

Massachusetts Department of Public Health

Arbovirus Weekly Report

Week of September 05, 2023

For additional information regarding this report,
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Background information on West Nile virus (WNV) and eastern equine encephalitis (EEE) virus and the Department of Public Health's current surveillance and response activities is available through www.mass.gov/dph/mosquito.

Additionally, please find videos regarding mosquitoes and ticks and how best to protect yourself. Please feel free to share these resources with your constituents: www.mass.gov/MosquitoesAndTicks.

	Season Total	Total Positive
Number of Mosquito Samples Tested	7914	WNV – 96 EEE – 4
Number of Animals Tested	0	WNV – 0 EEE – 0
Number of People Tested	134	WNV – 2 EEE – 0

Key Talking Points for the public for the week of September 5, 2023:

- MDPH reported two human cases of WNV, one locally acquired in Middlesex County, the second case was acquired out-of-state.
- Four mosquito samples of EEE were detected in Worcester County adjacent to the RI border, risk levels were increased to Moderate in the region. Enhanced mosquito surveillance has been activated; results will be available mid-week.
- MDPH has reported 96 WNV positive mosquito samples from Barnstable, Berkshire, Essex, Hampden, Hampshire, Middlesex, Norfolk, Suffolk, and Worcester Counties.
- In response to intensifying WNV activity and increased mosquito vector abundance, selected communities in Berkshire, Bristol, Middlesex, Plymouth Counties were raised to Moderate WNV risk.
- Regional precipitation events and average temperatures will support increased populations of WNV and EEE mosquito vectors and increase human outdoor activity.
- August and September are the highest risk months for human WNV and EEE transmission.
- In 2022 MDPH identified 10 human cases with one death and 95 WNV positive mosquito samples.
- 2019 was the first year of a two-year outbreak cycle and was the most active EEE year in Massachusetts since the 1950s. There were 12 human cases with 6 deaths and nine animal cases. Six aerial sprays were conducted to reduce risk from EEE.
- DPH began early season surveillance in mid-May and continues surveillance activities this week to monitor for viral activity. Results from trapping and testing mosquitoes are critical to understanding how rapidly the viruses might emerge this year and how widespread it might become.

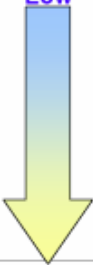
- DPH has been working since the end of the last season with partners and stakeholders, most significantly the Massachusetts Department of Agricultural Resources, to plan and prepare for this season.
- Recommended public health measures include raising awareness among residents and reminding them that it is important to use mosquito repellents with an EPA-registered active ingredient, use long sleeves and pants to reduce exposed skin and be aware of mosquito activity around you.
- Regional precipitation events coupled with warm weather are expected to increase abundance of mosquito vectors for both EEE and WNV.
- Check your risk levels throughout the season by visiting www.mass.gov/dph/mosquito.
- Most human cases of WNV and EEE occur in the months of August and September.
- Remember that several 30 second PSA videos are available for download and use on your website to help promote prevention activities to your residents. These can be found at www.mass.gov/mosquitoesandticks.
 - Pick a repellent with an EPA-registered active ingredient;
 - Use long sleeves to cover up when possible;
 - Repair screens;
 - Remove standing water to help reduce mosquito populations; and
 - Teach children to be aware of mosquito activity around them and avoid it.

Interactive EEE and WNV Mapping

Check risk levels throughout the season by visiting our interactive site <https://www.mass.gov/info-details/massachusetts-arbovirus-update>

EEE/WNV Risk Levels

Key to Color Coding on EEE Risk Map		
Risk	What it Means	What You Can Do
Remote 	EEE is not usually found in your area	TO Prepare - Know your risk – check regularly at www.mass.gov/dph/mosquito - Repair screens
Low 	EEE may occur in your area	TO Prevent - Wear mosquito repellent between dusk to dawn - Wear long sleeves and long pants from dusk to dawn - Use mosquito netting on baby carriages and playpens
Moderate 	EEE occurred in your area within the last year AND/OR there is EEE in mosquitoes in your area now	TO Prevent – add this - Wear mosquito repellent when outdoors, especially between dusk and dawn - Avoid outside areas with obvious mosquito activity
High 	Conditions likely to lead to infection of a person with EEE are occurring in your area	TO Prevent – add this - Adjust outdoor activity to avoid peak mosquito hours (from dusk to dawn) - Avoid overnight camping, particularly near freshwater swamps where EEE activity is most likely
Critical 	Excessive risk from EEE virus exists, a person with EEE infection has been identified in your area	TO Prevent – add this Cancel or reschedule outdoor gatherings, organized sporting events, etc. to avoid peak mosquito hours (dusk to dawn)

Key to Color Coding on WNV Risk Map		
Risk	What it Means	What You Can Do
Low 	Infection with WNV is unlikely	TO Prepare - Know your risk – check regularly at www.mass.gov/dph/mosquito - Repair screens - Cleanup to get rid of mosquito breeding sites - Be aware of stagnant water on private property (e.g. unused swimming pools) and consult the local board of health. TO Prevent - Wear mosquito repellent between dusk to dawn - Wear long sleeves and long pants from dusk to dawn - Use mosquito netting on baby carriages and playpens
Moderate 	People with WNV infection have been found in your area	TO Prevent – add this - Wear mosquito repellent - Wear long sleeves and long pants when weather permits - Use mosquito netting on baby carriages and playpens - Dump standing water twice weekly
High 	More people may get infected with WNV in your area	TO Prevent – add this People over 50 or those who are immune compromised should adjust outdoor activity to avoid peak mosquito hours (from dusk to dawn)
Critical 	Unusually high risk from WNV exists	TO Prevent – add this Situation specific recommendations will be made

EEE Summary by County

As of: 9/5/23

Note: Municipalities start the season at remote, low or moderate risk depending upon historical EEE activity:

County	Towns at Critical risk	Towns at High risk	Human Cases	Animal Cases
Barnstable			0	0
Berkshire			0	0
Bristol			0	0
Dukes			0	0
Essex			0	0
Franklin			0	0
Hampden			0	0
Hampshire			0	0
Middlesex			0	0
Nantucket			0	0
Norfolk			0	0
Plymouth			0	0
Suffolk			0	0
Worcester			0	0
Total:			0	0

WNV Summary by County

As of: 9/5/23

Note: All municipalities start the season at low risk for WNV:

County	Towns at Critical risk	Towns at High risk	Human Cases	Animal Cases
Barnstable			0	0
Berkshire			0	0
Bristol			0	0
Dukes			0	0
Essex			0	0
Franklin			0	0
Hampden			0	0
Hampshire			0	0
Middlesex			0	0
Nantucket			0	0
Norfolk			0	0
Plymouth			0	0
Suffolk			0	0
Worcester			0	0
Total:			0	0

Below are important steps families and individuals can take in protecting themselves and their loved ones from illnesses caused by mosquitoes:

Avoid Mosquito Bites

- Apply Insect Repellent when Outdoors. Use a repellent with DEET (N, N-diethyl-m-toluamide), permethrin, picaridin (KBR 3023), oil of lemon eucalyptus [p-methane 3, 8-diol (PMD)] or IR3535 according to the instructions on the product label. DEET products should not be used on infants under 2 months of age and should be used in concentrations of 30% or less on older children. Oil of lemon eucalyptus should not be used on children under 3 years of age.
- Be Aware of Peak Mosquito Hours. The hours from dusk to dawn are peak biting times for many mosquitoes. Consider rescheduling outdoor activities that occur during evening or early morning.
- Clothing Can Help Reduce Mosquito Bites. Wearing long-sleeves, long pants and socks when outdoors will help keep mosquitoes away from your skin.

Mosquito-Proof Your Home

- Drain Standing Water. Mosquitoes lay their eggs in standing water. Limit the number of places around your home for mosquitoes to breed by either draining or discarding items that hold water. Check rain gutters and drains. Empty any unused flowerpots and wading pools, and change water in birdbaths frequently.
- Install or Repair Screens. Keep mosquitoes outside by having tightly-fitting screens on all of your windows and doors.

More information is available on the DPH website:

www.mass.gov/dph/mosquito. Information about WNV and Eastern Equine Encephalitis (EEE) is also available by calling the Epidemiology Program at 617-983-6800.

Also, please find videos regarding mosquitoes and ticks and how best to protect yourself to share with your constituents: www.mass.gov/MosquitoesAndTicks.