



**MOSQUITO and VECTOR MANAGEMENT DISTRICT
of SANTA BARBARA COUNTY**

DISEASE SURVEILLANCE REPORT

July 2022

Vector-borne Disease Surveillance

Location	Date	Number of Mosquitoes	Type of Trap	# of Traps	Mosquitoes per Trap Night	Pools Submitted	WSW Virus Test Result
Orcutt Creek	7/7-7/8	49	Gravid	2	24.5	2	-
Orcutt Creek	7/7-7/8	28	EVS	4	7	1	-
Hartnell x Broadway, Orcutt	7/7-7/8	14	EVS	2	7	1	-
South Bradley Rd., Orcutt	7/7-7/8	1	EVS	2	0.5	0	
Lake Marie, 93455	7/7-7/8	7	EVS	3	2.3	0	
Goleta Sanitary District	7/8-7/13	59	Gravid	2	5.9	1	-
Carpinteria Creek	7/12-7/18	10	Gravid	2	0.8	1	-
Islay Park, San Luis Obispo, SLO County	7/19-7/20	82	EVS	3	27.3	1	-
Islay Park, San Luis Obispo, SLO	7/19-7/20	41	Gravid	1	41	1	-
Laguna Lake Park, San Luis Obispo, SLO	7/19-7/20	196	EVS	3	65.3	3	-
Producer's Ditch, San Luis Obispo, SLO	7/19-7/20	147	EVS	3	49	1	-
Producer's Ditch, San Luis Obispo, SLO	7/19-7/20	75	Gravid	1	75	3	-
San Luis Obispo Water Treatment Plant, SLO	7/19-7/20	19	EVS	3	6.3	1	-
Santa Monica Creek, Carpinteria	7/15-7/21	26	Gravid	2	2.2	1	-
MVMD, Summerland	7/22-7/27	6	Gravid	1	1.2	1	-
Hot Springs x Olive Mill Rd, Montecito	7/22-7/27	64	Gravid	3	4.3	2	-
El Estero Water Treatment Plant, Santa Barbara	7/26-7/27	52	EVS	5	10.4	2	-
Andree Clark Bird Refuge, Santa Barbara	7/26-7/27	10	EVS	5	2	1	-
UCSB/SB Airport Bluffs*	7/27-7/28	118	EVS	4	29.5	2	-
UCSB/SB Airport Bluffs*	7/28-7/29	136	BGP	3	45.3	1	-

Location	Date	Number of Mosquitoes	Type of Trap	# of Traps	Mosquitoes per Trap Night	Pools Submitted	WSW Virus Test Result
UCSB/SB Airport Bluffs*	7/28-7/29	332	EVS	3	110.7	1	-
Pismo Eco Reserve, SLO	7/28-7/29	4	EVS	1	4	0	
Pismo Creek, Pismo Beach, SLO	7/28-7/29	3	EVS	2	1.5	0	
Chumash Park, Pismo Beach, SLO	7/28-7/29	51	EVS	2	25.5	1	-
Oceano Dunes State Rec Area, SLO	7/28-7/29	37	EVS	2	18.5	1	-
Pismo Golf Course, SLO	7/28-7/29	9	EVS	2	4.5	0	

BGS2=Biogents Sentinel 2

BGP=Biogents Pro

EVS=encephalitis surveillance trap (CO²)

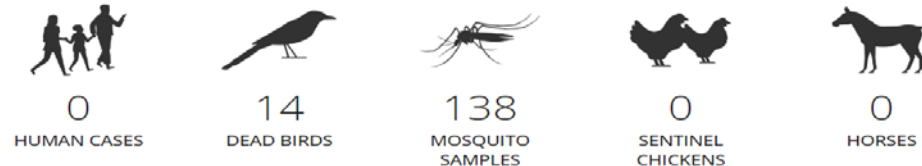
WSW=WNV, SLEV, AND WEE

*Response to complaints. Source of mosquitoes (almost all *Aedes taeniorhynchus*) was determined to be the Goleta Salt Marsh

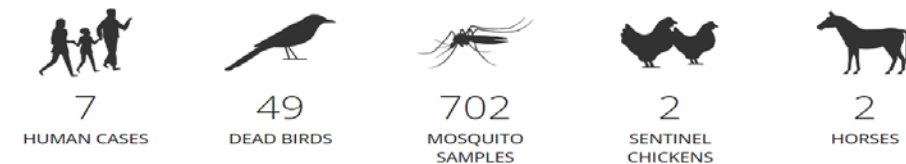
California Arbovirus Detection

In July, 564 WNV positive mosquito pools were reported throughout California. Thirty-five dead birds also tested positive for WNV; at this time last year, there were 94. Out of the total of nine human WNV cases, five progressed to neuroinvasive disease and 2 were asymptomatic blood donors. Only nine mosquito pools from Imperial and Kings Counties tested positive for Saint Louis encephalitis virus in 2022. No detections of Western equine encephalitis virus have been reported in California this year.

2022 West Nile Virus Activity in California through June



2022 West Nile Virus Activity in California through July



In July, five dead birds were reported in Santa Barbara County. Two red-tail hawks were accepted by the State for WNV testing; results were negative. Thirty-seven mosquito pools from Santa Barbara County (24) and San Luis Obispo County (13) tested negative for encephalitis viruses.

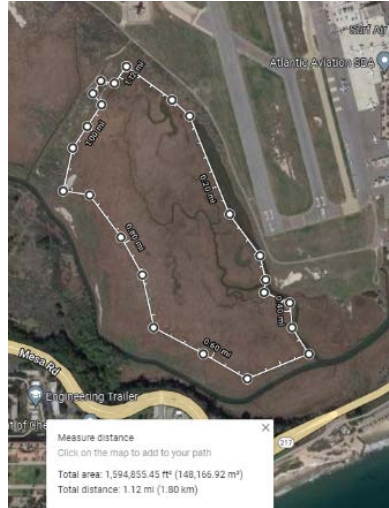
Invasive *Aedes* Mosquito and Zika Virus Update

Despite increased use of BG sentinel traps, and ovi-cups in July, no *Aedes aegypti* mosquitoes or other invasive *Aedes* species have been detected in Santa Barbara County, thus far in 2022.

Aedes aegypti mosquitoes are present in 22 California counties. *Aedes albopictus* is present in four. *Aedes notoscriptus* occurs in L.A., Orange and San Diego Counties. To date, there have been no human cases of Zika, dengue, or chikungunya, and 280 mosquito pools have tested negative, in California in 2022.



Aedes taeniorhynchus adult female emerging from pupa. Photograph by James M. Newman, University of Florida.



“Main Basin” where a new source was found. Approximately 36 acres



“Middle Basin” where heavy breeding was found. Approximately 30 acres

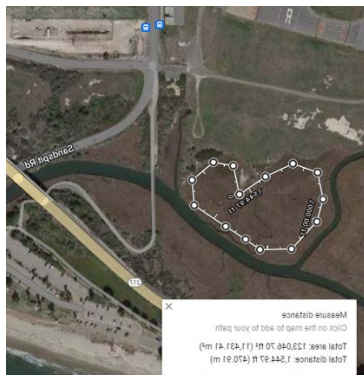
The Black Salt Marsh Mosquito *Aedes taeniorhynchus*

At the end of July, the District started receiving many complaints about mosquitoes at UCSB and throughout Goleta. The Goleta Salt Marsh was immediately suspected because in the middle of July, high tides reached 7.2 feet. Mosquito trapping confirmed that the black salt marsh mosquito, *Aedes taeniorhynchus*, was the culprit.

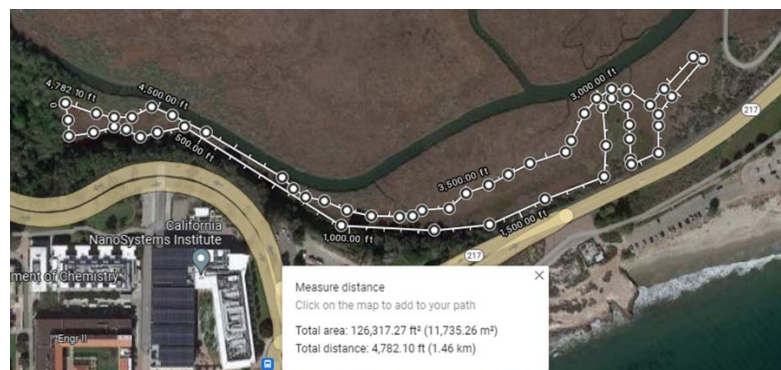
Staff inspects the Carpinteria and Goleta salt marshes, from April to October, about 3 days after tides above 6 feet. These tides coincide with full and new moon phases. At the edges of the marshes, water gets impounded in low spots that do not drain at low tide and remain stagnant for about 2 weeks. Extremely high tides, as well as changes in the topography, can impound water in places that haven't been known to produce mosquitoes before. The second week of August brought more tides exceeding 7 feet and another chance to find the breeding location. With the help of the Argo, the location was found and treated!

A black salt marsh mosquito lays eggs on moist soil, and the eggs hatch when the area is flooded by the high tide. Time from larva to adult mosquito is 5 to 15 days. The adult has white stripes on its legs and abdomen and a white ring around its proboscis. Black salt marsh mosquitoes can fly up to 25 miles in search of a blood meal. In this outbreak, complaints were received from as far away as Lake Los Carneros and Storke Ranch.

Santa Barbara is the northern limit of the black salt marsh mosquito's range. WNV has been detected in this species, but it is not considered to be a good vector. In the Southeast U.S. and in Central and South America, *Aedes taeniorhynchus* is a vector of Eastern equine encephalitis virus, Venezuelan equine encephalitis virus, and dog heartworm.



Breeding was first found in “Coral Area” in 2020. Approx. 3 acres



The “217 Area” is about 3 acres and is difficult to access