

# Pioneer Valley MCD Weekly Report

EPI Week 28

Week Ending: July 13, 2024

## Surveillance Summary

EPI Week 28 Target Species Surveillance Summary					Cumulative Totals: EPI Weeks 24-28			
Species	# Collected	Pools	WNV+	EEEV+	Cumulative Specimens	Cumulative Pools	Cumulative WNV+	Cumulative EEEV+
<i>Cx. pipiens/restuans</i>	216	9	0	0	1121	40	0	0
<i>Cs. melanura</i>	8	1	0	0	116	11	0	0
<i>Cq. perturbans</i>	2753	37	0	0	14105	122	0	0
<i>Oc. canadensis</i>	47	2	0	0	545	19	0	0
<i>Oc. japonicus</i>	43	8	0	0	340	18	0	0
<i>Cx. salinarius</i>	40	2	0	0	463	7	0	0
<i>Ae. albopictus</i>	5	1	0	0	13	2	0	0
<i>Ps. ferox</i>	85	2	0	0	229	4	0	0
<i>An. quadrimaculatus</i>	25	1	0	0	505	1	0	0
<i>Ae. vexans</i>	50	1	0	0	123	1	0	0

### Positive Samples

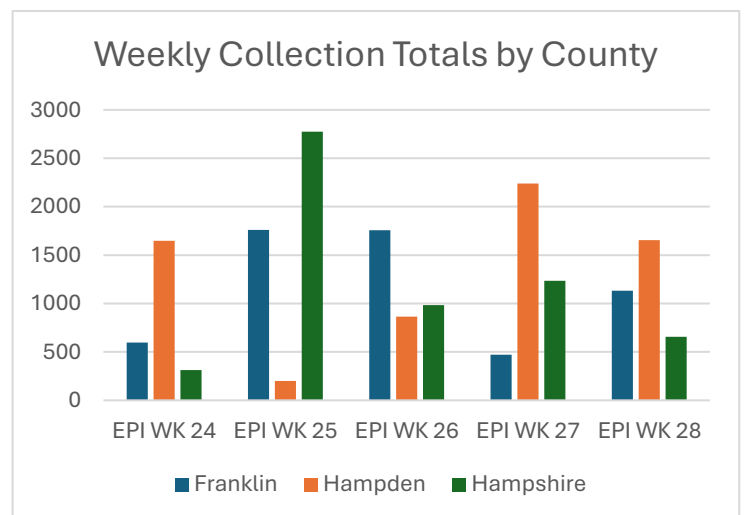
- There were no arboviruses detected during EPI week 28 in Pioneer Valley. Note, the State Laboratory confirmed one WNV positive pool of *Cx. salinarius* from a trap placed in East Longmeadow on 7/14, at the beginning of EPI week 29.

### Most Abundant Species

- Cq. perturbans* were the most abundant vector species collected during EPI week 28, totaling 2753 specimens. *Perturbans* collections are down by 7% from the previous week and are expected to remain relatively stable or decrease during the next few 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.

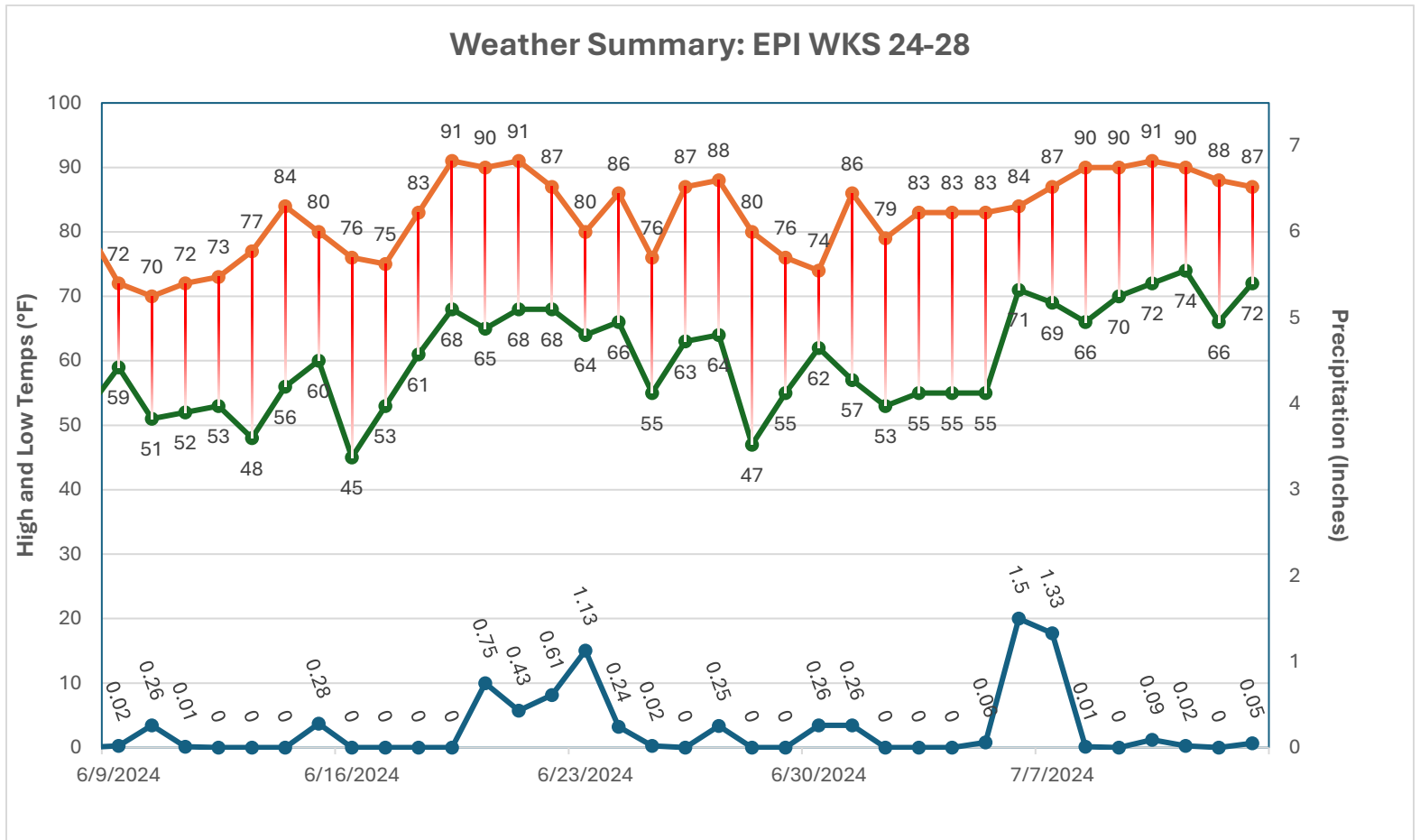
### EPI WK 28 Summary by County

- Franklin County
  - EPI WK 28 Pools Tested: 26
  - Positive Samples: 0
  - Most Abundant Species: *Cq. perturbans* (871)
  - Total Mosquitoes Collected: 1132
- Hampden County
  - EPI WK 28 Pools Tested: 19
  - Positive Samples: 0
  - Most Abundant Species: *Cq. perturbans* (1388)
  - Total Mosquitoes Collected: 1653
- Hampshire County
  - EPI WK 28 Pools Tested: 19
  - Positive Samples: 0
  - Most Abundant Species: *Cq. perturbans* (494)
  - Total Mosquitoes Collected: 655



- Total Mosquitoes Collected (All Counties): 3440
- Total Pools Submitted for Testing (All Counties): 64

## Weather Data



## Weather Summary

- Weather conditions remained favorable for mosquitoes during EPI week 28. There was a total of 3,440 mosquitoes collected during EPI week 28 (-13%). If favorable weather conditions persist, it is expected that mosquito populations will remain relatively stable.

## Weekly Changes

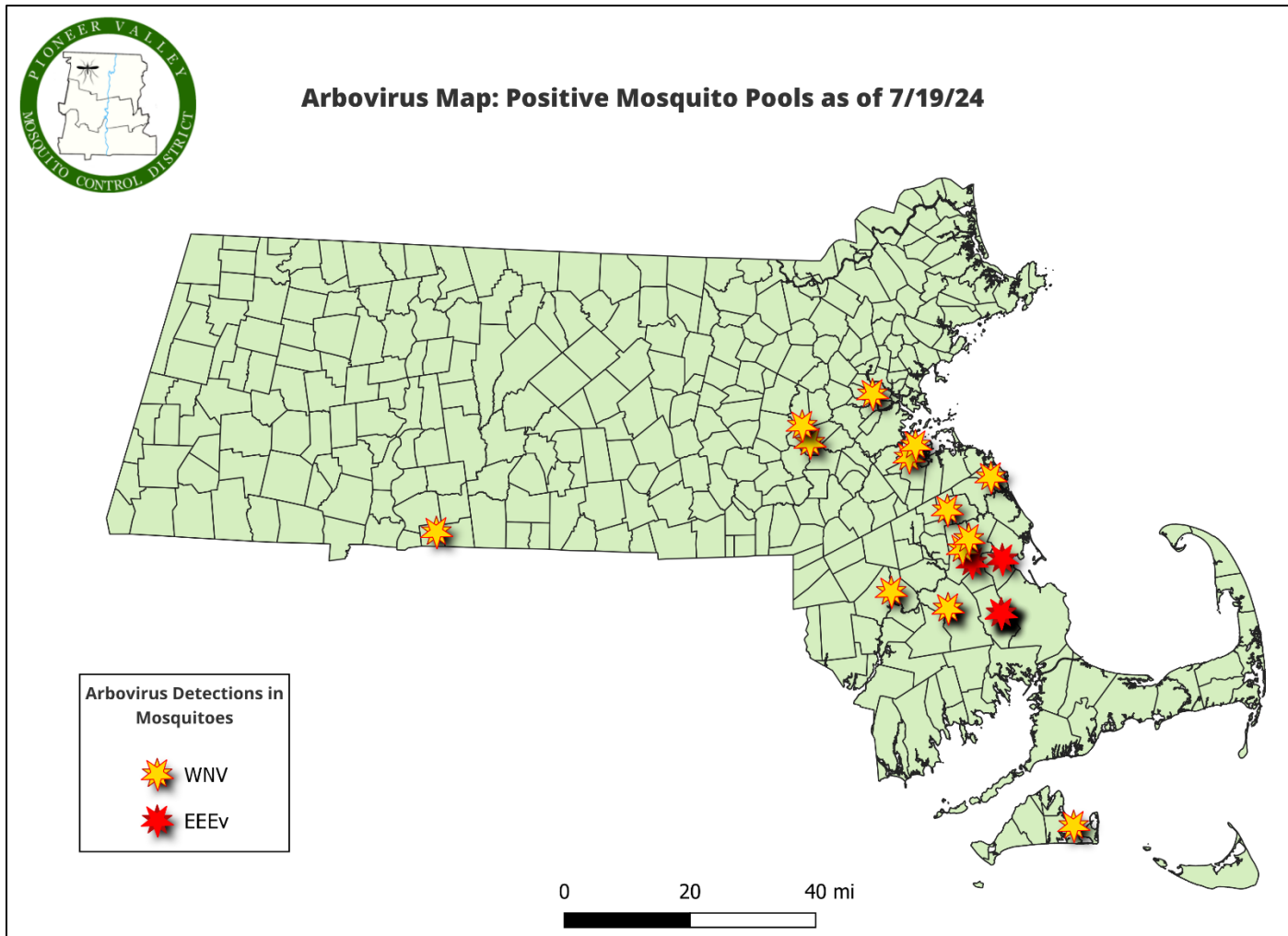
Station	Name	EPI Week	PRCP Total (in.)	TMAX AVG (°F)	TMIN AVG (°F)
USC00190120	AMHERST, MA US	24	0.57	75.43	54.14
USC00190120	AMHERST, MA US	25	1.79 (+214%)	84.71 (+12%)	61.14 (+13%)
USC00190120	AMHERST, MA US	26	1.64 (-8%)	81.86 (-3%)	59.14 (-3%)
USC00190120	AMHERST, MA US	27	2.08 (+28%)	81.71 (no change)	58.29 (+1%)
USC00190120	AMHERST, MA US	28	1.5 (-28%)	89 (+9%)	69.9 (+20%)

## EPI Week 28 and Early EPI Week 29 Arbovirus Detections

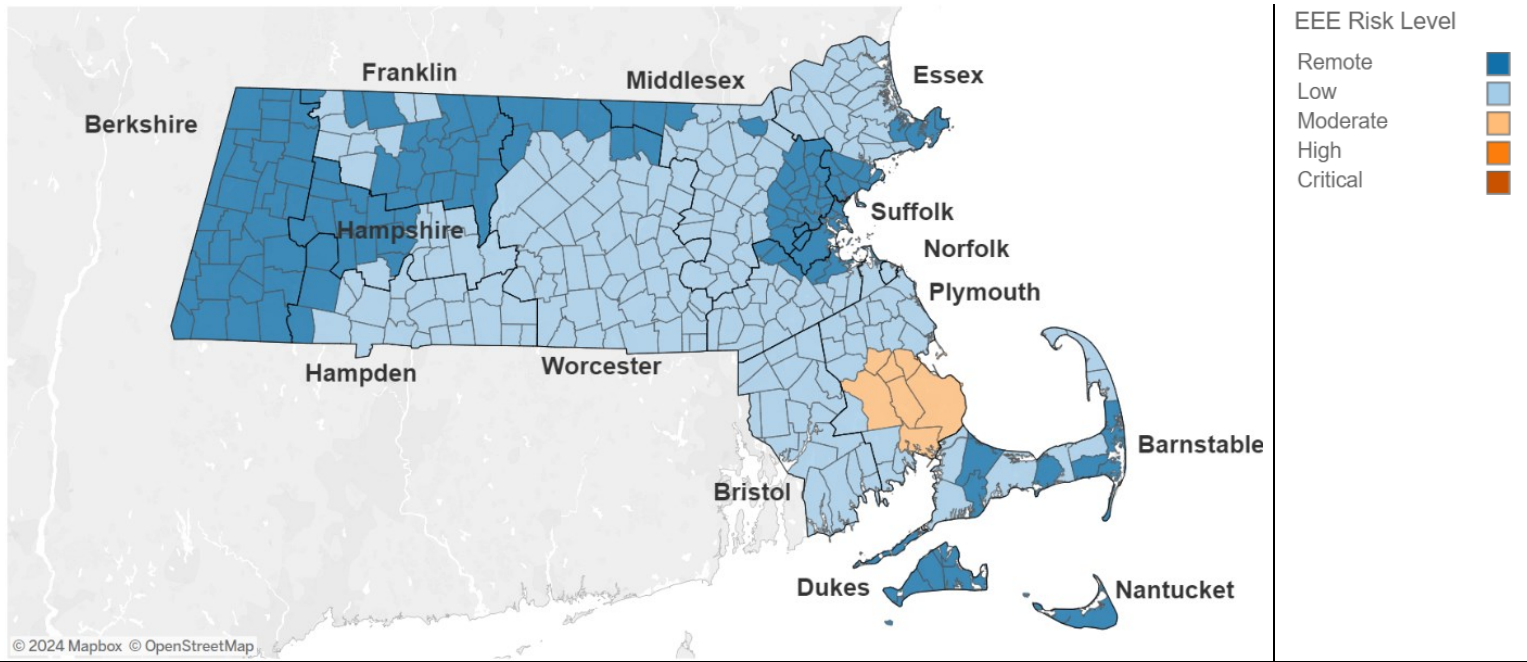
Town	County	Collection Date	Pool Size	Species	Virus Detected
Kingston	Plymouth	7/8/2024	50	<i>Culex pipiens/restuans</i>	EEE
Halifax	Plymouth	7/8/2024	50	<i>Culiseta melanura</i>	EEE
Raynham	Bristol	7/9/2024	50	<i>Culiseta melanura</i>	WNV
Blackstone	Worcester	7/9/2024	24	<i>Culex pipiens/restuans</i>	WNV
Edgartown	Dukes	7/9/2024	22	<i>Culex pipiens/restuans</i>	WNV
Cambridge	Middlesex	7/9/2024	50	<i>Culex pipiens/restuans</i>	WNV
Hanson	Plymouth	7/9/2024	50	<i>Culiseta melanura</i>	WNV
Clinton	Worcester	7/11/2024	20	<i>Culex pipiens/restuans</i>	WNV
Natick	Middlesex	7/11/2024	50	<i>Culex pipiens/restuans</i>	WNV
Carver	Plymouth	7/15/2024	50	<i>Culiseta melanura</i>	EEE
E. Longmeadow	Hampden	7/15/2024	5	<i>Culex salinarius</i>	WNV
Wayland	Middlesex	7/16/2024	34	<i>Culex pipiens/restuans</i>	WNV
Middleborough	Plymouth	7/16/2024	50	<i>Culex pipiens/restuans</i>	WNV
Middleborough	Plymouth	7/16/2024	50	<i>Culex pipiens/restuans</i>	WNV
Scituate	Plymouth	7/16/2024	49	<i>Culex pipiens/restuans</i>	WNV
Pembroke	Plymouth	7/16/2024	31	<i>Culex pipiens/restuans</i>	WNV

## Arbovirus Summary for 2024 (Updated 7/19/24)

Virus	Positive Mosquito Samples	Animal Cases	Human Cases
EEEv	9	0	0
WNV	16	0	0



**EEE Impacted Areas (Updated 7/19/24)**



Recent detections of EEEV in mosquitoes has resulted in a risk level change to “Moderate” in the following communities: Carver, Halifax, Kingston, Middleborough, Plymouth, Plympton, and Wareham.

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

**WNV Impacted Areas (Updated 7/19/24)**



There were no recent changes to the WNV risk map.

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 62 cases of dengue in Massachusetts, as of 7/19/24. 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	
<b>WNV</b>	<b>2 to 14 Days</b>	<b>Febrile Illness</b>	<b>Neuroinvasive Disease</b>
		<ul style="list-style-type: none"> <li>• Fever</li> <li>• Muscle aches</li> <li>• Joint Pain</li> <li>• Fatigue</li> <li>• Rash</li> </ul>	<ul style="list-style-type: none"> <li>• Stiff neck</li> <li>• Muscle Tremors</li> <li>• Seizures</li> <li>• Changes in vision</li> <li>• Weakness or paralysis</li> </ul>
<b>EEE</b>	<b>4 to 10 Days</b>	<b>Febrile Illness</b>	<b>Neuroinvasive Disease</b>
		<ul style="list-style-type: none"> <li>• Fever</li> <li>• Muscle aches</li> <li>• Joint pain</li> <li>• Chills</li> </ul>	<ul style="list-style-type: none"> <li>• Fever</li> <li>• Headache</li> <li>• Seizures</li> <li>• Behavioral changes</li> <li>• Vomiting</li> <li>• Diarrhea</li> <li>• Coma</li> </ul>

## 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 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](mailto: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.

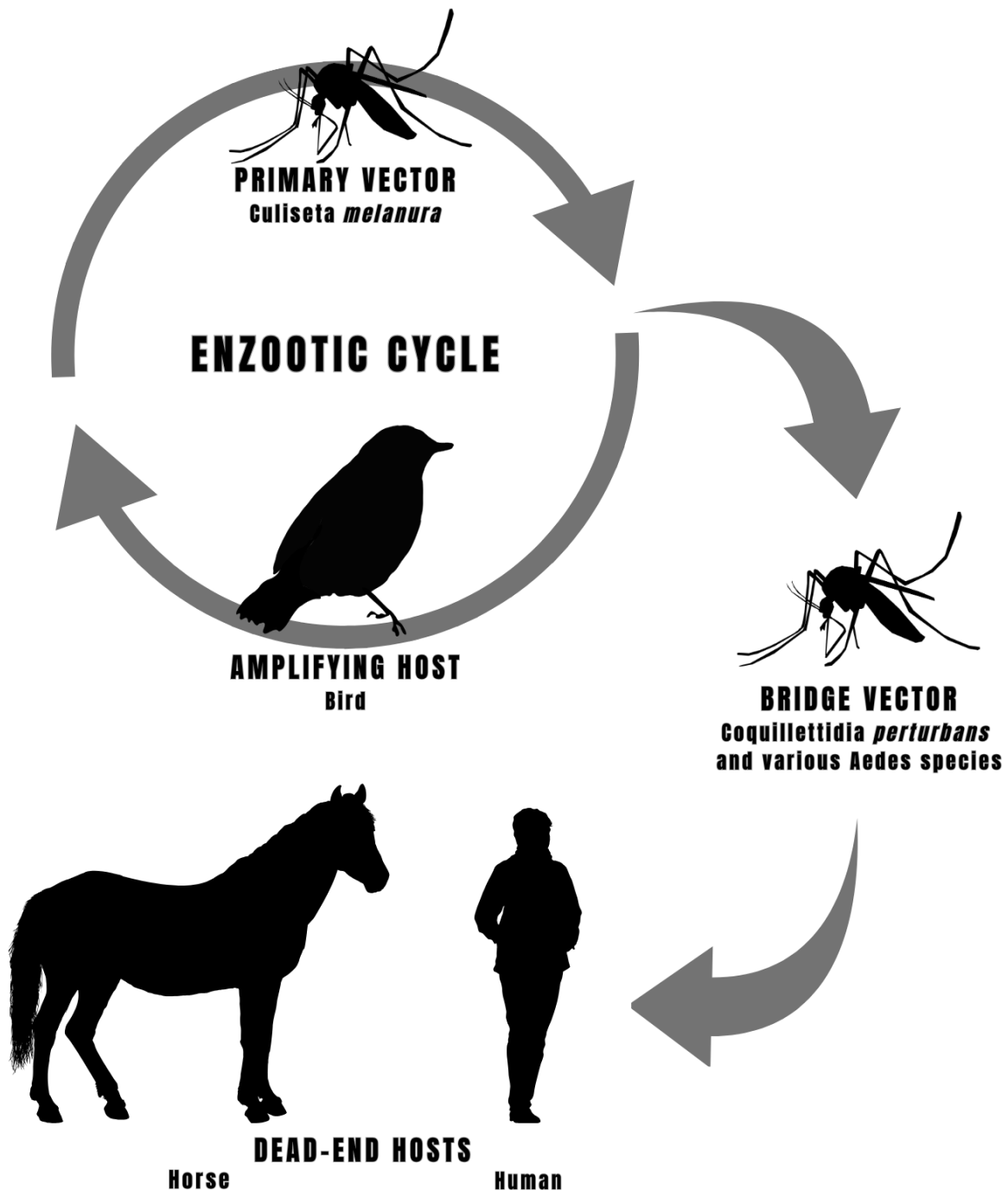
**Email:** [john.c.briggs@mass.gov](mailto:john.c.briggs@mass.gov)

**Web:** [mass.gov/info-details/pioneer-valley-mosquito-control-district-pvmcd](http://mass.gov/info-details/pioneer-valley-mosquito-control-district-pvmcd)



# PIONEER VALLEY MOSQUITO CONTROL DISTRICT

## EASTERN EQUINE ENCEPHALITIS VIRUS TRANSMISSION CYCLE



Email: [john.c.briggs@mass.gov](mailto:john.c.briggs@mass.gov)

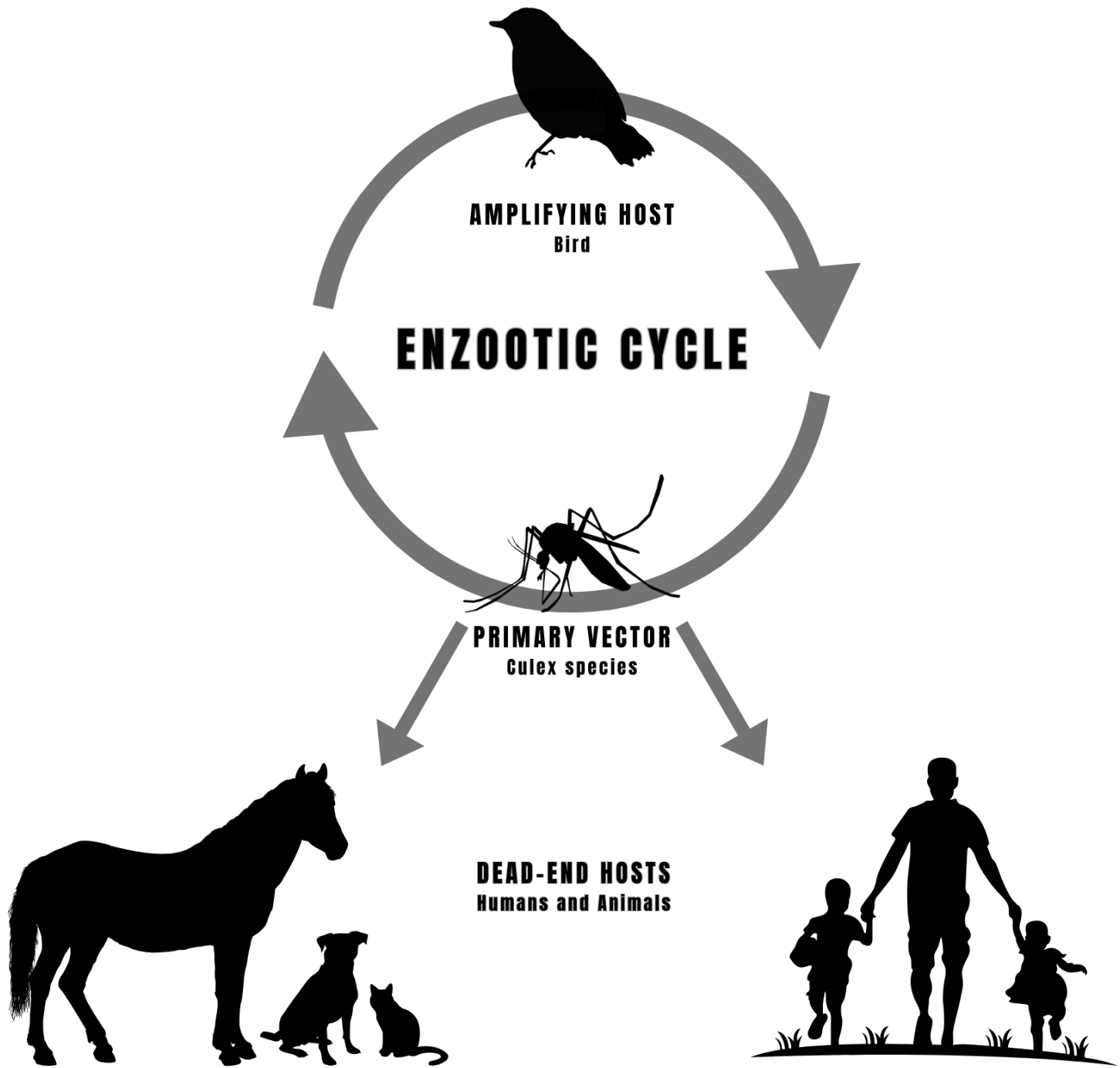
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# PIONEER VALLEY MOSQUITO CONTROL DISTRICT

## WEST NILE VIRUS TRANSMISSION CYCLE



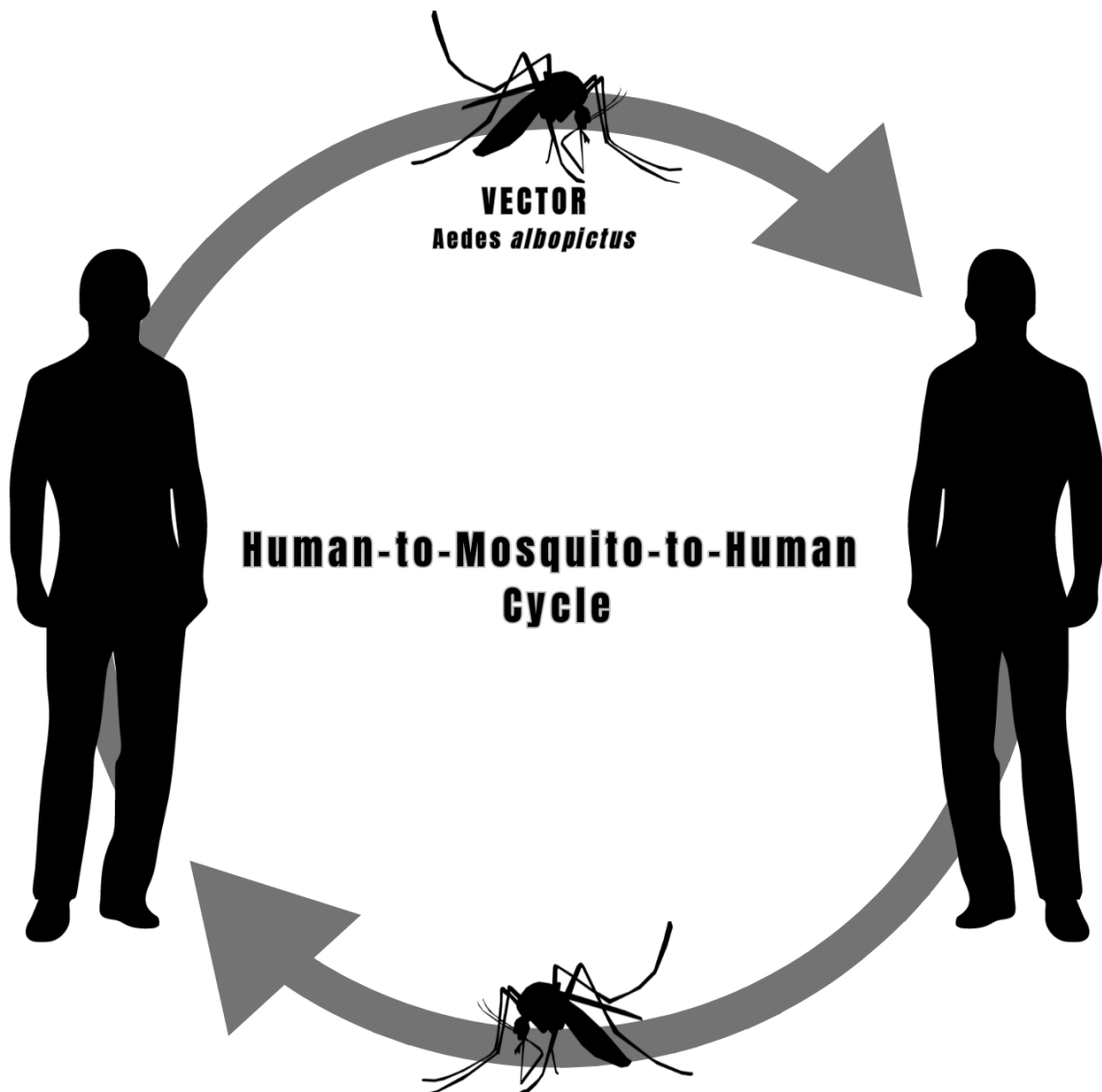
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# PIONEER VALLEY MOSQUITO CONTROL DISTRICT

## DENGUE VIRUS TRANSMISSION CYCLE



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