



MOSQUITO and VECTOR MANAGEMENT DISTRICT of SANTA BARBARA COUNTY

DISEASE SURVEILLANCE REPORT

December 2020

Live Mosquito-Borne Virus Surveillance

Encephalitis virus surveillance will resume in March. No additional *Aedes aegypti* were detected.

| Location | Date | Number of Mosquitoes | Type of Trap | # of Traps | Mosquitoes per Trap Night | Pools Submitted | WSW Virus Test Result |
|---------------|-------------|----------------------|--------------|------------|---------------------------|-----------------|-----------------------|
| Sterrett Ave. | 12/11-12/27 | 0 | BGS2 | 1 | 0 | 0 | |
| Valerio St. | 12/11-12/27 | 0 | BGS2 | 1 | 0 | 0 | |
| Orella St. | 12/4-12/27 | 0 | BGS1 | 1 | 0 | 0 | |
| Chino St. | 12/11-12/27 | 1 | BGS2 | 1 | 0.06 | 0 | |
| Crescent Dr. | 12/1-12/27 | 0 | AGO | 1 | 0 | 0 | |
| Sterrett Ave. | 12/1-12/27 | 0 | AGO | 1 | 0 | 0 | |
| Chino St. | 12/11-12/27 | 0 | GAT | 2 | 0 | 0 | |
| Valerio St. | 12/11-12/17 | 0 | AGO | 1 | 0 | 0 | |

BGS2=BioGents Sentinel 2

GAT=Gravid Autocidal Trap

AGO=Autocidal Gravid Ovitrap
WSW=WNV, SLEV, AND WEE

West Nile Virus Activity

No mosquito pools from the area were tested for West Nile virus, St. Louis encephalitis virus, or Western equine encephalitis virus last month. Three dead wild birds were reported, two were tested, and both tested negative.

California reported about 35% of the total human West Nile virus infections in the United States in 2020 (197 of 557). There were seven fatalities. In December in California, only five birds tested positive for WNV, bringing the 2020 total to 343. No new positive mosquito pools were reported.

Sentinel Chicken Flocks

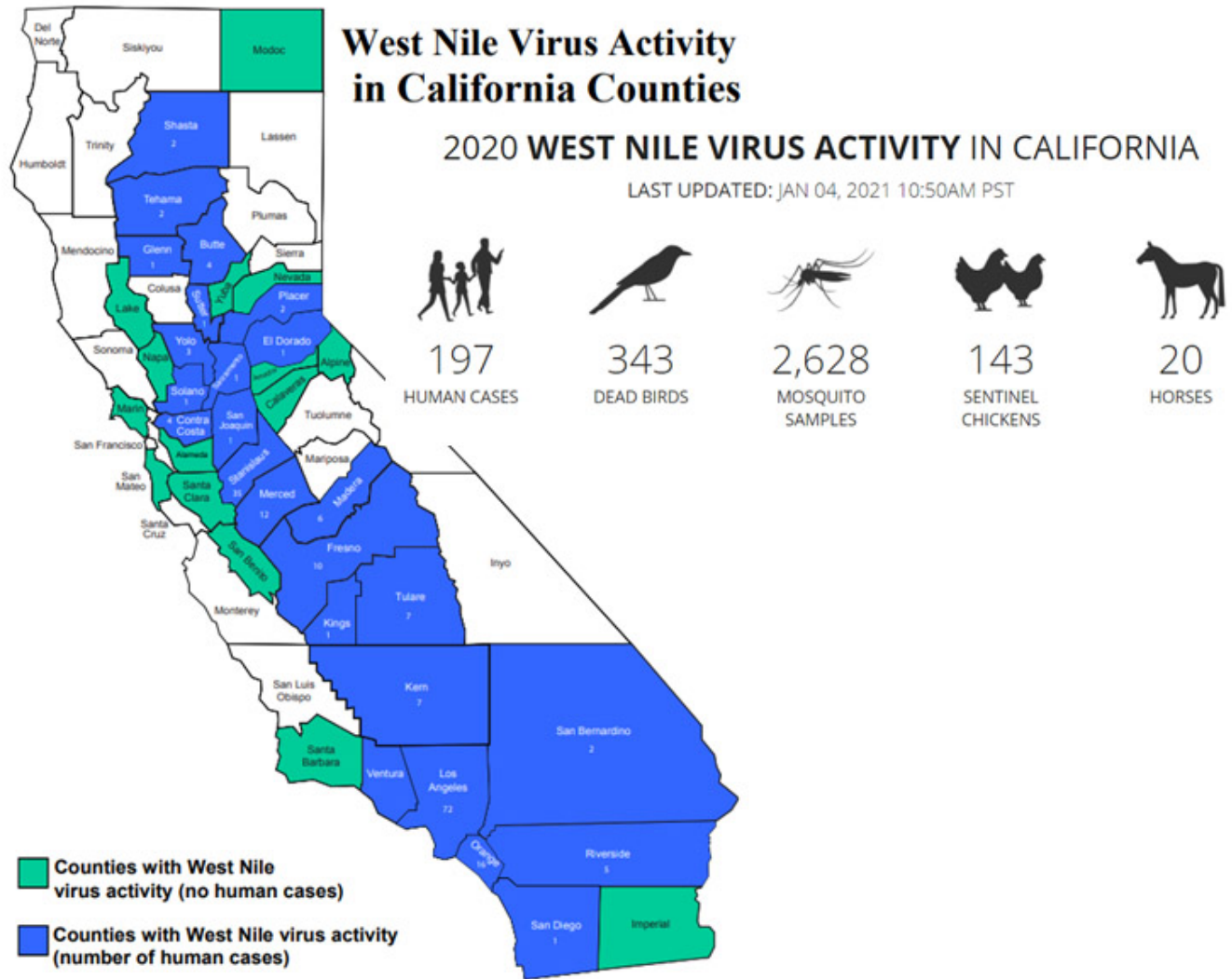
The District currently maintains four sentinel chicken flocks in Santa Barbara County located at the Goleta Sanitary District, Mission Hills Community Services District, the Solvang City Wastewater Treatment Plant, and the U.S. Forest Service Fire Station in Carpinteria. Blood samples were collected from these chickens during the week of December 7, and all tested negative for the presence of WNV, SLEV, and WEE. From November to March, chickens are tested only once every four weeks. One sentinel chicken in neighboring Ventura County tested positive for WNV in December, which was the only WNV activity in the county in 2020.

St. Louis Encephalitis Virus Activity

No SLEV activity was detected in Santa Barbara County in 2020. Five human SLEV infections were reported for the year from Fresno, Madera, Stanislaus, and San Joaquin Counties. In 2020, 510 positive mosquito pools were reported from nine counties.

Western Equine Encephalitis

There was no reportable WEE activity in California in 2020.



*Other data released by CDPH showed no human cases in Ventura County, so it should be colored green.-KS

Zika Virus and Invasive *Aedes* Mosquito Update

The District has documented 33 *Aedes aegypti* mosquitoes from nine addresses. December 28th brought about 2 inches of rain, so we can expect eggs laid in backyard containers to hatch if residents have not heeded our warnings. There are about 115 parcels in the North Hope Avenue area and about 190 in the Chino Street area within 150 meters of collection sites.

There were no Zika virus infections reported in California in December. Invasive *Aedes* are present in the following 22 counties: Los Angeles, Orange, San Diego, Riverside, San Bernardino, Butte, Imperial, Kern, Kings, Fresno, Madera, Merced, San Joaquin, Placer, Sacramento, **Santa Barbara**, Shasta, Sutter, Stanislaus, Tulare, Ventura, and Yolo.



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 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.” Some larvicides 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 being overwhelmed with work in the thirty days after habitat flooding. *Aedes washinoi*, named after Californian entomologist Dr. Robert Washino, is not known to be a vector of any pathogen.