

Pioneer Valley MCD Weekly Report

EPI Week 33

Week Ending: August 17, 2024

Surveillance Summary

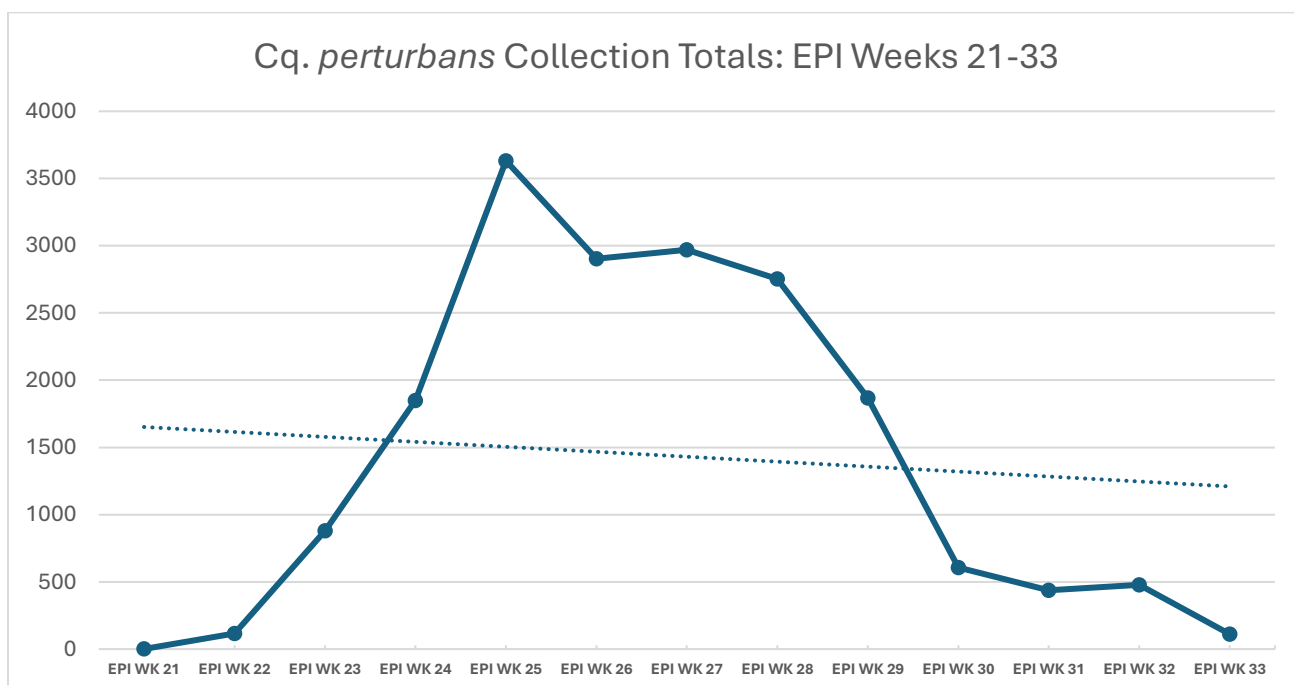
EPI Week 33 Target Species Surveillance Summary					Cumulative Totals: EPI Weeks 24-33			
Species	# Collected	Pools	WNV+	EEEV+	Cumulative Specimens	Cumulative Pools	Cumulative WNV+	Cumulative EEEV+
<i>Cx. pipiens/restuans</i>	4	0	0	0	1246	50	1	0
<i>Cs. melanura</i>	0	0	0	0	135	21	0	0
<i>Cq. perturbans</i>	112	7	0	0	16008	173	1	0
<i>Oc. canadensis</i>	9	0	0	0	572	20	0	0
<i>Oc. japonicus</i>	33	3	0	0	575	30	0	0
<i>Cx. salinarius</i>	105	6	0	0	921	31	2	0
<i>Ae. albopictus</i>	45	2	0	0	68	5	0	0
<i>Ps. ferox</i>	30	3	0	0	351	10	0	0
<i>An. quadrimaculatus</i>	17	1	0	0	581	3	0	0
<i>Ae. vexans</i>	30	1	0	0	287	9	0	0
<i>Cx. erraticus</i>	114	2	0	0	379	5	0	0
<i>An. punctipennis</i>	196	4	0	0	988	34	0	0
<i>Oc. trivittatus</i>	59	1	0	0	611	3	0	0
Totals	754	30	0	0	22722	394	4	0

Positive Mosquito Samples in Pioneer Valley

- There were no virus isolations during EPI week 33.

Most Abundant Species in Pioneer Valley

- Among the three vector species of most concern (*Cx. pipiens*, *Cs. melanura*, and *Cq. perturbans*), *Cq. perturbans* was the most prevalent during EPI week 33, with a total of 112 specimens collected. *Cq. perturbans* collections are down by 77% 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.



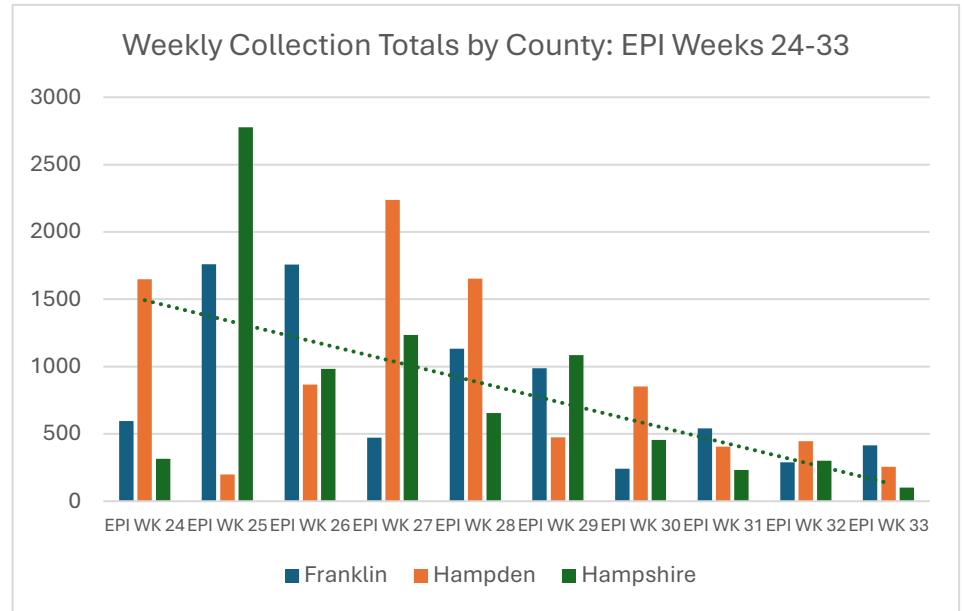
EPI WK 33 Summary by County

- **Franklin County**
 - EPI WK 33 Pools Tested: 11
 - Positive Samples: 0
 - Most Abundant Species: *Cq. perturbans* (77)
 - Total Mosquitoes Collected: 416

- **Hampden County**
 - EPI WK 33 Pools Tested: 17
 - Positive Samples: 0
 - Most Abundant Species: *Cx. salinarius* (46)
 - Total Mosquitoes Collected: 256

- **Hampshire County**
 - EPI WK 33 Pools Tested: 15
 - Positive Samples: 0
 - Most Abundant Species: *Cq. perturbans* (32)
 - Total Mosquitoes Collected: 101

- Total Mosquitoes Collected (All Counties): **773**
- Total Pools Submitted for Testing (All Counties): **30**



Weather Summary

- Weather conditions remained favorable for mosquitoes during EPI week 33, resulting in a total of 773 mosquitoes collected, which is a 25% decrease from the previous week. Due to the phenology (seasonal abundance) of specific species, and colder nighttime temperatures, it is expected that mosquito collection totals will continue to decrease in the coming weeks.

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%)
USC00190120	AMHERST, MA US	33	0.15 (-95%)	80.86 (no change%)	57 (-25%)

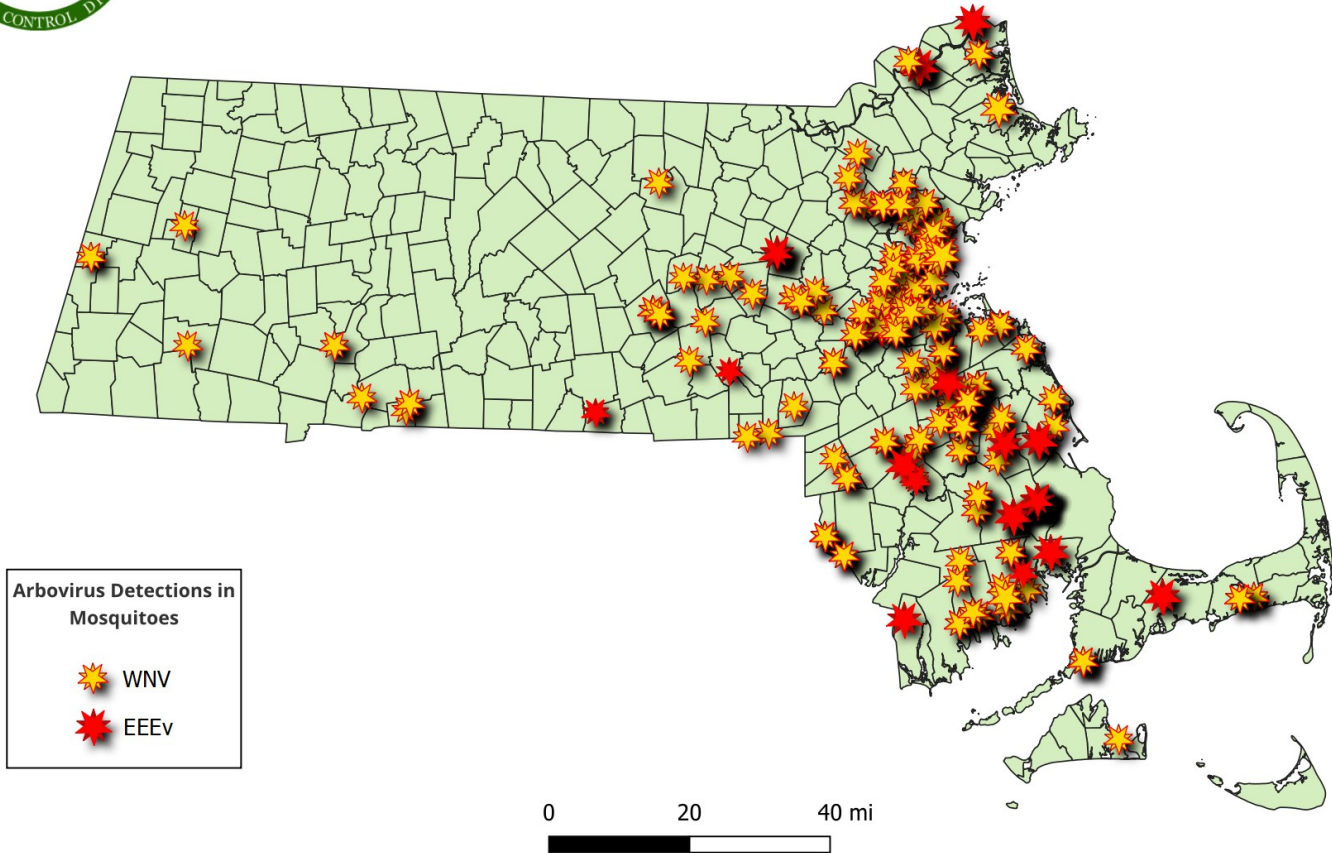
Statewide Cumulative Arbovirus Positives as of 8/23/24

Virus	Positive Mosquito Samples	Animal Cases	Human Cases
EEEv	69	1	1
WNV	262	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.

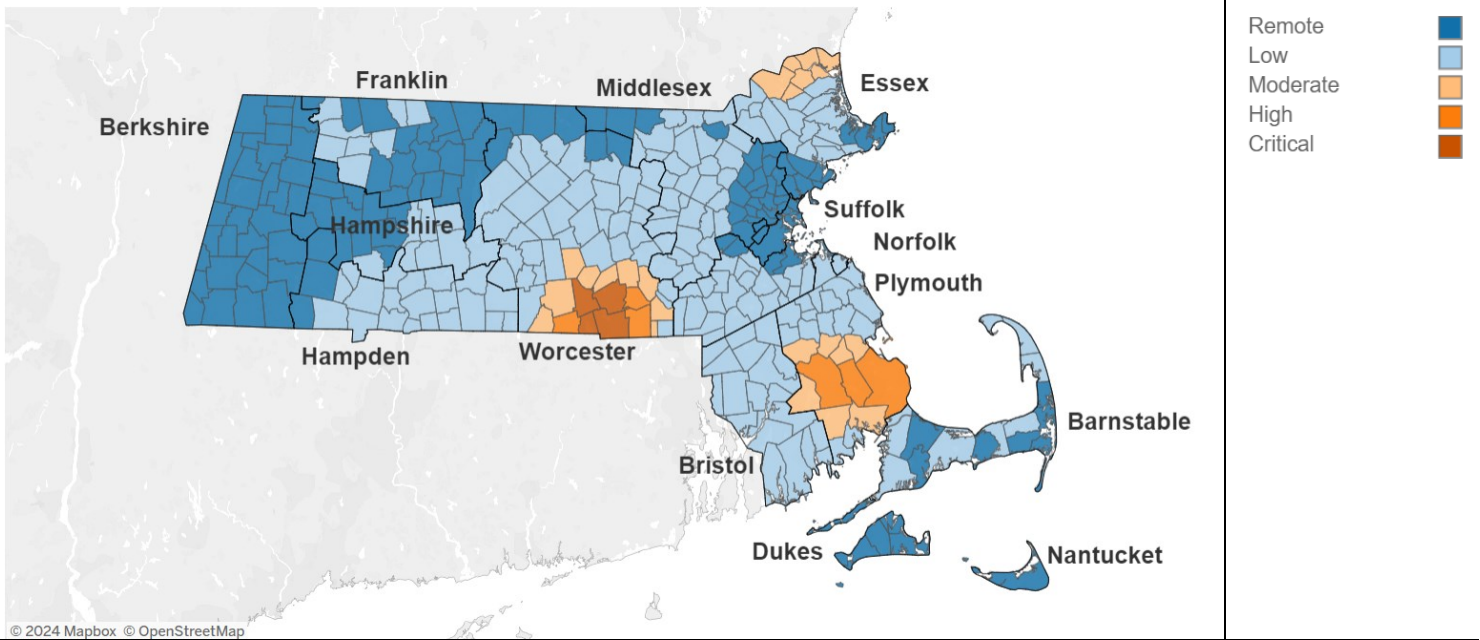


Arbovirus Map: Positive Mosquito Pools as of 8/23/24



EEE Impacted Areas

EEE Risk Level by Town

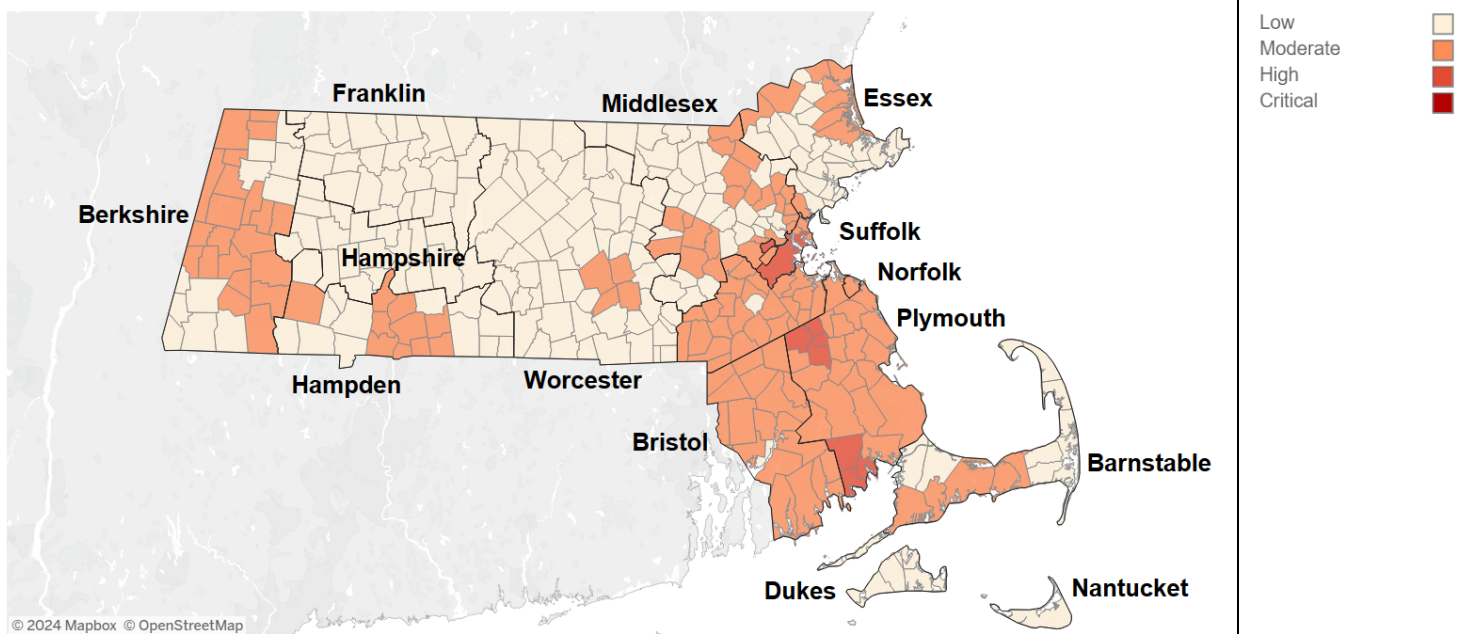


Recently confirmed animal case of EEEv positive mosquito pools have resulted in a risk level change to “Moderate” in the following communities: Acton, Berkley, Dartmouth, Hudson, Marion, Marlborough, Mattapoisett, Raynham, Sudbury, Taunton, and Westport. Please click the link below to track all communities 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

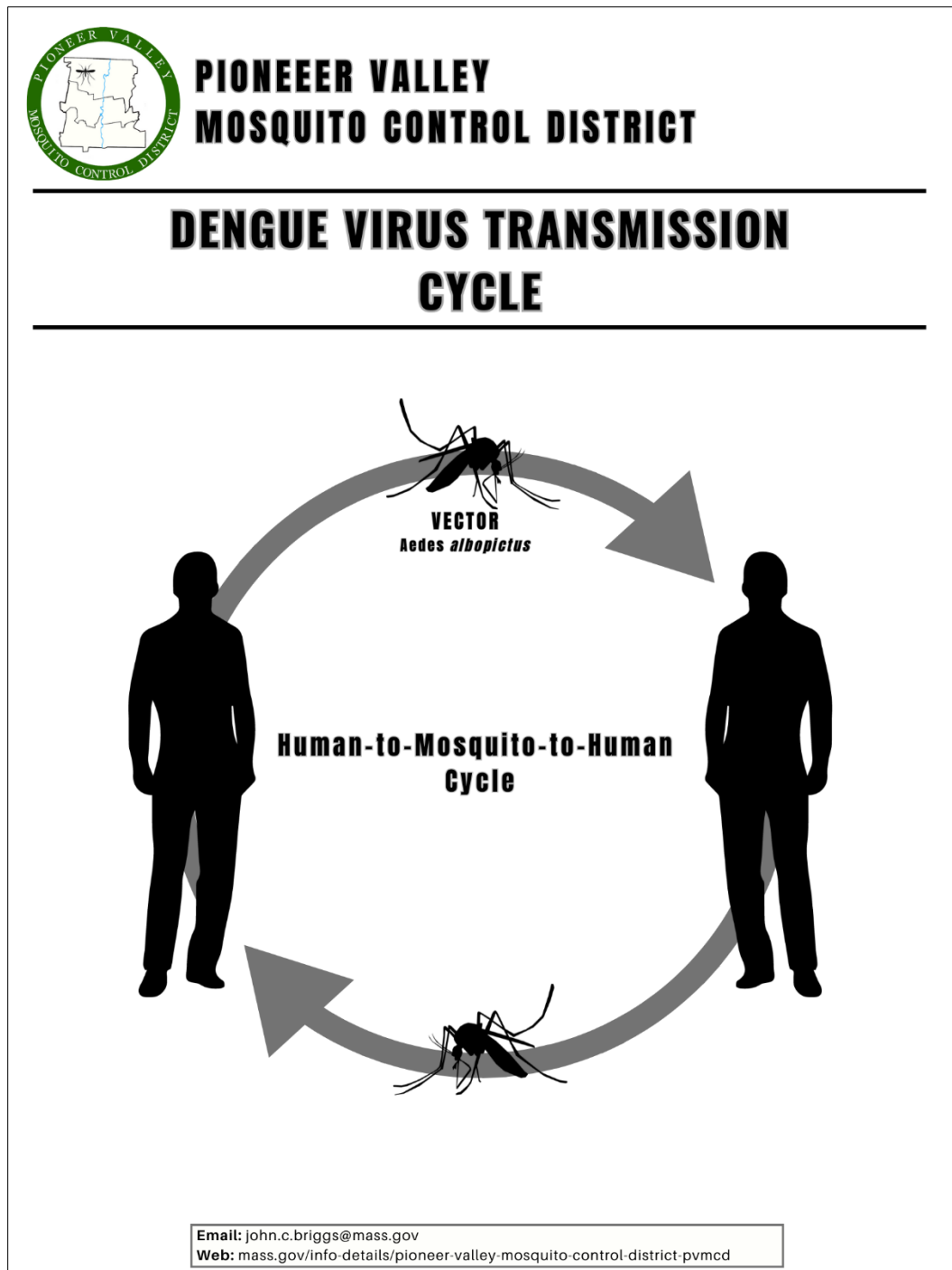


Multiple isolations of WNV in mosquitos during the past week has resulted in a risk level change to “High” in the following communities: Abington, Boston, Brockton, East Bridgewater, Marion, Mattapoisett, Rochester, Whitman, Please use the link below to track all communities have been impacted.

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

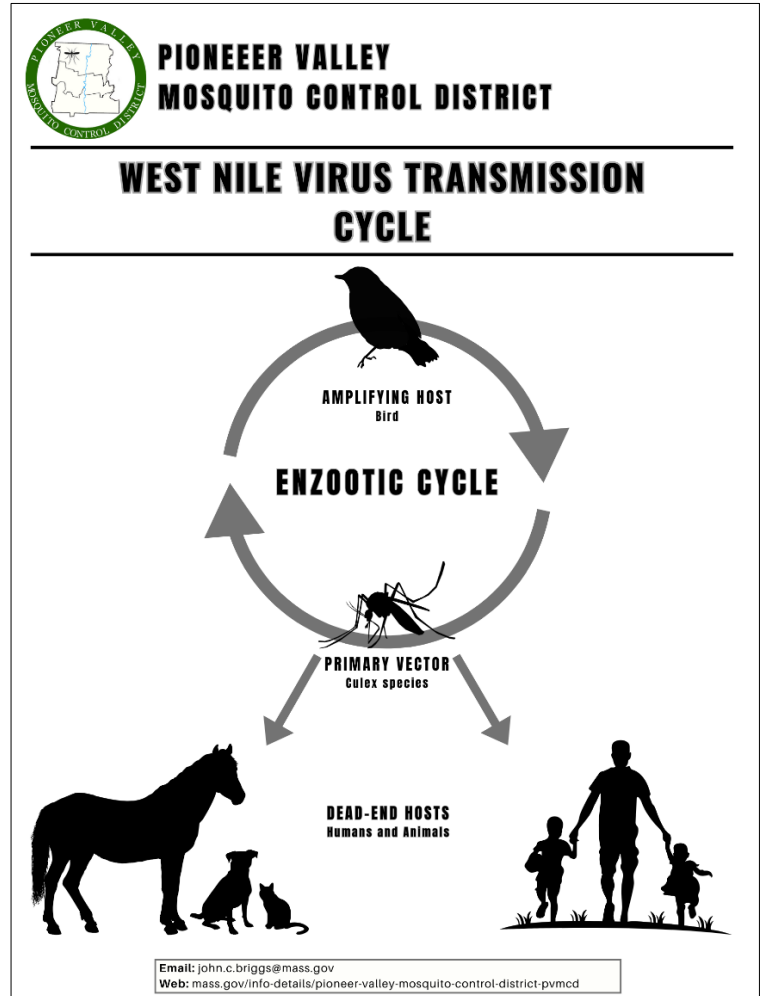
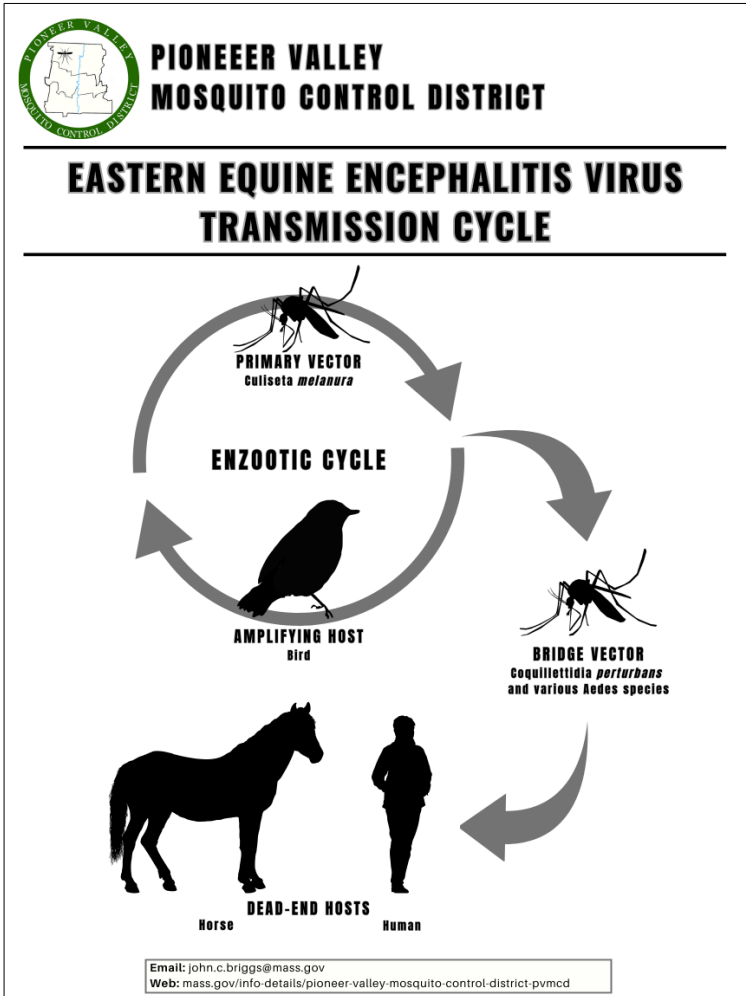
Dengue Fever in Massachusetts (acquired through travel)

- According to the CDC, there have been a total of 80 human cases of dengue in Massachusetts, as of 8/23/24. 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 <ul style="list-style-type: none"> Fever Muscle aches Joint Pain Fatigue Rash 	Neuroinvasive Disease <ul style="list-style-type: none"> Stiff neck Muscle Tremors Seizures Changes in vision Weakness or paralysis
		Febrile Illness <ul style="list-style-type: none"> Fever Muscle aches Joint pain Chills 	Neuroinvasive Disease <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.

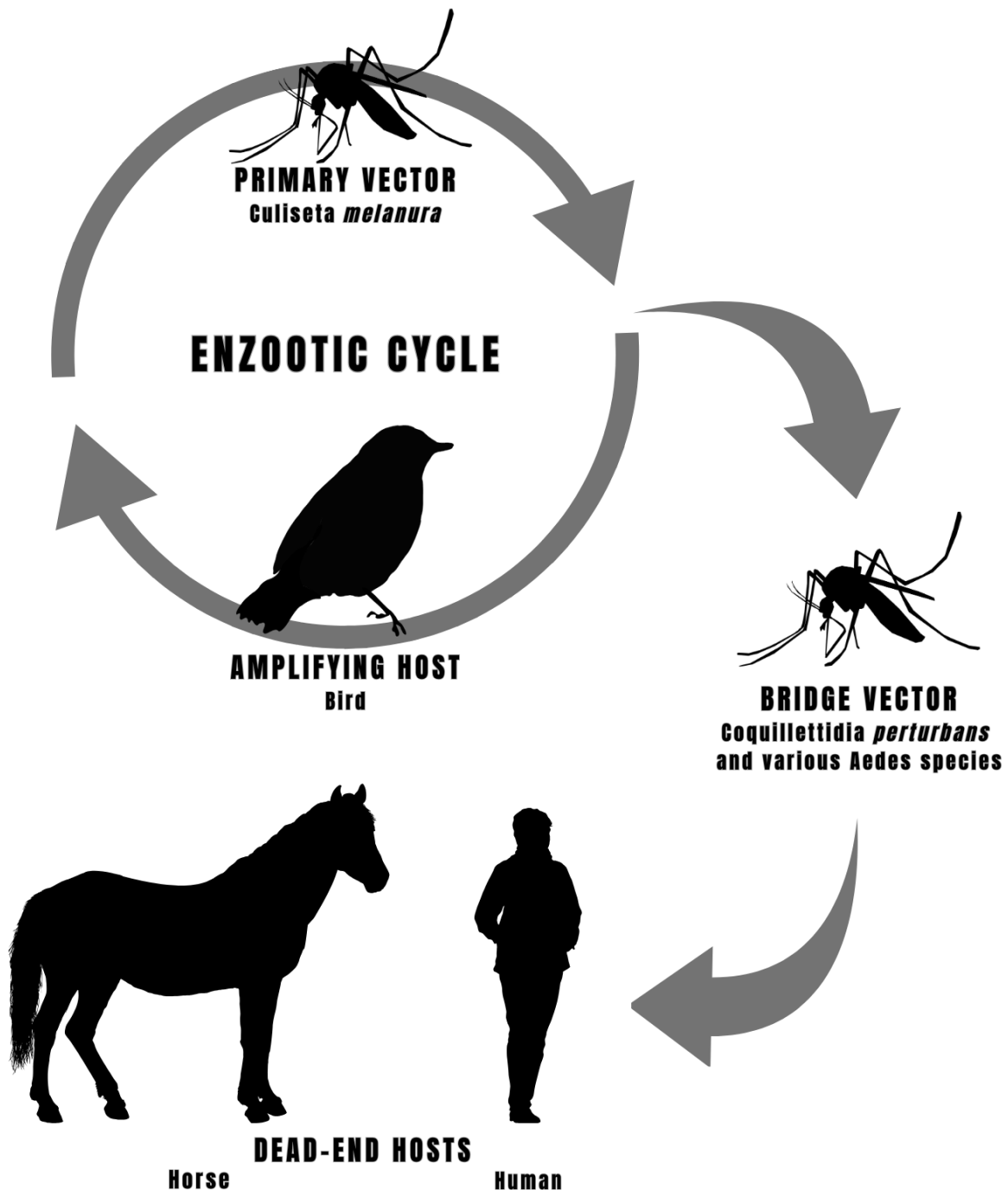
Email: john.c.briggs@mass.gov

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



PIONEER VALLEY MOSQUITO CONTROL DISTRICT

EASTERN EQUINE ENCEPHALITIS VIRUS TRANSMISSION CYCLE



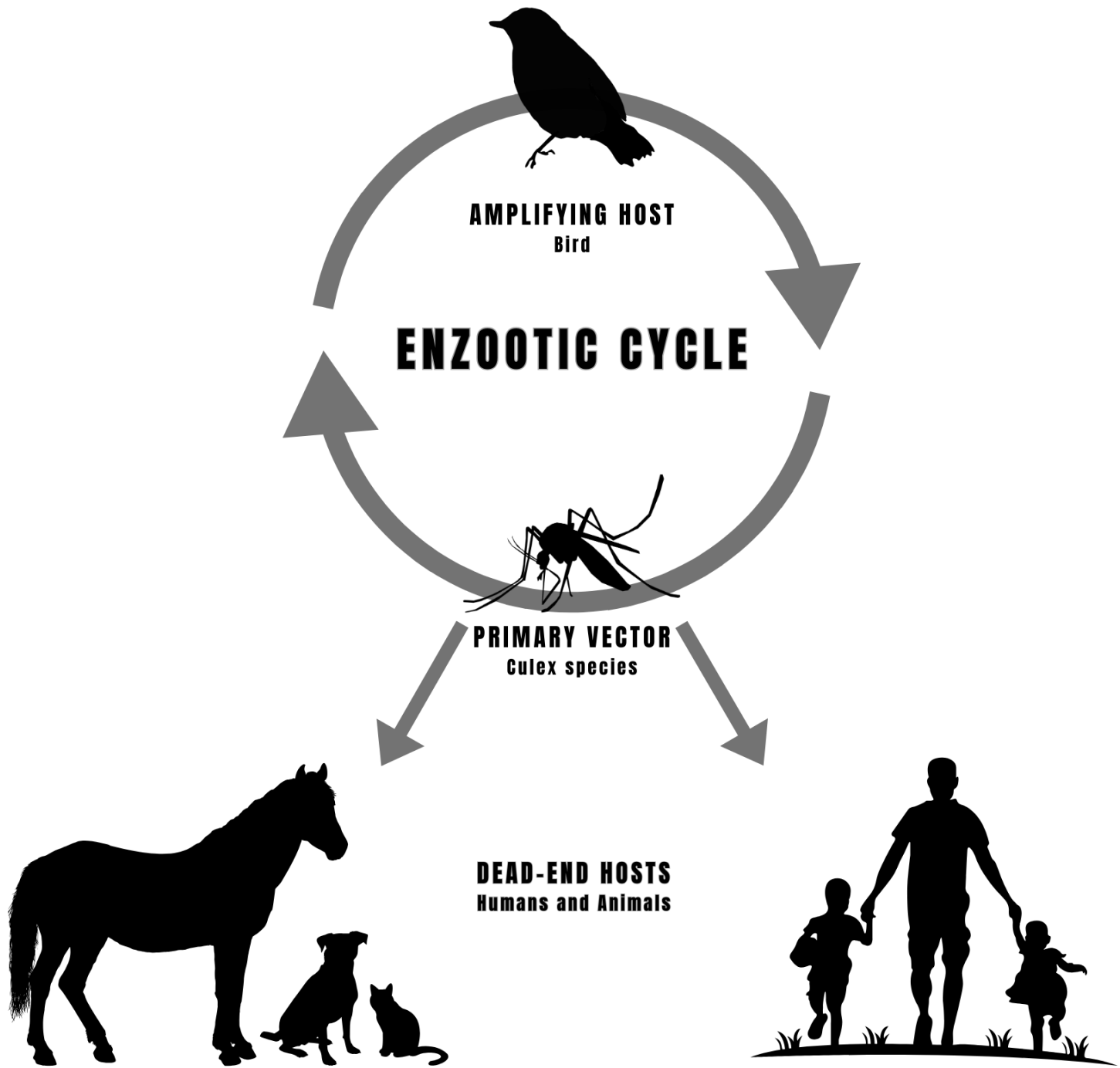
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PIONEER VALLEY MOSQUITO CONTROL DISTRICT

WEST NILE VIRUS TRANSMISSION CYCLE



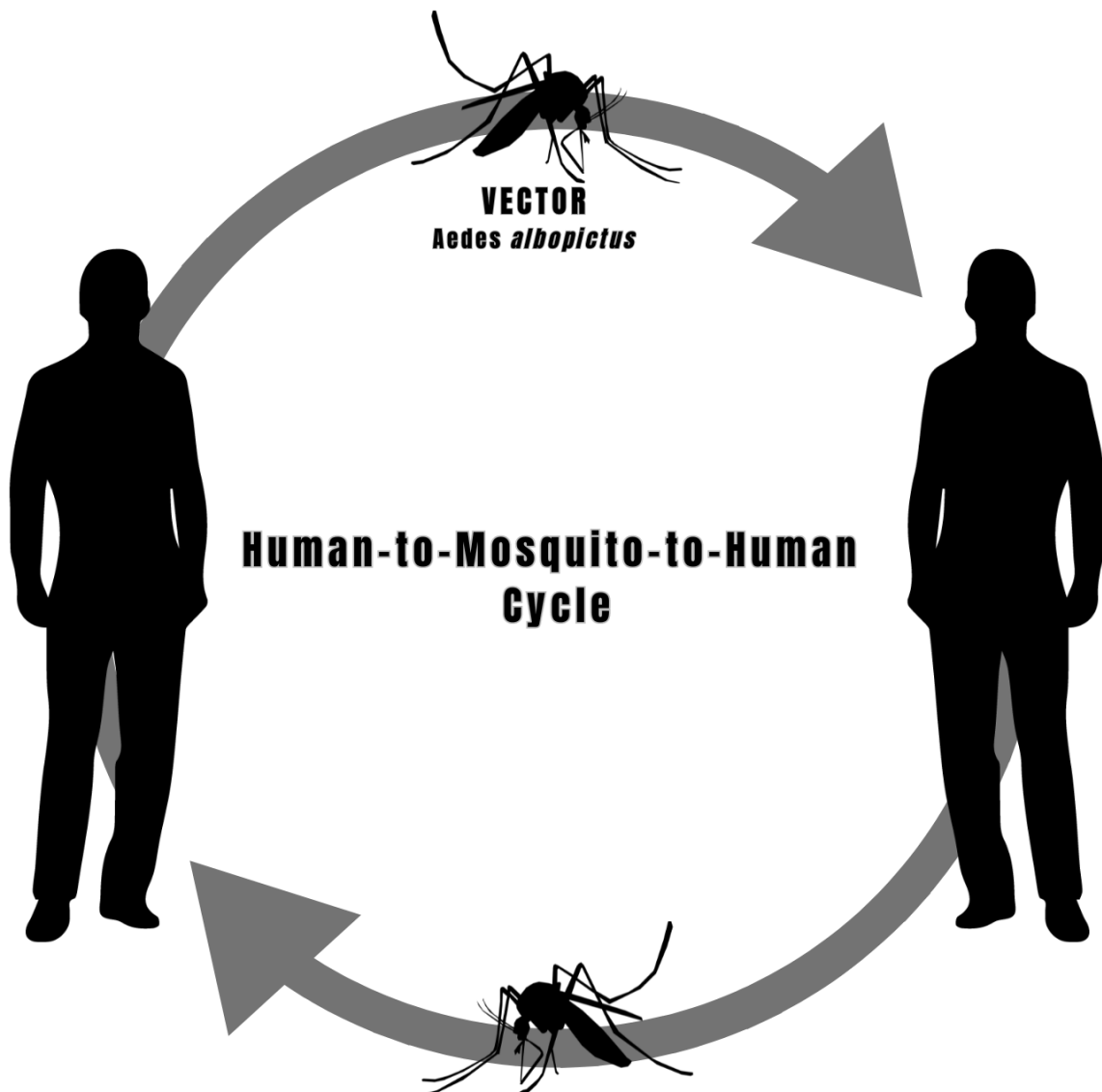
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PIONEER VALLEY MOSQUITO CONTROL DISTRICT

DENGUE VIRUS TRANSMISSION CYCLE



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