



# West Virginia Biweekly Vector-Borne Surveillance Report

January 1, 2022 – October 6, 2022

## Introduction

The purpose of this report is to share descriptive surveillance data related to vector-borne disease activity with public health partners in West Virginia. All information in this report is considered provisional. For questions or comments, visit [oeps.wv.gov/arboviral/pages/default.aspx](http://oeps.wv.gov/arboviral/pages/default.aspx) or contact Eric Dotseth, State Public Health Entomologist, or Kimberly Dailey, Vector-Borne Epidemiologist @ (304) 558-5358, extension 2.

## Tick Surveillance

The following areas were West Virginia Tick Surveillance Program sites as of **October 6, 2022**. Below shows the density/1000 m<sup>2</sup> of *Ixodes scapularis* (Blacklegged deer tick) and *Amblyomma americanum* (Lone Star tick). *Ixodes scapularis* is the species responsible for the majority of tickborne disease (TBD) in West Virginia, including Lyme disease, anaplasmosis, and babesiosis. Lone star tick is the vector for Spotted Fever Group Rickettsioses (SFGR), ehrlichiosis, Southern Tick Associate Rash Illness (STARI), tularemia, and alpha-gal syndrome.

*Ixodes scapularis* nymphs

*Amblyomma americanum* nymphs

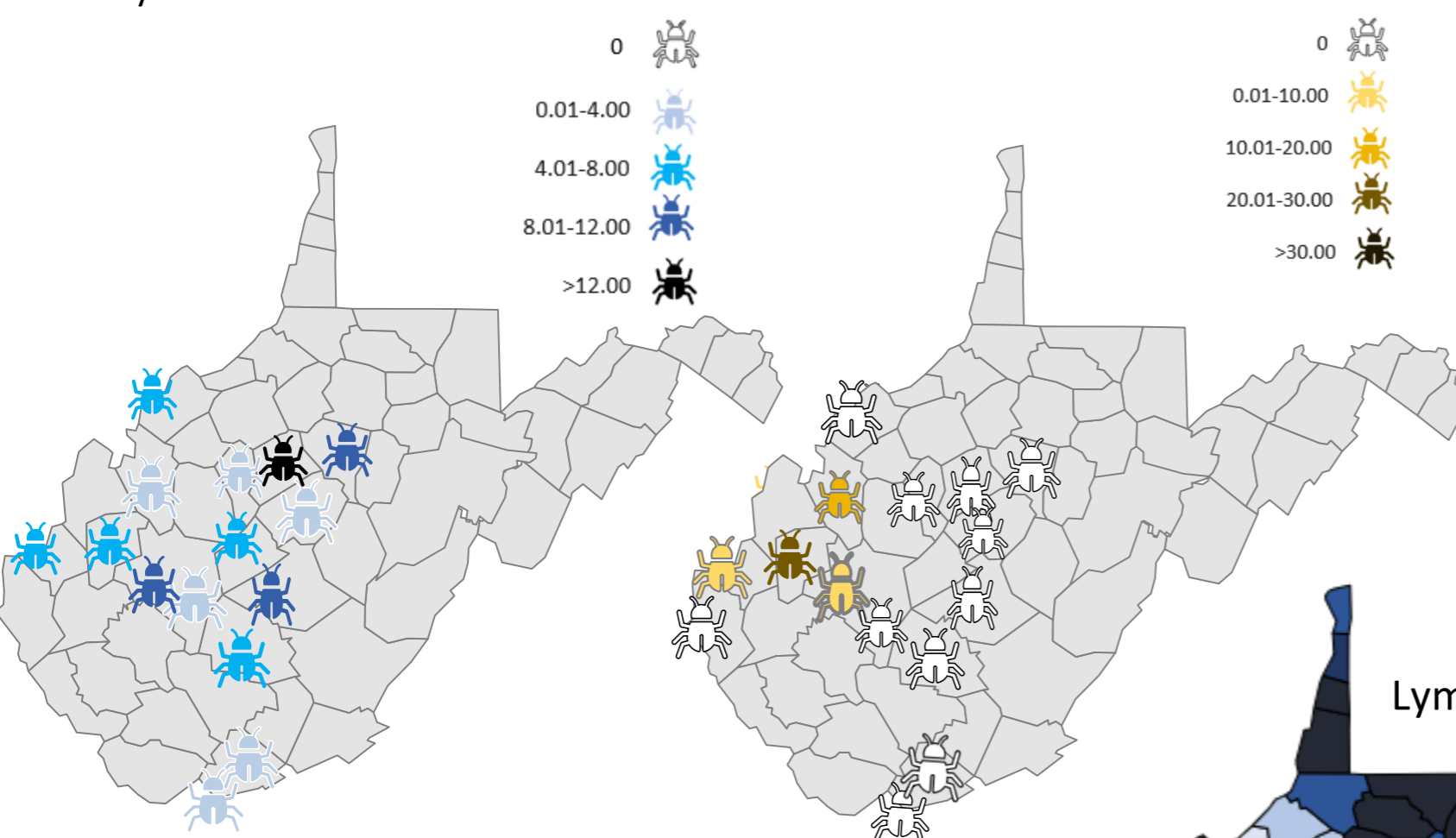


Figure 1. Density of *Ixodes scapularis* and *Amblyomma americanum* per 1000 m<sup>2</sup>

# Tickborne Disease

## Human Surveillance

Through **October 6, 2022**, **1,030** confirmed and probable cases of TBDs were reported in West Virginia. The majority of cases were **Lyme disease** cases. Spotted fever group rickettsioses (SFGRs), Ehrlichiosis, and Anaplasmosis cases were also reported.

Table 1. Summary of human cases of tickborne diseases through **October 6, 2022**.

Tickborne Disease	Cases through 10-6-2022
Lyme Disease	1,009
Ehrlichiosis	9
Spotted Fever Rickettsiosis	8
Anaplasmosis	3
Q Fever	1
<b>Total</b>	<b>1,030</b>

Table includes only confirmed or probable cases that have been reviewed and closed by the Vector-borne Disease Epidemiologist.

## Distribution of TBD

## At County Level

## Number of Cases

- Not Reported
- < 5
- 5 - 9
- 10 - 19
- 20 - 29
- >30

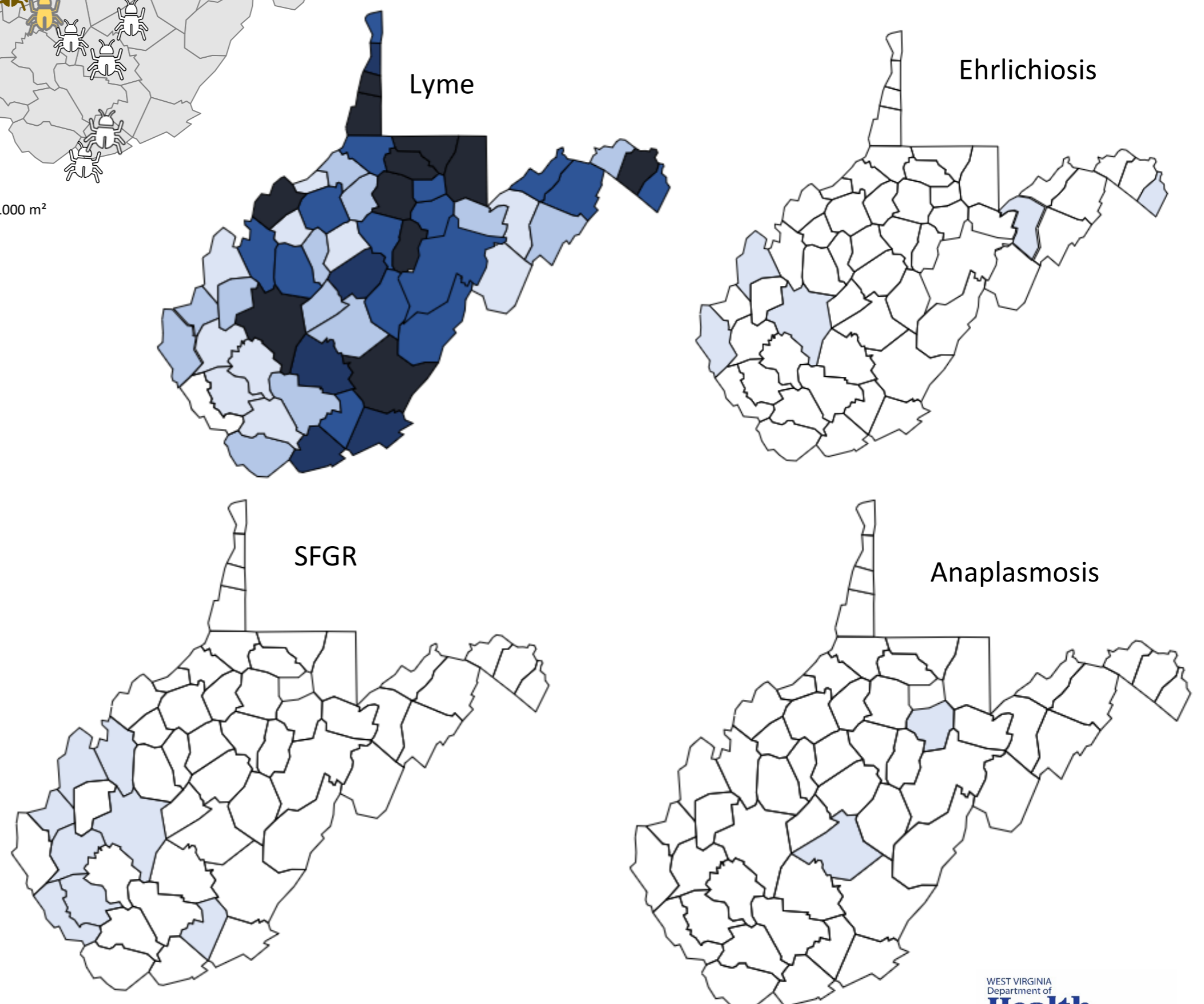


Figure 2. County-level distribution of Lyme disease, anaplasmosis, ehrlichiosis, and SFGR cases



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## Mosquito Borne Disease

### Human Surveillance

Surveillance for these diseases in West Virginia focuses on four endemic mosquito transmitted diseases—La Crosse virus (LAC), West Nile virus (WNV), St. Louis encephalitis virus (SLE), and eastern equine encephalitis virus (EEE) and travel-associated, or imported diseases, such as chikungunya, dengue fever, malaria, and Zika virus (ZIK).

As of **October 6, 2022**, aside from the three travel related Malaria cases earlier this year, there have been no reported human cases of arboviral disease in WV. However, West Nile Virus infection was detected in a horse in Jefferson Co on 8/30.

Table 2. Summary of human cases of mosquito borne diseases through October 6, 2022.

Mosquito Borne Disease	Cases through 10-6-2022
La Crosse encephalitis	0
West Nile Virus infection	0
Malaria	3
<b>Total</b>	<b>3</b>

Table includes only confirmed or probable cases that have been reviewed and closed by the Vector-borne Disease Epidemiologist.

### Mosquito Surveillance

During the period of **January 1 to October 6, 2022**, 7 locations in the following 5 counties have served as mosquito surveillance sites and provided sample testing for mosquito borne diseases. As of 10/6, West Nile virus (WNV) was detected in 4 Culex mosquito samples from Parkersburg (collected 8/25 - 8/26) and 1 Culex mosquito sample from MacArthur (collected 8/22 - 8/23).

#### Mosquito Surveillance Sites

- Active site
- WNV +
- EEEV +
- LACV +

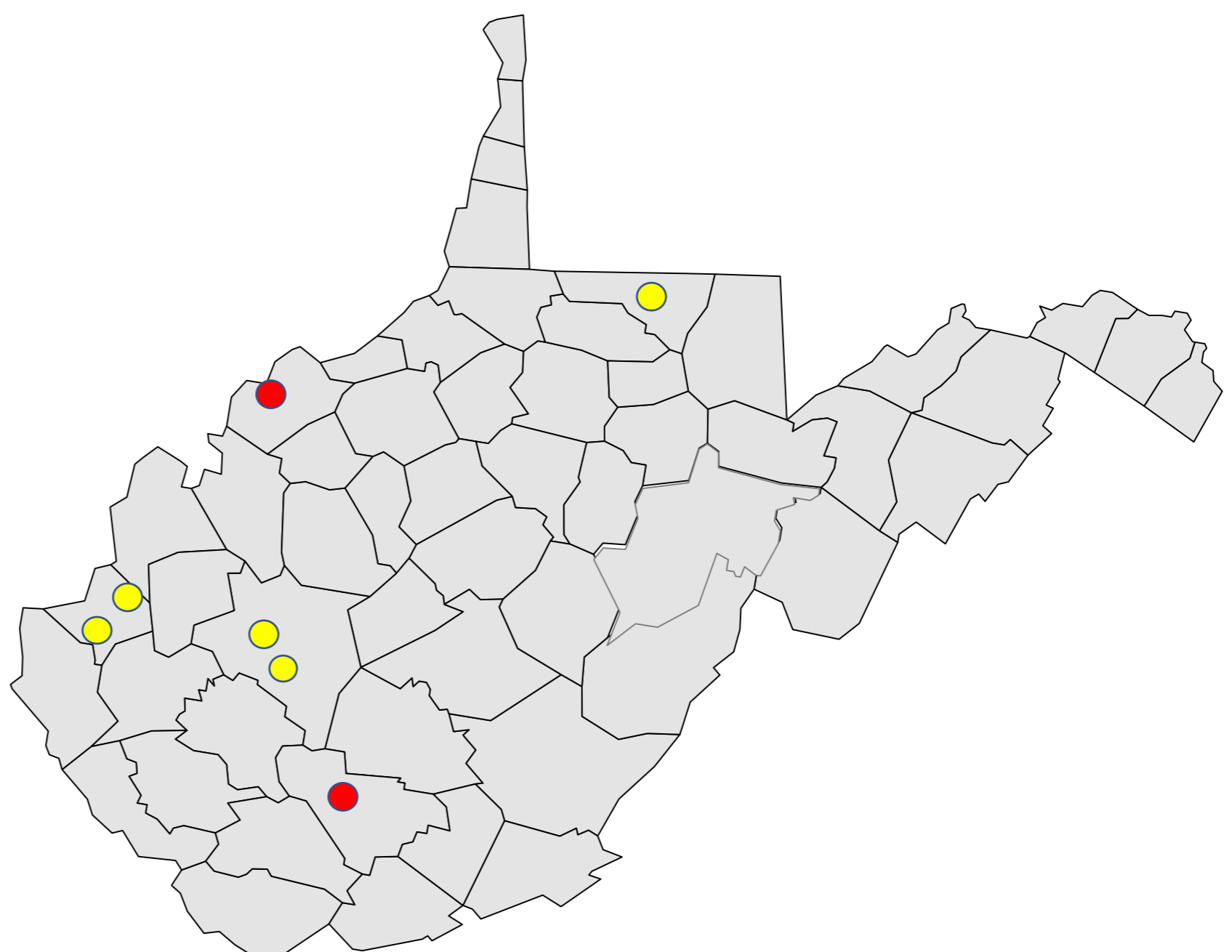


Figure 3. Active mosquito surveillance sites and sample testing results through October 6, 2022