



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



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

**Report Weeks 1-2  
CDC Weeks 21-22**

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					
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 1 and 2, there were 2 tests for WNV ordered by Summit County hospitals, all tests were negative (Table 1).

No 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.

Year to date, there have been 4 cases (suspected) of Lyme disease reported in Summit County (*year-to-date*) (Table 2). There were reported 60 tests for Lyme disease done during this period. Read more about Lyme Disease on page 3 & 4 of this report.

There were no reported cases of aseptic meningitis in WK 1 and 2 in Summit County. (Table 3).

**Mosquito Testing in Summit County\***

*As of June 16, 2017*

<b>Mosquitoes identified</b>	<b>10,970</b>
<b>Pooled samples tested</b>	<b>181</b>
<b>Positive WNV samples</b>	<b>0</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	0	4
Malaria	0	0
Rocky Mountain spotted fever	0	0
Zika	1	0

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		
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.

## Lyme Disease in Ohio



The black-legged tick, *Ixodes scapularis*, is the vector for Lyme disease in Ohio.

Lyme disease is caused by the bacterium *Borrelia burgdorferi* and is transmitted to humans through the bite of infected blacklegged ticks. Typical symptoms include fever, headache, fatigue and a characteristic skin rash called erythema migrans (the “bull’s-eye” rash). If left untreated, infection can spread to the joints, heart and nervous system. Lyme disease is diagnosed based on symptoms, physical findings (e.g., rash) and the possibility of exposure to infected ticks; laboratory testing is helpful if used correctly and performed with validated methods. Most cases of Lyme disease can be treated successfully with a few weeks of antibiotics. Steps to prevent Lyme disease include using insect repellent, removing ticks promptly, applying pesticides and reducing tick habitat. The ticks that transmit Lyme disease can occasionally transmit other tick-borne diseases as well.

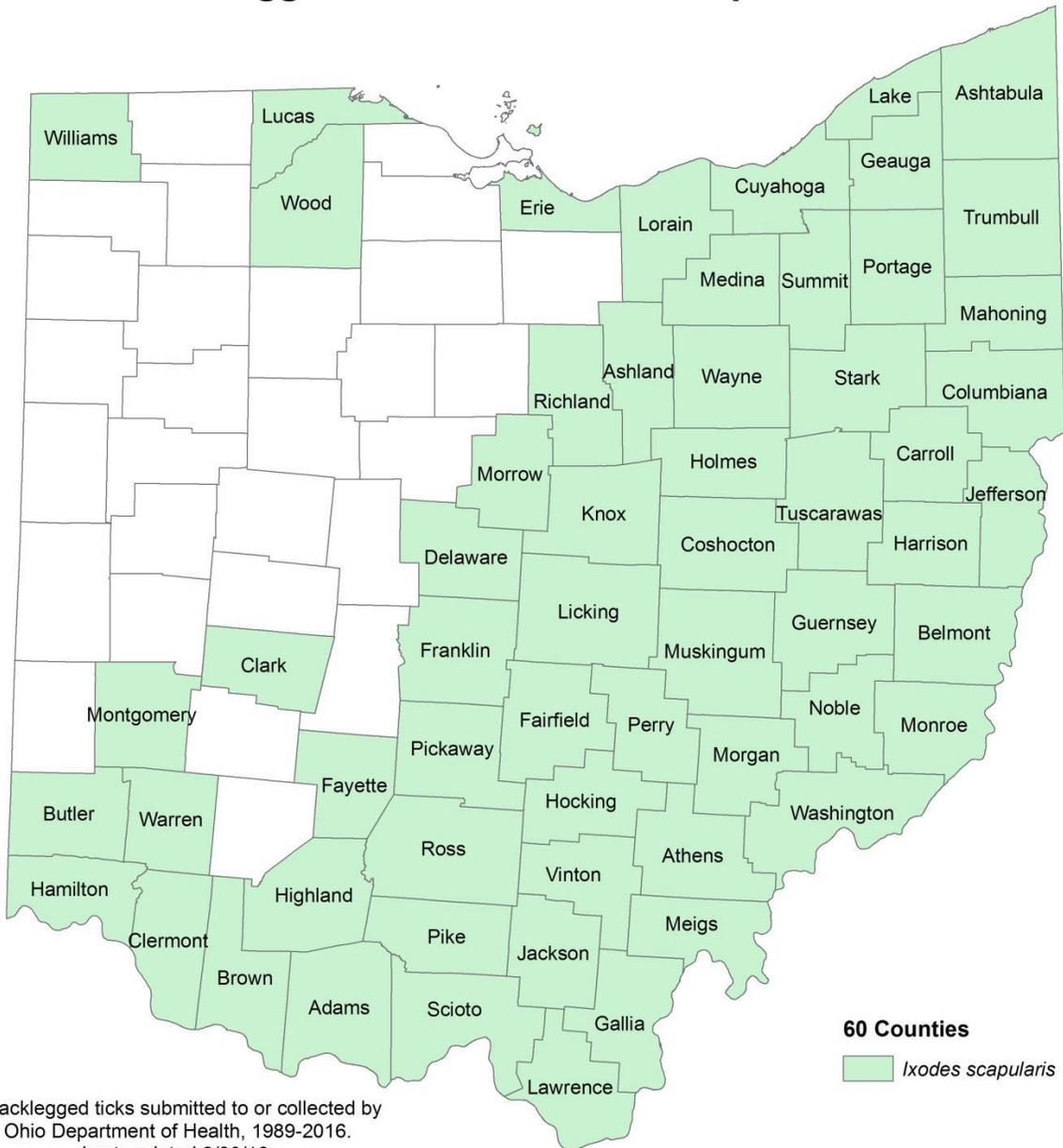
Here are some tips to avoid tick bites and prevent tick-borne diseases:

- Avoid direct contact with ticks by avoiding wooded and bushy areas with high grass and leaf litter, and by walking in the center of trails.
- Wear clothing and gear treated with permethrin, an insecticide (do not apply permethrin directly to skin).
- Use EPA-registered tick repellent and follow the label directions.
- Here are some tips for finding and removing ticks attached to your body:
  - o Use fine-tipped tweezers to grasp the tick as close to the skin's surface as possible.
- Pull upward with steady, even pressure. Do not twist or jerk the tick, which can cause the mouth parts to break off and remain in the skin. If this happens, remove the mouth parts with tweezers. If you are unable to remove the mouth easily, leave it alone and let the skin heal.
- After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol, an iodine scrub or soap and water.
- Dispose of a live tick by submersing it in alcohol, placing it in a sealed bag/container, wrapping it tightly in tape or flushing it down the toilet. Never crush a tick with your fingers.
- Avoid folklore remedies such as “painting” a tick with nail polish or petroleum jelly or using heat to make the tick detach from your skin.

Source: <http://www.odh.ohio.gov/odhprograms/bid/zdp/diseases/lyme.aspx>

Since 2010, blacklegged tick populations in Ohio have increased dramatically, and their range continues to expand in the state, particularly in the forest habitats preferred by this tick. The latest map of blacklegged ticks in Ohio is below:

### Blacklegged Deer Tick, *Ixodes scapularis*, Ohio\*



#### OHIO ARBOVIRUS SURVEILLANCE AS OF JUNE 6, 2017:

No 2017 data available to date.

2016 data can be found:

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

UNITED STATES SURVEILLANCE

Table 4: Reported Vector Borne Disease in the United States		
Disease	Current Week(s) Week 1-2: 5-28 to 6-10	2017 Cumulative
<b>West Nile Virus</b>		
Neuroinvasive	1	6
Non neuroinvasive	0	3
<b>Babesiosis</b>	0	64
<b>Chikungunya</b>	0	9
<b>Dengue</b>	0	40
<b>Eastern Equine Encephalitis</b>	0	0
<b>La Crosse Virus</b>	0	0
<b>Malaria</b>	0	426
<b>St Louis Encephalitis</b>	0	1
<b>Zika</b>	0	170

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)

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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