

Massachusetts Department of Public Health

Arbovirus Weekly Report

Week of September 9, 2024

For additional information regarding this report,
Please contact Ryan McGeown-Conron, DPH Director of Legislative Affairs
Ryan.c.mcgeown-conron@mass.gov

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 | 7622 | WNV – 301 EEE – 91 |
| Number of Animals Tested | 8 | WNV – 0 EEE – 2 |
| Number of People Tested | 141 | WNV – 7 EEE – 3 |

Key Talking Points for the public for the week of September 9, 2024:

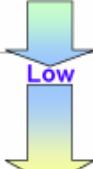
- DPH has identified three EEE human cases in Middlesex, Plymouth, and Worcester Counties and two EEE horse cases in Plymouth County. DPH has increased mosquito surveillance and testing.
- DPH identified seven WNV human cases in Hampden, Middlesex, Norfolk, and Suffolk Counties.
- DPH has detected 91 positive EEE mosquito samples in Barnstable, Bristol, Essex, Middlesex, Norfolk, Plymouth, and Worcester Counties.
- DPH has detected 301 positive WNV mosquito samples statewide.
- Aerial spraying to control EEE vectors in Plymouth County was completed on 8/28/24 and ground spraying in Worcester County was completed on 8/31/24.
- Elevated risk of human transmission occurs from late August through mid-September.
- Completed Aerial and Ground Spray Maps are be posted here: <https://massnrc.org/spray-map/Region/List>
- DPH is responding to EEE detections in Connecticut, New Hampshire, New York, Rhode Island, and Vermont with increased surveillance activities.
- 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.
- In 2023 MDPH identified five WNV human cases and 164 WNV positive mosquito samples.
- DPH began early season EEE 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.

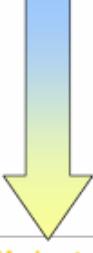
- DPH has been working since the end of the last season with partners and stakeholders, most significantly the Massachusetts Department of Agricultural Resources, to prepare for this season.
- Recommended public health measures include raising awareness among residents and reminding them that it is important 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 <ul style="list-style-type: none"> Know your risk – check regularly at www.mass.gov/dph/mosquito Repair screens |
| Low  | EEE may occur in your area | TO Prevent <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Situation specific recommendations will be made |

EEE Summary by County

As of: 9/9/24

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 | Animal |
|------------|------------------------|--------------------|----------|--------|
| | | | Cases | 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 | | 5 | 1 | 0 |
| Nantucket | | | 0 | 0 |
| Norfolk | | | 0 | 0 |
| Plymouth | | 3 | 1 | 2 |
| Suffolk | | | 0 | 0 |
| Worcester | 4 | 4 | 1 | 0 |
| | | | Total: 3 | 2 |

WNV Summary by County

As of: 9/9/2024

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

| County | Towns at Critical risk | Towns at High risk | Human | Animal |
|------------|------------------------|--------------------|-----------------|----------|
| | | | Cases | Cases |
| Barnstable | | | 0 | 0 |
| Berkshire | | | 0 | 0 |
| Bristol | | | 0 | 0 |
| Dukes | | | 0 | 0 |
| Essex | | 1 | 0 | 0 |
| Franklin | | | 0 | 0 |
| Hampden | | | 1 | 0 |
| Hampshire | | | 0 | 0 |
| Middlesex | | 10 | 3 | 0 |
| Nantucket | | | 0 | 0 |
| Norfolk | | 3 | 1 | 0 |
| Plymouth | | 7 | 0 | 0 |
| Suffolk | | 4 | 2 | 0 |
| Worcester | | | 0 | 0 |
| | | | Total: 7 | 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.