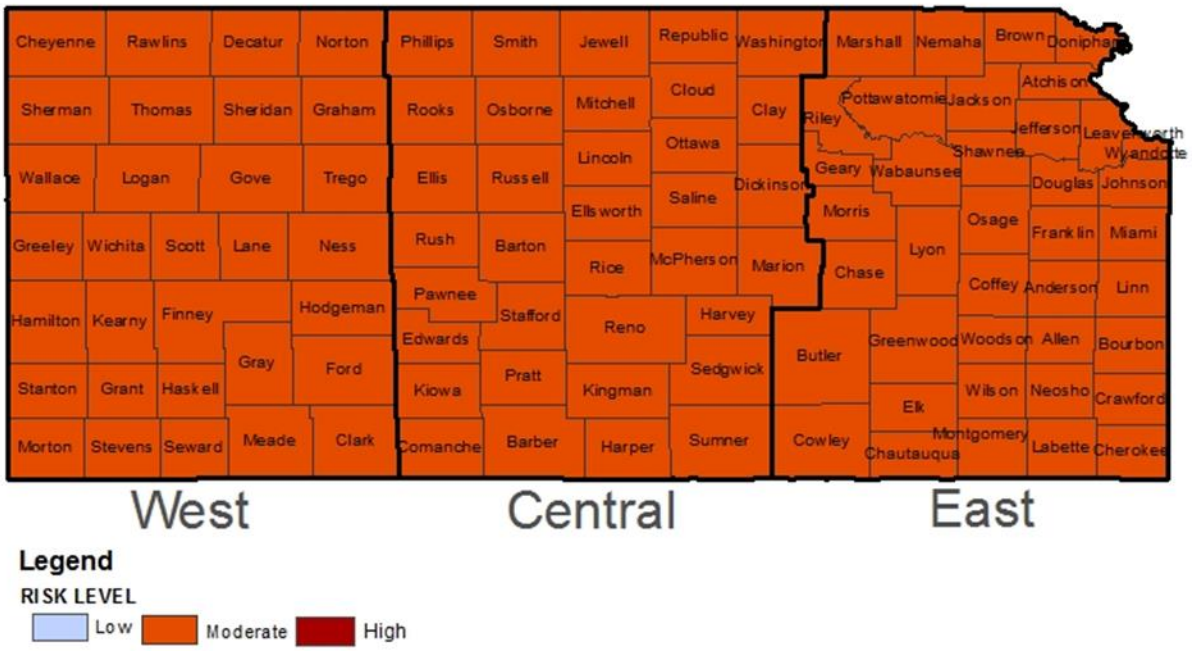
Kansas West Nile Virus (WNV) Weekly Surveillance and Transmission Risk Report

Week Ending October 13, 2017 (Week 21)

Highlights this week:

- The West Nile virus risk level decreased to moderate for all regions due to decreased numbers of *Culex* spp. mosquitoes.
- Four additional human cases of WNV were identified this week.
- Seven WNV human case investigation are in progress.
- No veterinary cases of WNV were identified this week.

West Nile virus Transmission Risk Level by Region*



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Key to West Nile Virus Risk Levels in Kansas - 2017		
Risk	**What it Means**	**What You Can Do**
Minimal	The mosquito species that carries WNV has not been detected. This does *not* mean the risk is zero.	**To Prepare:** Mosquito-Proof Your Home: • Keep screens on windows and doors in good repair. • Use air conditioning if you have it. • Drain - Reduce number of mosquitoes around your home by emptying standing water from flowerpots, gutters, buckets, pool covers, pet water dishes, discarded tires, and birdbaths on a regular basis.
Low	The mosquito species that carries WNV has been detected. Infection with WNV is unlikely.	**To Prevent:** • Wear mosquito repellent during high mosquito hours (dusk to dawn) • Wear long sleeves and long pants during high mosquito hours (dusk to dawn) • Use mosquito netting on baby carriages and playpens
Moderate	High numbers of mosquitoes that can spread WNV have been detected. Infection with WNV is likely or has already occurred.	**To Prevent: add to previous level** • Wear mosquito repellent continuously • Wear long sleeves and long pants when weather permits • Dump standing water twice weekly
High	1) Mosquitoes have tested positive for WNV *OR* 2) this week has been identified as a 'high risk' WNV infection week based on historical human cases. Many people may get infected with WNV in your area.	**To Prevent: add to previous level** • People over 50 or those who are immune compromised may consider adjusting outdoor activity to avoid peak mosquito hours (from dusk to dawn).
Always know your risk – check risk level regularly at http://www.kdheks.gov/epi/arboviral_disease.htm		

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Mosquito Surveillance Results, Week Ending October 13, 2017 (Week 21)

Table 1: Total Mosquitoes and Culex Spp. Mosquitoes Captured by Date and Region in Kansas, 2017[ǂ]

	WEST & CENTRAL						EAST				
	Sedgwick			Reno			Shawnee			Johnson*	
Week Ending, 2017	Total Mosquitoes	*Culex spp.*	Two-Week Mean, *Culex spp.*	Total Mosquitoes	*Culex spp.*	Two-Week Mean, *Culex spp.*	Total Mosquitoes	*Culex spp.*	Two-Week Mean, *Culex spp.*	Total Mosquitoes	*Culex spp.*
5/17	48	24	—	—	—	—	—	—	—	830	10
5/24	81	24	24	161	89	—	18	9	—	—	—
5/31	125	45	34.5	1206	966	527.5	21	4	6.5	249	2
6/7	105	4	24.5	157	98	532	176	10	7	—	—
6/14	209	27	15.5	137	55	76.5	527	36	23	123	35
6/21	203	37	32	146	48	51.5	330	64	50	—	—
6/28	192	10	23.5	17	8	28	527	273	168.5	43	9
7/5	329	35	22.5	28	4	6	56	15	144	—	—
7/12	125	11	23	57	7	5.5	354	148	81.5	138	11
7/19	57	26	18.5	50	8	7.5	335	192	170	—	—
7/26	65	24	25	23	8	8	29	10	101	38	15
8/2	112	53	38.5	33	12	10	1200	1172	591	—	—
8/9	119	58	55.5	47	21	16.5	719	690	931	476	17
8/16	133	56	57	200	52	36.5	2502	2429	1559.5	—	—
8/23	119	36	46	279	78	65	509	456	1442.5	99	19
8/30	421	244	140	137	50	64	317	306	381	—	—
9/6	795	184	214	213	71	60.5	554	154	230	132	4
9/13	173	27	105.5	71	10	40.5	263	142	148	—	—
9/20	169	96	61.5	161	81	45.5	341	134	136	289	179
9/27	75	50	73	127	103	92	97	14	74	—	—
10/4	383	165	107.5	111	81	92	163	57	35.5	33	9
10/11	25	8	86.5	43	1	41	3	2	29.5	—	—

[ǂ] *Evaluation of surveillance data from 2013 & 2014 revealed a strong correlation between the two-week mean Culex prevalence and human cases that occurred in Sedgwick County, and the entire state of Kansas, two and three weeks later. When the Culex spp. two-week mean is over 40, human cases may be expected in the subsequent weeks.*

**Two-week Culex spp. mean is not calculated for Johnson County due to biweekly trapping.*

During the week ending 7/26, only 3 out of 6 traps were set in Shawnee County.

Data from individual traps are used to guide mosquito control efforts. Data from a trap may be excluded when assigning a risk level to a region if only one location within a county has excessively high numbers. We will work with the county and city to provide recommendations on mosquito control efforts using the mosquito surveillance data.

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Table 2: West Nile Virus Mosquito Test Results by Date and County in Kansas, 2017.

Week Ending, 2017	WEST & CENTRAL		EAST	
	Sedgwick	Reno	Shawnee	Johnson*
5/17				
5/24				—
5/31				
6/7				—
6/14				
6/21				—
6/28				
7/5				—
7/12				
7/19				—
7/26				
8/2				—
8/9				
8/16				—
8/23				
8/30				—
9/6				
9/13				—
9/20				
9/27				—

Indicates WNV positive mosquitoes were identifieid.

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West Nile Virus Human Cases, 2017

Table 3: West Nile Virus Surveillance in Humans, 2017 (as of week ending October 7, 2017)

County	Number of Cases
Barber	1
Barton	3
Crawford	1
Dickinson	1
Finney	1
Ford	1
Hamilton	1
Osborne	1
Pratt	1
Scott	1
Shawnee	4
Thomas	1
Wallace	1
Wyandotte	1
Total	***19***

For more information on arboviral disease surveillance in Kansas, call the Kansas Department of Health and Environment's Infectious Disease Epidemiology and Response section at 1-877-427-7317 or e-mail at kdhe.epihotline@ks.gov.

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