



**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**

**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					
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 5 and 6, there were 5 tests ordered for WNV by Summit County hospitals, and all results were negative (Table 1).

Zero cases of Zika virus have been reported during this surveillance period in Summit County. Year-to-date there remains one case reported in Summit County (January, 2017). This case was travel related.

During weeks 5 & 6 there were 3 confirmed cases of Lyme disease. Year to date, there have also been 5 suspected cases of Lyme disease reported in Summit County. Area labs reported 51 tests for Lyme disease done during this period. Read more about confirmatory testing for Lyme Disease after Table 2.

There were 3 reported cases of aseptic meningitis in Weeks 5 and 6 in Summit County. (Table 3).

**Mosquito Testing in Summit County\***

*As of July 13, 2017*

<b>Mosquitoes identified</b>	<b>20,108</b>
<b>Pooled samples tested</b>	<b>416</b>
<b>Positive WNV samples</b>	<b>7</b>

**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*	3	5
Malaria	1	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.

## **MOSQUITO SPRAYING in SUMMIT COUNTY:**



### **WHEN and WHERE DO WE SPRAY?**

Using the best practice system of integrated pest management, the decision of when and where to spray is based on our mosquito surveillance program. SCPH does not have a predetermined spray schedule. Factors that may result in an evening mosquito control application include:

- Mosquitoes testing positive for WNV that were caught in mosquito traps
- A spike in the number of Culex species (carriers of WNV) caught in mosquito traps

Severe weather conditions such as flooding dictate the need for additional adulticiding.

For more information about mosquito spraying, please call 330-926-5668.

Spraying will begin at approximately 8:30 p.m. and continue until completed. In the event of bad weather, the spray schedule may be modified. An updated schedule will be available by noon on the following day by calling (330) 926-5667.

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

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

\*\*\* 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 July 10, 2017:**

<b>West Nile Virus</b>		<b>Notes</b>
Ohio Counties with WNV activity reported	6	Franklin, Lorain, Lucas, Montgomery, Richland and Summit counties
Human cases	0	
Asymptomatic blood donors	0	
WNV veterinary cases	0	
Mosquitoes tested	81,472	Collected in 25 counties, pooled into 2,890 samples
WNV positive mosquito samples	25	Franklin (10), Lorain (2), Lucas (4), Montgomery (1), Richland (1), and Summit (7) counties
<b>Travel associated mosquito-borne disease cases</b>		<b>Notes</b>
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	24	13 males and 11 females ranging in age from 1-77 years (median 36 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](http://www.cdc.gov/chikungunya) , [www.cdc.gov/zika/geo/index.html](http://www.cdc.gov/zika/geo/index.html)) and the Pan American Health Organization ([www.paho.org/chikungunya](http://www.paho.org/chikungunya), [www.paho.org/zika](http://www.paho.org/zika)).

**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](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) Week 5 -6: 6-11 to 6-24	2017 Cumulative
<b>West Nile Virus</b>		
Neuroinvasive	1	16
Non neuroinvasive	1	16
<b>Babesiosis</b>	13	166
<b>Chikungunya</b>	1	14
<b>Dengue</b>	0	52
<b>Eastern Equine Encephalitis</b>	0	0
<b>La Crosse Virus</b>	0	1
<b>Malaria</b>	18	630
<b>St Louis Encephalitis</b>	0	1
<b>Zika</b>	0	195

Source: [https://www.cdc.gov/mmwr/volumes/66/wr/mm6621md.htm?s\\_cid=mm6621md\\_w](https://www.cdc.gov/mmwr/volumes/66/wr/mm6621md.htm?s_cid=mm6621md_w)

Numbers reported from the CDC website are adjusted weekly according to case confirmation.

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/>

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