Vector Borne Disease
2025 Surveillance Report

Summit County Public Health

Report Weeks 21 and 22 (October 5 to October 18, 2025)
MMWR Weeks 41 and 42

This report will be issued from June through October of each year (or later if West Nile Virus disease is still a concern). Surveillance will include human and veterinary cases and testing of mosquito pools in Summit County. It will also include updates from Ohio and around the nation. It will include vector-borne diseases besides West Nile Virus.

SUMMIT COUNTY SURVEILLANCE

End of Season Report

Reported Vector-borne diseases in 2025 (Table 1): As of October 18, 2025 there were 169 reported cases of Lyme disease; 66 were confirmed and 98 were suspected status. There was also 1 confirmed case of Malaria and 1 probable case of West Nile Virus among Summit County residents.

These diseases will continue to be monitored and counted through the end of the year—these counts reflect the end of the vector borne surveillance season.

Table 1: Vector-borne diseases reported in Summit County, 2025 cumulative totals

	Confirmed	Suspected	Probable	Notes
Tick-borne diseases:				
Babesiosis	0	0	0	
Erhlichiosis / anaplasmosis	0	0	0	
Lyme disease	66	98	5	
Powassan virus disease	0	0	0	
Rocky Mountain spotted fever	0	0	0	
Mosquito-borne diseases:				
Chikungunya	0	0	0	
Dengue	0	0	0	
Eastern equine encephalitis	0	0	0	
LaCrosse virus disease	0	0	0	
Malaria	1	0	0	Travel Associated*
St. Louis encephalitis virus disease	0	0	0	
Zika virus infection	0	0	0	
West Nile virus infection	0	0	1	

Source: Ohio Disease Reporting System (ODRS); only confirmed, probable, and suspected cases are included.

Data in Table 2 and Table 3 are based on the laboratory information submitted by participating Summit County Hospital Laboratories. While a test associated with West Nile Virus (WNV) may be positive, it does not directly confirm an active human case. More information regarding laboratory testing for WNV can be found here:
https://www.cdc.gov/west-nile-virus/hcp/diagnosis-testing/index.html#:~:text=Patients%20with%20suspected%20West%20Nile,public%20health%20laboratory%20or%20CDC.

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West Nile virus testing (Table 2): During surveillance period Weeks 21 and 22, there was 1 test for West Nile virus ordered by a Summit County hospital, it was negative. Positive test results are not directly indicative of an active case.

Table 2: West Nile virus (WNV) tests ordered in Summit County hospitals 2025

Week(s)	# of WNV tests ordered this period	# of positive WNV tests this period	Cumulative # of tests ordered this season	Cumulative # of positive tests this season	Percentage of positive tests
Weeks 1 & 2: 5/18 to 5/31	3	0	3	0	0.0%
Weeks 3 & 4: 6/1 to 6/14	5	0	8	0	0.0%
Weeks 5 & 6: 6/15 to 6/28	4	0	12	0	0.0%
Weeks 7 & 8: 6/29 to 7/12	6	0	18	0	0.0%
Weeks 9 & 10: 7/13 to 7/26	3	0	21	0	0.0%
Weeks 11 & 12: 7/27 to 8/9	6	0	27	0	0.0%
Weeks 13 & 14: 8/10 to 8/23	7	2	34	2	5.9%
Weeks 15 & 16: 8/24 to 9/6	17	1	51	3	5.9%
Weeks 17 & 18: 9/7 to 9/20	11	1	62	4	6.45%
Weeks 19 & 20: 9/21 to 10/4	6	1	68	5	7.35%
Weeks 21 & 22: 10/5 to 10/18	1	0	69	5	7.25%

Note: Reporting may not be completed each week. Numbers will be updated when reports are received

Lyme disease testing (Table 3): There were 23 diagnostic test series performed for Lyme disease during Weeks 21 and 22, 13 tests were positive and 0 were indeterminate. For information about Diagnosis and Testing, visit this link:

https://www.cdc.gov/lyme/hcp/diagnosis-testing/?CDC_AAref_Val=https://www.cdc.gov/lyme/diagnosistesting/index.html

Table 3: Lyme Disease Tests Ordered in Summit County Hospitals 2025

Week(s)	# of Lyme tests ordered this period	# of positive Lyme tests this period	Cumulative # of tests ordered this season	Cumulative # of positive tests this season	Percentage of positive tests
Weeks 1 & 2: 5/18 to 5/31	19	10	19	10	52.63%
Weeks 3 & 4: 6/1 to 6/14	22	11	41	21	51.22%
Weeks 5 & 6: 6/15 to 6/28	59	26	100	47	47.00%
Weeks 7 & 8: 6/29 to 7/12	50	22	150	69	46.00%
Weeks 9 & 10: 7/13 to 7/26	42	16	192	85	44.27%
Weeks 11 & 12: 7/27 to 8/9	45	19	237	104	43.88%
Weeks 13 & 14: 8/10 to 8/23	50	14	287	118	41.11%
Weeks 15 & 16: 8/24 to 9/6	43	19	330	137	41.52%
Weeks 17 & 18: 9/7 to 9/20	45	7	375	144	38.40%
Weeks 19 & 20: 9/21 to 10/4	30	16	405	160	39.51%
Weeks 21 & 22: 10/5 to 10/18	23	13	428	173	40.42

Note: Reporting may not be completed each week. Numbers will be updated when reports are received

Table 4. Notable mosquito and tick species identifications in Summit County (as of October 16, 2025)**			
Species name	**Diseases associated**	**Summit County**	**Ohio**
Mosquito species			
Aedes albopictus	Chikungunya, dengue fever, yellow fever	38	3,418
Aedes triseriatus	La Crosse encephalitis	725	3,345
Coquillettidia perturbans	Eastern equine encephalitis, West Nile virus	211	430
Tick species			
Amblyomma americanum	Ehrlichiosis, tularemia, red meat allergy	-	16,636
Dermacentor variabilis	Rocky Mountain spotted fever, tularemia	-	2,331
Ixodes scapularis	Lyme disease, babesiosis, anaplasmosis	9	1,663

Source: Ohio Department of Health (Identification via mailed specimens, emailed photos and iNaturalist observations)
**Tick species related data is limited and will be updated as new information becomes available.

Table 5. Reported Aseptic/Viral Meningitis Cases in Summit County in 2025 (confirmed & probable)		
Reporting Week(s)	**Cases reported this period**	**Cumulative cases for the season**
Aseptic meningitis cases reported prior to season (1/1 to 5/18/2025)	**2**	**-**
Weeks 1 & 2: 5/18 to 5/31	**0**	**0**
Weeks 3 & 4: 6/1 to 6/14	**1**	**1**
Weeks 5 & 6: 6/15 to 6/28	**1**	**2**
Weeks 7 & 8: 6/29 to 7/12	**1**	**3**
Weeks 9 & 10: 7/13 to 7/26	**2**	**5**
Weeks 11 & 12: 7/27 to 8/9	**1**	**6**
Weeks 13 & 14: 8/10 to 8/23	**2**	**8**
Weeks 15 & 16: 8/24 to 9/6	**2**	**10**
Weeks 17 & 18: 9/7 to 9/20	**2**	**12**
Weeks 19 & 20: 9/21 to 10/4	**2**	**14**
Weeks 21 & 22: 10/5 to 10/18	**0**	**14**

Source: Ohio Disease Reporting System (ODRS)

Reported aseptic/viral meningitis cases (Table 5): Prior to the reporting season, there were 2 reported cases of aseptic meningitis. 11 confirmed case, 2 probable and 1 suspected case have been reported up to week 22 of the surveillance season. Aseptic/viral meningitis is the most common type of meningitis and occurs predominately in the summer and fall. While most aseptic/viral meningitis cases are due to gastrointestinal or respiratory viruses, similar symptoms may be present with arthropod-borne diseases.

Mosquito testing by the Ohio Department of Health: Based on the ODH mosquito testing summary released on October 16, 2025, 70,855 mosquitoes were collected as 1,809 pooled samples throughout Summit County. 246 of the pooled samples were positive for West Nile Virus.

Table 6. Mosquito Testing in Summit County (*samples processed by noon on 10/16/2025*)	
Mosquitoes identified	70,855
Pooled samples tested	1,809
Positive WNV pooled samples	246

Note: All mosquitoes pools tested were *Culex spp.*

Ohio Department of Health Mosquito-borne Disease Surveillance- As of October 16, 2025

393,432

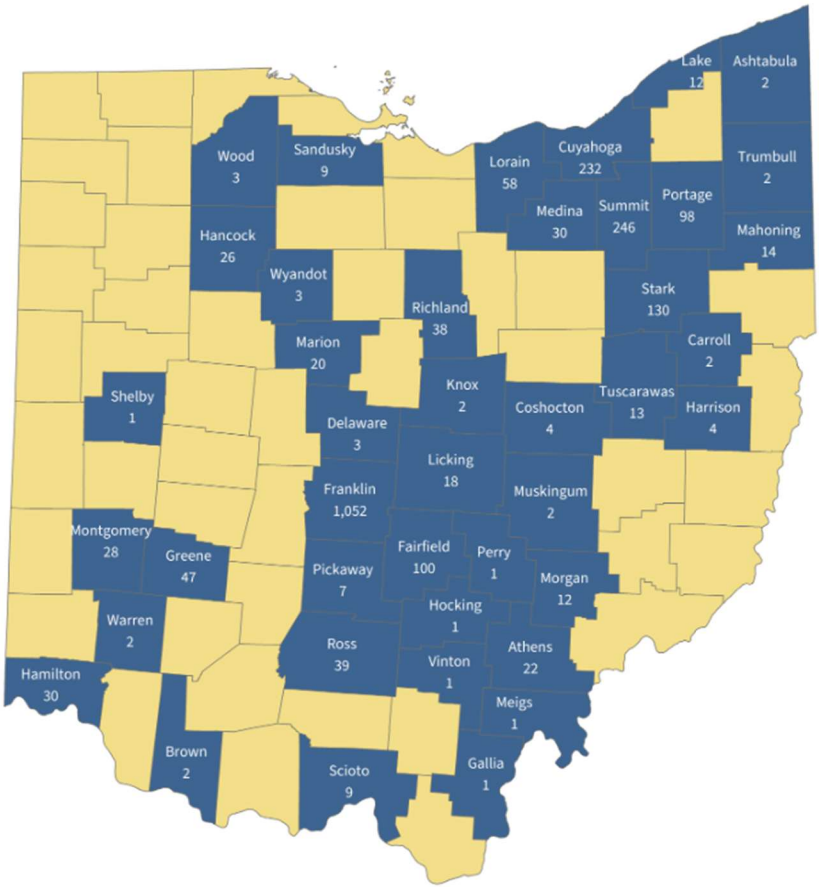
36

West Nile virus disease human cases.

Mosquitoes tested from 58 agencies in 48 counties, pooled into 11,960* samples.

2,327

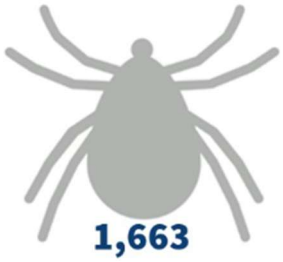
West Nile virus positive mosquito pools from 42 counties:



Ashtabula (2), Athens (22), Brown (2), Carroll (2), Coshocton (4), Cuyahoga (232), Delaware (3), Fairfield (100), Franklin (1,052), Gallia (1), Greene (47), Hamilton (30), Hancock (26), Harrison (4), Hocking (1), Knox (2), Lake (12), Licking (18), Lorain (58), Mahoning (14), Marion (20), Medina (30), Meigs (1), Montgomery (28), Morgan (12), Muskingum (2), Perry (1), Pickaway (7), Portage (98), Richland (38), Ross (39), Sandusky (9), Scioto (9), Shelby (1), Stark (130), Summit (246), Trumbull (2), Tuscarawas (13), Vinton (1), Warren (2), Wood (3), Wyandot (3).

* In addition to samples tested by the Ohio Department of Health, Athens City-County Health Department, Columbus Public Health, Delaware Public Health District, Franklin County Public Health, and Licking County Health Department tested some of their samples.

Ohio Department of Health Tick-borne Disease Surveillance- As of October 16, 2025



Blacklegged ticks identified.

Human cases of Associated Tick-borne Diseases:

- 2,322 Lyme disease-Adams (3), Ashland (31), Ashtabula (6), Athens (63), Belmont (175), Brown (1), Butler (3), Carroll (75), Champaign (1), Clark (6), Clermont (26), Clinton (3), Columbiana (114), Coshocton (64), Cuyahoga (51), Delaware (13), Erie (9), Fairfield (50), Franklin (67), Gallia (10), Geauga (27), Greene (7), Guernsey (56), Hamilton (14), Hancock (1), Harrison (52), Highland (5), Hocking (11), Holmes (59), Huron (3), Jackson (25), Jefferson (168), Knox (45), Lake (24), Lawrence (6), Licking (112), Logan (1), Lorain (12), Lucas (16), Madison (1), Mahoning (31), Marion (2), Medina (22), Meigs (17), Miami (3), Monroe (12), Montgomery (12), Morgan (15), Morrow (5), Muskingum (115), Noble (19), Ottawa (2), Perry (23), Pickaway (5), Portage (27), Preble (1), Putnam (1), Richland (67), Ross (15), Sandusky (1), Scioto (6), Stark (142), Summit (67), Trumbull (40), Tuscarawas (157), Vinton (9), Washington (23), Wayne (60), Williams (1), Wood (4), unknown county (2).
- 28 Anaplasmosis Human Case- Athens (1), Carroll (4), Columbiana (1), Coshocton (2), Cuyahoga (3), Harrison (2), Huron (1), Jefferson (2), Licking (1), Mahoning (1), Meigs (1), Scioto (1), Stark (2), Summit (4), Tuscarawas (1), unknown county (1).
- 2 Babesiosis – Athens (1), Columbiana (1).

American dog ticks identified.

Human cases of Associated Tick-borne Diseases:

- 17 Rocky Mountain spotted fever (RMSF) - Athens (2), Clinton (1), Gallia (3), Hamilton (1), Jackson (3), Lake (1), Lucas (1), Meigs (1), Montgomery (1), Ross (1), Stark (1), Vinton (1).

Lone Star ticks identified.

Human cases of Associated Tick-borne Diseases:

- 29 Ehrlichiosis - Clermont (1), Columbiana (1), Delaware (2), Franklin (1), Gallia (2), Hamilton (4), Hocking (1), Jackson (2), Jefferson (5), Meigs (1), Pike (2), Ross (1), Scioto (2), Vinton (3), Wood (1).

Source: https://odh.ohio.gov/know-our-programs/zoonotic-disease-program/news/vectorborne-disease-update

Special note for travelers:

Ohioans traveling to areas where local transmission is occurring should be aware of the ongoing situation and make every effort to avoid mosquito bites. Additional information can be found from the Centers for Disease Control and Prevention (CDC)'s Travelers' Health and Pan-American Health Organization websites.

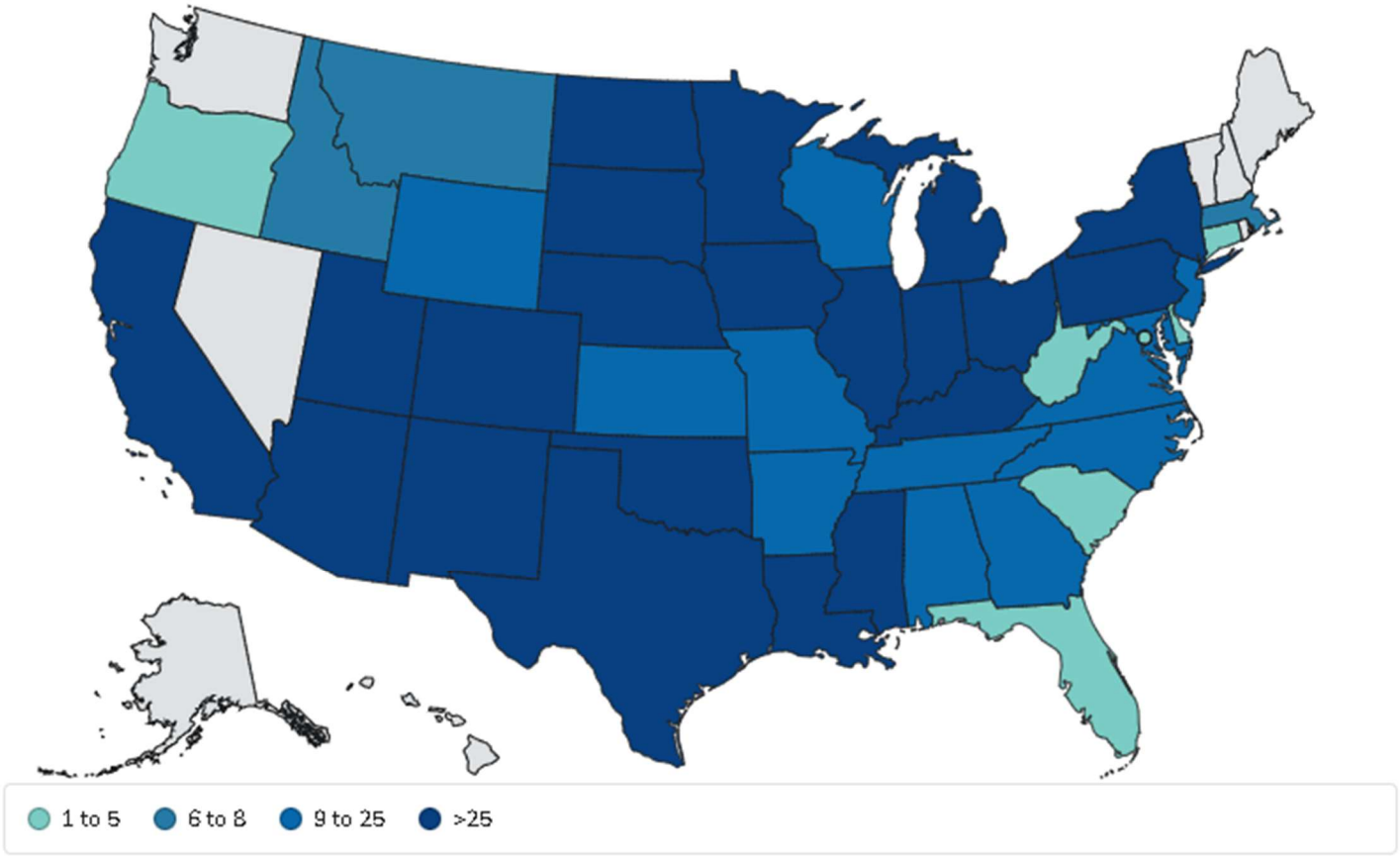
UNITED STATES SURVEILLANCE

Table 7. Reported Vector Borne disease in the United States, 2025 –DATA NOT AVAILABLE AS OF 10/24/2025.

Disease	MMWR Weeks 41 and 42	2025 Cumulative (as of 10/19)
Babesiosis	Not reported weekly by CDC	
Chikungunya		
Dengue (includes dengue-like illness)		
Eastern equine encephalitis		
Ehrlichiosis / anaplasmosis	Not reported weekly by CDC	
Jamestown Canyon virus disease		
LaCrosse virus disease		
Lyme Disease	Not reported weekly by CDC	
Malaria		
Powassan virus disease		
Spotted fever rickettsiosis	Not reported weekly by CDC	
St. Louis encephalitis virus disease		
West Nile virus infection		
Zika virus infection, non-congenital		
Note: Data is provisional and subject to change **NR**: Not Reported		

Source: https://stacks.cdc.gov/

Figure 1. West Nile virus activity by state – United States, 2025 (as of October 14, 2025)



Source: https://www.cdc.gov/west-nile-virus/data-maps/current-year-data.html

TRENDS IN VECTOR BORNE DISEASE IN SUMMIT COUNTY, 2014 - 2024

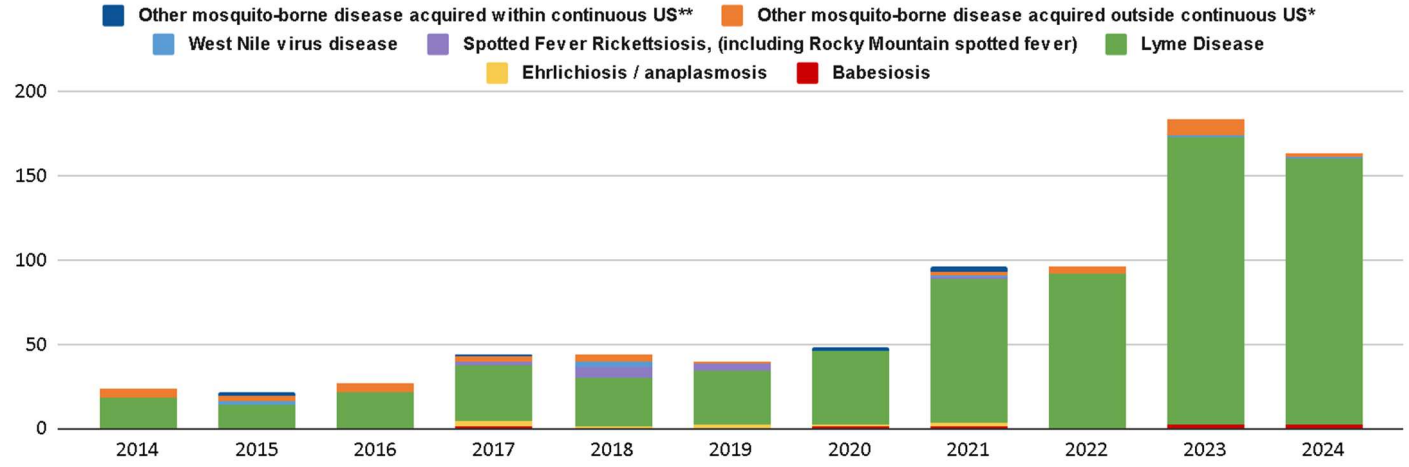
Table 8 provides data on the vector borne disease that were reported in Summit County from 2014 to 2024. The vector for Lyme disease, the blacklegged tick (*Ixodes scapularis*), was first identified in Ohio in 1989, but populations did not begin to increase dramatically until 2009. The blacklegged tick is now established throughout eastern and southern Ohio, and has been collected in all of Ohio's 88 counties.

Table 8. Reported vector-borne disease cases in Summit County, 1/1/2014 - 12/31/2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Babesiosis	0	0	0	1	0	0	1	1	0	2	2
Ehrlichiosis / anaplasmosis	0	0	0	3	1	2	1	2	0	0	0
Lyme Disease	18	14	21	33	29	32	44	86	92	171	158
Spotted Fever Rickettsiosis, (including Rocky Mountain spotted fever)	0	0	0	2	6	4	0	1	0	0	0
West Nile virus disease	0	2	0	1	3	0	0	1	0	1	1
Other mosquito-borne disease acquired outside continuous US*	6	3	6	3	5	2	0	2	4	10	2
Other mosquito-borne disease acquired within continuous US**	0	2	0	1	0	0	2	3	0	0	0
	24	21	27	44	44	40	48	96	96	184	163

Other notable events in vector borne disease surveillance were the increase in Chikungunya cases in 2014 (reported as other arthropod-borne diseases) and the Zika virus disease epidemic of 2016. Increases in Ehrlichiosis and spotted fever rickettsiosis were observed from 2017 to 2019. The incidence of other vector-borne diseases, including West Nile virus disease and other tick-borne illness have remained consistently low.

Figure 2. Reported vector-borne disease cases in Summit County, 2014 – 2024



Notes: * Includes imported cases of malaria, chikungunya, dengue, and Zika virus infection
** Includes LaCrosse virus disease and St. Louis encephalitis virus disease

Data Source: Ohio Disease Reporting System

About this report: *Reporting agencies include Summit County hospital laboratories and the Ohio Department of Health. Vector-borne disease case data for Summit County are obtained from the Ohio Disease Reporting System.*

Many thanks to all agencies who report vector-borne disease data weekly.

Reporting from participants may not be complete each week. Numbers may change as updated reports are received. For questions, please contact Julie Zidones (JZidones@schd.org) or the Summit County Public Health Communicable Disease Unit (330-375-2662). This report was issued on **October 24, 2025**.