



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

DISEASE SURVEILLANCE REPORT

May 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
Crescent Drive, Goleta 93105	4/27-5/2	110	Gravid	3	21.6	4	-
El Estero Water Treatment Plant, SB	5/2-5/3	10	BGP	1	10	1	-
El Estero Water Treatment Plant, SB	5/2-5/3	28	EVS	4	7	1	-
Andree Clark Bird Refuge, SB	5/2-5/3	24	BGP	1	24	1	-
Andree Clark Bird Refuge, SB	5/2-5/3	104	EVS	5	20.8	1	-
Los Olivos x Alamo Pintado Creek	5/4-5/5	0	BGP	1	0	0	
Los Olivos x Alamo Pintado Creek	5/4-5/5	19	EVS	3	6.3	0	
Santa Ynez Park x Alamo Pintado Creek	5/4-5/5	6	EVS	4	1.5	0	
Santa Ynez Park x Alamo Pintado Creek	5/4-5/5	3	Gravid	2	1.5	0	
Solvang Water Treatment Plant	5/4-5/5	23	EVS	4	5.75	2	-
Solvang Water Treatment Plant	5/4-5/5	19	Gravid	2	9.5	3	-
Goleta Sanitary District	5/6-5/9	39	Gravid	4	3.25	2	pending
Isabella Way x Prefumo Creek, San Luis Obispo	5/25-5/26	13	EVS	3	4.3	2	pending
Isabella Way x Prefumo Creek, San Luis Obispo	5/25-5/26	2	Gravid	1	0.7	1	pending
Islay Park, San Luis Obispo	5/25-5/26	34	EVS	4	8.5	3	pending
Islay Park, San Luis Obispo	5/25-5/26	2	Gravid	1	0.5		
55 Broad St., San Luis Obispo	5/25-5/26	16	EVS	3	5.3	2	pending
Sinsheimer Park, San Luis Obispo	5/25-5/26	0	EVS	2	0	0	

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Mission Creek, Santa Barbara	5/25-5/26	14	EVS	4	3.5	2	pending
Mission Creek, Santa Barbara	5/25-5/26	2	BGP	2	1		
Mission Creek, Santa Barbara	5/25-5/27	206	Gravid	3	34.3	6	pending

BGS2=Biogents Sentinel 2

BGP=Biogents Pro

EVS=encephalitis surveillance trap (CO²)

WSW=WNV, SLEV, AND WEE

Tick flagging results are listed in the table below. All ticks collected were adults.

Site	Date	Western Black Legged Tick (<i>Ixodes pacificus</i>)		Pacific Coast Tick <i>Dermacentor occidentlis</i>		American Dog Tick <i>Dermacentor similis</i> *	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Cold Springs Trail, Montecito	5/2	0	2	65	68	0	0
Hot Springs Trail, Montecito	5/24	0	0	1	1	0	0
More Mesa, NW area, Goleta	5/27	0	3	0	0	5	6
Elings Park, East area, SB 93109	5/27	0	0	0	0	0	0

*formerly *Dermacentor variabilis*

California Arbovirus Detection

Five WNV positive mosquito pools have been reported this year in California, none in Santa Barbara County. There have been no WNV detections in horses, humans, or sentinel chickens. No detections of Saint Louis encephalitis virus or Western equine encephalitis virus have been reported in California.

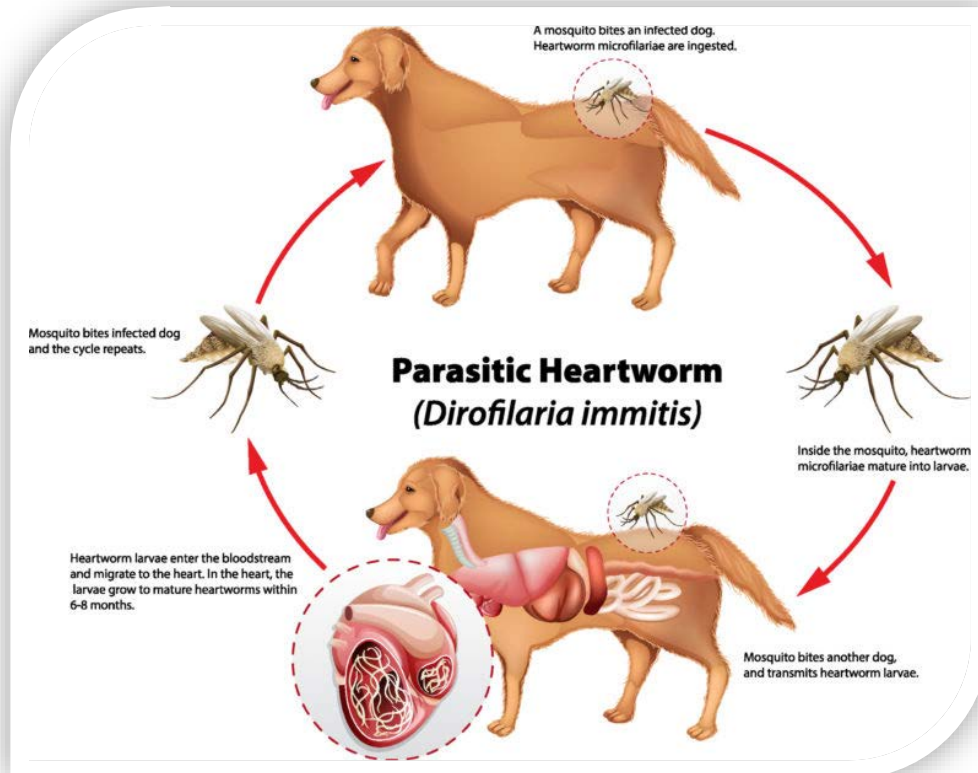
2021 & 2022 YTD West Nile Virus Comparisons		
	2021	2022
Total # Dead Bird Reports	1,966	1,582
# Positive Counties	2	5
# Human Cases	0	0
# Positive Dead Birds / # Tested	4 / 475	1 / 307
# Positive Mosquito Pools / # Tested	0 / 5,526	5 / 5,432
# Seroconversions / # Tested	0 / 844	0 / 567

In May, eight dead birds were reported in Santa Barbara County, but only two were accepted by the State for testing. Results are pending.

Invasive *Aedes* Mosquito and Zika Virus Update

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 in California in 2022.



Companion Animal Hospital, Canada

Dog Heartworm *Dirofilaria immitis*

Dog heartworm is caused by the filarial roundworm *Dirofilaria immitis*, which is vectored by the bite of a mosquito. After infection of a dog or other canine, immature worms travel in the bloodstream to the heart and lungs. After about three months, the worms develop into adults, mate, and begin producing tiny offspring that can be taken-up in the blood by the next mosquito bite. Heartworms congregate mostly in the right ventricle of the heart and can grow to a length of 6 to 12 inches! Infected dogs may show rapid tiring, coughing, shortness of breath, and/or weight loss; heartworm can be fatal. Fortunately, there are oral medications for dogs to prevent heartworm disease. Since the primary vector is the tree-hole mosquito, *Aedes sierrensis*, it is especially important to pre-treat dogs that live near wooded areas. Humans, cats, ferrets, and other animals can also be affected as “accidental hosts,” but the worm needs to infect a canine to complete its life cycle.

Researchers in Lake County, California, recently published the results of their analysis of different mosquito species for presence of *Dirofilaria immitis*. DNA from the heartworm was found in not only *Aedes sierrensis*, the long-known vector, but also in *Aedes increpitus*, *Anopheles freeborni*, and *Culex tarsalis*. Further study is needed to determine how well these mosquito species transmit the worm to dogs.