

Pioneer Valley MCD Weekly Report

EPI Week 32

Week Ending: August 10, 2024

Surveillance Summary

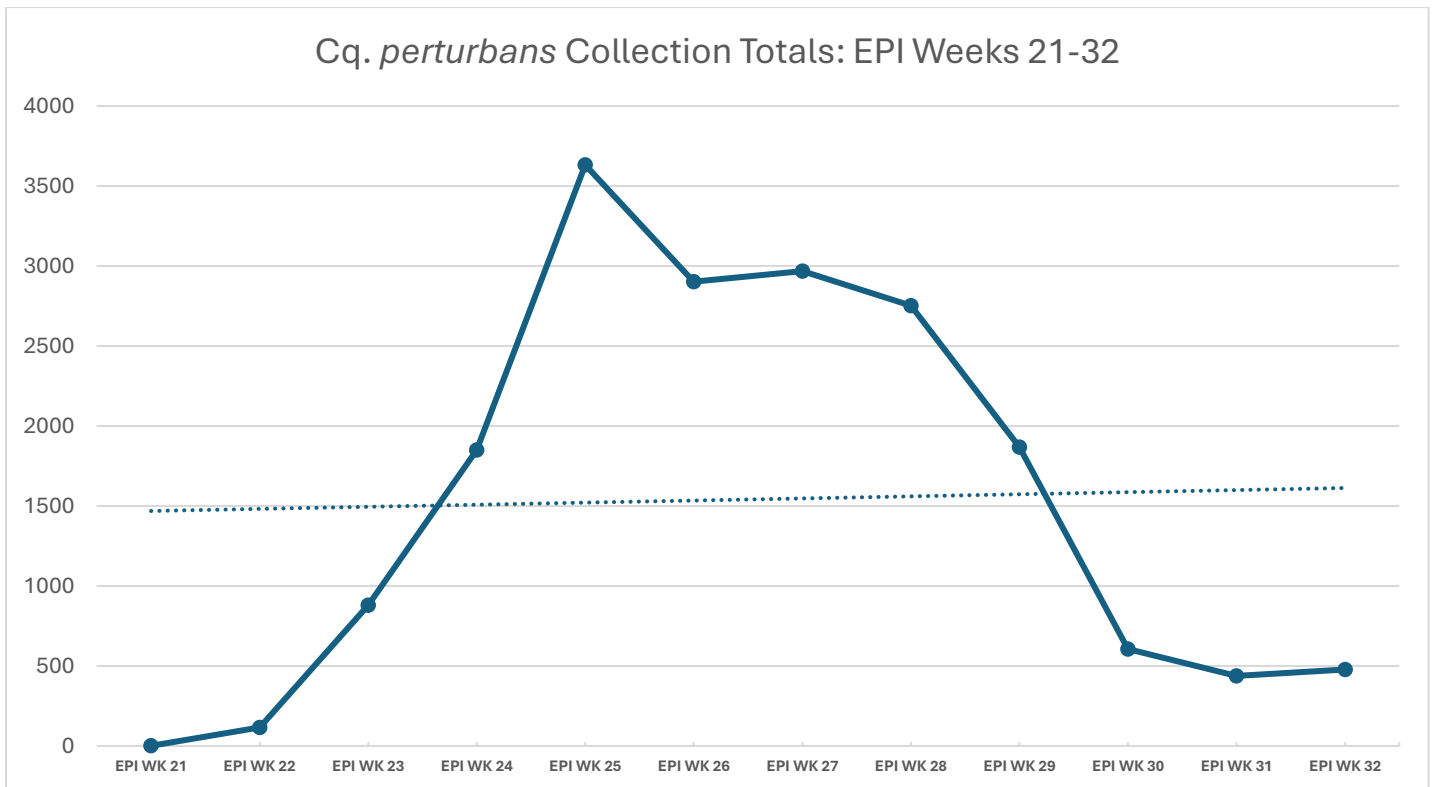
EPI Week 32 Target Species Surveillance Summary					Cumulative Totals: EPI Weeks 24-32			
Species	# Collected	Pools	WNV+	EEEV+	Cumulative Specimens	Cumulative Pools	Cumulative WNV+	Cumulative EEEV+
<i>Cx. pipiens/restuans</i>	53	7	0	0	1242	50	1	0
<i>Cs. melanura</i>	7	5	0	0	135	21	0	0
<i>Cq. perturbans</i>	477	15	0	0	15896	166	1	0
<i>Oc. canadensis</i>	2	0	0	0	563	20	0	0
<i>Oc. japonicus</i>	119	4	0	0	542	27	0	0
<i>Cx. salinarius</i>	138	7	0	0	816	25	2	0
<i>Ae. albopictus</i>	8	1	0	0	23	3	0	0
<i>Ps. ferox</i>	25	1	0	0	321	7	0	0
<i>An. quadrimaculatus</i>	20	0	0	0	564	2	0	0
<i>Ae. vexans</i>	43	3	0	0	257	8	0	0
<i>Cx. erraticus</i>	0	0	0	0	265	3	0	0
Totals	882	43	0	0	20624	332	4	0

Positive Mosquito Samples in Pioneer Valley

- There were no virus isolations during EPI week 32.

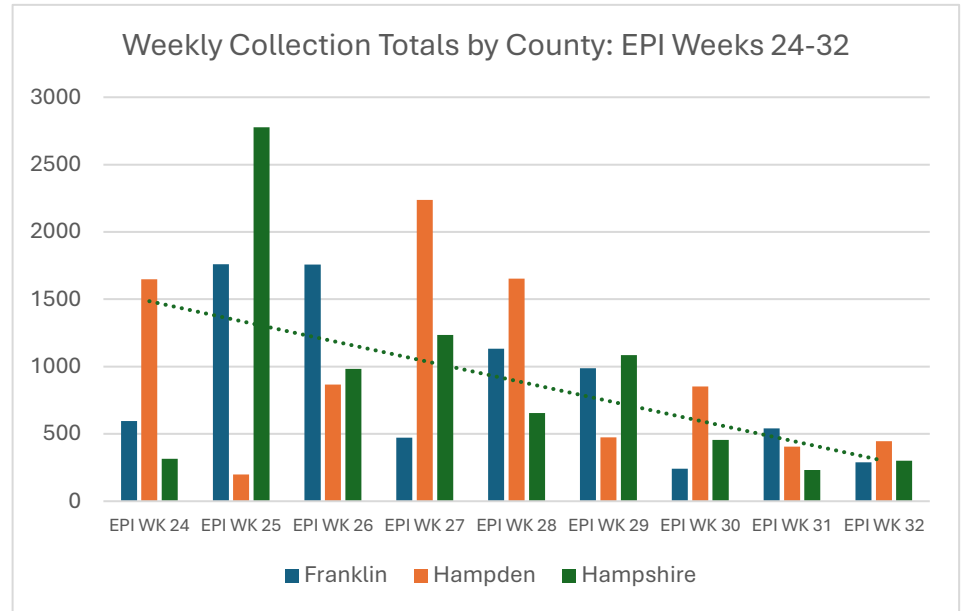
Most Abundant Species in Pioneer Valley

- *Cq. perturbans* were the most abundant vector species collected during EPI week 32, totaling 477 specimens. *Perturbans* collections are up by 9% from the previous week and are expected to continue to decrease or remain relatively stable during the coming weeks. *Cq. perturbans* are a bridge vector for EEE and WNV and can be found in permanent swamps with emergent vegetation (e.g. cattails and hummocks/tussocks). *Cq. perturbans* are aggressive human biters that can fly up to 5 miles for a blood meal and are active during the night.

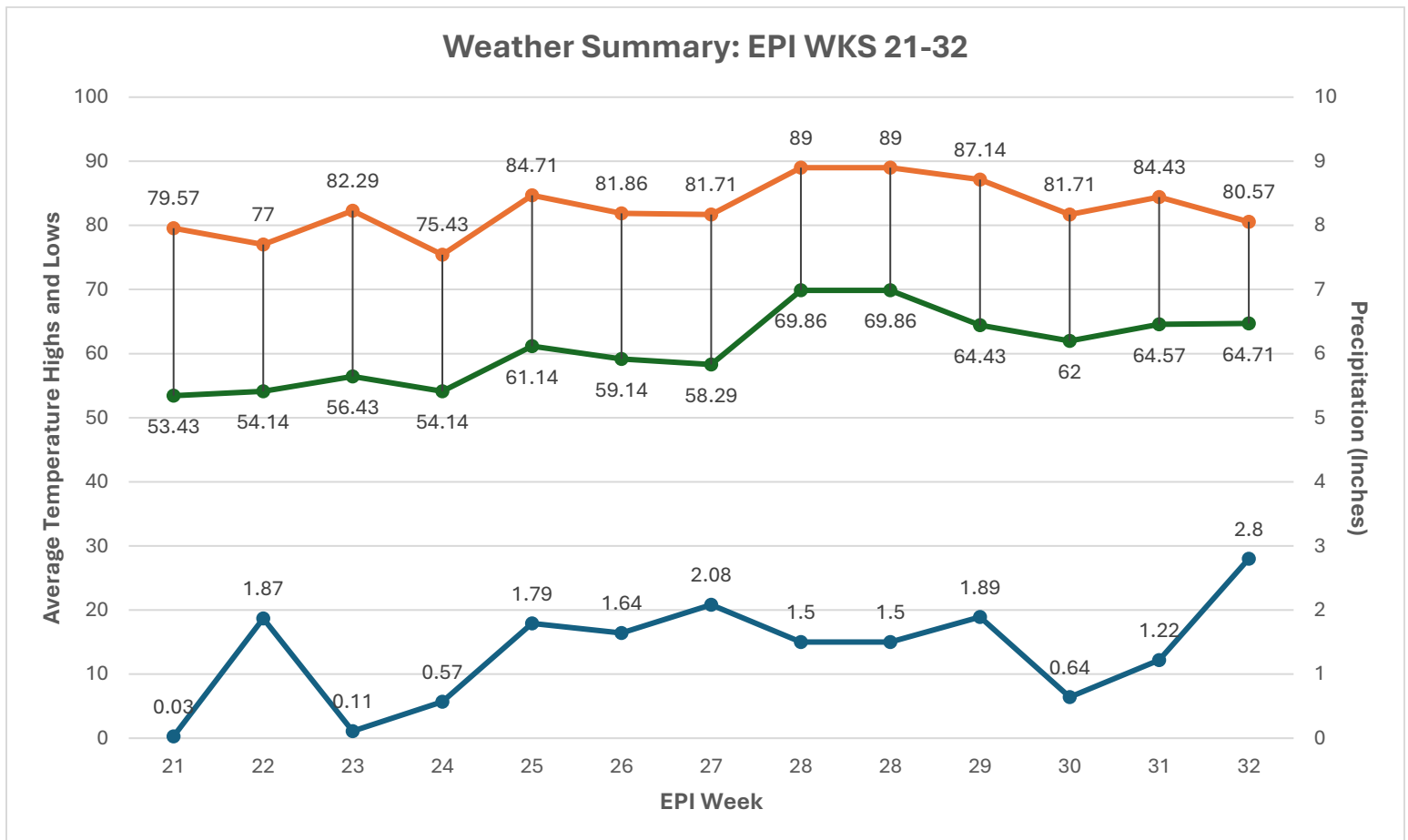


EPI WK 32 Summary by County

- **Franklin County**
 - EPI WK 32 Pools Tested: 11
 - Positive Samples: 0
 - Most Abundant Species: *Cq. perturbans* (84)
 - Total Mosquitoes Collected: 290
- **Hampden County**
 - EPI WK 32 Pools Tested: 17
 - Positive Samples: 0
 - Most Abundant Species: *Cq. perturbans* (296)
 - Total Mosquitoes Collected: 446
- **Hampshire County**
 - EPI WK 32 Pools Tested: 15
 - Positive Samples: 0
 - Most Abundant Species: *Cq. perturbans* (97)
 - Total Mosquitoes Collected: 300
- Total Mosquitoes Collected (All Counties): **1036**
- Total Pools Submitted for Testing (All Counties): **43**



Weather Data



Weather Summary

- Weather conditions remained favorable for mosquitoes during EPI week 32, resulting in a total of **1,036** mosquitoes collected, which is a 12% decrease from the previous week. Due to the phenology (seasonal abundance) of specific species, it is expected that mosquito collection totals will continue to decrease in the coming weeks, despite favorable weather conditions. Colder nighttime may also be contributing to lower mosquito collection numbers. However, spikes in specific 'floodwater' mosquito species that benefit from heavy rainfall may increase.

Weekly Changes in Weather

Station	Name	EPI Week	PRCP Total (in.)	TMAX AVG (°F)	TMIN AVG (°F)
USC00190120	AMHERST, MA US	24	0.57	75.43	54.14
USC00190120	AMHERST, MA US	25	1.79 (+214%)	84.71 (+12%)	61.14 (+13%)
USC00190120	AMHERST, MA US	26	1.64 (-8%)	81.86 (-3%)	59.14 (-3%)
USC00190120	AMHERST, MA US	27	2.08 (+28%)	81.71 (no change)	58.29 (+1%)
USC00190120	AMHERST, MA US	28	1.5 (-28%)	89 (+9%)	69.9 (+20%)
USC00190120	AMHERST, MA US	29	1.89 (+26%)	87.14 (-2%)	64.43 (-8%)
USC00190120	AMHERST, MA US	30	0.64 (-66%)	81.71 (-6%)	62 (-4%)
USC00190120	AMHERST, MA US	31	1.22 (+91%)	84.43 (+3%)	64.57 (+4%)
USC00190120	AMHERST, MA US	32	2.8 (+130%)	80.57(-5%)	64.71 (0%)

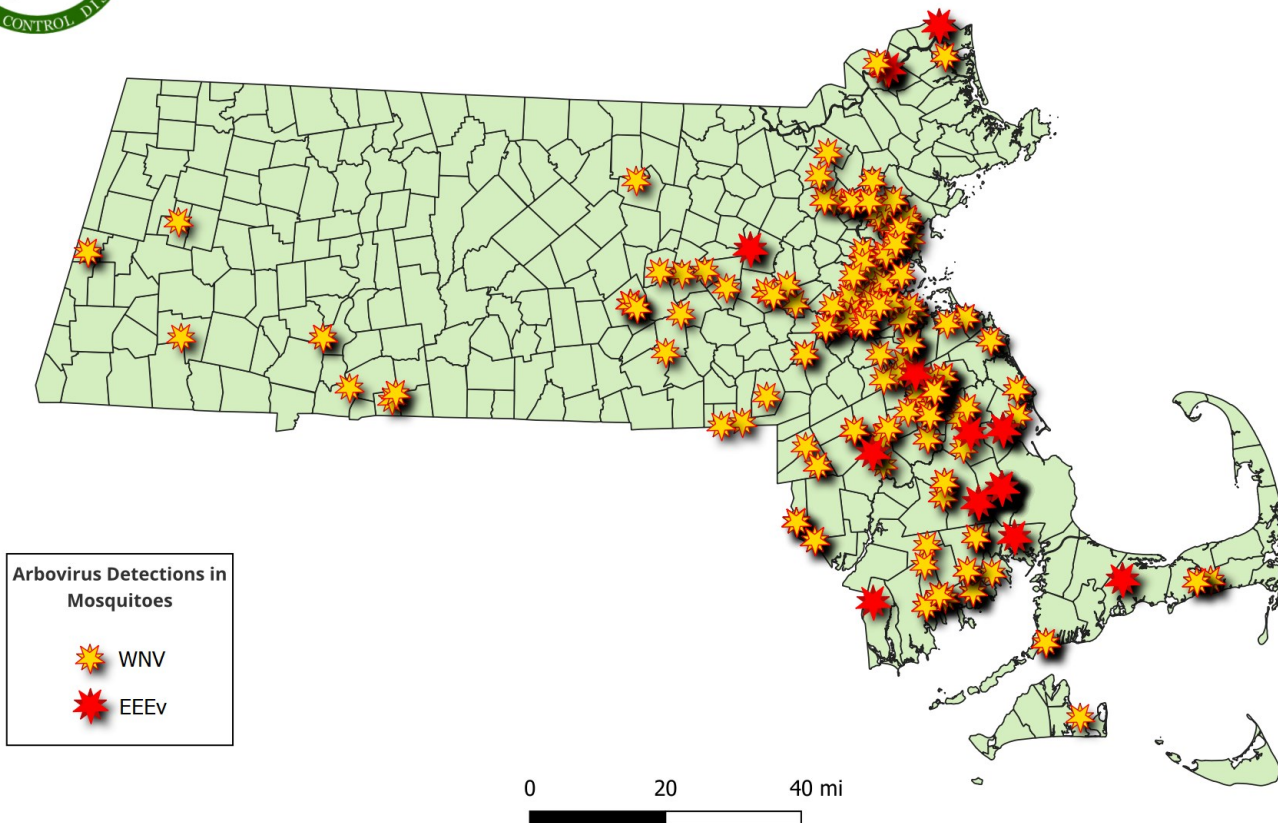
Statewide Cumulative Arbovirus Positives as of 8/16/24

Virus	Positive Mosquito Samples	Animal Cases	Human Cases
EEEv	55	1	1
WNV	244	0	2

Note: A human case of EEE (encephalitis) in Worcester County was confirmed on 8/16 by DPH. A second WNV (neuroinvasive) case in Middlesex County was reported by DPH earlier this week.

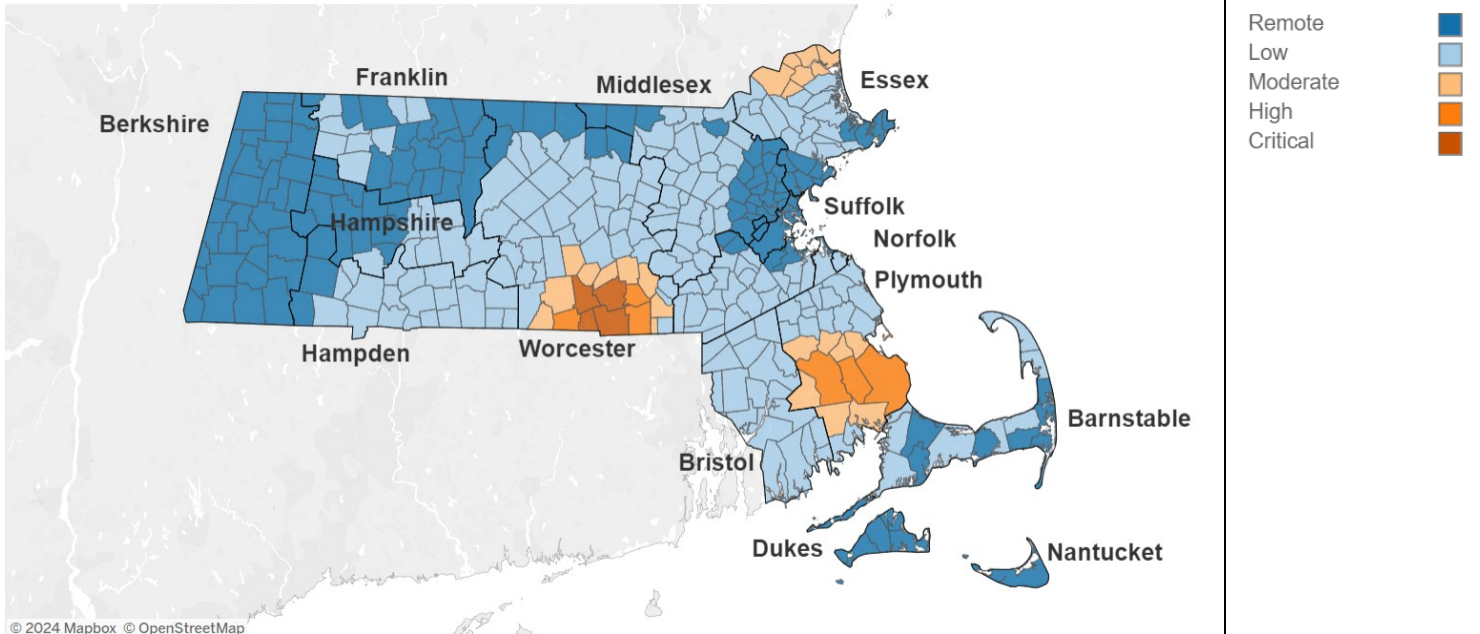


Arbovirus Map: Positive Mosquito Pools as of 8/16/24



EEE Impacted Areas

EEE Risk Level by Town

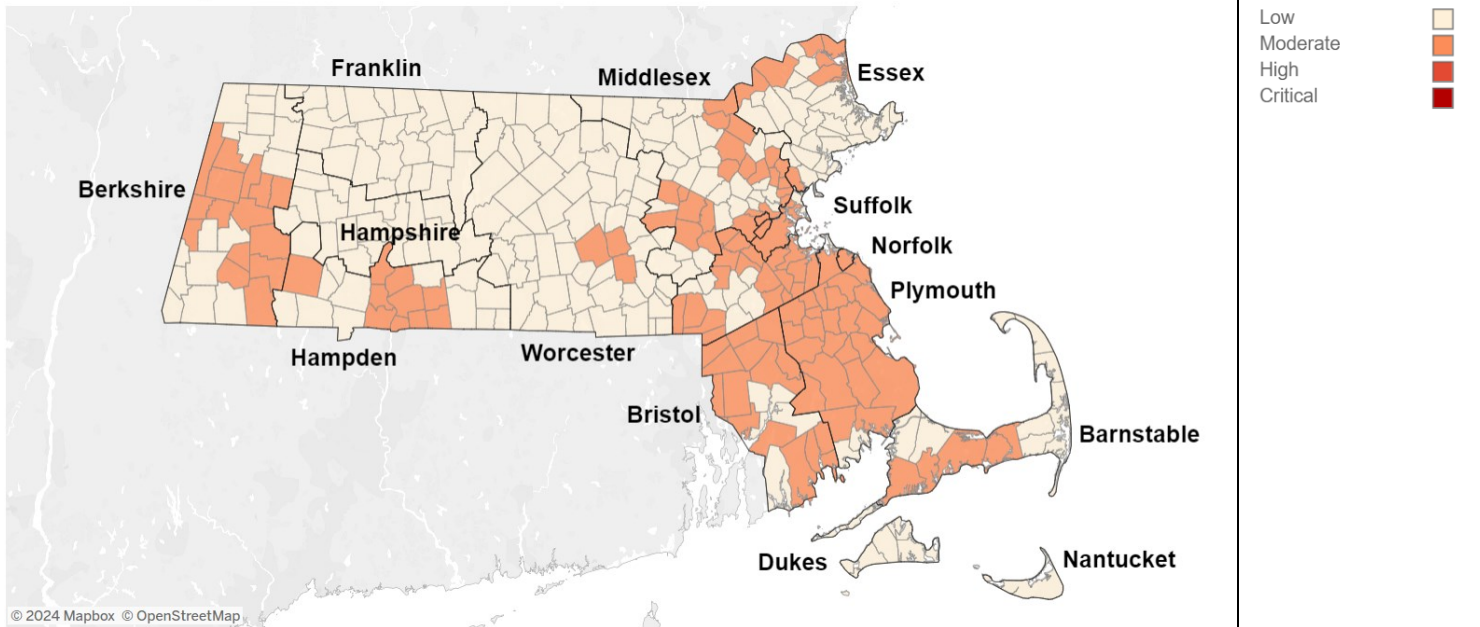


A recently confirmed animal case of EEEv in a single horse has resulted in a risk level change to “Critical” in the following communities: Douglas, Oxford, Sutton, and Webster. Please click the link below to track all communities that have been impacted.

Current EEE Risk Map from: <https://www.mass.gov/info-details/massachusetts-arbovirus-update>

WNV Impacted Areas

WNV Risk Level by Town



Detections of WNV in mosquitoes and a single confirmed human case (Hampden County) during the past week has resulted in a risk level change to “Moderate” in multiple communities. Please use the link below to track all communities that have been impacted.

Current WNV Risk Map From: <https://www.mass.gov/info-details/massachusetts-arbovirus-update>

Dengue Fever in Massachusetts (acquired through travel)

- According to the CDC, there have been a total of 75 human cases of dengue in Massachusetts, as of 8/19/24. There have been no local transmissions of dengue in Massachusetts.
- Dengue transmission typically occurs in the following regions: the Caribbean, Central America, South America, Southeast Asia, and the Pacific Islands.
- Dengue is spread through a human-to-mosquito-to-human cycle.
- Onset is up to two weeks with illness lasting 2-7 days. Transmission to mosquitoes is possible for up to 12 days.
- Symptoms include:
 - Fever
 - Nausea and vomiting
 - Rash
 - Aches and pains
 - Joint and muscle pain
 - Pressure and pain around the eye sockets
 - Headache

WNV and EEE Symptoms Chart

Disease	Onset	Symptoms	
WNV	2 to 14 Days	Febrile Illness	Neuroinvasive Disease
		<ul style="list-style-type: none"> • Fever • Muscle aches • Joint Pain • Fatigue • Rash 	<ul style="list-style-type: none"> • Stiff neck • Muscle Tremors • Seizures • Changes in vision • Weakness or paralysis
EEE	4 to 10 Days	Febrile Illness	Neuroinvasive Disease
		<ul style="list-style-type: none"> • Fever • Muscle aches • Joint pain • Chills 	<ul style="list-style-type: none"> • Fever • Headache • Seizures • Behavioral changes • Vomiting • Diarrhea • Coma

PE Poster Printouts and Helpful Links

- [Mosquito Bite Prevention Poster](#)
- [EEE Transmission Cycle Poster](#)
- [WNV Transmission Cycle Poster](#)
- [Dengue Virus Transmission Cycle Poster](#)
- [CDC Dengue Fever Information](#)
- DPH Mosquito PE Materials: <https://www.mass.gov/lists/mosquito-borne-disease-educational-materials>
- CDC Press Kit: <https://www.cdc.gov/mosquitoes/communication-resources/press-kit-mosquitoes.html>
- DPH Tick PE Materials: <https://www.mass.gov/info-details/tick-borne-educational-materials>

Recommended Public Messaging

- Use EPA approved bug-repellent
- Cover skin/wear long sleeves and pants
- Avoid outdoor activities during peak mosquito times (between dusk and dawn)
- Repair window screens
- Containers in yards with standing water should be emptied to reduce mosquito breeding

DPH Arbovirus Toolkit: <https://www.mass.gov/lists/arbovirus-information-for-local-boards-of-health#toolkit->

DPH Arbovirus Phased Response Plan: <https://www.mass.gov/doc/2024-arbovirus-surveillance-and-response-plan/download>

Questions/Comments: Please email John Briggs, the District Director, at john.c.briggs@mass.gov.



PIONEER VALLEY MOSQUITO CONTROL DISTRICT

FIGHT THE BITE

AND HELP PREVENT THE SPREAD OF MOSQUITO BORNE DISEASES



USE REPELLENT

Be sure to apply EPA approved insect repellents containing plant based eucalyptus or DEET when outdoors.



AVOID DUSK AND DAWN

Most mosquito species are very active at dusk and dawn. Avoid engaging in outdoor activities during these times whenever possible.



WEAR PROPER CLOTHING

Wearing long-sleeves and pants will significantly help reduce mosquito bites.



PREVENT ARTIFICIAL HABITAT

Buckets, plant pots, kiddie pools, tire swings, and anything that holds water should be emptied to prevent mosquito habitat.



FIX DOORS AND WINDOWS

Screens with holes should be repaired and be sure that all doors and windows are working properly to keep the mosquitoes out.



FIRST AID FOR BITES

Wash bite with soap and water and apply anti-itch cream. If necessary, apply a cold cloth to reduce swelling.

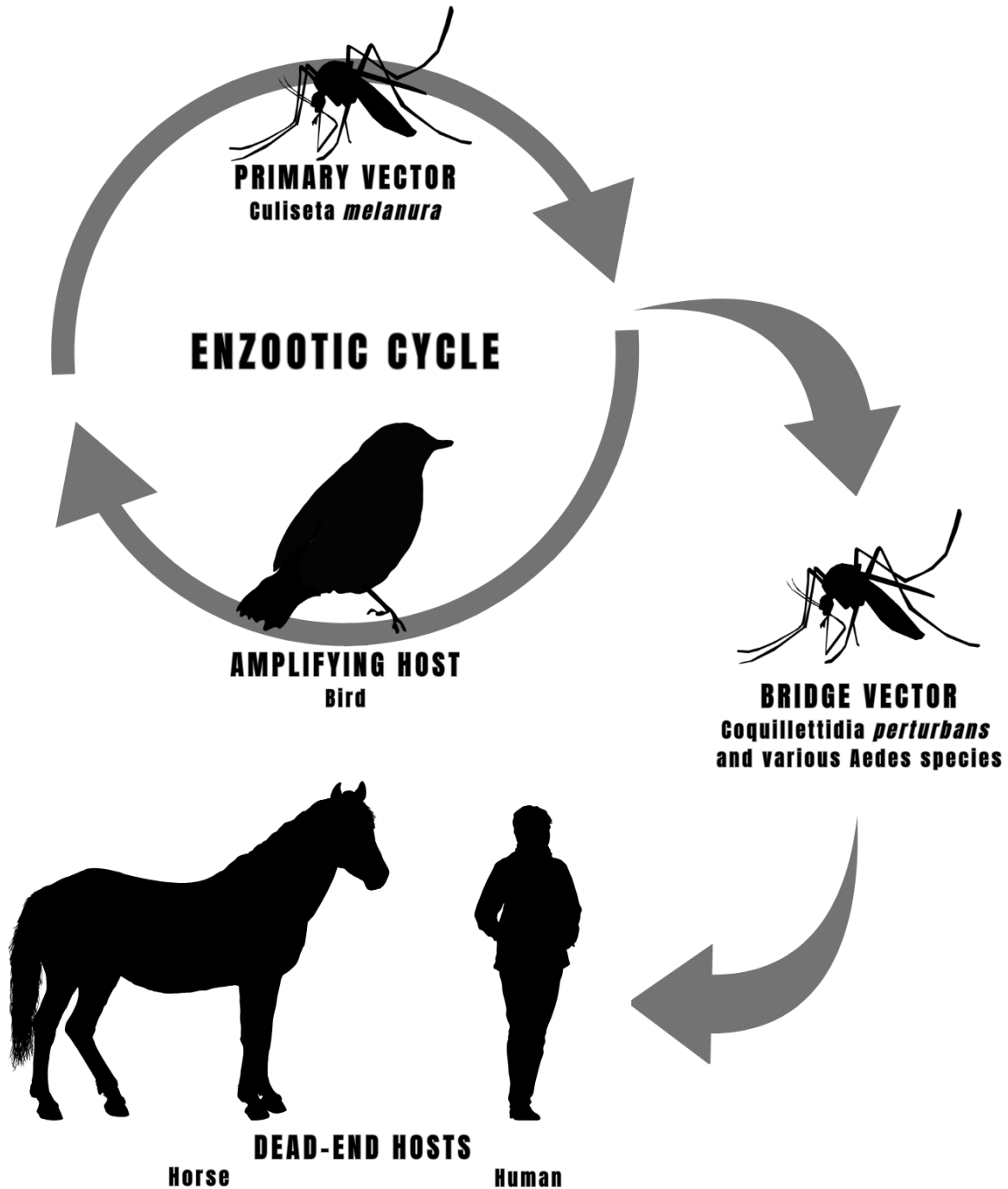
Email: john.c.briggs@mass.gov

Web: mass.gov/info-details/pioneer-valley-mosquito-control-district-pvmcd



PIONEER VALLEY MOSQUITO CONTROL DISTRICT

EASTERN EQUINE ENCEPHALITIS VIRUS TRANSMISSION CYCLE



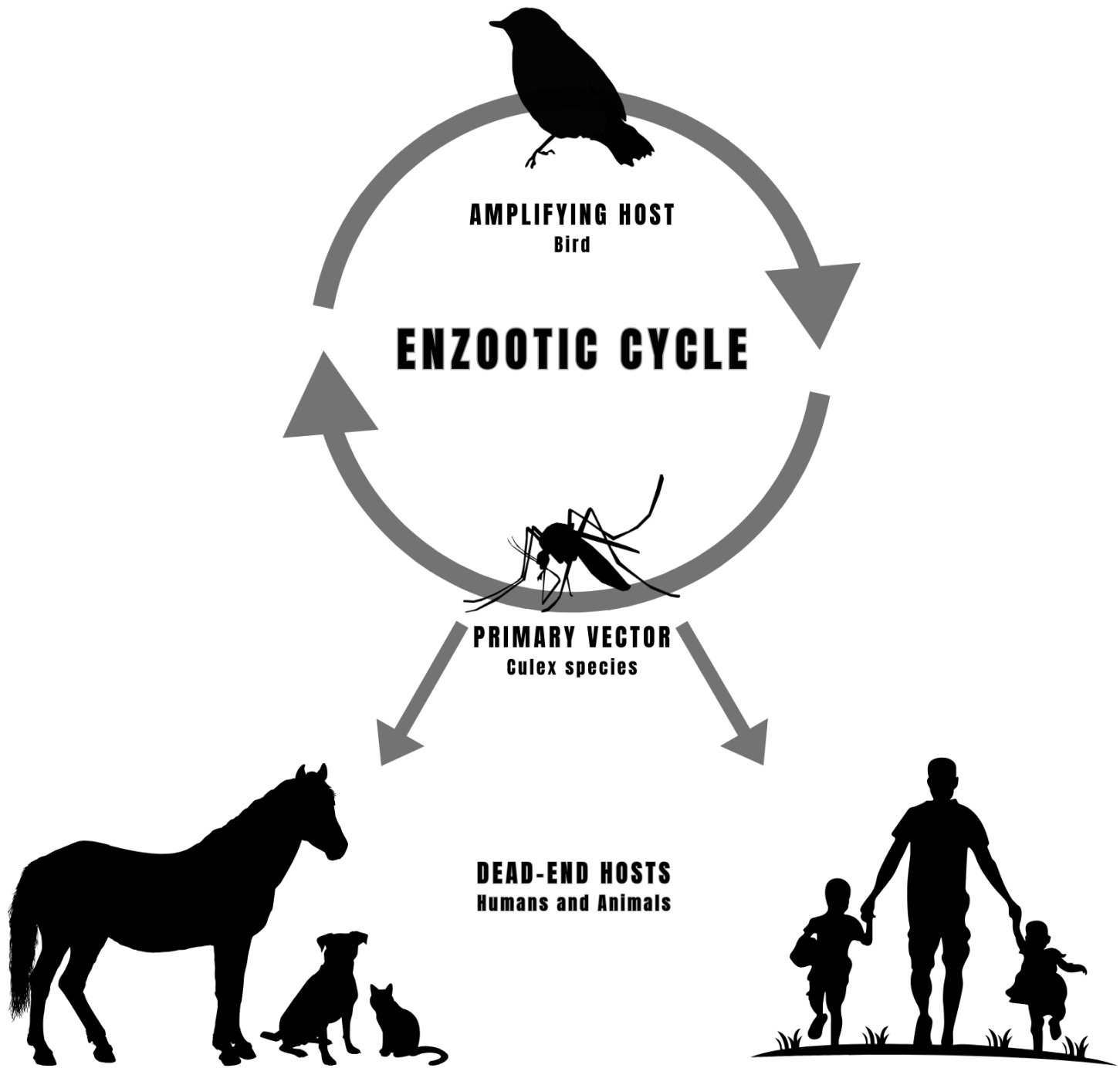
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PIONEER VALLEY MOSQUITO CONTROL DISTRICT

WEST NILE VIRUS TRANSMISSION CYCLE



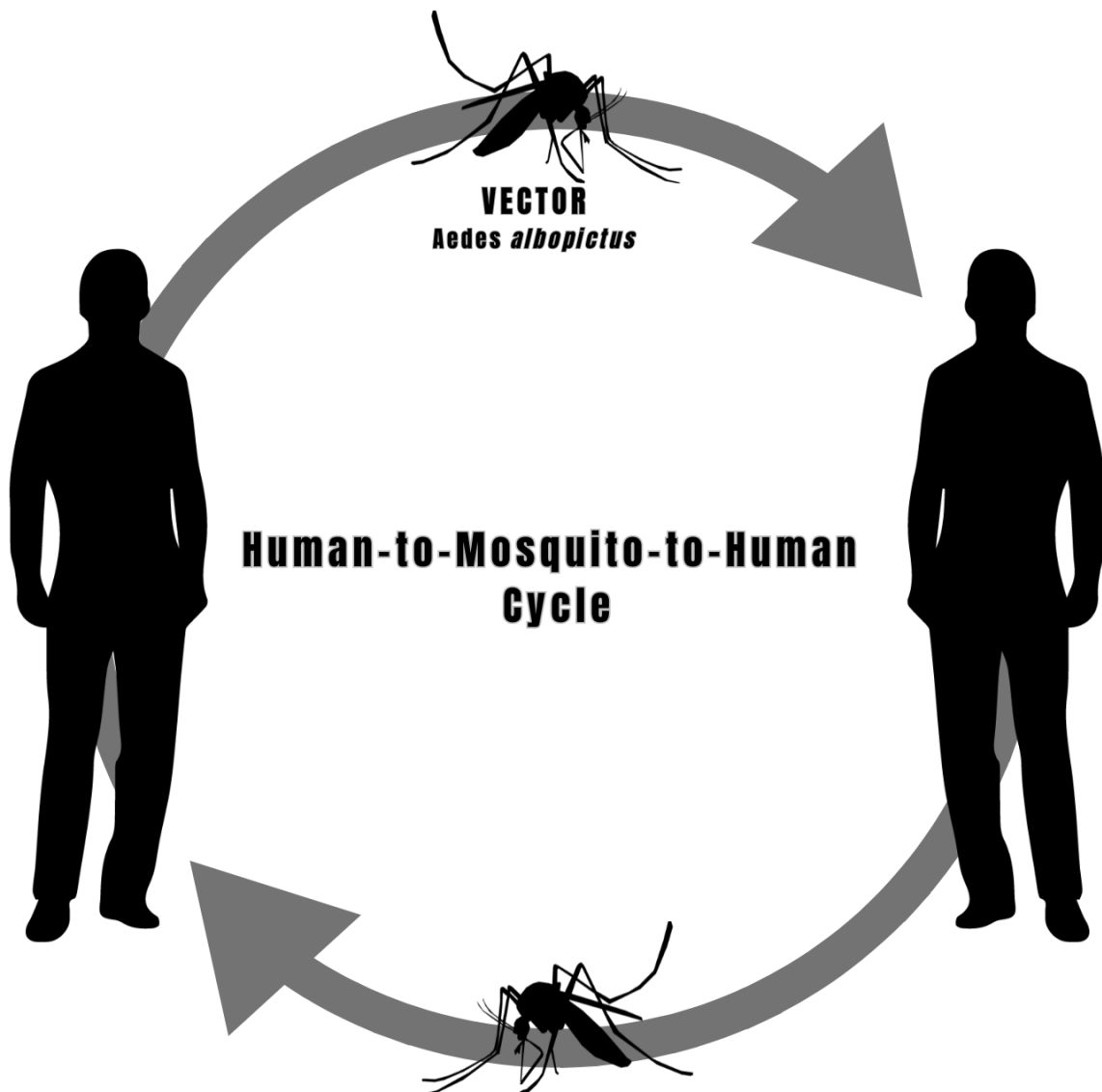
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PIONEER VALLEY MOSQUITO CONTROL DISTRICT

DENGUE VIRUS TRANSMISSION CYCLE



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