



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



Public Health
Prevent. Promote. Protect.

**Report Weeks 3-4
CDC Weeks 23-24**

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

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					
Week 7-8: 7-9 to 7-22					
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 3 and 4, there was 1 test ordered for WNV by Summit County hospitals, and the results were negative (Table 1).

One suspected case of Zika virus has been reported during this surveillance period in Summit County. This case is pending confirmatory testing. Year-to-date there remains one case reported in Summit County (January, 2017). This case was travel related.

Year to date, there have been 5 cases (suspected) of Lyme disease reported in Summit County (*year-to-date*) (Table 2). Area labs reported 24 tests for Lyme disease done during this period. Read more about confirmatory testing for Lyme Disease after Table 2.

There were no reported cases of aseptic meningitis in Weeks 3 and 4 in Summit County. (Table 3).

Mosquito Testing in Summit County*

As of June 30, 2017

Mosquitoes identified	14,912
Pooled samples tested	325
Positive WNV samples	0

Note:

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

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*	0	5
Malaria	0	0
Rocky Mountain spotted fever	0	0
Zika	1	1

*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.

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	0	0
Week 5-6: 6-25 to 7-8		
Week 7-8: 7-9 to 7-22		
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.

**OHIO MOSQUITO-BORNE DISEASE 2017 NUMBERS-AT-A-GLANCE AS OF JUNE 19, 2017:
(AS REPORTED BY OHIO DEPARTMENT OF HEALTH)**

West Nile Virus		Notes
Ohio Counties with WNV activity reported	3	Franklin, Lorain and Summit counties
Human cases	0	
Asymptomatic blood donors	0	
WNV veterinary cases	0	
Mosquitoes tested	19,362	Collected in 17 counties, pooled into 743 samples
WNV positive mosquito samples	3	Franklin (1), Lorain (1) and Summit (1) counties
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*	3	1 male, 2 females ranging in age from 12-59 years (median 33 years) with travel to Caribbean islands
Malaria Human Cases	20	9 males and 11 females ranging in age from 1-77 years (median 26 years) with travel to African countries.

*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).

WEST NILE VIRUS IN OHIO

Of the 743 pooled mosquito samples tested by the Ohio Department of Health, 3 have tested positive. These were collected in Franklin, Lorain and Summit Counties. This is similar in timing to the first positive samples last year, but there are reports of WNV activity in neighboring states that includes an equine case in Kentucky and 2 human cases in Indiana. It is still too early in the surveillance season to predict whether or not this will be a worse than normal year. However, these reports serve as a reminder that WNV infected mosquitoes are active, and the following measures are ways to reduce risk:

Avoid mosquito bites. It is important to prioritize personal protection to prevent mosquito bites.

- Wear EPA-registered mosquito repellents whenever mosquitoes are present and follow label instructions.
- Wear long, loose, light-colored clothing.
- Install or repair screens on windows and doors to keep mosquitoes outside.

Help reduce mosquito breeding around your home. Get rid of potential mosquito breeding sites to help prevent mosquito-borne diseases.

- Empty standing water from flowerpots, gutters, buckets, pool covers, pet water dishes, discarded tires, and birdbaths.
- Consider using products containing *Bacillus thuringiensis israelensis* (Bti), available at many garden and home improvement stores, to control mosquito larvae in containers that are too large to empty. Follow the label instructions.

Taking these steps will help protect against mosquito-borne diseases, including WNV, La Crosse and Zika virus.

<http://www.odh.ohio.gov/~media/ODH/ASSETS/Files/bid/zdp/Animals/Mosquitoes/oharboupdate.pdf>

Arbovirus Cases and Information from Neighboring States:

Indiana: <http://www.in.gov/isdh/23592.htm>

Illinois: <http://www.dph.illinois.gov/topics-services/diseases-and-conditions/west-nile-virus/surveillance>

Michigan: http://www.michigan.gov/emergingdiseases/0,4579,7-186-25805_26531---,00.html

Pennsylvania: <http://www.westnile.state.pa.us/surv.htm>

West Virginia: <http://www.dhhr.wv.gov/oeps/disease/Zoonosis/Mosquito/Pages/default.aspx>

UNITED STATES SURVEILLANCE

Table 4: Reported Vector Borne Disease in the United States		
Disease	Current Week(s) Week3 -4: 6-11 to 6-24	2017 Cumulative
West Nile Virus		
Neuroinvasive	1	10
Non neuroinvasive	0	12
Babesiosis	9	150
Chikungunya	1	13
Dengue	1	49
Eastern Equine Encephalitis	0	0
La Crosse Virus	0	0
Malaria	5	596
St Louis Encephalitis	0	1
Zika	0	190

Source: https://www.cdc.gov/mmwr/volumes/66/wr/mm6621md.htm?s_cid=mm6621md_w

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 June 30, 2017.