



# Vector Borne Disease 2020 Surveillance Report

Summit County Public Health



**Public Health**  
Prevent. Promote. Protect.

Report Weeks 7 and 8 (July 5 to July 18, 2020)  
MMWR Weeks 28 and 29

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

**Table 1: West Nile virus (WNV) tests ordered in Summit County hospitals**

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: 5/24 to 6/6	3	0	3	0	0.0%
Weeks 3 & 4: 6/7 to 6/20	9	1	12	1	8.3%
Weeks 5 & 6: 6/21 to 7/4	6	0	18	1	5.6%
Weeks 7 & 8: 7/5 to 7/18	7	0	25	1	4.0%
Weeks 9 & 10: 7/19 to 8/1					
Weeks 11 & 12: 8/2 to 8/15					
Weeks 13 & 14: 8/16 to 8/29					
Weeks 15 & 16: 8/30 to 9/12					
Weeks 17 & 18: 9/13 to 9/26					
Weeks 19 & 20: 9/27 to 10/10					
Weeks 21 & 22: 10/11 to 10/24					

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

**West Nile virus testing (Table 1):** During surveillance period Weeks 7 and 8, there were 7 tests for West Nile virus ordered by Summit County hospitals. So far this season, there has been 1 positive result, which was likely to be indication of immunity due to a past exposure and were not active infections.

**Lyme Disease testing (Table 2):** There were 56 diagnostic test series performed for Lyme disease during Weeks 7 and 8, with 15 positive or indeterminate test results. The CDC currently recommends a two-step process when testing blood for evidence of antibodies against the Lyme disease bacteria (*Borrelia burgdorferi*). Both steps can be done using the same blood sample. The first step uses a testing procedure called "EIA" (enzyme immunoassay) or rarely, an "IFA" (indirect immunofluorescence assay). If this first step is negative, no further testing of the specimen is recommended. If the first step is positive or indeterminate (sometimes called "equivocal"), then the second step should be performed. The second step uses a test called an immunoblot test, commonly, a "Western blot" test. Results are considered positive and the case is confirmed only if the EIA/IFA and the immunoblot are both positive.

Week(s)	# of Lyme tests ordered this period	# of positive or indeterminate Lyme tests this period	Cumulative # of tests ordered this season	Cumulative # of positive or indeterminate tests this season	Percentage of positive or indeterminate tests
Weeks 1 & 2: 5/24 to 6/6	41	5	41	5	12.2%
Weeks 3 & 4: 6/7 to 6/20	48	11	89	16	18.0%
Weeks 5 & 6: 6/21 to 7/4	76	13	165	29	17.6%
Weeks 7 & 8: 7/5 to 7/18	56	15	221	44	19.9%
Weeks 9 & 10: 7/19 to 8/1					
Weeks 11 & 12: 8/2 to 8/15					
Weeks 13 & 14: 8/16 to 8/29					
Weeks 15 & 16: 8/30 to 9/12					
Weeks 17 & 18: 9/13 to 9/26					
Weeks 19 & 20: 9/27 to 10/10					
Weeks 21 & 22: 10/11 to 10/24					

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

**Reported Vector-borne diseases in 2020 (Table 3):** As of July 18, there were 18 reported cases of Lyme disease; all were suspected. There was also one suspected case of Ehrlichiosis and one suspected case of babesiosis.

	Confirmed	Suspected	Notes
<b>Tick-borne diseases:</b>			
Babesiosis	0	1	
Ehrlichiosis / anaplasmosis	0	1	
Lyme disease	0	18	
Powassan virus disease	0	0	
Rocky Mountain spotted fever	0	0	
<b>Mosquito-borne diseases:</b>			
Chikungunya	0	0	
Dengue	0	0	
Eastern equine encephalitis	0	0	
LaCrosse virus disease	0	0	
Malaria	0	0	
St. Louis encephalitis virus disease	0	0	
Zika virus infection	0	0	
West Nile virus infection	0	0	

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

Species name	Diseases associated	# identified
<b>Mosquito species</b>		
<i>Aedes albopictus</i>	Chikungunya, dengue fever, yellow fever	0
<i>Aedes triseriatus</i>	La Crosse encephalitis	4
<b>Tick species</b>		
<i>Amblyomma americanum</i>	Ehrlichiosis, tularemia, red meat allergy	1
<i>Dermacentor variabilis</i>	Rocky Mountain spotted fever, tularemia	29
<i>Ixodes scapularis</i>	Lyme disease, babesiosis, anaplasmosis	12

Source: Ohio Department of Health (Identification via mailed specimens, emailed photos and iNaturalist observations)

Week(s)	Cases reported this period	Cumulative cases for the season
Aseptic meningitis cases reported prior to season (1/1 to 5/23/2020)	5	-
Weeks 1 & 2: 5/24 to 6/6	1	1
Weeks 3 & 4: 6/7 to 6/20	0	1
Weeks 5 & 6: 6/21 to 7/4	1	2
Weeks 7 & 8: 7/5 to 7/18	0	2
Weeks 9 & 10: 7/19 to 8/1		
Weeks 11 & 12: 8/2 to 8/15		
Weeks 13 & 14: 8/16 to 8/29		
Weeks 15 & 16: 8/30 to 9/12		
Weeks 17 & 18: 9/13 to 9/26		
Weeks 19 & 20: 9/27 to 10/10		
Weeks 21 & 22: 10/11 to 10/24		

Source: Ohio Disease Reporting System (ODRS)

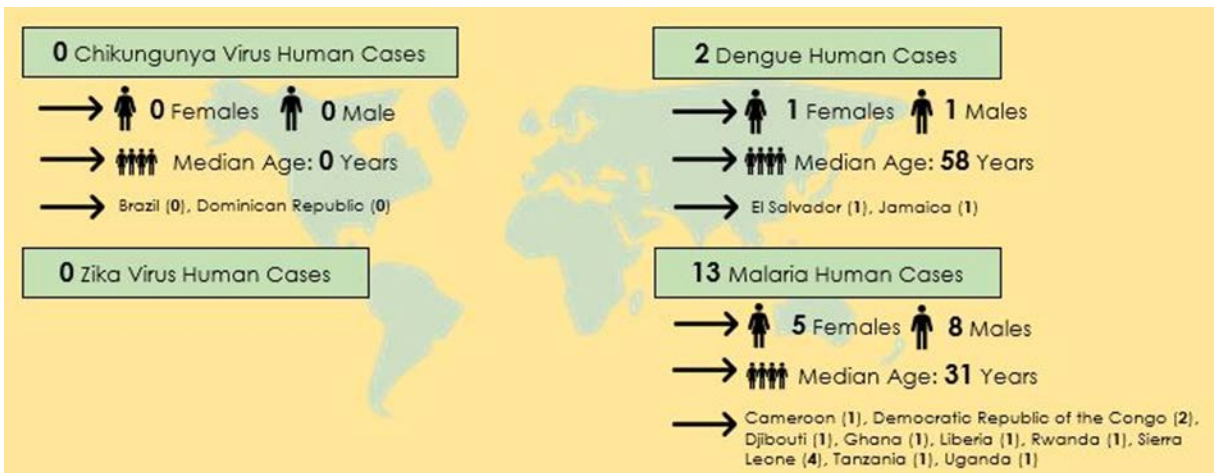
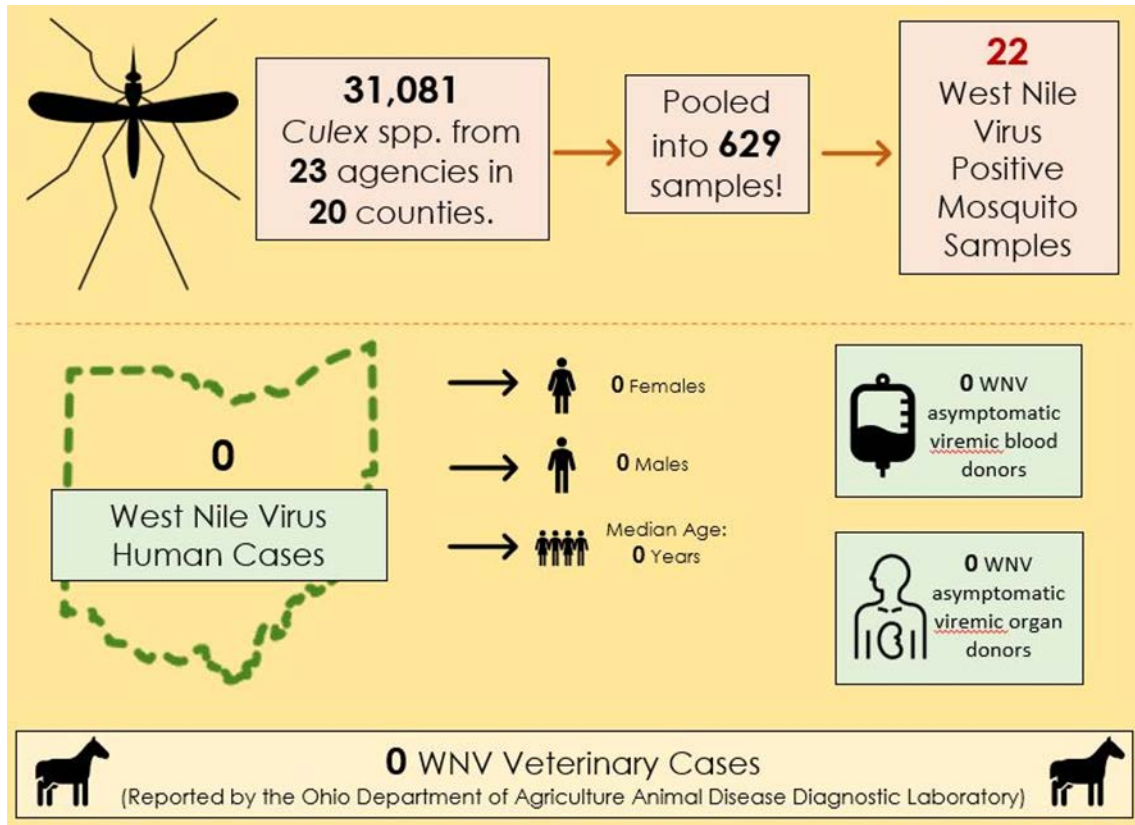
**Reported aseptic/viral meningitis cases (Table 5):** Prior to the reporting season, there were 5 reported cases of aseptic meningitis, and 0 cases were reported during Weeks 7 and 8, keeping the season total at 2. Aseptic/viral meningitis is the most common type of meningitis and occurs predominately 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.

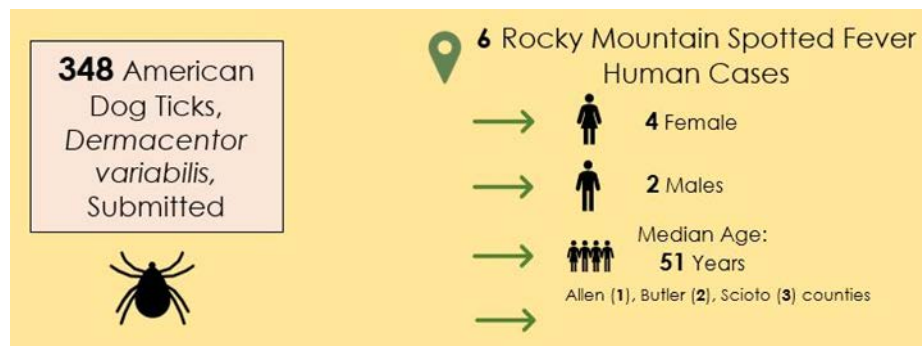
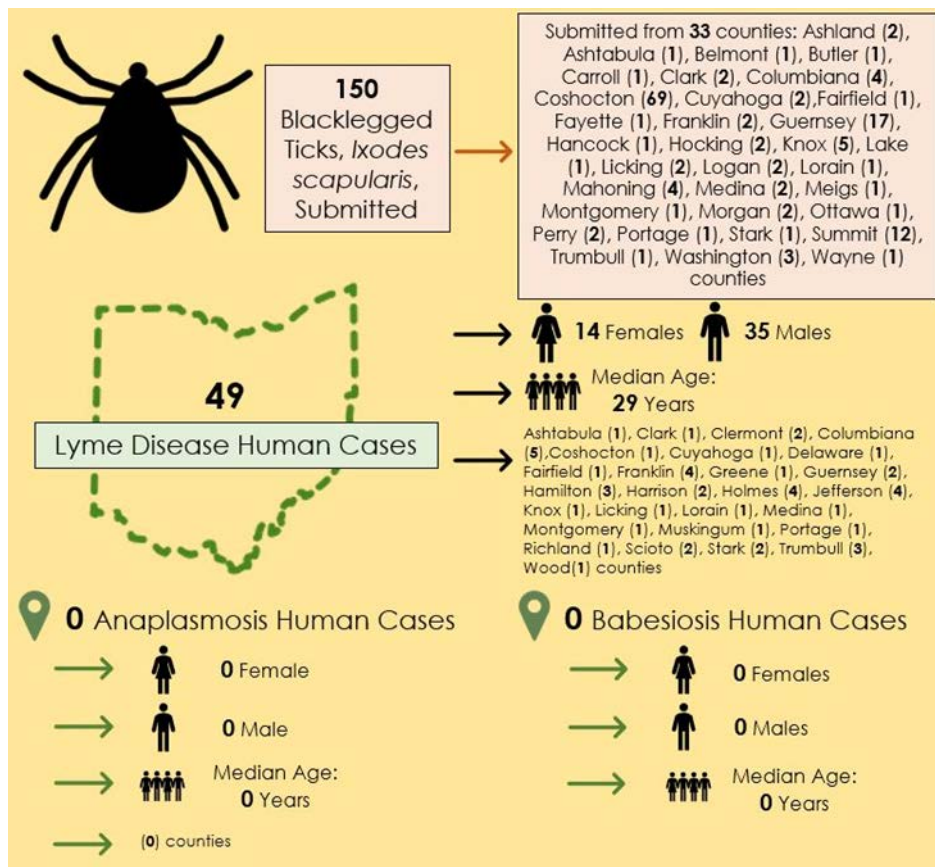
**Mosquito testing (Table 6):** Based on the ODH mosquito testing summary released on July 9, 2,326 mosquitoes were collected throughout Summit County, and 809 *Culex* spp. were combined as pooled samples. Thirty of the pooled samples were tested for West Nile virus, and none were positive for West Nile Virus.

Mosquitoes identified	2,326
Pooled samples tested	30
Positive WNV pooled samples	0

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

**OHIO (GRAPHICS AS OF 7/10/2020) AND UNITED STATES SURVEILLANCE**





Source: <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/zoonotic-disease-program/news-and-events/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.



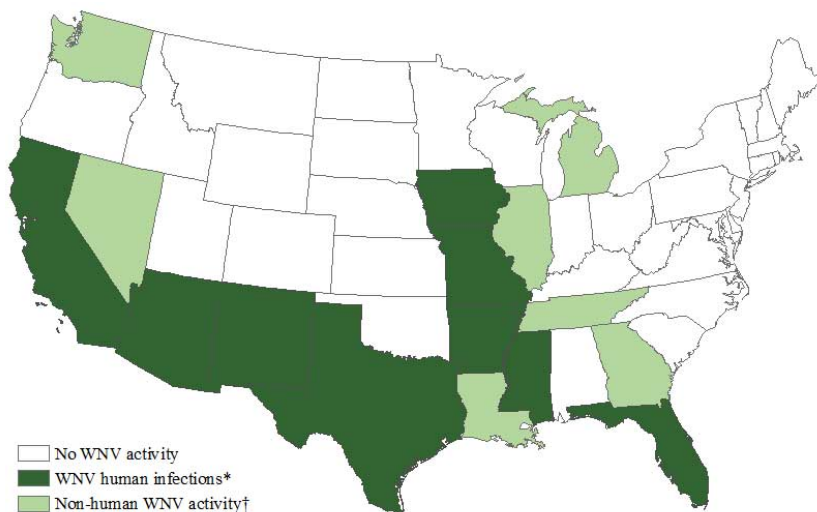
**Table 7. Reported Vector Borne disease in Ohio and the United States, 2020**

Disease	OHIO	UNITED STATES	
	2019 (as of 7/18) cumulative	Weeks 7 and 8 (7/5 to 7/18)	2019 (as of 7/18) Cumulative
Babesiosis	2	46	317
Chikungunya	1	0	12
Dengue (includes dengue-like illness)	2	6	157
Eastern equine encephalitis	0	0	0
Erlchiosis / anaplasmosis	29	167	1678
Jamestown Canyon virus disease	0	0	2
LaCrosse virus disease	0	0	1
Lyme Disease	638	Not reported weekly by CDC	
Malaria	16	1	241
Powassan virus disease	0	0	1
Spotted fever rickettsiosis	79	Not reported weekly by CDC	
St. Louis encephalitis virus disease	0	0	1
West Nile virus infection	0	0	15
Zika virus infection, non congenital	0	0	1

**Note:** Data is provisional and subject to change

Source: [https://wonder.cdc.gov/nndss/nndss\\_weekly\\_tables\\_menu.asp](https://wonder.cdc.gov/nndss/nndss_weekly_tables_menu.asp)

**Figure 1. West Nile virus activity by state – United States, 2020 (as of July 14, 2020)**



Ohio has not yet reported West Nile virus activity in humans or non-humans. Human cases of West Nile virus infection have been reported in Arizona, Arkansas, California, Florida, Iowa, Mississippi, Missouri, New Mexico, and Texas.

Source:

<https://www.cdc.gov/westnile/statsmaps/preliminarymapsdata2020/activitybystate2020.html>

**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 Joan Hall (jhall@sched.org) or the Summit County Public Health Communicable Disease Unit (330-375-2662). This report was issued on **July 24, 2020**.