



**Vector Borne Disease
Surveillance Report**
Summit County Public Health

Report Weeks 7-8
CDC MMWR Weeks 28-29



Public Health
Prevent. Promote. Protect.

This report will run from June through October of each year (or later if West Nile Virus disease is still a concern). Surveillance will include mosquitoes, horses, and humans. It will also include updates from Ohio and around the nation. It will include vector-borne diseases besides West Nile virus. The year 2017 report will include updates on Zika virus.

SUMMIT COUNTY

Table 1: West Nile Virus 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
Week 1-2: 5-28 to 6-10	2	0	2	0	0%
Week 3-4: 6-11 to 6-24	1	0	3	0	0%
Week 5-6: 6-25 to 7-8	5	0	8	0	0%
Week 7-8: 7-9 to 7-22	7	0	15	0	0%
Week 9-10: 7-23 to 8-5					
Week 11-12: 8-6 to 8-19					
Week 13-14: 8-20 to 9-2					
Week 15-16: 9-4 to 9-16					
Week 17-18: 9-17 to 9-30					
Week 19-20: 10-1 to 10-14					
Week 21-22: 10-15 to 10-28					

During the surveillance period Week 7 and 8, there were 7 tests ordered for WNV by Summit County hospitals, and all results were negative (Table 1).

During weeks 7 & 8 there were 2 suspect cases of Lyme disease. Year to date, there have also been 11 suspected cases of Lyme disease reported in Summit County and 1 confirmed. Area labs reported 32 tests for Lyme disease done during weeks 7 & 8. Read more about confirmatory testing for Lyme Disease after Table 2.

Year-to-date there remains one case reported in Summit County (January, 2017). This case was travel related.

One case of travel related malaria was reported this period.

There was 1 reported case of aseptic meningitis in Weeks 7 and 8 in Summit County. (Table 3).

Mosquito Testing in Summit County*

As of July 27, 2017

Mosquitoes identified	42,139
Pooled samples tested	567
Positive WNV samples	22

Table 2: Other Vector-borne Diseases Reported in Summit County, Year-to-date 2017 *

	Confirmed	Suspected
Babesiosis	0	1
Chikungunya	0	0
Dengue	0	0
Ehrlichiosis	0	1
Lyme*	1	11
Malaria	1	0
Rocky Mountain spotted fever	0	0
Zika	1	0

*CDC currently recommends a two-step process when testing blood for evidence of antibodies against the Lyme disease bacteria. 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 only if the EIA/IFA and the immunoblot are both positive.

Note:

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

Table 3: Reported Aseptic Meningitis Cases in Summit County (confirmed & suspected)

Week(s)	Cases reported this period	Cumulative cases for the season
Week 1-2: 5-28 to 6-10	0	0
Week 3-4: 6-11 to 6-24	1	1
Week 5-6: 6-25 to 7-8	3	4
Week 7-8: 7-9 to 7-22	1	5
Week 9-10: 7-23 to 8-5		
Week 11-12: 8-6 to 8-19		
Week 13-14: 8-20 to 9-2		
Week 15-16: 9-3 to 9-16		
Week 17-18: 9-17 to 9-30		
Week 19-20: 10-1 to 10-14		
Week 21-22: 10-15 to 10-28		

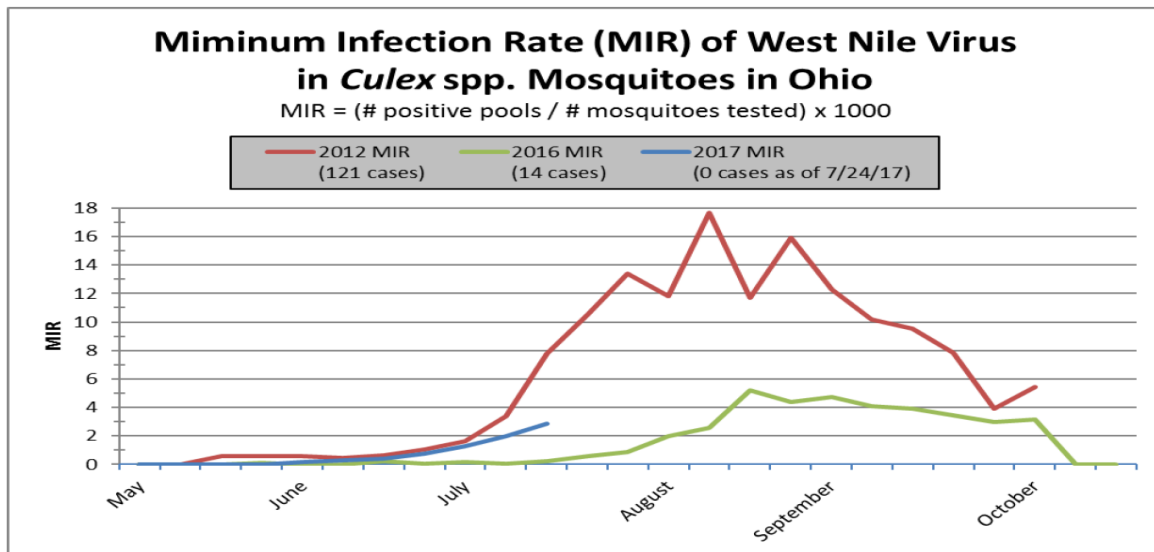
*** Aseptic (viral) meningitis is the most common type of meningitis and occurs predominantly during summer and fall. While most aseptic meningitis cases are due to gastrointestinal or respiratory viruses, similar symptoms may be present with arthropod-borne diseases.

Reference: <https://www.cdc.gov/meningitis/clinical-resources.html> For this report, the WNV surveillance season will start in mid-June and stop at the end of October. This data comes from the weekly report that the Ohio Department of Health sends to the Centers of Disease Control and Prevention.

Vector Borne Surveillance in Ohio

West Nile Virus		Notes
Ohio Counties with WNV activity reported	13	Clark, Franklin, Lake, Licking, Lorain, Lucas, Medina, Montgomery, Pickaway, Portage, Richland, Stark and Summit counties
Human cases	0	
Asymptomatic blood donors	0	
WNV veterinary cases	0	
Mosquitoes tested	158,882	Collected in 37 counties, pooled into 5,987 samples
WNV positive mosquito samples	151	Clark (1), Franklin (50), Lake (8), Licking (8), Lorain (9), Lucas (29), Medina (2), Montgomery (11), Pickaway (1), Portage (5), Richland (4), Stark (5) and Summit (18) counties

This graph provides a comparison of weekly WNV infection rates of mosquitoes collected and tested in 2012 (our most recent WNV Outbreak year), 2016 and 2017 as of 7/24/17:



Travel associated mosquito-borne disease cases		Notes
Chikungunya Virus Human Cases*	0	
Dengue Human Cases	3	1 male, 2 females ranging in age from 17-60 years (median 27 years) with travel to Asian countries
Zika Human Cases*	4	2 males, 2 females ranging in age from 12-59 years (median 34.5 years) with travel to Caribbean islands
Malaria Human Cases	26	15 males and 11 females ranging in age from 1-77 years (median 26 years) with travel to African countries, Afghanistan and Guatemala.

*Ohioans traveling to areas where local transmission is occurring should be aware of this ongoing situation and make every effort to avoid mosquito bites. Additional information can be found from the CDC (www.cdc.gov/chikungunya, www.cdc.gov/zika/geo/index.html) and the Pan American Health Organization (www.paho.org/chikungunya, www.paho.org/zika).

Updated 7/24/16

UNITED STATES SURVEILLANCE

Table 4: Reported Vector Borne Disease in the United States*		
Disease	Current Week(s) Weeks 7-8: 7-9 to 7-22	2017 Cumulative
West Nile Virus		
Neuroinvasive	3	43
Non neuroinvasive	2	35
Babesiosis	45	385
Chikungunya	0	16
Dengue	0	65
Eastern Equine Encephalitis	0	0
La Crosse Virus	0	1
Malaria	25	750
St Louis Encephalitis	0	1
Zika	0	228

Source: https://www.cdc.gov/mmwr/volumes/66/wr/mm6628md.htm?s_cid=mm6628md_w

*Case counts for reporting years 2016 and 2017 from the CDC are provisional and subject to change.

The CDC's website for WNV is: <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>

The CDC's website for MMWR reporting is: <https://www.cdc.gov/mmwr/index2017.html> and the reader should select Notifiable Diseases under the week of inquiry.

The CDC's website for Zika updates: <http://www.cdc.gov/zika/>

This report was issued on July 28, 2017.