

Year-End Summary, Michigan 2021

*Arboviruses are viruses transmitted by mosquitoes or other insects

Updated: March 17, 2022

48 

Mosquito pools tested positive for arboviruses

53 

Animals tested positive for WNV infection

15 

Animals tested positive for EEE infection

54 

Human cases of WNV, JCV, or other arbovirus reported

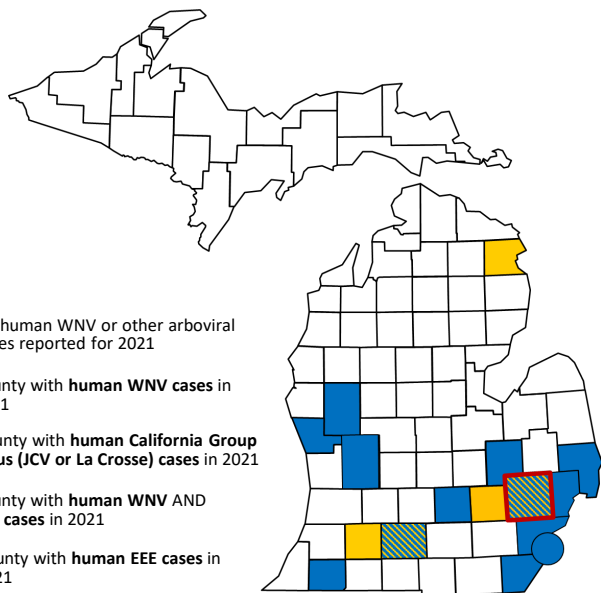
2021 Michigan Arbovirus Surveillance

EEE Positive Mosquito Pools	1
WNV Positive Mosquito Pools	27
JCV Positive Mosquito Pools	20
Total Number of Mosquito Pools Tested	3,841
Total Number of Mosquitoes Tested	53,399
EEE Positive Mammals	10
EEE Positive Birds	5
WNV Positive Mammals	12
WNV Positive Birds	41
Human EEE cases	1
Human WNV cases	46
Human California Group virus (JCV or La Crosse) cases	7

Highlights

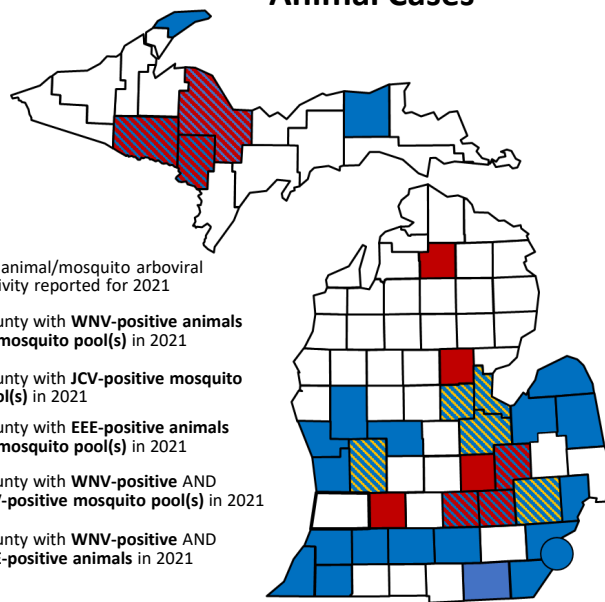
- In 2021, Eastern Equine Encephalitis virus (EEE) infected one Michigan resident from Oakland county.
- Forty-six Michigan residents developed West Nile virus disease (1 Calhoun, 1 Cass, 9 Detroit, 1 Genesee, 1 Ingham, 1 Kent, 14 Macomb, 1 Monroe, 1 Muskegon, 1 Newaygo, 12 Oakland, 1 St. Clair, 2 Wayne), including seven deaths. Seven asymptomatic blood donors from Charlevoix, Ingham, Macomb, Monroe, Oakland, and Wayne counties also tested positive for WNV.
- Seven Michigan residents tested positive for California Group virus, including Jamestown Canyon virus (JCV) and La Crosse Virus.
- Nine horses (1 Barry, 1 Gladwin, 1 Genesee, 1 Ingham, 2 Livingston, 1 Otsego, 2 Shiawassee), one deer (Livingston), five birds (1 Dickinson, 3 Iron, 1 Marquette) and one mosquito pool (Barry) tested positive for (EEE).
- Seven horses (1 Genesee, 1 Kent, 1 Lenawee, 1 Midland, 1 Montcalm, 1 Sanilac, 1 Van Buren), one moose from Marquette County, one deer from Cass County, one deer from Kent County, one bovid from Calhoun County, one squirrel from Macomb County, and forty-one birds tested positive for WNV.

Human Cases



- No human WNV or other arboviral cases reported for 2021
- County with human WNV cases in 2021
- County with human California Group Virus (JCV or La Crosse) cases in 2021
- County with human WNV AND JCV cases in 2021
- County with human EEE cases in 2021

Animal Cases



- No animal/mosquito arboviral activity reported for 2021
- County with WNV-positive animals or mosquito pool(s) in 2021
- County with JCV-positive mosquito pool(s) in 2021
- County with EEE-positive animals or mosquito pool(s) in 2021
- County with WNV-positive AND JCV-positive mosquito pool(s) in 2021
- County with WNV-positive AND EEE-positive animals in 2021

For more information

www.michigan.gov/westnile



Preventing Mosquito Bites and Arboviruses: Tips for Michigan Residents

The most effective way to avoid arboviruses is to prevent mosquito bites. Be aware of the West Nile virus and other arbovirus activity in your area and take action to protect yourself and your family.



Use Insect Repellent

Use Environmental Protection Agency (EPA)-registered insect repellents with one of the active ingredients below. When used as directed, EPA-registered insect repellents are proven safe and effective, even for pregnant and breastfeeding women.

- DEET
- Picaridin
- IR3535
- Oil of lemon eucalyptus (OLE) or para menthane-diol (PMD)
- 2-undecanone

Find the insect repellent that's right for you by using [EPA's search tool](#)



Tips for Babies & Children

- Always follow instructions when applying insect repellent to children.
- Do not use insect repellent on babies younger than 2 months old.
- Do not apply insect repellent onto a child's hands, eyes, mouth, and cut or irritated skin.
 - Adults: Spray insect repellent onto your hands and then apply to a child's face.
- Do not use products containing oil of lemon eucalyptus (OLE) or para-menthane-diol (PMD) on children under 3 years old.



Take steps to control mosquitoes inside and outside your home

- Use screens on windows and doors. Repair holes in screens to keep mosquitoes outside.
- Once a week, eliminate potential breeding areas for mosquitoes. Check inside and outside your home. Mosquitoes lay eggs on or near water:
 - Discard old tires, tin cans, ceramic pots or other containers that can hold water
 - Repair failed septic systems
 - Drill holes in the bottom of recycling containers left outdoors
 - Keep grass cut short and shrubbery trimmed
 - Clean clogged roof gutters, particularly if leaves tend to plug up the drains
 - Frequently replace the water in pet bowls
 - Flush ornamental fountains and birdbaths periodically; aerate ornamental pools, or stock them with predatory fish.

For Up-to-Date Information Visit Michigan's Emerging Diseases Website

www.michigan.gov/westnile

or the Centers for Disease Control and Prevention Website

www.cdc.gov/westnile