

Pioneer Valley MCD Weekly Report

EPI Week 31

Week Ending: August 3, 2024

Surveillance Summary

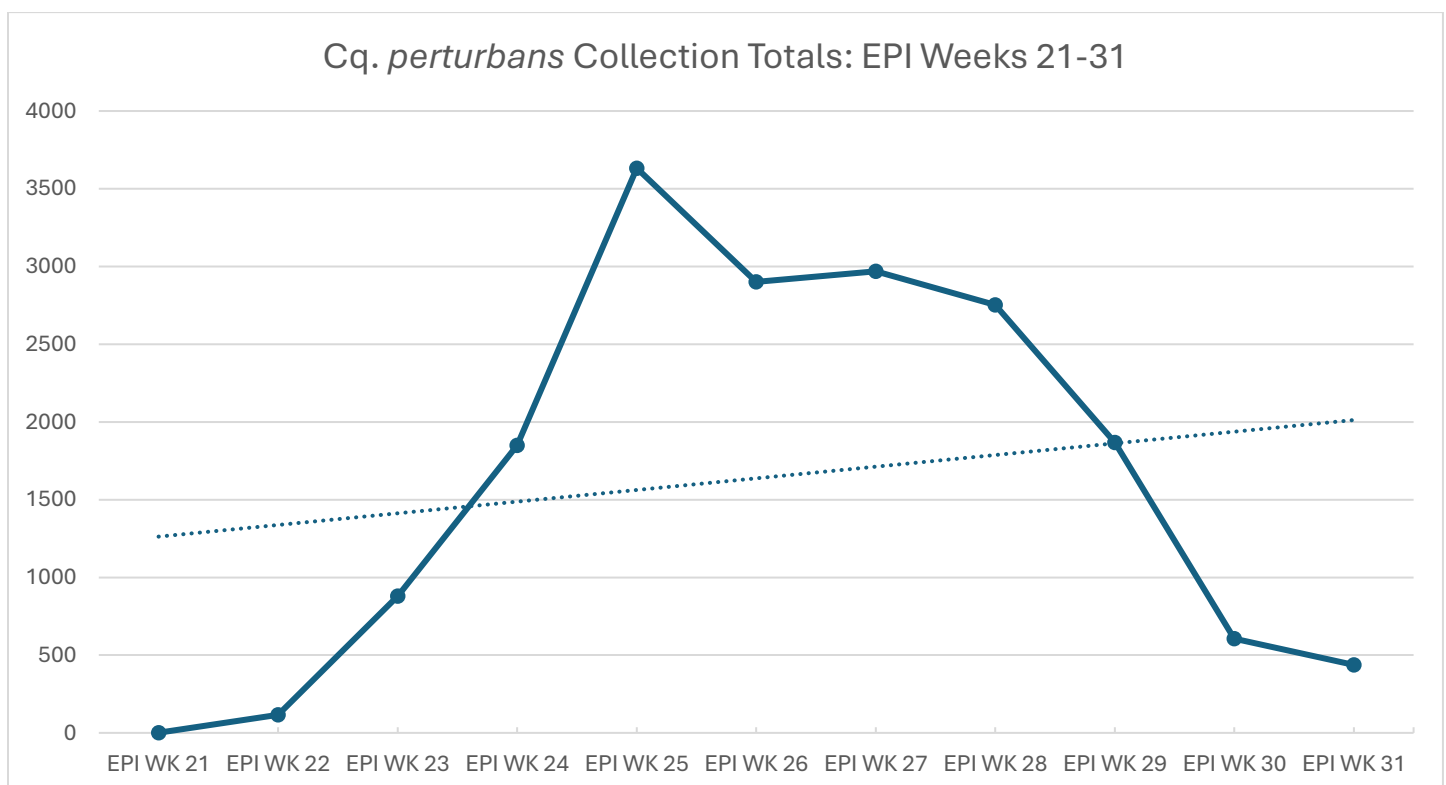
EPI Week 31 Target Species Surveillance Summary					Cumulative Totals: EPI Weeks 24-31			
Species	# Collected	Pools	WNV+	EEEV+	Cumulative Specimens	Cumulative Pools	Cumulative WNV+	Cumulative EEEV+
<i>Cx. pipiens/restuans</i>	28	2	0	0	1189	43	1	0
<i>Cs. melanura</i>	6	3	0	0	128	16	0	0
<i>Cq. perturbans</i>	437	17	0	0	15419	151	1	0
<i>Oc. canadensis</i>	5	0	0	0	561	20	0	0
<i>Oc. japonicus</i>	66	4	0	0	423	23	0	0
<i>Cx. salinarius</i>	129	8	1	0	678	18	2	0
<i>Ae. albopictus</i>	8	1	0	0	15	2	0	0
<i>Ps. ferox</i>	62	2	0	0	296	6	0	0
<i>An. quadrimaculatus</i>	29	1	0	0	544	2	0	0
<i>Ae. vexans</i>	82	4	0	0	214	5	0	0
<i>Cx. erraticus</i>	114	2	0	0	265	3	0	0
Totals	966	44	1	0	19732	289	4	0

Positive Mosquito Samples

- There was one WNV positive pool of *Cx. salinarius* (50) found in West Springfield during EPI week 31.

Most Abundant Species

- Cq. perturbans* were the most abundant vector species collected during EPI week 31, totaling 437 specimens. *Perturbans* collections are down by 28% from the previous week and are expected to continue to decrease 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.



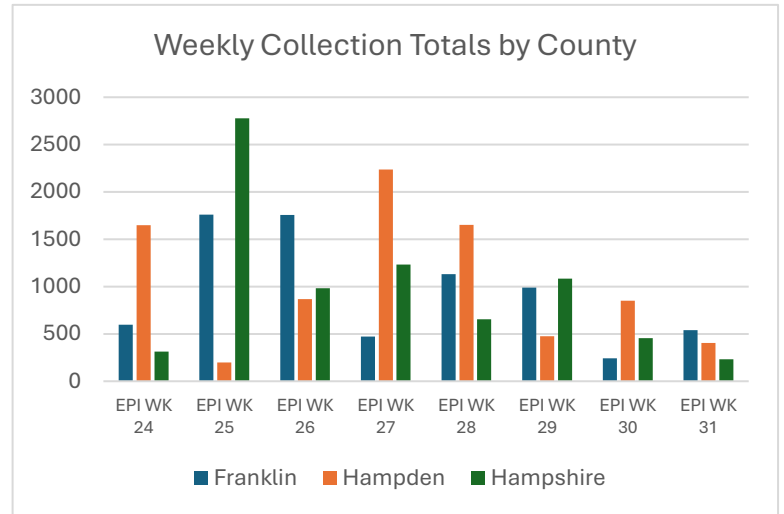
EPI WK 31 Summary by County

- Franklin County
 - EPI WK 31 Pools Tested: 16
 - Positive Samples: 0
 - Most Abundant Species: *Cq. perturbans* (265)
 - Total Mosquitoes Collected: 541

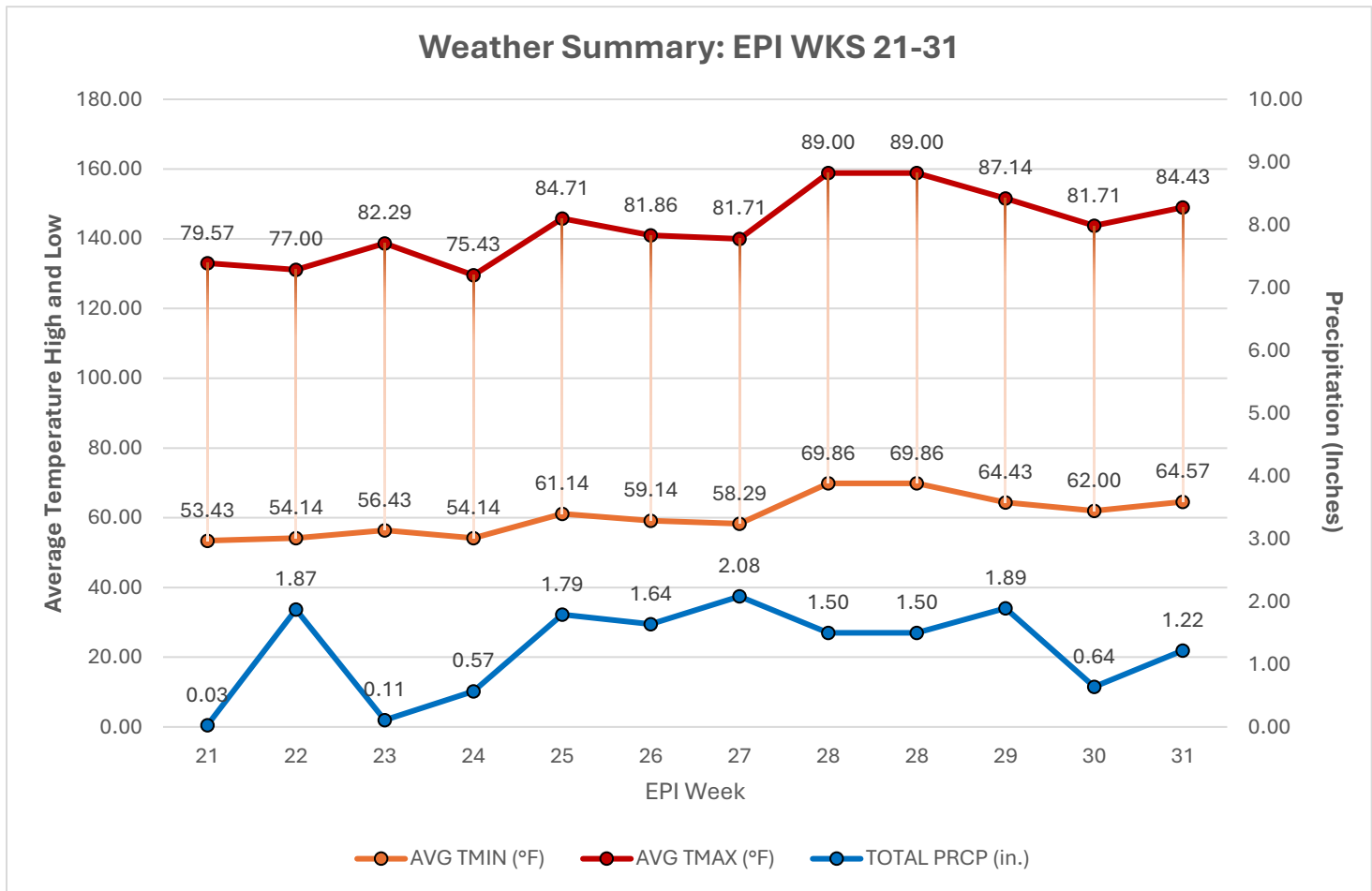
- Hampden County
 - EPI WK 31 Pools Tested: 16
 - Positive Samples: 1
 - Most Abundant Species: *Cx. erraticus* (114)
 - Total Mosquitoes Collected: 406

- Hampshire County
 - EPI WK 31 Pools Tested: 12
 - Positive Samples: 0
 - Most Abundant Species: *Cq. perturbans* (105)
 - Total Mosquitoes Collected: 233

- Total Mosquitoes Collected (All Counties): 1549
- Total Pools Submitted for Testing (All Counties): 59



Weather Data



Weather Summary

- Weather conditions remained favorable for mosquitoes during EPI week 31, resulting in a total of 1,180 mosquitoes collected, which is a 24% 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.

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%)

Statewide Arbovirus Detections as of 8/9/24

Collection Date	Town	Species	Pool Size	County	Pool Size	Virus
6/25/2024	Quincy	Culex pipiens/restuans	36	Norfolk	36	WNV
6/25/2024	Quincy	Culex pipiens/restuans	25	Norfolk	25	WNV
7/1/2024	Carver	Culiseta melanura	50	Plymouth	50	EEE
7/1/2024	Carver	Culiseta melanura	50	Plymouth	50	EEE
7/1/2024	Carver	Culiseta melanura	50	Plymouth	50	EEE
7/1/2024	Carver	Culiseta melanura	34	Plymouth	34	EEE
7/1/2024	Carver	Coquillettidia perturbans	50	Plymouth	50	EEE
7/1/2024	Carver	Coquillettidia perturbans	50	Plymouth	50	EEE
7/2/2024	Rockland	Culex pipiens/restuans	50	Plymouth	50	WNV
7/8/2024	Kingston	Culex pipiens/restuans	50	Plymouth	50	EEE
7/8/2024	Halifax	Culiseta melanura	50	Plymouth	50	EEE
7/9/2024	Raynham	Culiseta melanura	50	Bristol	50	WNV
7/9/2024	Blackstone	Culex pipiens/restuans	24	Worcester	24	WNV
7/9/2024	Edgartown	Culex pipiens/restuans	22	Dukes	22	WNV
7/9/2024	Cambridge	Culex pipiens/restuans	50	Middlesex	50	WNV
7/9/2024	Hanson	Culiseta melanura	50	Plymouth	50	WNV
7/11/2024	Clinton	Culex pipiens/restuans	20	Worcester	20	WNV
7/11/2024	Natick	Culex pipiens/restuans	50	Middlesex	50	WNV
7/15/2024	Carver	Culiseta melanura	50	Plymouth	50	EEE
7/15/2024	East Longmeadow	Culex salinarius	5	Hampden	5	WNV
7/16/2024	Dracut	Coquillettidia perturbans	50	Middlesex	50	WNV
7/16/2024	Wayland	Culex pipiens/restuans	34	Middlesex	34	WNV
7/16/2024	Middleborough	Culex pipiens/restuans	50	Plymouth	50	WNV
7/16/2024	Middleborough	Culex pipiens/restuans	50	Plymouth	50	WNV
7/16/2024	Scituate	Culex pipiens/restuans	49	Plymouth	49	WNV
7/16/2024	Pembroke	Culex pipiens/restuans	31	Plymouth	31	WNV
7/17/2024	Fairhaven	Culex pipiens/restuans	22	Bristol	22	WNV
7/17/2024	Dartmouth	Culex pipiens/restuans	37	Bristol	37	WNV
7/18/2024	Seekonk	Coquillettidia perturbans	50	Bristol	50	WNV
7/18/2024	Seekonk	Culiseta melanura	31	Bristol	31	WNV
7/19/2024	Richmond	Culex pipiens/restuans	21	Berkshire	21	WNV
7/19/2024	Attleboro	Culex pipiens/restuans	23	Bristol	23	WNV
7/19/2024	Worcester	Culex pipiens/restuans	19	Worcester	19	WNV
7/19/2024	Worcester	Culex pipiens/restuans	50	Worcester	50	WNV

7/19/2024	Marlborough	Culex pipiens/restuans	50	Middlesex	50	WNV
7/22/2024	Haverhill	Culex pipiens	50	Essex	50	WNV
7/22/2024	Haverhill	Culex pipiens	50	Essex	50	WNV
7/22/2024	Haverhill	Culex pipiens	41	Essex	41	WNV
7/22/2024	Brookline	Culex pipiens/restuans	50	Norfolk	50	WNV
7/22/2024	Kingston	Culex pipiens/restuans	37	Plymouth	37	WNV
7/22/2024	Carver	Culiseta melanura	50	Plymouth	50	EEE
7/22/2024	Carver	Culiseta melanura	50	Plymouth	50	EEE
7/22/2024	Carver	Culiseta melanura	50	Plymouth	50	EEE
7/22/2024	Carver	Coquillettidia perturbans	50	Plymouth	50	EEE
7/22/2024	Carver	Coquillettidia perturbans	50	Plymouth	50	EEE
7/23/2024	Easton	Culiseta melanura	24	Bristol	24	WNV
7/23/2024	Norton	Culex pipiens/restuans	44	Bristol	44	WNV
7/23/2024	Barnstable	Culex pipiens/restuans	50	Barnstable	50	EEE
7/23/2024	Quincy	Culex pipiens/restuans	50	Norfolk	50	WNV
7/23/2024	Braintree	Culex pipiens/restuans	50	Norfolk	50	WNV
7/23/2024	Quincy	Culex pipiens/restuans	50	Norfolk	50	WNV
7/23/2024	Westwood	Coquillettidia perturbans	50	Norfolk	50	WNV
7/23/2024	Avon	Culex pipiens/restuans	16	Norfolk	16	WNV
7/23/2024	Holyoke	Coquillettidia perturbans	50	Hampden	50	WNV
7/23/2024	Abington	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Abington	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Abington	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Brockton	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Brockton	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Brockton	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Bridgewater	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Whitman	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Whitman	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Whitman	Culex pipiens/restuans	50	Plymouth	50	EEE
7/23/2024	Whitman	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Whitman	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Whitman	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Whitman	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Whitman	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Whitman	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Whitman	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Whitman	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Whitman	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Abington	Culex pipiens/restuans	50	Plymouth	50	EEE
7/23/2024	Abington	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Abington	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Halifax	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Rockland	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Rockland	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Rockland	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Rockland	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Rockland	Culex pipiens/restuans	50	Plymouth	50	WNV
7/23/2024	Middleborough	Culiseta melanura	50	Plymouth	50	EEE
7/23/2024	Middleborough	Culex salinarius	50	Plymouth	50	EEE
7/23/2024	Middleborough	Culiseta melanura	50	Plymouth	50	EEE
7/23/2024	Middleborough	Culiseta melanura	50	Plymouth	50	EEE
7/23/2024	Middleborough	Coquillettidia perturbans	50	Plymouth	50	EEE
7/23/2024	Middleborough	Coquillettidia perturbans	50	Plymouth	50	EEE
7/23/2024	Middleborough	Culiseta melanura	43	Plymouth	43	EEE

7/23/2024	Boston	Culex pipiens/restuans	37	Suffolk	37	WNV
7/23/2024	Boston	Ochlerotatus japonicus	9	Suffolk	9	WNV
7/23/2024	Boston	Culex pipiens/restuans	41	Suffolk	41	WNV
7/23/2024	Boston	Culex pipiens/restuans	19	Suffolk	19	WNV
7/23/2024	Boston	Culex pipiens/restuans	50	Suffolk	50	WNV
7/23/2024	Boston	Culex pipiens/restuans	50	Suffolk	50	WNV
7/23/2024	Boston	Culex pipiens/restuans	28	Suffolk	28	WNV
7/23/2024	Boston	Culex pipiens/restuans	50	Suffolk	50	WNV
7/23/2024	Boston	Culex pipiens/restuans	39	Suffolk	39	WNV
7/24/2024	Fairhaven	Culex pipiens/restuans	38	Bristol	38	WNV
7/24/2024	New Bedford	Culex pipiens/restuans	23	Bristol	23	WNV
7/24/2024	Bedford	Culex pipiens/restuans	43	Middlesex	43	WNV
7/24/2024	Burlington	Culex pipiens/restuans	29	Middlesex	29	WNV
7/24/2024	East Longmeadow	Culex pipiens/restuans	10	Hampden	10	WNV
7/24/2024	Woburn	Culex pipiens/restuans	50	Middlesex	50	WNV
7/25/2024	Swansea	Culex pipiens/restuans	19	Bristol	19	WNV
7/25/2024	Marlborough	Culex pipiens/restuans	39	Middlesex	39	WNV
7/25/2024	Worcester	Culex pipiens/restuans	50	Worcester	50	WNV
7/25/2024	Worcester	Culex pipiens/restuans	50	Worcester	50	WNV
7/25/2024	Medfield	Culiseta melanura	51	Norfolk	51	WNV
7/25/2024	Dover	Culiseta melanura	43	Norfolk	43	WNV
7/26/2024	Grafton	Culex pipiens/restuans	50	Worcester	50	WNV
7/29/2024	Saugus	Culex pipiens	35	Essex	35	WNV
7/29/2024	Middleborough	Culex salinarius	50	Plymouth	50	WNV
7/29/2024	Kingston	Culiseta melanura	10	Plymouth	10	EEE
7/30/2024	Norton	Culex pipiens/restuans	50	Bristol	50	WNV
7/30/2024	Falmouth	Culex pipiens/restuans	31	Barnstable	31	WNV
7/30/2024	Framingham	Culex pipiens/restuans	50	Middlesex	50	WNV
7/30/2024	Quincy	Culex pipiens/restuans	15	Norfolk	15	WNV
7/30/2024	Quincy	Culex pipiens/restuans	53	Norfolk	53	WNV
7/30/2024	Dedham	Culex pipiens/restuans	50	Norfolk	50	EEE
7/30/2024	Dedham	Culex pipiens/restuans	36	Norfolk	36	EEE
7/30/2024	Holbrook	Culex pipiens/restuans	23	Norfolk	23	WNV
7/30/2024	Haverhill	Coquillettidia perturbans	50	Essex	50	EEE
7/30/2024	Haverhill	Coquillettidia perturbans	50	Essex	50	WNV
7/30/2024	Amesbury	Coquillettidia perturbans	25	Essex	25	EEE
7/30/2024	Wareham	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Wareham	Culex pipiens/restuans	50	Plymouth	50	EEE
7/30/2024	Rochester	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Rochester	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Rochester	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Rochester	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Rochester	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Rochester	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Middleborough	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Cohasset	Culex pipiens/restuans	50	Norfolk	50	WNV
7/30/2024	Cohasset	Culex pipiens/restuans	50	Norfolk	50	WNV
7/30/2024	Marshfield	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Marshfield	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Hingham	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Pembroke	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Duxbury	Culex pipiens/restuans	50	Plymouth	50	WNV
7/30/2024	Boston	Culex pipiens/restuans	8	Suffolk	8	WNV
7/30/2024	Boston	Culex pipiens/restuans	11	Suffolk	11	WNV
7/31/2024	New Bedford	Culex pipiens/restuans	10	Bristol	10	WNV

7/31/2024	Dartmouth	Culex pipiens/restuans	50	Bristol	50	WNV
7/31/2024	Dennis	Culiseta melanura	6	Barnstable	6	WNV
7/31/2024	Lowell	Culex pipiens/restuans	12	Middlesex	12	WNV
7/31/2024	Burlington	Culex salinarius	50	Middlesex	50	WNV
7/31/2024	Franklin	Culex pipiens/restuans	38	Norfolk	38	WNV
7/31/2024	Bellingham	Culex pipiens/restuans	41	Norfolk	41	WNV
7/31/2024	West Springfield	Culex salinarius	50	Hampden	50	WNV
7/31/2024	Boston	Culiseta melanura	7	Suffolk	7	WNV
8/1/2024	Seekonk	Culiseta melanura	50	Bristol	50	WNV
8/1/2024	Seekonk	Coquillettidia perturbans	33	Bristol	33	WNV
8/1/2024	Dennis	Culiseta melanura	15	Barnstable	15	WNV
8/1/2024	Westborough	Culex pipiens/restuans	9	Worcester	9	WNV
8/1/2024	Worcester	Culex pipiens/restuans	34	Worcester	34	WNV
8/2/2024	North Attleborough	Culex pipiens/restuans	37	Bristol	37	WNV
8/2/2024	Worcester	Culex pipiens/restuans	28	Worcester	28	WNV
8/5/2024	Saugus	Culex salinarius	20	Essex	20	WNV
8/5/2024	Revere	Culex pipiens	10	Suffolk	10	WNV
8/5/2024	Easton	Culiseta melanura	50	Bristol	50	WNV
8/5/2024	Carver	Culiseta melanura	17	Plymouth	17	EEE
8/5/2024	Carver	Coquillettidia perturbans	50	Plymouth	50	EEE
8/5/2024	Carver	Coquillettidia perturbans	50	Plymouth	50	EEE
8/5/2024	Carver	Coquillettidia perturbans	30	Plymouth	30	EEE
8/6/2024	Yarmouth	Culex pipiens/restuans	19	Barnstable	19	WNV
8/6/2024	Falmouth	Culex pipiens/restuans	13	Barnstable	13	WNV
8/6/2024	Melrose	Culex pipiens/restuans	50	Middlesex	50	WNV
8/6/2024	Melrose	Culex pipiens/restuans	17	Middlesex	17	WNV
8/6/2024	Melrose	Culex pipiens/restuans	43	Middlesex	43	WNV
8/6/2024	Stoneham	Culex pipiens/restuans	10	Middlesex	10	WNV
8/6/2024	Wakefield	Culex pipiens/restuans	50	Middlesex	50	WNV
8/6/2024	Wakefield	Culex pipiens/restuans	24	Middlesex	24	WNV
8/6/2024	Newburyport	Culex pipiens	4	Essex	4	WNV
8/6/2024	Boston	Culex pipiens/restuans	40	Suffolk	40	WNV
8/6/2024	Boston	Culex pipiens/restuans	31	Suffolk	31	WNV
8/6/2024	Boston	Culex pipiens/restuans	20	Suffolk	20	WNV
8/6/2024	Chelsea	Culex pipiens/restuans	36	Suffolk	36	WNV
8/6/2024	Boston	Culex pipiens/restuans	50	Suffolk	50	WNV
8/7/2024	Woburn	Culex pipiens/restuans	22	Middlesex	22	WNV

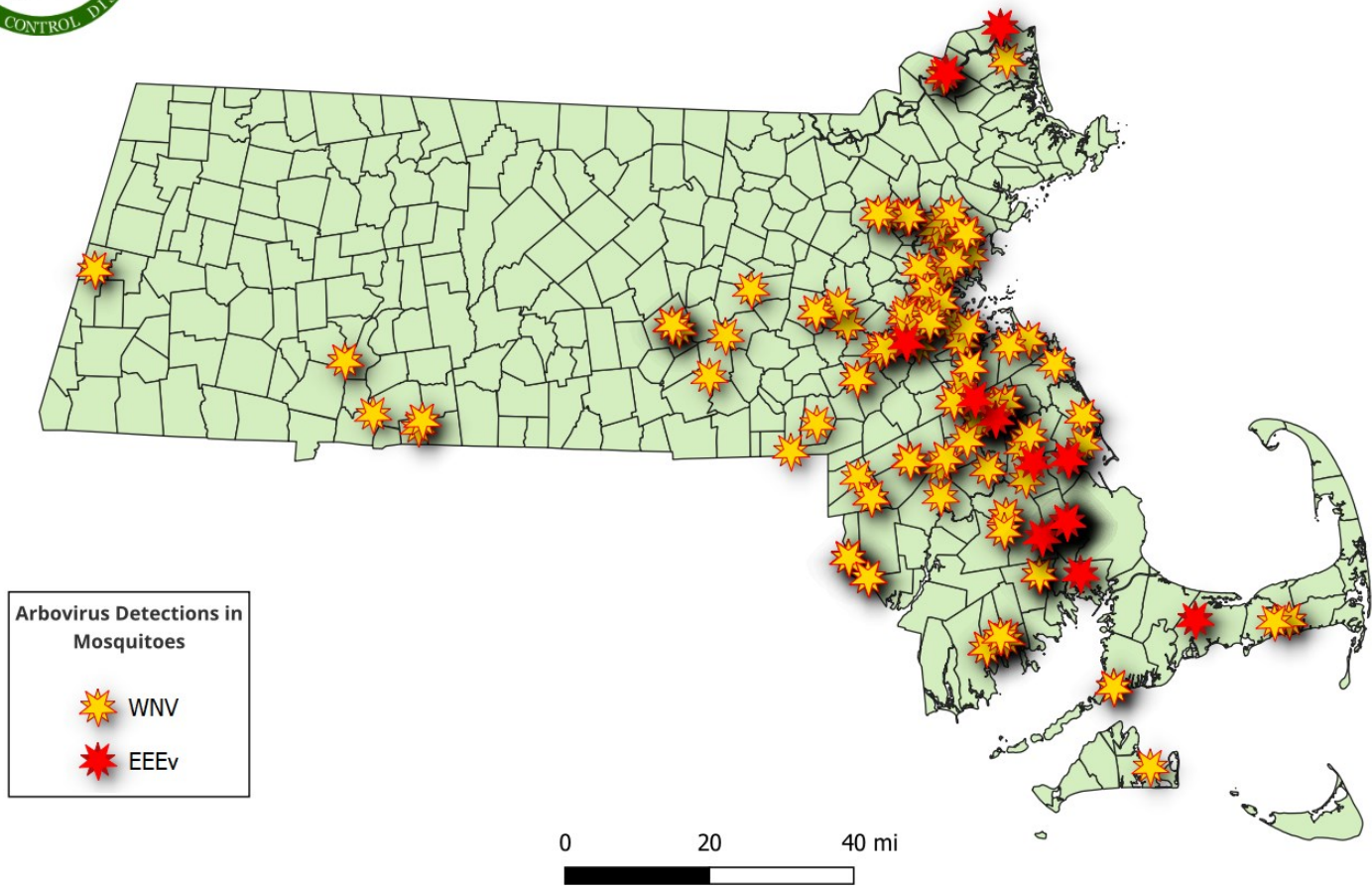
Statewide Cumulative Arbovirus Positives as of 8/9/24

Virus	Positive Mosquito Samples	Animal Cases	Human Cases
EEEv	34	1	0
WNV	145	0	1

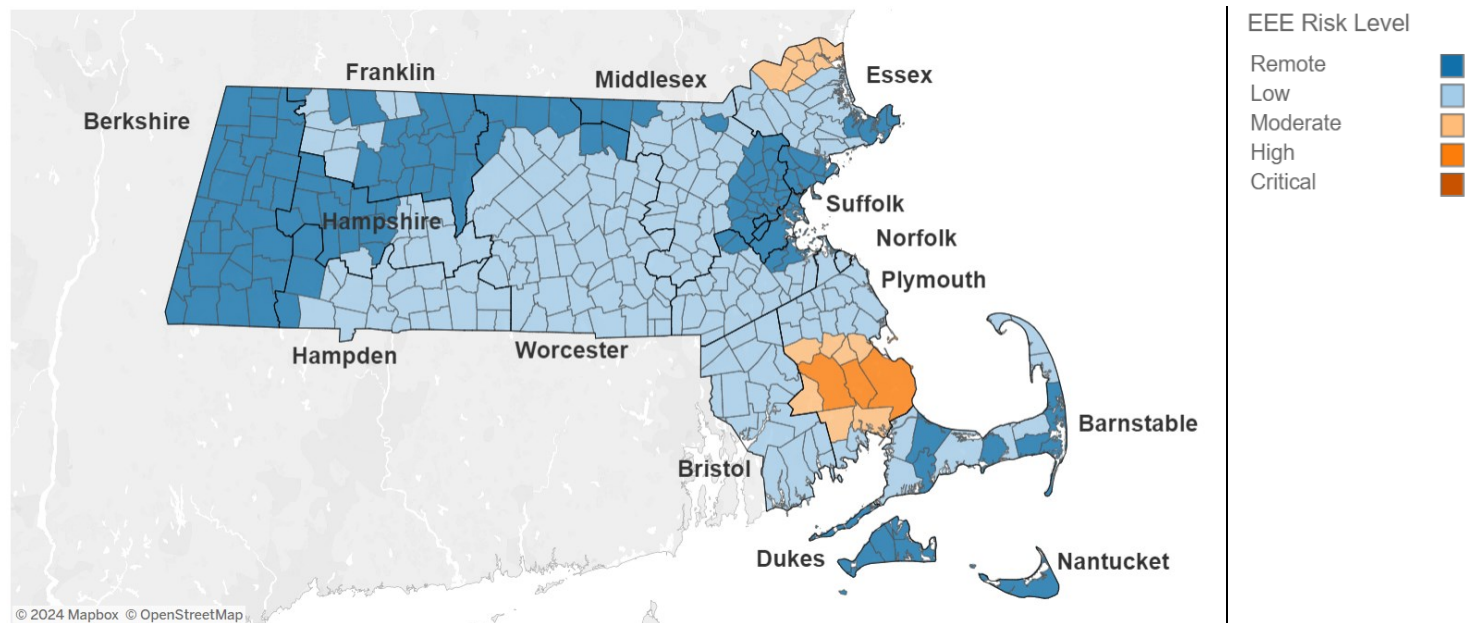
Note: A human case of WNV (meningitis/neuroinvasive) occurred in Hampden County, while a horse contracted EEE in Plymouth County – both of which were confirmed on 8/6/24.



Arbovirus Map: Positive Mosquito Pools as of 8/9/24



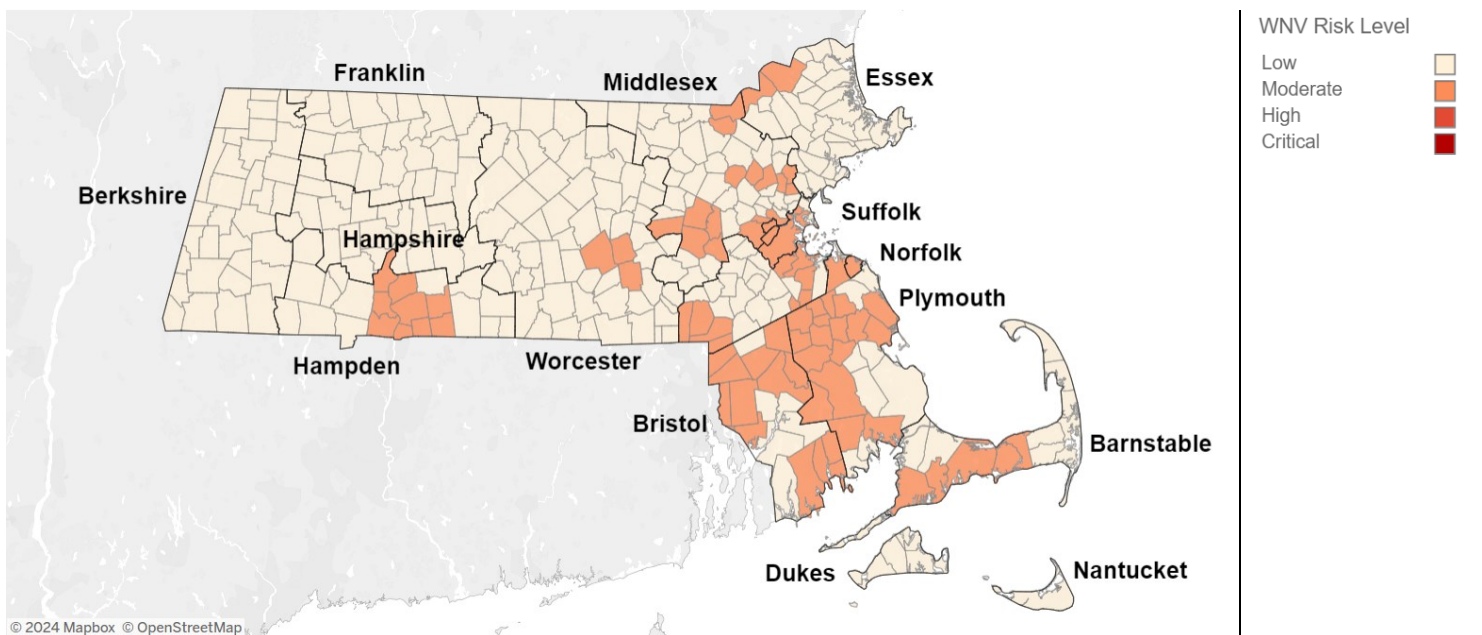
EEE Impacted Areas



A recently confirmed animal case of EEEv in a single horse has resulted in a risk level change to “High” in the following communities: Carver, Middleborough, and Plymouth.

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

WNV Impacted Areas



Detections of WNV in mosquitos and a single confirmed human case (Hampden County) during the past week has resulted in a risk level change to “Moderate” in the following communities: Agawam, Barnstable, Bellingham, Cambridge, Chicopee, Cohasset, Dennis, Dracut, Duxbury, East Bridgewater, Falmouth, Franklin, Halifax, Hampden, Hanover, Hingham, Holyoke, Lakeville, Longmeadow, Lowell, Marshfield, Mashpee, Melrose, Methuen, Milton, Newton, North Attleboro, Plainville, Rochester, Springfield, Stoneham, Wakefield, Wareham, West Springfield, Watertown, Whitman, Wilbraham, Wrentham, and Yarmouth.

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 72 human cases of dengue in Massachusetts, as of 8/9/24. 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 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.

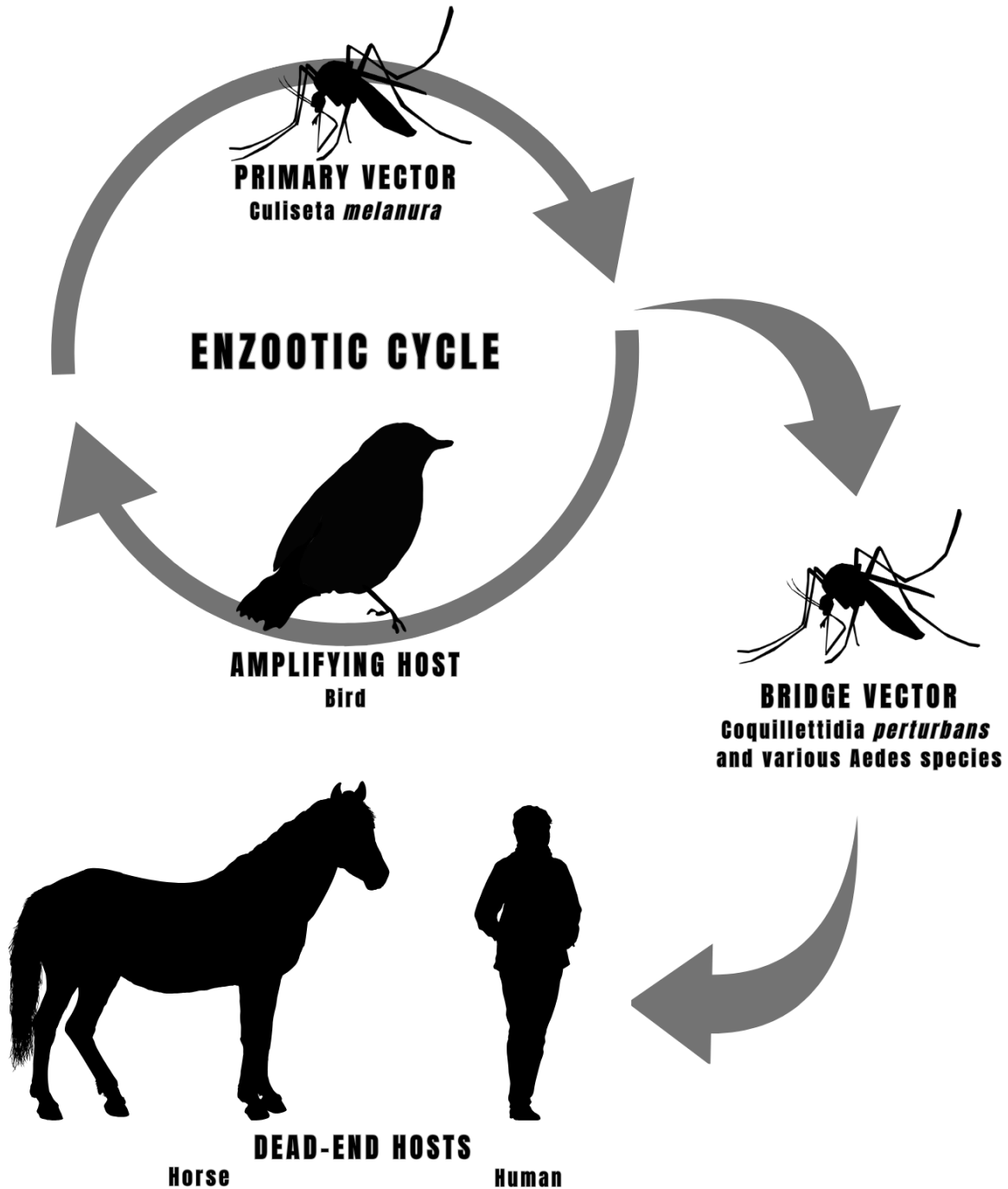
Email: john.c.briggs@mass.gov

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



PIONEER VALLEY MOSQUITO CONTROL DISTRICT

EASTERN EQUINE ENCEPHALITIS VIRUS TRANSMISSION CYCLE



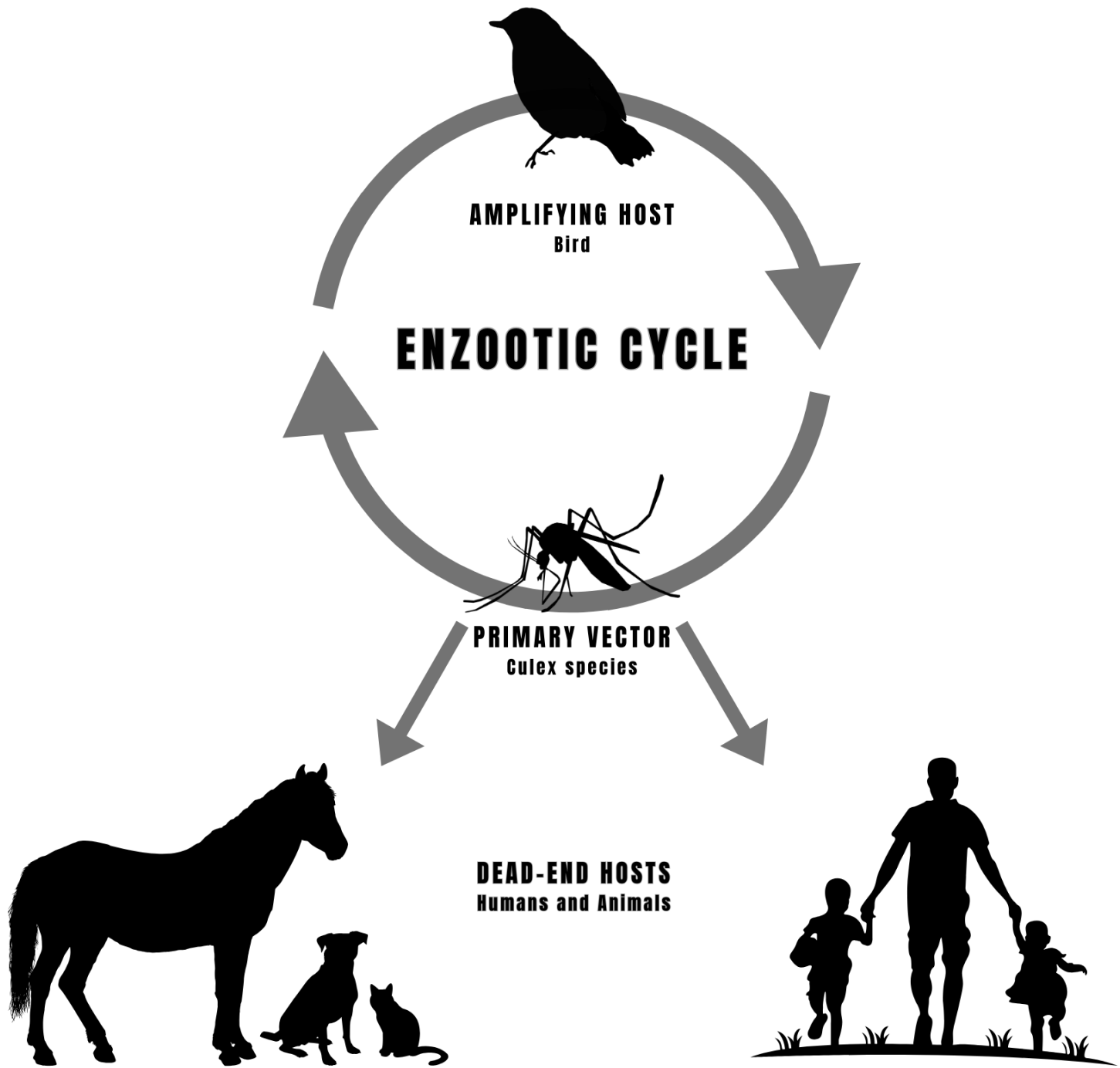
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PIONEER VALLEY MOSQUITO CONTROL DISTRICT

WEST NILE VIRUS TRANSMISSION CYCLE



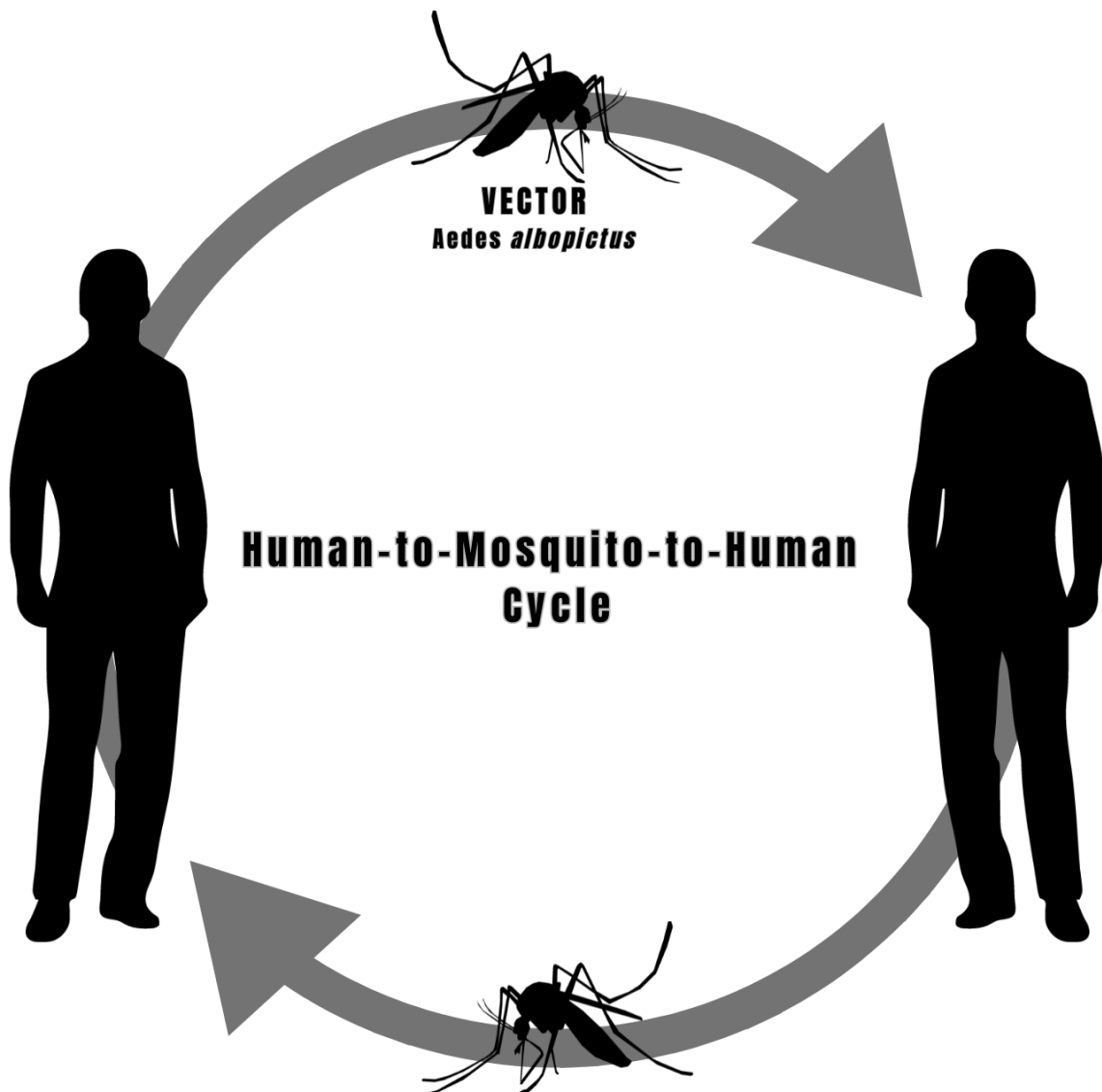
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PIONEER VALLEY MOSQUITO CONTROL DISTRICT

DENGUE VIRUS TRANSMISSION CYCLE



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