MOSQUITO and VECTOR MANAGEMENT DISTRICT of SANTA BARBARA COUNTY

DISEASE SURVEILLANCE REPORT

January 2024

Santa Barbara County Vector-borne Disease Surveillance

No trapping was conducted in January due to a combination of low nighttime temperatures and a lack of complaints received from residents. No mosquitoes or dead birds were collected in January. There were no detections of West Nile virus (WNV) in the County in 2023. St. Louis encephalitis virus (SLE) and Western equine encephalitis virus have never been documented in the county.

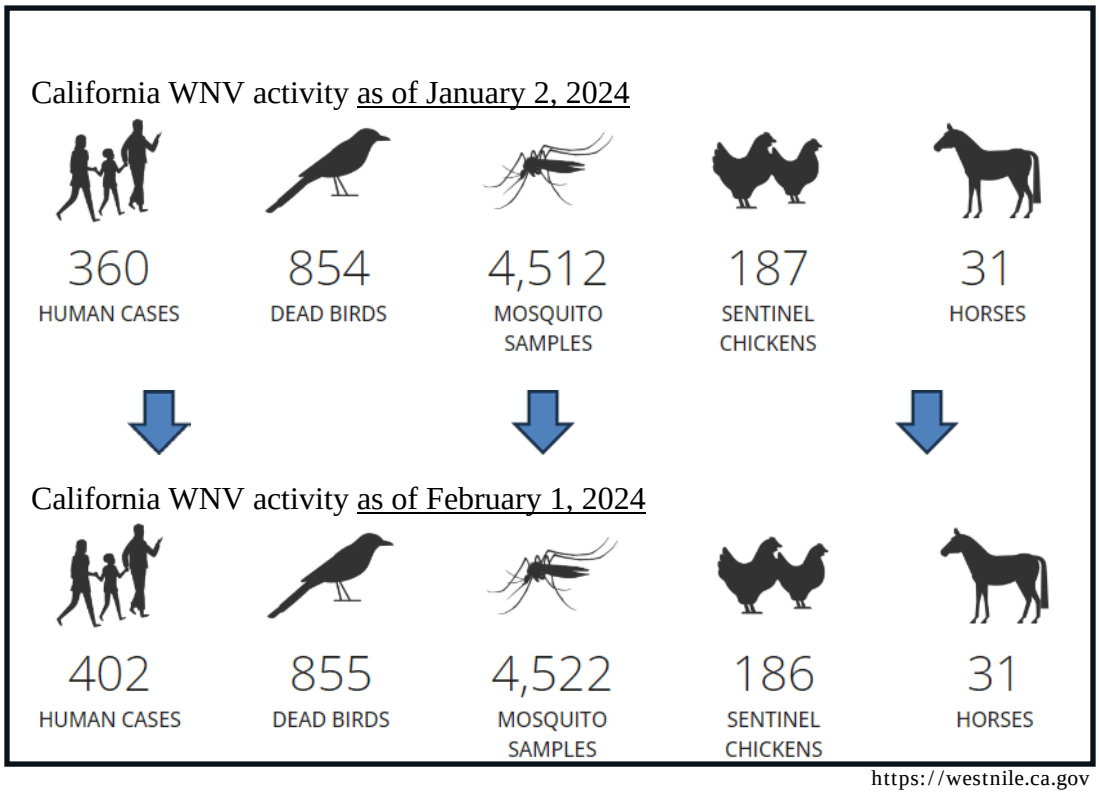
Three trails were surveyed for ticks by flagging* last month.

1. 1/5/2024 **Fish & Game,** Los Carneros Rd. x Mesa Rd.: no ticks
2. 1/8/2024 **More Mesa**, Shoreline Goleta Valley: *Ixodes pacificus* (a vector of Lyme disease): 1 male
3. 1/29/2024 **Andree Clark Bird Refuge**: no ticks

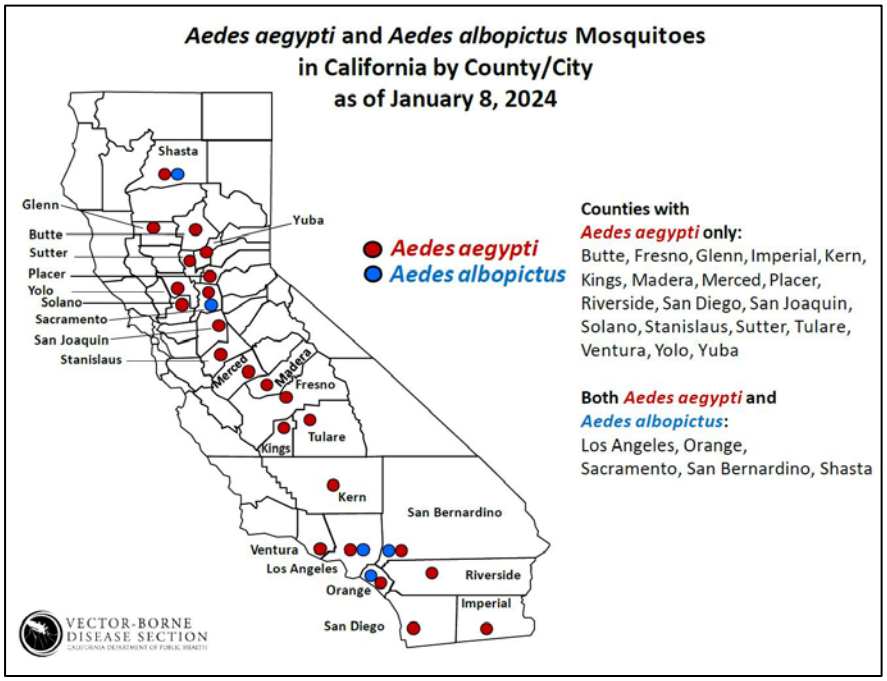
** Visit https://www.mvmdistrict.org/tick-talk for an explanation of tick flagging and more information about ticks.*

California Vector-borne Disease Surveillance

For the year 2023, WNV was detected in 41 counties. **Seventeen human cases were fatal**. On October 13, the WNV dead bird program switched to only online reporting and limited testing until April. Eighteen human cases of SLE infection were reported in CA in 2023; 728 SLE-positive mosquito pools were reported in 15 counties. Both neighboring Ventura and San Luis Obispo counties had detections of WNV in 2023. Ventura County had one human case and four positive dead birds. SLO had two humans, one dead bird, and two horses that tested positive.



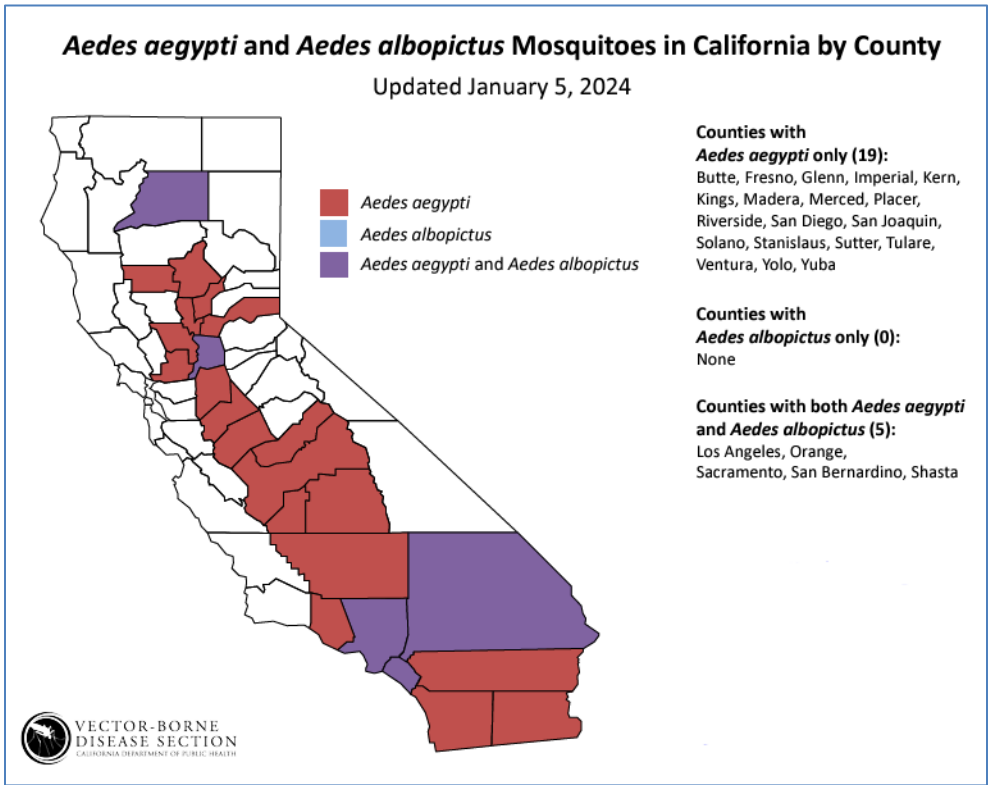
https://westnile.ca.gov



Invasive *Aedes* Mosquito Update

No invasive *Aedes* species have been detected in Santa Barbara County since May 2021. Santa Barbara, along with four other Counties, have been removed from the invasive *Aedes* map because more than two years has passed since the last collection. *Aedes aegypti* is found in 24 California counties, and *Aedes albopictus* is found in five.

Two human cases of locally transmitted dengue virus were discovered in the Los Angeles area in October. Trapping and testing around these finds have not revealed any dengue-positive mosquitoes. Non-native *Aedes* mosquitoes, capable of vectoring dengue, Zika, chikungunya, and yellow fever are common in the LA area. In 2023, there were 105 travel-related human dengue cases in California; Santa Barbara County Public Health has reported three travel-related human cases.



Female *Aedes washinoi*. Wing scales are shown to differentiate from *Aedes squamiger*, which has rounded wing scales.

Floodwater or Willow Mosquito

Aedes washinoi

Aedes washinoi larvae develop in wetlands and vernal pools that are flooded by winter rain. There is typically one generation per year (this is referred to as a univoltine species). Eggs are laid on moist soil or vegetation as water dries-up in late spring/early summer. Eggs hatch the following winter when rain water accumulates. Metamorphosis from the larval stage to the adult stage takes about 30 days. Adult females, staying within one half mile of their larval sources, are aggressive day-biters that will readily feed on humans. One strategy that the District uses against this mosquito is “pre-treatment” in which larvicide briquets can be placed in historically mosquito-prone habitats before winter rains occur. About 60 acres are pre-treated in Santa Barbara County each autumn. Treatment is notably easier while the habitats are dry; pre-treatment also prevents technicians from making footprints in the mud (which can fill with water and become mosquito breeding sites) and from being overwhelmed with work in the thirty days after habitat flooding. *Aedes washinoi*, named after University of California, Davis entomologist and professor emeritus Dr. Robert Washino, is not known to be a vector of any human pathogens.