

# West Nile Virus Outbreak in Houston and Harris County, Texas, USA, 2014

## Technical Appendix

**Technical Appendix Table 1.** Total number of WNV cases by year for the state of Texas and Houston/Harris County, TX\*

Year	Texas WNV cases			Harris County, Texas WNV cases
	Fever	Neuroinvasive	Total deaths	Total deaths
2002	NR	202	202 (13)	106 (12)
2003	289	431	720 (37)	48 (3)
2004	57	119	176 (8)	38 (3)
2005	67	128	195 (11)	42 (1)
2006	121	233	354 (32)	68 (5)
2007	90	170	260 (16)	20 (2)
2008	24	40	64 (1)	6 (1)
2009	22	93	115 (9)	10 (1)
2010	12	77	89 (6)	32 (1)
2011	7	20	27 (2)	17 (0)
2012	1,024	844	1,868 (89)	115 (4)
2013	70	113	183 (13)	9 (0)
2014	126	253	379 (6)	139 (2)
<b>Total</b>	<b>1,909</b>	<b>2,723</b>	<b>4,632 (243)</b>	<b>650 (35)</b>

\*WNV, West Nile virus; NR, none reported.

**Technical Appendix Table 2.** Number of WNV and SLE confirmed positive mosquito pools collected from different mosquito species throughout Harris County and the City of Houston, TX, 2014

Mosquito species	No. traps	Total no. females	Total no. males	Percent collected	Total no. pools	Females pooled	WNV+	SLE+
<i>Culex quinquefasciatus</i>	8,651	720,121	93,115	92.02	9,698	347,259	1,285	1
<i>Aedes taeniorhynchus</i>	564	18,592	4,833	2.37	30	205	0	0
<i>Aedes albopictus</i>	2,449	17,776	10,940	2.27	1,208	13,737	1	0
<i>Aedes aegypti</i>	1,957	7,876	3,062	1.00	1,114	6,375	0	0
<i>Culex salinarius</i>	1,361	7,498	147	0.95	277	998	0	0
<i>Culex restuans</i>	645	2,452	55	0.31	42	89	0	0
<i>Culex coronator</i>	613	2,019	108	0.25	67	200	0	0
<i>Aedes vexans</i>	402	1,685	53	0.21	22	27	0	0
<i>Culex nigripalpus</i>	530	1,042	78	0.13	101	186	0	0
<i>Psorophora columbiae</i>	164	701	139	0.08	2	2	0	0
<i>Culiseta inornata</i>	190	643	20	0.08	4	4	0	0
<i>Culex erraticus</i>	156	472	136	0.0603	19	30	0	0
<i>Anopheles quadrimaculatus</i>	260	403	85	0.0514	9	12	0	0
<i>Psorophora cyaneescens</i>	29	370	3	0.0472	1	1	0	0
<i>Aedes sollicitans</i>	86	307	9	0.0392	1	1	0	0
<i>Psorophora howardii</i>	32	143	23	0.0182	0	0	0	0
<i>Psorophora ferox</i>	36	61	13	0.0077	3	3	0	0
<i>Psorophora longipalpus</i>	23	50	1	0.0063	0	0	0	0
<i>Mansonia titillans</i>	33	46	0	0.0058	4	6	0	0
<i>Anopheles crucians</i>	35	46	1	0.0058	4	4	0	0
<i>Uranotaenia lowii</i>	38	43	1	0.0054	0	0	0	0
<i>Toxorhynchites rutilus septentrionalis</i>	33	32	4	0.0040	0	0	0	0
<i>Culex tarsalis</i>	17	30	1	0.0038	0	0	0	0
<i>Psorophora ciliate</i>	16	28	0	0.0035	0	0	0	0
<i>Aedes triseriatus</i>	25	28	0	0.0035	2	2	0	0
<i>Uranotaenia sapphirina</i>	23	23	1	0.0029	0	0	0	0
<i>Anopheles punctipennis</i>	14	16	1	0.0020	0	0	0	0
<i>Anopheles pseudopunctipennis</i>	4	12	1	0.0015	0	0	0	0
<i>Aedes fulvus pallens</i>	9	11	1	0.0014	0	0	0	0
<i>Psorophora horrida</i>	3	8	3	0.0010	0	0	0	0
<i>Orthopodomyia signifera</i>	7	7	0	0.0008	0	0	0	0

Mosquito species	No. traps	Total no. females	Total no. males	Percent collected	Total no. pools	Females pooled	WNV+	SLE+
<i>Aedes nigromaculis</i>	4	5	0	0.0006	0	0	0	0
<i>Aedes atlanticus</i>	3	4	0	0.0005	0	0	0	0
<i>Coquillettidia perturbans</i>	1	1	0	0.0001	0	0	0	0

\*WNV, West Nile virus; SLE, St. Louis encephalitis virus; TX, Texas.

**Technical Appendix Table 3.** Calculations of the cost of acute medical care and loss of productivity as a result of the 2014 Houston/Harris County, Texas WNV outbreak\*

Case status	Barber <i>et al.</i> estimated costs per case in 2005 (range)	Cost adjusted to 2014 US dollars† (range)	No. cases	Cost estimate of 2014 outbreak
WNND	\$46,531 (\$13,201-\$140,257)	\$56,403 (\$16,001-\$170,014)	105	\$5,922,315 (\$1,680,105-\$17,851,470)
WNF	\$1,170 (\$1,128-\$1,235)	\$1,418 (\$1,367-\$1,497)	34	\$48,212 (\$46,478-\$50,286)
Total	NA	NA	139	\$5,970,527 (\$1,726,583-\$17,901,756)

\*WNF, West Nile Fever; US, United States; WNND, West Nile neuroinvasive disease; NA, not applicable.

†Bureau of Labor Statistics Consumer Price Index Calculator: [www.bls.gov/data/inflation\\_calculator.htm](http://www.bls.gov/data/inflation_calculator.htm)