Pioneer Valley MCD Weekly Report

EPI WK 25 **Week Ending: June 22, 2024**

Note: The trapping schedule was reduced this week, due to the holiday.

EPI WK 25 Surveillance Summary

EPI Week 25 Target Species Surveillance Summary					Cumulative Totals: EPI Weeks 24-25			
Species	# Collected	Pools	WNV+	EEEV+	Cumulative Specimens	Cumulative Pools	Cumulative WNV+	Cumulative EEEV+
Cx. *pipiens/restuans*	706	15	0	0	833	25	0	0
Cs. *melanura*	24	1	0	0	59	6	0	0
Cq. *perturbans*	3632	12	0	0	5481	22	0	0
Oc. *canadensis*	121	3	0	0	314	8	0	0
Oc. *japonicus*	76	1	0	0	212	5	0	0
Oc. *vexans*	6	0	NA	NA	39	2	0	0

Positive Samples

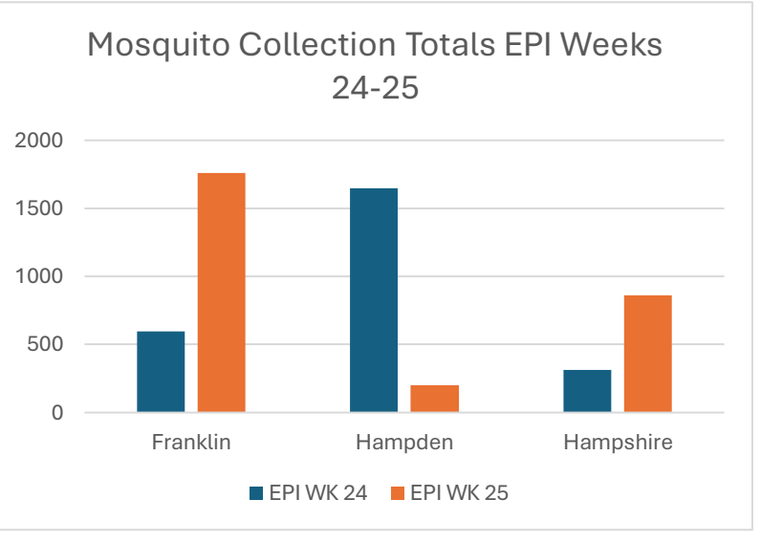
- There were no positive mosquito pools reported from EPI week 25.

Most Abundant Species

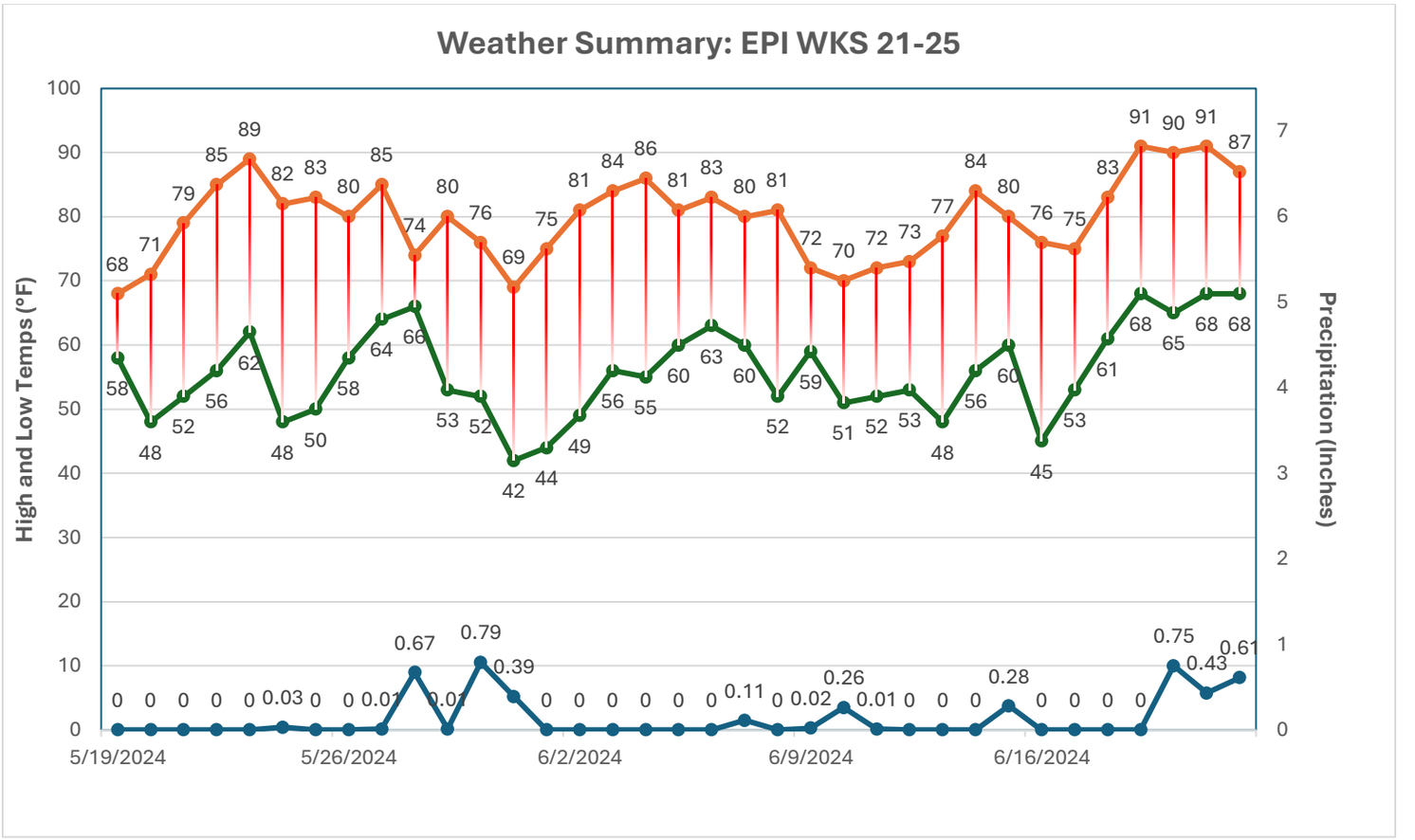
- Cq. *perturbans* were the most abundant vector species collected from EPI weeks 25, totaling 3632 specimens and are up 90% from the previous week. Cq. *perturbans* are a bridge vector for EEE and WNV and can be found in permanent swamps with emergent vegetation (e.g. cattails and hummocks/tussocks). Cq. *perturbans* are aggressive human biters and are primarily active during the night. Peak numbers of Cq. *perturbans* can be expected from early to mid-July.

EPI WK 25 Summary by County

- Franklin County
  - EPI WK 25 Pools Tested: 17
  - Positive Samples: 0
  - Most Abundant Species: Cq. *perturbans* (1420)
  - Total Mosquitoes Collected: 1761
- Hampden County
  - EPI WK 25 Pools Tested: 3
  - Positive Samples: 0
  - Most Abundant Species: Oc. canadensis (87)
  - Total Mosquitoes Collected: 199
- Hampshire County
  - EPI WK 25 Pools Tested: 11
  - Positive Samples: 0
  - Most Abundant Species: Cq. *perturbans* (2170)
  - Total Mosquitoes Collected: 2776
- Total Mosquitoes Collected (All Counties): 4736



Weather Data



Weather Summary

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%)**

- Weather conditions remained favorable for mosquitoes during EPI weeks 21-25. Collection sizes have increased each week, with EPI week 25 having the highest weekly total of 4736, despite the reduced number of traps set in the field. If weather conditions continue to remain favorable, it is expected that mosquito populations will increase.

Eastern Equine Encephalitis Update

- It was announced on June 20 that RI had confirmed two EEE positive pools of mosquitoes from Tiverton and Coventry. With the presence of EEE so close Bristol County, it is likely going to be detected in MA within the coming weeks.

Conditions Impacting EEE

- Weather: The weather needs to remain favorable for both Cs. *melanura* and bridge vector species.
- Reservoirs/Amplifying Hosts: The EEE virus will need to become prevalent enough in the bird population for spillover to occur into bridge vectors.

West Nile Virus Update

- WNV was detected in pool of mosquitoes collected from New Haven, Connecticut on June 24, 2024.
- This is the earliest detection of WNV in Connecticut during the last 25 years.

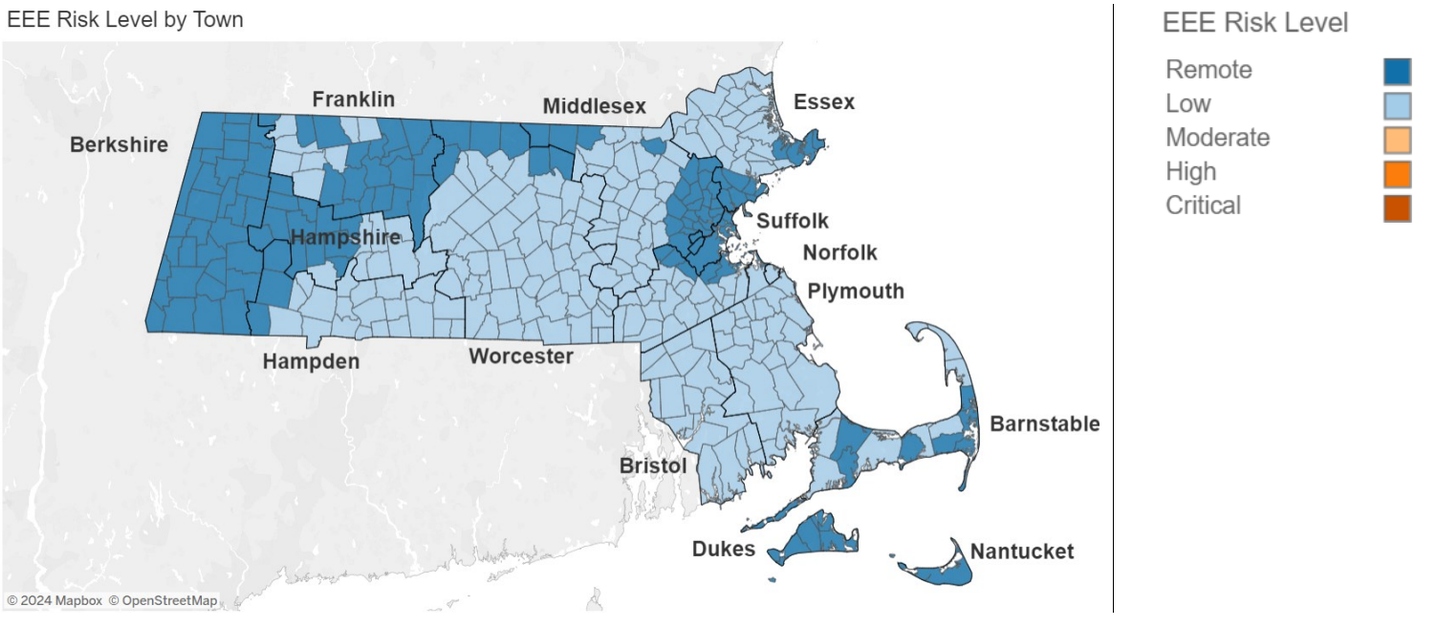
Recommended Public Messaging

- 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

EEE Impacted Areas

- **There were no changes to the EEE risk map during EPI 25. It should be noted that Tiverton, RI borders multiple communities in Bristol County.**
- Some municipalities are listed as "Low", one step above "Remote", on the MA Department of Public Health's Arbovirus Risk Maps. This is due to a history of EEE activity being detected in the past 10 years.

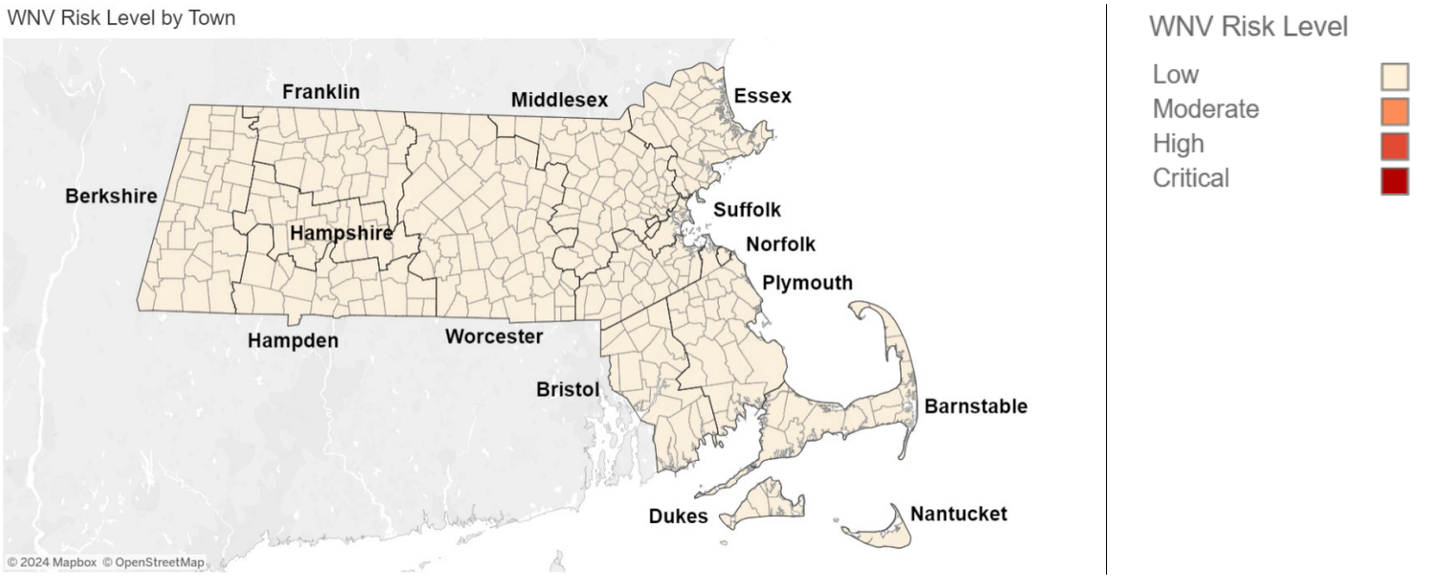
Current EEE Risk Map from: https://www.mass.gov/info-details/massachusetts-arbovirus-update



WNV Impacted Areas

- **There were no changes to the WNV risk map during EPI week 25.**

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



Dengue Fever Spike Reported in Massachusetts

- According to the CDC, there have been 50 cases of dengue fever in MA as of June 27. The WHO is also reporting record outbreaks of dengue globally.
- Dengue is spread through a human-to-mosquito-to-human cycle.
- Dengue infection typically occurs in the following regions: the Caribbean, Central America, South America, Southeast Asia, and the Pacific Islands.
- 41 of the 50 reported cases occurred across 3 counties: Suffolk (21), Middlesex (11), and Norfolk (9).
- There are an estimated 1-4 cases in both Hampshire and Worcester Counties.
- Competent vectors for dengue fever:
    - Ae. *aegypti* and Ae. *albopictus*.
- 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

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

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

PIONEEER 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.

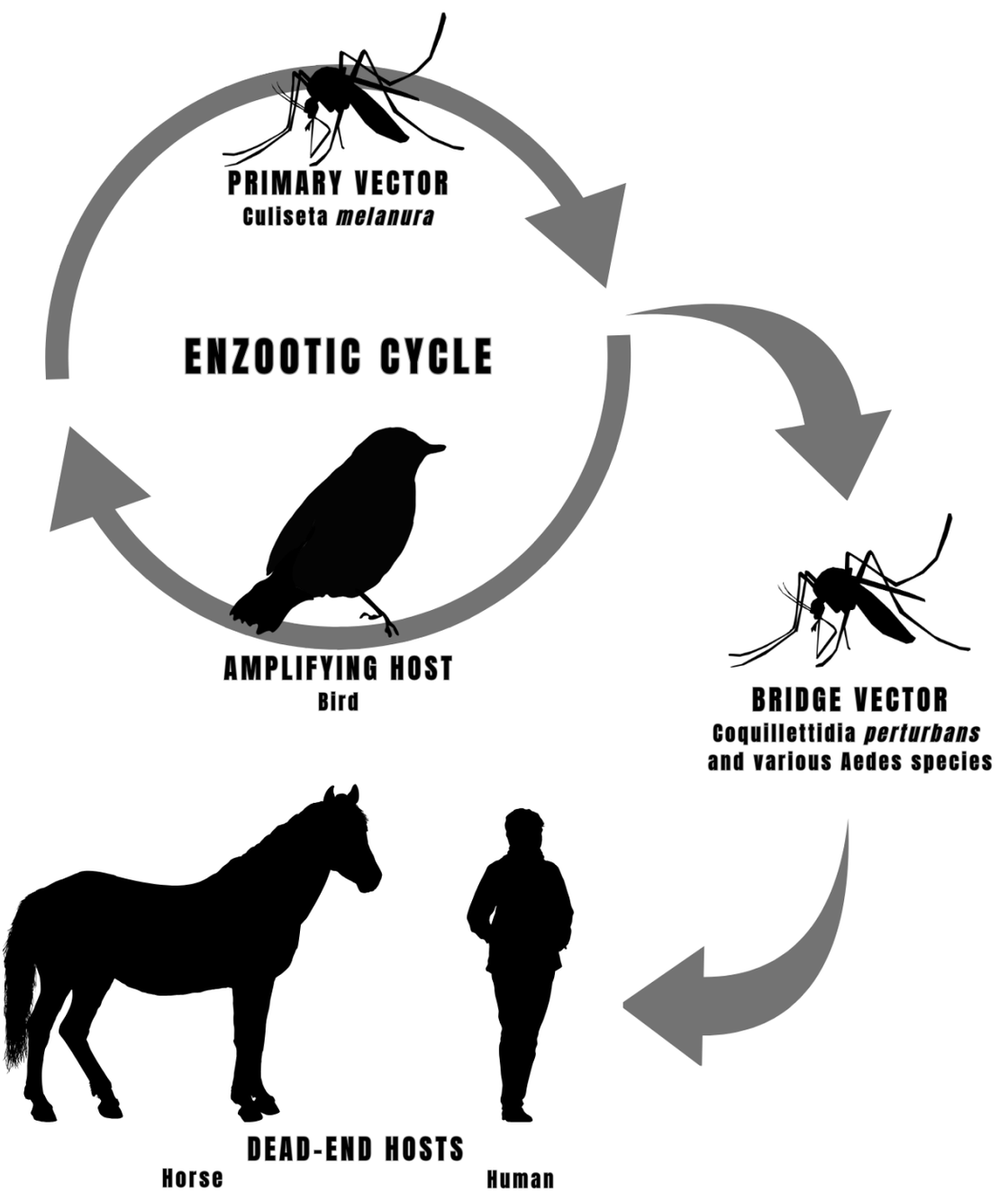
FIRST AID FOR BITES

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

PIONEEER VALLEY MOSQUITO CONTROL DISTRICT

EASTERN EQUINE ENCEPHALITIS VIRUS TRANSMISSION CYCLE



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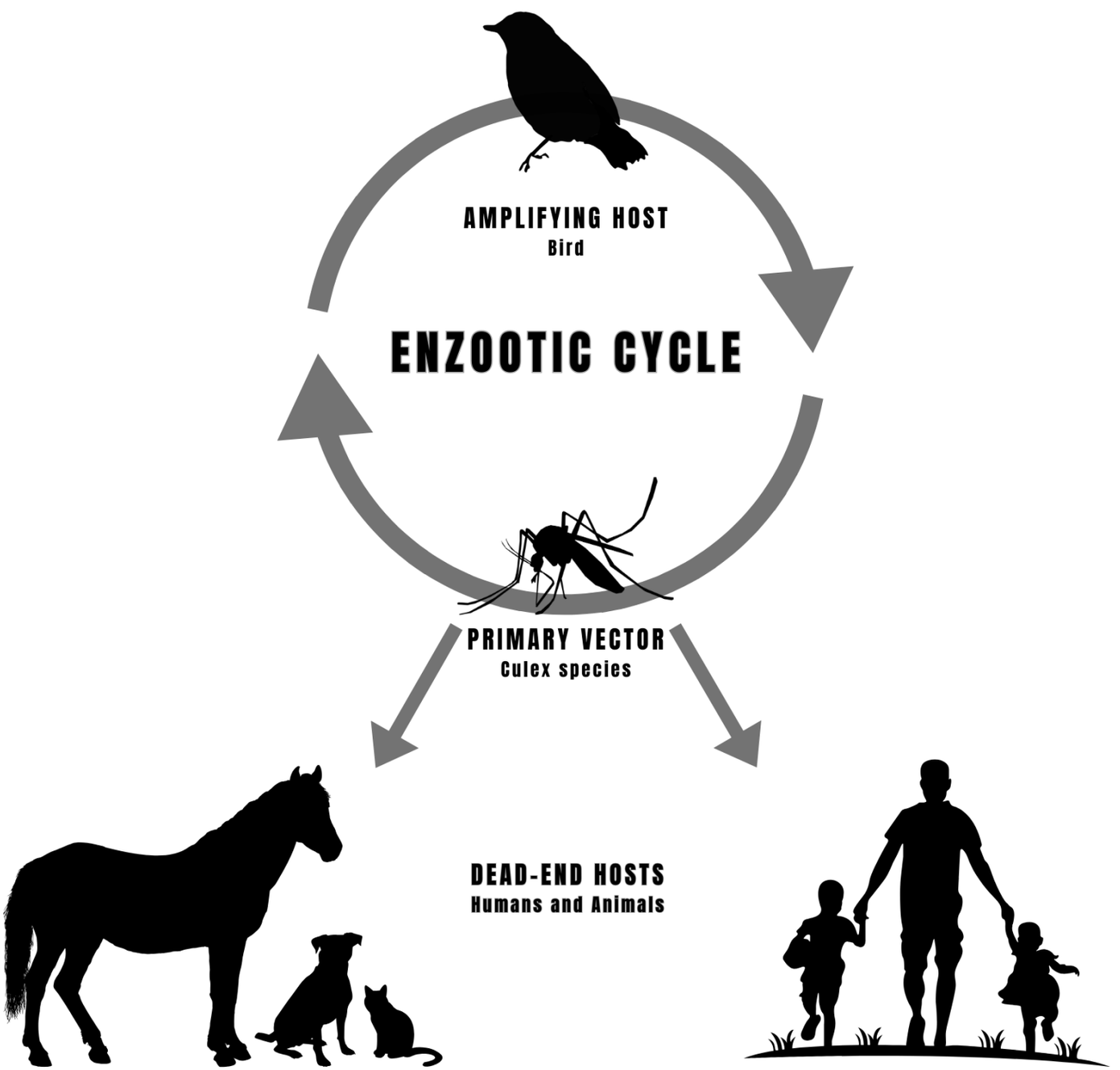
PIONEEER VALLEY MOSQUITO CONTROL DISTRICT

WEST NILE VIRUS TRANSMISSION CYCLE



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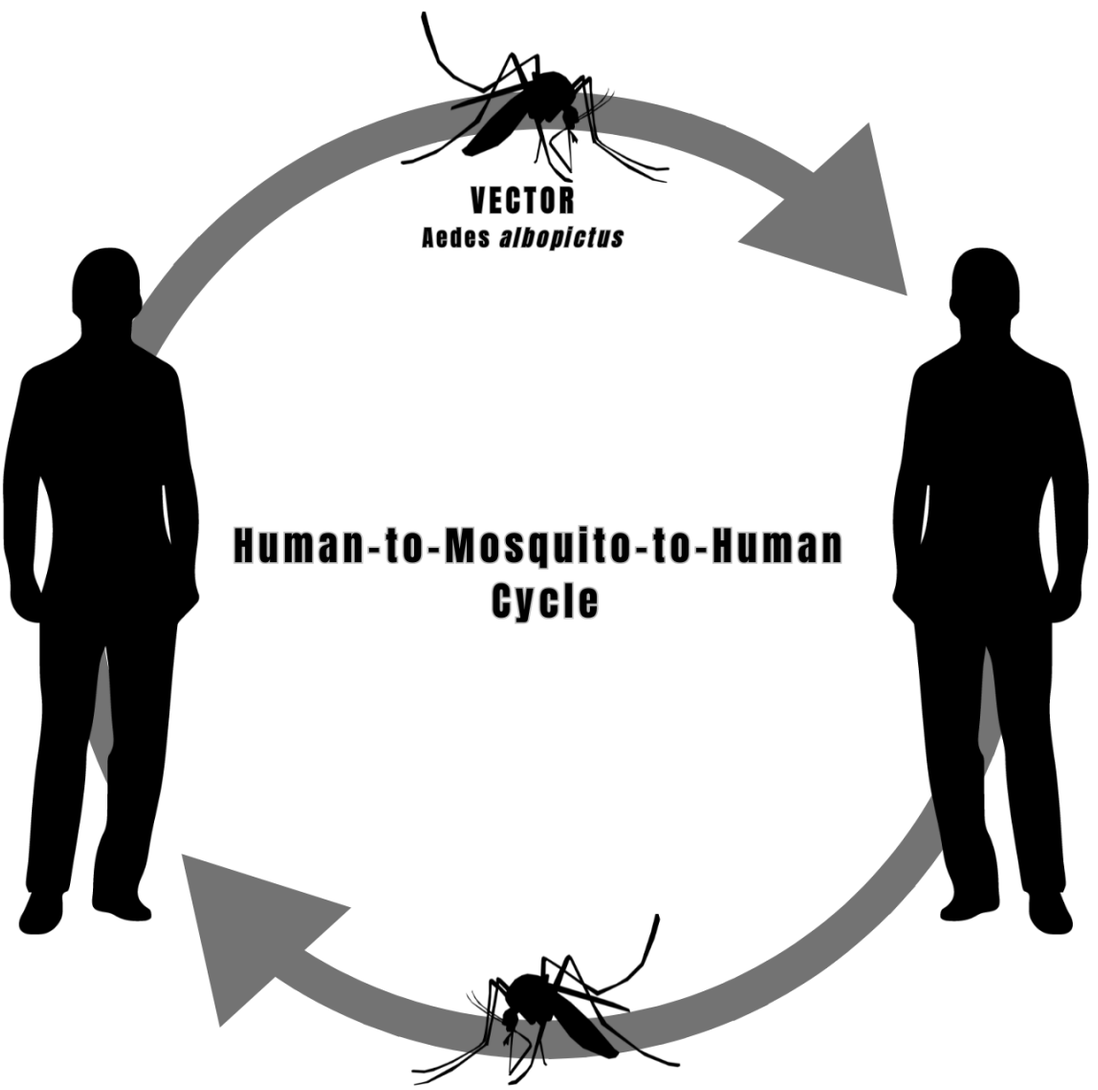
PIONEEER VALLEY MOSQUITO CONTROL DISTRICT

DENGUE VIRUS TRANSMISSION CYCLE



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