

California Arbovirus Surveillance Bulletin #36

Week 44 Friday, November 6, 2015



Weekly Update

Humans

A total of 43 new human cases of West Nile virus (WNV) illness were reported this week from the following 8 counties: Butte (1), Los Angeles (16), Orange (11), Riverside (9), San Bernardino (3), San Diego (1), Santa Clara (1), and Yuba (1). As of November 4, a total of 512 human cases of WNV illness have been reported to the California Department of Public Health from 30 counties; 32 (6%) were fatal. At this time last year, 654 cases had been reported from 30 counties. Of the 512 case-patients, 377 (74%) had neuroinvasive illness. The median age of the individuals is 60 years (range: 5-98 years); 305 (60%) are male. Dates of symptom onset ranged from May 15 to October 19. In addition, a total of 51 asymptomatic WNV-positive blood donors have been reported this year in 16 local health jurisdictions: Butte (5), Fresno (5), Glenn (2), Kern (1), Los Angeles (14), Merced (1), Napa (1), Orange (3), Placer (1), Riverside (4), Sacramento (2), San Bernardino (6), San Diego (2), Tehama (2), Tulare (1), and Yolo (1).

Dead Birds

A total of 35 WNV positive dead birds were reported this week from the following 4 counties: Los Angeles (16), Orange (6), Riverside (5), and San Diego (8). In 2015, 1,254 birds have tested positive for WNV from 37 counties. At this time last year, 2,390 WNV positive birds had been detected in 36 counties.

Mosquito Pools

A total of 61 WNV positive mosquito pools were reported this week from the following 7 counties: Alameda (2), Los Angeles (24), Orange (20), Riverside (4), San Bernardino (9), San Joaquin (1), and Santa Clara (1). In 2015, 3,261 mosquito pools have tested positive for WNV from 29 counties, and 38 mosquito pools have tested positive for St. Louis encephalitis virus (SLEV) from one county (Riverside). At this time last year, 3,309 WNV mosquito pools had been reported from 30 counties.

Sentinel Chickens

A total of 38 WNV seroconversions were reported this week from 16 flocks located in the following 4 counties: Los Angeles (28), Riverside (6), San Bernardino (1), and Ventura (3). In 2015, 423 WNV seroconversions have been detected among 93 flocks located in 22 counties and 8 SLEV seroconversions have been detected from 2 flocks in Riverside County. At this time last year, 433 WNV positive chickens had been reported from 95 flocks in 23 counties.

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YTD WNV Activity by Element and County, 2015				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		16	16	
Butte	53	38	94	37
Colusa	1	3		10
Contra Costa	1	11	8	18
El Dorado		4		
Fresno	7	3	108	
Glenn	19	4	21	10
Humboldt		2		
Kern	11	1	135	
Kings		3	144	
Lake	2	5	31	4
Los Angeles	119	75	266	127
Madera	4	1	21	
Marin	1	3		
Mendocino	1			
Merced	1	3	8	21
Napa		7		
Nevada	2	10		4
Orange	57	76	540	
Placer		21	52	8
Riverside	102	82	158	22
Sacramento	2	103	164	2
San Bernardino	40	25	291	27
San Diego	29	303	42	9
San Joaquin	2	18	208	
San Mateo		21	5	
Santa Barbara		3	1	
Santa Clara	7	229	20	5
Shasta	3	16	48	22
Siskiyou	1			
Solano	1	10	6	7
Sonoma		11	12	
Stanislaus	12	14	84	9
Sutter	2	16	54	36
Tehama	5			18
Trinity		2		
Tulare	7	22	528	
Ventura	5	26		10
Yolo	7	61	173	6
Yuba	8	6	23	11
Totals	512	1,254	3,261	423

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2014 & 2015 YTD West Nile Virus Comparisons		
	2014	2015
Total # Dead Bird Reports	14,039	10,271
# Positive Counties	40	40
# Human Cases	654	512
# Positive Dead Birds / # Tested	2,390 / 3,905	1,254 / 3,029
# Positive Mosquito Pools / # Tested	3,309 / 30,569	3,261 / 36,006
# Seroconversions / # Tested	433 / 14,204	423 / 11,942

TESTING SUMMARIES

Humans

		WNV	SLE	WEE
Human Cases	Week	43	0	0
	YTD	512	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	49	35
	YTD	3,029	1,254

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	298	38	0	0
	YTD	11,942	423	8	0
Mosquito Pools	Week	1,927	61	0	0
	YTD	36,006	3,261	38	0

NEW POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Los Angeles	Greater Los Angeles Co VCD - SFS	Cerritos	90703	American Crow	9/17/2015	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Cerritos	90703	American Crow	9/18/2015	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Cerritos	90703	American Crow	10/6/2015	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Cerritos	90703	American Crow	10/9/2015	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Long Beach	90815	American Crow	9/18/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Calabasas	91302	American Crow	11/2/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Calabasas	91302	American Crow	11/2/2015	WNV

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Los Angeles	Los Angeles Co Veterinarian	Culver City	90230	American Crow	11/2/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90034	American Crow	10/26/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90048	American Crow	11/2/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90066	American Crow	10/26/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90066	American Crow	10/29/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90210	American Crow	10/29/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Santa Monica	90405	American Crow	10/12/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Santa Monica	90405	American Crow	10/27/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	West Covina	91790	American Crow	10/29/2015	WNV
Orange	Orange Co VCD	Cypress	90630	American Crow	10/29/2015	WNV
Orange	Orange Co VCD	Fullerton	92833	House Finch	10/27/2015	WNV
Orange	Orange Co VCD	Huntington Beach	92646	American Crow	10/27/2015	WNV
Orange	Orange Co VCD	Irvine	92612	Yellow-rumped Warbler	10/23/2015	WNV
Orange	Orange Co VCD	Orange	92869	American Crow	10/29/2015	WNV
Orange	Orange Co VCD	San Clemente	92673	American Crow	10/29/2015	WNV
Riverside	Northwest Mosquito VCD	Lake Elsinore	92530	American Crow	10/21/2015	WNV
Riverside	Northwest Mosquito VCD	Norco	92860	American Crow	10/15/2015	WNV
Riverside	Northwest Mosquito VCD	Norco	92860	American Crow	10/15/2015	WNV
Riverside	Northwest Mosquito VCD	Riverside	92506	American Crow	10/23/2015	WNV
Riverside	Northwest Mosquito VCD	Riverside	92506	American Crow	10/28/2015	WNV
San Diego	San Diego Co VCP	Cardiff	92007	American Crow	11/6/2015	WNV
San Diego	San Diego Co VCP	Chula Vista	91910	American Crow	11/4/2015	WNV
San Diego	San Diego Co VCP	Chula Vista	91910	American Crow	11/4/2015	WNV
San Diego	San Diego Co VCP	Escondido	92027	American Crow	11/4/2015	WNV
San Diego	San Diego Co VCP	Escondido	92027	American Crow	11/4/2015	WNV
San Diego	San Diego Co VCP	Escondido	92027	American Crow	11/4/2015	WNV
San Diego	San Diego Co VCP	Escondido	92027	American Crow	11/4/2015	WNV
San Diego	San Diego Co VCP	Escondido	92027	American Crow	11/4/2015	WNV

Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Alameda	ALCO5009	380	Cx. erythrothorax	Hayward	11	CO2	10/6/2015	WNV
Alameda	ALCO7071	381	Cx. tarsalis	Union City	7	CO2	10/8/2015	WNV
Los Angeles	GRLA2029	5917	Cx. quinquefasciatus	Canoga Park	50	GRVD	10/29/2015	WNV
Los Angeles	GRLA2035	5927	Cx. quinquefasciatus	Tarzana	29	GRVD	10/30/2015	WNV
Los Angeles	GRLA2116	758	Cx. quinquefasciatus	Bell	25	GRVD	10/30/2015	WNV
Los Angeles	GRLA2194	733	Cx. quinquefasciatus	South El Monte	50	GRVD	10/28/2015	WNV
Los Angeles	GRLA2196	734	Cx. quinquefasciatus	South El Monte	50	GRVD	10/28/2015	WNV
Los Angeles	GRLA2228	738	Cx. quinquefasciatus	Diamond Bar	50	GRVD	10/28/2015	WNV
Los Angeles	GRLA2359	736	Cx. quinquefasciatus	Pico Rivera	50	GRVD	10/28/2015	WNV
Los Angeles	GRLA2438	5921	Cx. quinquefasciatus	Chatsworth	50	GRVD	10/29/2015	WNV
Los Angeles	GRLA2539	5933	Cx. quinquefasciatus	Northridge	22	GRVD	10/30/2015	WNV
Los Angeles	GRLA2540	5932	Cx. quinquefasciatus	Porter Ranch	48	GRVD	10/30/2015	WNV
Los Angeles	GRLA2554	5915	Cx. quinquefasciatus	Winnetka	50	GRVD	10/29/2015	WNV
Los Angeles	GRLA2555	5925	Cx. quinquefasciatus	Encino	26	GRVD	10/30/2015	WNV
Los Angeles	GRLA2635	5924	Cx. quinquefasciatus	Van Nuys	18	GRVD	10/30/2015	WNV
Los Angeles	GRLA2636	5923	Cx. quinquefasciatus	Van Nuys	50	GRVD	10/30/2015	WNV
Los Angeles	GRLA2724	5916	Cx. quinquefasciatus	Canoga Park	50	GRVD	10/29/2015	WNV
Los Angeles	GRLA2962	5922	Cx. quinquefasciatus	Chatsworth	50	GRVD	10/29/2015	WNV
Los Angeles	GRLA3028	5920	Cx. quinquefasciatus	West Hills	50	GRVD	10/29/2015	WNV

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Los Angeles	GRLA3043	737	Cx. quinquefasciatus	Avocado Heights	50	GRVD	10/28/2015	WNV
Los Angeles	GRLA3047	766	Cx. quinquefasciatus	Downey	50	GRVD	10/30/2015	WNV
Los Angeles	GRLA3049	754	Cx. quinquefasciatus	Downey	31	GRVD	10/30/2015	WNV
Los Angeles	GRLA3053	742	Cx. quinquefasciatus	Hacienda Heights	50	GRVD	10/28/2015	WNV
Los Angeles	GRLA3058	761	Cx. quinquefasciatus	Lynwood	50	GRVD	10/30/2015	WNV
Los Angeles	GRLA3059	763	Cx. quinquefasciatus	Paramount	37	GRVD	10/30/2015	WNV
Los Angeles	GRLA3067	752	Cx. quinquefasciatus	Gardena	50	GRVD	10/29/2015	WNV
Orange	ORCO1009	4628	Cx. quinquefasciatus	Garden Grove	48	GRVD	10/27/2015	WNV
Orange	ORCO1009	4643	Cx. quinquefasciatus	Garden Grove	50	GRVD	10/27/2015	WNV
Orange	ORCO1010	4738	Cx. quinquefasciatus	Huntington Beach	40	GRVD	10/29/2015	WNV
Orange	ORCO1014	4688	Cx. quinquefasciatus	Mission Viejo	41	GRVD	10/28/2015	WNV
Orange	ORCO1021	4731	Cx. quinquefasciatus	Tustin	11	GRVD	10/29/2015	WNV
Orange	ORCO1021	4735	Cx. quinquefasciatus	Tustin	50	GRVD	10/29/2015	WNV
Orange	ORCO1021	4736	Cx. quinquefasciatus	Tustin	41	GRVD	10/29/2015	WNV
Orange	ORCO17	4610	Cx. quinquefasciatus	Orange	42	GRVD	10/27/2015	WNV
Orange	ORCO170	4606	Cx. quinquefasciatus	Anaheim	50	GRVD	10/27/2015	WNV
Orange	ORCO198	4619	Cx. quinquefasciatus	La Habra	50	GRVD	10/27/2015	WNV
Orange	ORCO198	4621	Cx. quinquefasciatus	La Habra	20	GRVD	10/27/2015	WNV
Orange	ORCO218	4673	Cx. quinquefasciatus	Anaheim	50	GRVD	10/28/2015	WNV
Orange	ORCO218	4674	Cx. quinquefasciatus	Anaheim	50	GRVD	10/28/2015	WNV
Orange	ORCO218	4680	Cx. quinquefasciatus	Anaheim	50	GRVD	10/28/2015	WNV
Orange	ORCO218	4686	Cx. quinquefasciatus	Anaheim	50	GRVD	10/28/2015	WNV
Orange	ORCO238	4596	Cx. quinquefasciatus	Anaheim	50	GRVD	10/27/2015	WNV
Orange	ORCO29	4602	Cx. quinquefasciatus	Santa Ana	37	CO2	10/27/2015	WNV
Orange	ORCO3	4591	Cx. quinquefasciatus	Garden Grove	50	GRVD	10/27/2015	WNV
Orange	ORCO34	4618	Cx. quinquefasciatus	Brea	38	GRVD	10/27/2015	WNV
Orange	ORCO81	4712	Cx. quinquefasciatus	Seal Beach	50	GRVD	10/29/2015	WNV
Riverside	COAV320	3771	Cx. quinquefasciatus	Palm Desert	8	GRVD	11/4/2015	WNV
Riverside	NWST140	409	Cx. quinquefasciatus	Riverside	35	CO2	10/29/2015	WNV
Riverside	NWST86	391	Cx. quinquefasciatus	Corona	50	CO2	10/27/2015	WNV
Riverside	RIVR100	705	Cx. quinquefasciatus	Hemet	32	CO2	10/28/2015	WNV
San Bernardino	WVAL1009	2019	Cx. quinquefasciatus	Ontario	25	GRVD	10/30/2015	WNV
San Bernardino	WVAL1009	2020	Cx. quinquefasciatus	Ontario	25	GRVD	10/30/2015	WNV
San Bernardino	WVAL2010	1990	Cx. tarsalis	Chino Hills	6	CO2	10/28/2015	WNV
San Bernardino	WVAL2018	1994	Cx. quinquefasciatus	Chino	30	GRVD	10/28/2015	WNV
San Bernardino	WVAL5008	1966	Cx. quinquefasciatus	Rancho Cucamonga	14	GRVD	10/27/2015	WNV
San Bernardino	WVAL5011	1945	Cx. quinquefasciatus	Fwy I-15	26	GRVD	10/27/2015	WNV
San Bernardino	WVAL6004	1935	Cx. quinquefasciatus	Ontario	20	GRVD	10/27/2015	WNV
San Bernardino	WVAL6004	1952	Cx. quinquefasciatus	Ontario	30	GRVD	10/27/2015	WNV
San Bernardino	WVAL6009	1940	Cx. quinquefasciatus	Ontario	18	GRVD	10/27/2015	WNV
San Joaquin	SJCM8005	3087	Cx. tarsalis	Stockton	100	CO2	10/27/2015	WNV
Santa Clara	STCL2083	6226	Cx. pipiens	Sunnyvale	12	CO2	10/14/2015	WNV

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Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03	Band 04	Band 05
Los Angeles	ANTV3247	Lancaster	10/14/2015	WNV	1001				
Los Angeles	ANTV7947	Palmdale	10/14/2015	WNV	1051				
Los Angeles	GRLA2056	Long Beach	10/14/2015	WNV	5304	5310			
Los Angeles	GRLA2056	Long Beach	10/27/2015	WNV	5307				
Los Angeles	GRLA2132	Wilmington	10/27/2015	WNV	5313	5315			
Los Angeles	GRLA2132	Wilmington	10/14/2015	WNV	5317				
Los Angeles	GRLA2223	Rowland Heights	10/14/2015	WNV	5321				
Los Angeles	GRLA2223	Rowland Heights	10/28/2015	WNV	5322	5324			
Los Angeles	GRLA2371	South El Monte	10/14/2015	WNV	5331	5338	5339		
Los Angeles	GRLA2371	South El Monte	10/28/2015	WNV	5332	5333	5334	5335	5337
Los Angeles	GRLA2465	Los Feliz	10/13/2015	WNV	5342				
Los Angeles	GRLA2615	Newhall	10/13/2015	WNV	5363				
Los Angeles	GRLA2615	Newhall	10/26/2015	WNV	5364				
Los Angeles	GRLA2651	Encino	10/26/2015	WNV	5355	5358			
Los Angeles	LACW1005	El Segundo	10/22/2015	WNV	1425	1426	1429		
Los Angeles	LACW1022	Pacific Palisades	10/20/2015	WNV	1468				
Riverside	COAV327	Desert Hot Springs	10/26/2015	WNV	2502	2503	2506		
Riverside	RIVR0001	San Jacinto	10/28/2015	WNV	1904	1907	1908		
San Bernardino	SANB0007	Fontana	10/13/2015	WNV	2044				
Ventura	MOOR0029	Moorpark	10/27/2015	WNV	1398	1399			
Ventura	VENT00700	Simi Valley	10/27/2015	WNV	2326				

Test Protocols

Humans:

Specimens are tested by local laboratories with an IgM or IgG immunofluorescent assay (IFA) and/or an IgM enzyme immunoassay (EIA). Specimens with inconclusive results are forwarded to the California Department of Public Health Viral and Rickettsial Disease Laboratory (VRDL) for further testing or confirmation.

Dead Birds

Oral swab samples from corvids are collected onto RNA preservation cards and tested by the UC Davis Center for Vectorborne Diseases (CVEC) for West Nile virus by the singleplex RT-PCR Taqman assay and confirmed with a second primer set. Some local agencies test birds using the RAMP© test or conduct RT-PCR on tissue samples.

Sentinel Chickens:

Dried blood spot specimens from sentinel chickens are submitted to the California Department of Public Health Vector-Borne Disease Laboratory and tested for the presence of antibodies to West Nile, western equine encephalomyelitis, and St. Louis encephalitis viruses by EIA. Positive samples are confirmed by IFA, western-blot, or PRNT.

Mosquito Pools:

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Mosquito pools are submitted to CVEC and screened for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a Taqman multiplex RT-PCR. CVEC no longer performs confirmatory testing on PCR-positive pools of *Cx. tarsalis* and *Cx. quinquefasciatus* but will continue to confirm multiplex PCR-positive results for other mosquito species using singleplex RT-PCR.

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch), California Department of Public Health, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Tina Feiszli by phone (510) 412-6253 or email: tina.feiszli@cdph.ca.gov.