HILL	05/06/15	10:30A	17
IRVING	05/06/15	11:30A	17
WILMER	05/06/15	11:45A	17
DALLAS	05/06/15	1:00P	17
RICHARDSON	05/06/15	1:40P	17
FARMERS BRANCH	05/06/15	2:00P	17
DUNCANVILLE	05/07/15	10:00A	17
CARROLLTON	05/07/15	11:00A	17
DESOTO	05/07/15	11:00A	17
UNIVERSITY PARK	05/07/15	11:32A	17
GRAND PRAIRIE	05/08/15	10:00A	17
LANCASTER	05/08/15	10:00A	17
SACHSE	05/08/15	11:00A	17
HIGHLAND PARK	05/08/15	1:30P	17
HUTCHINS	05/08/15	2:00P	17
SEAGOVILLE	05/12/15	10:00A	17
GARLAND	05/13/15	10:00A	17
CEDAR HILL	05/13/15	12:30P	17
COPPLE	05/15/15	10:30A	17
ADDISON	05/20/15	11:00A	17
BALCH SPRINGS	05/20/15	11:00A	17
ROWLETT	06/04/15	10:30A	17
GLENN HEIGHTS			17
SUNNYVALE	No dunks needed this year		0



# West Nile Virus

## Mosquito data submitted to CDC for review

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA		
#	Collected	Trap #	ID by	T	Zone	Zip	Pools	Result	Comments	M	Total	ok	err	res	Cx	sol	tar	alb	aeg	vex	Ae	trs	An	pun	qud	Or	col		
953	05/27/15	VC15-315	VC	IG	SU1	75102	1	N		7	15	1		15						1									
954	05/27/15	VC15-316	VC	IG	SU2	75102	1	N		14	41	32		3		5		1											
955	05/27/15	VC15-317	VC	IG	BS1	75180	2	N		5	75	30		39		1		3		1									
956	05/27/15	VC15-318	VC	IG	BS2	75180	1	N		54	55	63		7		1		3		2									
957	05/27/15	VC15-319	VC	IG	BS3	75180	2	N		51	5	145		3						2		1							
958	05/27/15	VC15-320	VC	IG	CO2	75098	1	N		3	25	11		20			1	3											
959	05/27/15	DL15-84	CO	IG	DL	75216	1	N		19	22	6		5					2	2							1		
960	05/27/15	DL15-85	CO	IG	DL	75216	1	N		1	11	2		4															
961	05/27/15	DL15-86	CO	IG	DL	75252	1	N		3	11	5		6															
962	05/27/15	DL15-87	CO	IG	DL	75248	1	N		1	7	1		5							1								
963	05/27/15	DL15-88	CO	IG	DL	75215	0	D	D ONLY	3	3	0																	
964	05/27/15	DL15-89	CO	IG	DL	75241	0	D	D ONLY	1	1	0																	
965	05/27/15	DL15-90	CO	IG	DL	75216	0	D	D ONLY	1	1	0																	
966	05/27/15	DL15-91	CO	IG	DL	75211	2	N		7	20	3		7						1									
967	05/27/15	DL15-92	CO	IG	DL	75235	2	N		8	31	8		18					1	1									
968	05/27/15	DL15-93	CO	IG	DL	75209	2	N		27	75	45		33					1	1									
969	05/27/15	DL15-94	CO	IG	DL	75217	2	N		44	115	30		74		5			3	2	2								
970	05/27/15	DL15-95	CO	IG	DL	75217	1	N		2	7	2		2															
971	05/27/15	DL15-96	CO	IG	DL	75287	1	N		4	9	0		7					1								1		
972	05/27/15	DL15-97	CO	IG	DL	75287	1	N		4	5	0		1					4										
973	05/27/15	DL15-98	CO	IG	DL	75241	0	D	D ONLY	1	1	0																	
974	05/27/15	DL15-99	CO	IG	DL	75216	1	N		1	19	1		1					11	2	1								
975	05/27/15	DL15-200	CO	IG	DL	75238	2	N		1	25	20		7						1									
976	05/27/15	DL15-201	CO	IG	DL	75206	0	D	D ONLY	1	2	0																	
977	05/27/15	DL15-202	CO	IG	DL	75253	1	N		3	11	3		3					7	1									
978	05/27/15	DL15-200	CO	IG	DL	75253	1	N		3	11	1		3											1				
979	05/27/15	DL15-201	CO	IG	DL	75229	1	N		5	10	1		8		1			2		0								
980	05/27/15	GA15-110	CO	IG	GA	75042	2	N		15	37	110		13		1			2		0								
981	05/27/15	GA15-117	CO	IG	GA	75042	-	-	Knocked over	-	-	-		-															
982	05/27/15	GA15-140	CO	IG	GA	75042	1	N		3	3	2		-															
983	05/27/15	GA15-145	CO	IG	GA	75044	1	N		-	12	10		2															
984	05/27/15	GA15-150	CO	IG	GA	75044	1	N		3	3	3																	
985	05/27/15	GA15-151	CO	IG	GA	75040	1	N		-	75	40		24		1			2	1									
986	05/27/15	CA15-152	CO	IG	CA	75044	1	N		3	14	10		3		1													
987	05/27/15	CA15-153	CO	IG	CA	75044	1	N		2	7	5		2															
988	05/27/15	CA15-154	CO	IG	CA	75044	1	N		3	5	2							1	1	1								
989	05/27/15	CA15-155	CO	IG	CA	75044	1	N		-	4	4																	
990	05/27/15	ME15-057	CO	IG	ME	75149	1	N		12	14	8		5		1													
991	05/27/15	ME15-058	CO	IG	ME	75149	1	N		5	25	25		9		3									1				
992	05/27/15	MF15-059	CO	IG	MF	75181	1	N		3	4	2																	
993	05/27/15	MF15-100	CO	IG	MF	75149	1	N		8	33	20		7		2			3	1									
994	05/27/15	MF15-101	CO	IG	MF	75181	1	N		-	15	4		0		2				2	2								
995	05/27/15	MF15-102	CO	IG	MF	75181	1	N		2	10	7		2															
996											3																		



# West Nile Virus

## Health Advisory issued May 21, 2015



DALLAS COUNTY  
DEPARTMENT OF HEALTH AND HUMAN SERVICES  
EPIDEMIOLOGY

Zachary Thompson  
Director

Dr. Christopher Perkins  
Health Authority/ Medical Director

From: Surya Hughes, MPH, Alice Nyakeriga, PhD, Epidemiologists  
Scott Sawlis, Tony Jenkins, Environmental Health Services  
Wendy Chung, MD, Chief Epidemiologist

To: Dallas County Medical Providers and Laboratory Staff

Date: May 21, 2015

### HEALTH ADVISORY: West Nile Virus

Dallas County Health and Human Services (DCHHS) is reporting confirmation today by our laboratory of the first positive West Nile Virus (WNV) mosquito trap for 2015 in Dallas County, which was collected May 20, 2015. The virus was detected by PCR testing in *Culex quinquefasciatus* mosquitoes, the primary vectors transmitting WNV to humans in our area. The abundance of this species of mosquitoes has still been relatively low to date, as expected this early in the season. No confirmed human cases of WNV infection have yet been reported this year in Texas or Dallas County. *Reports of human cases typically begin locally in the weeks following the first identification of WNV from area Cx. quinquefasciatus mosquitoes.*

Although the majority of WNV infections may be asymptomatic or cause mild febrile illness in humans, some individuals can develop severe illness. Clinicians should maintain a high index of suspicion for West Nile Neuroinvasive disease (WNND), which occurs in <1% of infections, typically characterized by: fever with aseptic meningitis, encephalitis, acute flaccid paralysis, altered mental status, seizures, transverse myelitis, or cranial nerve palsies, with generalized muscle weakness.

#### DCHHS is reminding medical providers to be alert for cases of WNV disease, and to send WNV antibody (IgM and IgG) testing in patients with clinically compatible symptoms.

Current testing recommendations for all patients with suspected WNF or WNND include sending WNV IgM and IgG antibodies from serum. In suspected WNND patients, the following tests should **additionally** be sent **from CSF specimens**: (1) WNV IgM and IgG antibodies in CSF, and (2) panel for IgM and IgG antibodies for other endemic arboviruses from CSF. Additional testing by PCR for WNV from CSF or serum should be considered in patients with immune suppression or very recent onset of symptoms (within 3 days of presentation).

Patients at higher risk of severe disease, including those over 60 years of age or with immune suppression (e.g. organ transplantation, chemotherapy, dialysis, HIV infection), should be reminded to take particular preventive measures to avoid mosquito exposures, including wearing long sleeves and pants when outside and using EPA registered repellents such as DEET.

Active public health surveillance for WNV in mosquitoes and humans is ongoing through this season. Additional health advisories will be issued if vector indices are noted to be significantly increasing, and when human WNV infections begin to be reported. Please report suspected WNV cases as soon as possible by fax to DCHHS at (214) 819-1933. For questions please contact DCHHS at (214) 819-2004. Information about WNV is available at [www.cdc.gov/incdd/dvbd/westnile/index.htm](http://www.cdc.gov/incdd/dvbd/westnile/index.htm).



# West Nile Virus

## Surveillance Report

### Dallas County Health and Human Services West Nile Surveillance Report



Week 19 ending May 16, 2015

- Of the 347 mosquito traps from weeks 19 and 20 for which results have been reported, one pool tested positive for WNV, the first positive trap in our County for the season.
- Although the abundance of *Cx. quinquefasciatus* is currently low as expected at this time in the season, the average abundance is slightly higher compared to the same reporting time last year.
- No human WNV cases have been reported to date for 2015, in Dallas County.

Mosquito Laboratory and Human Case Surveillance Data, Dallas County

Week Ending MMWR Week	4/18	4/25	5/2	5/9	5/16	5/23	YTD
Total Traps Placed in Dallas County <sup>a</sup>	104	126	134	182	177	170	1,050
Number of Pools Tested (PHL, IL) <sup>b,c</sup>	13; 9	19; 28	16; 19	69; 24	83; 23	107; 26	294; 155
Number of Trap Results Currently Pending	0	0	0	0	0	0	0
Average Number of <i>Cx. quinquefasciatus</i> per Trap <sup>d</sup>	4.12	7.04	1.8	5.00	11.14	11.74	6.50
Total Number of <i>Cx. quinquefasciatus</i> Trapped and Tested	222	736	171	1,419	1,706	1,975	6,800
Number of Positive Mosquito Pools (PHL; IL) <sup>e</sup>	0; 0	0; 0	0; 0	0; 0	0; 0	1; 0	1; 0
WNV Infection Rate per 1,000 <i>Cx. quinquefasciatus</i> <sup>f</sup>	0	0	0	0	0	0.54	0
Weekly Vector Index (VI) <sup>g</sup>	0	0	0	0	0	0.01	0
Presumptive WNV Viraemic Blood Donors	0	0	0	0	0	0	0
Confirmed WNV Human Cases (WNND; WNHC) <sup>h</sup>	0; 0	0; 0	0; 0	0; 0	0; 0	0; 0	0; 0

- All traps deployed in municipalities reporting data to LCHHS since week 13. Includes traps without mosquitoes; malfunctioning traps and traps with pending results.
- Includes traps without female *Culex quinquefasciatus* identified. Maximum of 50 female *Culex quinquefasciatus* per pool; more than 1 pool may be tested per trap.
- See [Dallas County Mosquito Control](#) for more information on the testing process.
- Average abundance of female *Culex quinquefasciatus* mosquito traps per trap-night (pool) (includes non-working traps).
- WNV infection rate per 1,000 *Culex quinquefasciatus* (PHL; IL). Reported as:  $\frac{\text{Number of Positive Pools}}{\text{Total Number of Pools Tested}} \times 1,000$ .
- The Vector Index (VI) reflects the MCI adjusted for *Culex quinquefasciatus* abundance.  $VI = \frac{MCI}{\text{Average Number of } Cx. quinquefasciatus \text{ per trap-night}}$ .
- Human cases by week of report to health department. WNND = West Nile Neuroinvasive Disease; WNHC = West Nile Human Case.

Figure 1: All WNV Negative and Positive Mosquito Traps Collected During Weeks 17-20\*, 2015 Season

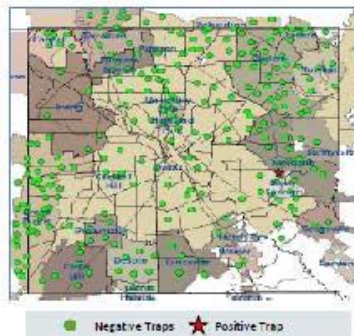
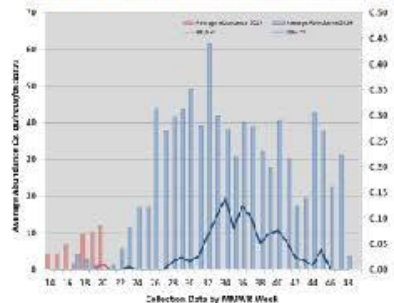


Figure 2: Average numbers of female *Cx. quinquefasciatus* per trap-night and Vector Index by week: 2014 and 2015 Seasons



\*Figure 1 only shows traps for which results were available; pending results and malfunctioning traps were not included. All traps are at their own risk. Most recent 2-3 weeks data are preliminary and subject to change following receipt of data still pending.





# West Nile Virus

## Cases from 2002 to 2014

Dallas County West Nile Virus Cases  
2002 to 2014

YEAR	HUMAN CASES	POSITIVE MOSQUITO TRAPS	HUMAN DEATHS
2002	34	42	3
2003	50	116	4
2004	16	108	
2005	44	190	1
2006	104	187	4
2007	23	117	
2008	9	40	
2009	16	124	1
2010		1	
2011	2	8	
2012	398	264	21
2013	16	192	2
2014	12	174	