

California Arbovirus Surveillance Bulletin # 34

Week 41 Friday, October 13, 2006

Weekly Summary

COMMENTS

Humans

This week, 11 new human cases of West Nile virus (WNV) were reported from Colusa (1), Fresno (1), Los Angeles (2), Merced (1), Placer (1), Shasta (1), Stanislaus (1), Tulare (2), and Yolo (1) counties. As of October 13, 2006, a total of 253 human West Nile virus (WNV) cases have been identified from the following 36 counties: Alameda (1), Butte (30), Colusa (3), Contra Costa (8), El Dorado (1), Fresno (9), Glenn (12), Imperial (1), Kern (47), Kings (1), Lake (2), Los Angeles (12), Marin (1), Merced (3), Modoc (2), Mono (1), Napa (1), Nevada (1), Orange (5), Placer (8), Riverside (3), Sacramento (11), San Bernardino (1), San Diego (1), San Joaquin (8), San Luis Obispo (1), Santa Clara (5), Shasta (3), Solano (6), Stanislaus (11), Sutter (12), Tehama (3), Tulare (7), Ventura (3), Yolo (26), and Yuba (3). Of the 253 WNV cases, 71 (28%) have been classified as West Nile neuroinvasive disease, and 175 (69%) as West Nile fever. The median age of all cases is 50 years (range: 8-86 years). Of the cases, 161 (64%) are male. Four WNV-related fatalities have been reported in 2006, from Butte (2) and Contra Costa (2).

Twenty-eight WNV-positive blood donation samples have been identified to date; 14 of the individuals reported symptoms and were reclassified as cases.

Horses

No new equine cases were reported this week. To date in 2006, 52 equine cases of WNV have been reported from 22 counties: Fresno (5); Kern (3); Lake (2); Lassen (7); Marin (1), Mendocino (2); Merced (3); Modoc (2); Placer (1); Sacramento (1); San Diego (1); San Joaquin (2); San Luis Obispo (5); Santa Barbara (2); Santa Clara (1); Shasta (4); Sonoma (1); Stanislaus (3); Sutter (1); Tehama (1); Tulare (2); and Yuba (2). Twenty-three have died or were euthanized.

Dead Birds

This week, 44 out of 111 (39.6%) dead birds tested positive for WNV.

- 38/102 dead birds tested positive via RT-PCR.
- 5/8 dead birds tested positive via VecTest.
- 1/1 dead birds tested positive via RAMP.

The WNV positive dead birds were collected from 21 counties: Alameda (2); Contra Costa (2); El Dorado (2); Fresno (1); Los Angeles (6); Marin (2); Merced (5); Napa (3); Placer (1); Sacramento (1); San Bernardino (2); San Diego (2); San Mateo (1); Santa Barbara (3); Santa Clara (1); Shasta (2); Sonoma (2); Stanislaus (1); Tulare (1); Tuolumne (1); and Ventura (3). **This is the first indication of WNV activity in Tuolumne County this year.**

To date in 2006, 1,256 out of 5,147 (24.4%) dead birds have tested positive for WNV from the following 53 counties: Alameda (33) Amador (2); Butte (40); Calaveras (2); Colusa (9); Contra Costa (81); El Dorado (19); Fresno (71); Glenn (35); Humboldt (2); Inyo (8); Kern (22); Kings (12); Lake (7); Lassen (3); Los Angeles (76); Madera (2); Marin (7); Mariposa (1); Mendocino (7); Merced (39); Modoc (2); Mono (1); Monterey (5); Napa (7); Nevada (4); Orange (35); Placer (12); Riverside (1); Sacramento (84); San Benito (1); San Bernardino (27); San Diego (14); San Francisco (3); San Joaquin (45); San Luis Obispo (9); San Mateo (6); Santa Barbara (13); Santa Clara (203); Santa Cruz (4); Shasta (74); Siskiyou (1); Solano (16); Sonoma (13); Stanislaus (69); Sutter (2); Tehama (12); Trinity (1); Tulare (10); Tuolumne (1); Ventura (50); Yolo (52) and Yuba (1).

Tree Squirrels: This week, 5 tree squirrels tested positive for West Nile virus. To date in 2006, 30 of 119 (25.2%) dead tree squirrels have tested positive from 9 counties: Alameda (2), Butte (1), Contra Costa (17), Los Angeles (1), Marin (1), San Bernardino (3), San Mateo (2), Santa Clara (1), and Shasta (2).

The California Department of Health Services has received a total of 42,388 dead bird reports (hotline and website) this year.

Mosquito Pools

This week, CVEC reported 1 WNV positive mosquito pool from Merced County. In addition, Sacramento-Yolo MVCD reported 1 WNV positive pool from Sacramento County.

In 2006, 816 mosquito pools have tested positive for WNV from 34 counties: Alameda (9), Butte (1), Calaveras (2), Contra Costa (18); El Dorado (2); Fresno (39); Glenn (1); Imperial (13); Inyo (3); Kern (229); Kings (34); Lake (12); Lassen (3); Los Angeles (71); Madera (4); Marin (3); Merced (6); Orange (11); Placer (23); Riverside (27); Sacramento (35); San Bernardino (24), San Joaquin (39); Santa Barbara (1); Santa Clara (9); Shasta (7); Solano (1); Sonoma (2); Stanislaus (53); Sutter (55); Tulare (8); Ventura (2); Yolo (63); and Yuba (6). 18 mosquito pools from Kern County have tested positive for western equine encephalomyelitis virus (WEE) this year.

Sentinel Chickens

This week, VRDL reported 21 WNV seroconversions from 14 flocks within the following 7 counties: Fresno (5); Imperial (2); Kings (1); Los Angeles (7); Madera (2); San Bernardino (3); and Shasta (1).

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In 2006, 589 WNV seroconversions have been confirmed in chickens from Butte (47), Colusa (1), Contra Costa (25), Fresno (35), Glenn (11), Imperial (51), Kern (94), Kings (24), Lake (6), Los Angeles (27), Madera (9), Marin (2), Merced (14), Placer (11), Riverside (15), Sacramento (13), San Bernardino (22), San Joaquin (19), Santa Clara (1), Shasta (4), Solano (20), Stanislaus (39), Sutter (36), Tehama (3), Tulare (25), Ventura (1), Yolo (25), and Yuba (9) counties. 108 flocks have had at least one chicken test positive for WNV. WEE antibodies have been detected in 11 chickens from Kern (9) and Riverside (2) counties this year.

Website Information

For updated information on WNV, please visit the California WNV website, www.westnile.ca.gov, the CDC website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov. Please go to the Vector website at <http://vector.ucdavis.edu/arbo.html> for flock location and more information on WNV and other vector-borne diseases.

TEST SUMMARIES

Humans and Horses

		Number Tested	WNV Positive		WEE Positive		SLE Positive		Other Positive	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested	Week	56	0	11	0	0	0	0	0	0
	YTD	1300	0	253	0	0	0	0	0	0
Horses Tested	Week	18	0	0	0	0	0	0	0	0
	YTD	427	0	52	0	0	0	0	0	0

Dead Birds

	Number Tested	WNV Positive
Week	111	44
YTD	5147	1256

Sentinel Chickens and Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Flavivirus*
Chicken sera	Week	753	21	0	0	0
	YTD	27,347	589	11	0	14
Mosquito pools	Week	336	1	0	0	0
	YTD	14,508	646	18	0	0

*Does not include those later confirmed as WNV or SLE

Mosquito pools tested by local agencies

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Other Positive
RT-PCR	Week	127	1	0	0	0
	YTD	5512	101	0	0	0
RAMP	Week	55	0	N/A	N/A	N/A
	YTD	2161	69	--	--	--
VecTest	Week	0	0	N/A	N/A	N/A
	YTD	9	0	--	--	--

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POSITIVES

Human Cases

West Nile Virus Cases* Reported October 9 – October 13, 2006							
ID	Report Date	County ¹	Age	Sex	Clin Pres ²	Onset Date	WNV Fatality?
06-0244	10/03/06	MERCED	56	M	WNF	09/10/06	NO
06-0245	10/04/06	STANISLAUS	<18	F	WNF	09/19/06	NO
06-0246	10/04/06	FRESNO	76	M	WNND	09/22/06	NO
06-0247	10/04/06	COLUSA	>18	n/a	WNF	09/21/06	NO
06-0248	10/05/06	LOS ANGELES	42	M	WNND	09/18/06	NO
06-0249	10/06/06	YOLO	>18	F	WNND	n/a	NO
06-0250	10/12/06	LOS ANGELES	43	M	WNF	09/27/06	NO
06-0251	10/12/06	TULARE	85	F	WNF	09/12/06	NO
06-0252	10/13/06	TULARE	49	F	WNF	09/18/06	NO
06-0253	10/13/06	SHASTA	>18	n/a	WNF	Week 37	NO
06-0254	10/13/06	PLACER	>18	M	WNND	09/26/06	NO

* Cases of WNV illness in California residents with infection likely acquired in California

¹ County of residence

² Clinical presentation of WNV: WNF=fever; WNND=neuroinvasive

^ Initially identified as blood donor, later developed symptoms

Mosquito Pools

Site Code	County	City	Pool #	Species	Collected	Received	Virus
MERC0402	Merced	Hilmar	217	Cx pipiens	9/27/06	10/11/06	WN
SAYO4309*	Sacramento	Elk Grove	3807	Cx tarsalis	10/6/06	10/10/06	WN

*Local agency RT-PCR

Sentinel Chicken Seroconversions

Site Number	County	Nearest City	Date Bled	Virus	BAND 01	BAND 02	BAND 03
CNSL5007	FRESNO	Laton	10/2/06	WNV	1385	1387	
CNSL5008	FRESNO	Orange Cove	10/2/06	WNV	1400		
FRNO0002	FRESNO	Kerman	10/3/06	WNV	1566		
FRNO0012	FRESNO	Fresno	10/3/06	WNV	1556		
COAV5001	Imperial	Niland	10/2/06	WNV	4283		
COAV5002	Imperial	Niland	10/2/06	WNV	4273		
KNGS2003	KINGS	Stratford	10/3/06	WNV	2023		
ANTV8656	LOS ANGELES	Lancaster	10/3/06	WNV	1074	1075	
GRLA2223	LOS ANGELES	Rowland Heights	10/2/06	WNV	1735		
GRLA2465	LOS ANGELES	Los Angeles	10/3/06	WNV	1682		
GRLA2651	LOS ANGELES	Encino	10/3/06	WNV	1693	1697	1698
MADR4123	MADERA	Chowchilla	10/4/06	WNV	2250	2251	
SANB0001	SAN BERNARDINO	Needles	10/2/06	WNV	2819	2820	2825
SHAS9701	SHASTA	Cottonwood	9/28/06	WNV	3287		

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WNV Positive Dead Birds

County	City	ZIP	Species	Collected	Tested	Tested By
Alameda	Hayward	94541	Chipping Sparrow	10/3/06	10/9/06	RT-PCR
Alameda	Pleasanton	94566	Swainson's Hawk	9/28/06	10/9/06	RT-PCR
Contra Costa	Pleasant Hill	94523	Western Scrub-Jay	9/28/06	10/9/06	RT-PCR
Contra Costa	Walnut Creek	94595	Western Scrub-Jay	9/27/06	10/9/06	RT-PCR
El Dorado	Cameron Park	95682	Western Scrub-Jay	10/3/06	10/9/06	RT-PCR
El Dorado	South Lake Tahoe	96150	American Robin	9/28/06	10/9/06	RT-PCR
Fresno	Clovis	93611	Western Scrub-Jay	9/28/06	10/9/06	RT-PCR
Los Angeles	Canyon Country	91351	American Crow	10/2/06	10/9/06	RT-PCR
Los Angeles	Los Angeles	90023	American Crow	9/27/06	10/9/06	RT-PCR
Los Angeles	Los Angeles	90036	Western Scrub-Jay	9/28/06	10/9/06	RT-PCR
Los Angeles	Palmdale	93550	American Crow	10/4/06	10/9/06	RT-PCR
Los Angeles	Sherman Oaks	91423	Purple Finch	9/27/06	10/9/06	RT-PCR
Los Angeles	Venice	90291	House Sparrow	10/2/06	10/9/06	RT-PCR
Marin	San Rafael	94903	Western Scrub-Jay	9/26/06	10/9/06	RT-PCR
Marin	San Rafael	94901	American Crow	10/2/06	10/9/06	RT-PCR
Merced	Atwater	95301	Western Scrub-Jay	9/27/06	10/9/06	RT-PCR
Merced	Livingston	95334	Merlin	9/19/06	10/9/06	RT-PCR
Merced	Merced	95340	Western Scrub-Jay	9/26/06	10/9/06	RT-PCR
Merced	Merced	95340	Yellow-billed Magpie	9/27/06	10/9/06	RT-PCR
Merced	Merced	95340	Yellow-billed Magpie	10/2/06	10/9/06	RT-PCR
Napa	Napa	94559	American Crow	10/02/06	10/02/06	VecTest
Napa	Napa	94558	American Crow	10/02/06	10/02/06	VecTest
Napa	Napa	94558	American Crow	10/04/06	10/04/06	VecTest
Placer	Loomis	95650	Western Scrub-Jay	10/4/06	10/9/06	RT-PCR
Sacramento	Gold River	95670	American Crow	10/3/06	10/9/06	RT-PCR
San Bernardino	Chino	91710	Barn Owl	9/27/06	10/9/06	RT-PCR
San Bernardino	Fontana	92335	American Crow	10/02/06	10/02/06	RAMP
San Diego	San Diego	92154	Cooper's Hawk	9/28/06	10/9/06	RT-PCR
San Diego	Vista	92081	Barn Owl	9/28/06	10/9/06	RT-PCR
San Mateo	Portola Valley	94028	Chipping Sparrow	10/2/06	10/9/06	RT-PCR
Santa Barbara	Santa Ynez	93460	American Crow	9/26/06	10/9/06	RT-PCR
Santa Barbara	Santa Ynez	93460	Western Scrub-Jay	9/27/06	10/9/06	RT-PCR
Santa Barbara	Santa Ynez	93460	American Crow	9/28/06	10/9/06	RT-PCR
Santa Clara	Los Altos	94022	Cooper's Hawk	9/27/06	10/9/06	RT-PCR
Shasta	Anderson	96007	American Crow	10/04/06	10/04/06	VecTest
Shasta	Redding	96002	American Crow	09/28/06	09/28/06	VecTest
Sonoma	Petaluma	94952	Western Scrub-Jay	9/26/06	10/9/06	RT-PCR
Sonoma	Sonoma	95476	American Crow	10/2/06	10/9/06	RT-PCR
Stanislaus	Oakdale	95361	Orange-crowned Warbler	9/29/06	10/9/06	RT-PCR
Tulare	Visalia	93292	Western Scrub-Jay	10/2/06	10/9/06	RT-PCR
Tuolumne	Jamestown	95327	House Sparrow	9/29/06	10/9/06	RT-PCR
Ventura	Oak Park	91377	American Crow	9/27/06	10/9/06	RT-PCR
Ventura	Simi Valley	93065	American Crow	9/28/06	10/9/06	RT-PCR
Ventura	Thousand Oaks	91360	Western Scrub-Jay	9/25/06	10/9/06	RT-PCR

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National Comments: As of October 10, 2006, WNV activity had been reported from 48 states, the District of Columbia (DC), and New York City (NYC). A total of 3,135 human cases were reported to the Centers for Disease Control and Prevention (CDC) from 41 states and DC: Alabama (5), Arizona (45), Arkansas (26), California (242), Colorado (273), Connecticut (8), DC (1), Florida (3), Georgia (7), Idaho (642), Illinois (189), Indiana (28), Iowa (29), Kansas (24), Kentucky (6), Louisiana (115), Maryland (4), Massachusetts (3), Michigan (37), Minnesota (63), Mississippi (151), Missouri (51), Montana (30), Nebraska (156), Nevada (121), New Jersey (5), New Mexico (3), New York (11), North Dakota (135), Ohio (34), Oklahoma (34), Oregon (54), Pennsylvania (8), South Dakota (108), Tennessee (8), Texas (256), Utah (136), Virginia (2), Washington (2), West Virginia (1), Wisconsin (18), and Wyoming (61). Of the 3,135 cases, 1,121 (36%) had West Nile neuroinvasive disease (i.e. encephalitis or meningitis). The median age of the 3,124 cases where data was available was 50 years (range: 3 months-99 years) and 55% were male. Ninety-eight WNV-associated fatalities have been reported in 2006, from Arizona (3), California (4), Colorado (3), Connecticut (1), Georgia (1), Idaho (10), Illinois (9), Kansas (3), Kentucky (1), Michigan (3), Minnesota (3), Missouri (2), Mississippi (6), Nebraska (1), Nevada (1), New York (2), North Dakota (1), Ohio (3), Oklahoma (5), Pennsylvania (2), South Dakota (3), Tennessee (1), Texas (23), Utah (4), Wisconsin (1), and Wyoming (2).

TEST PROTOCOLS

Dead Birds:

All bird species from all zip codes are currently being accepted for testing unless otherwise requested by a local agency. Additionally, once WNV has been detected within a county, doves, pigeons, and chickens will no longer be accepted for testing from that county. Corvids that test positive via RAMP or VecTest are no longer confirmed. Dead birds are necropsied at the California Animal Health and Food Safety (CAHFS) laboratory at UC Davis. Oral swabs from American Crows and kidney tissue from all other dead birds are forwarded to the UC Davis Center for Vector borne Diseases (CVEC) for WNV testing using the singleplex RT-PCR Taqman assay and confirmed with a second primer set. The WNV Dead Bird Surveillance Coordinator, Ryan Carney, can be reached directly at (510) 412-6254.

Sentinel Chickens:

Dried blood spot specimens from sentinel chickens submitted each week to the DHS Viral and Rickettsial Disease Laboratory (VRDL) are tested for the presence of antibodies to West Nile virus (WNV), western equine encephalomyelitis (WEE), and St. Louis encephalitis (SLE) viruses by EIA and IFA. The VRDL performs additional testing, including plaque reduction neutralization (PRNT), on specimens from sentinel chickens from geographic areas where WNV is detected for the first time.

Mosquito Pools:

All mosquito pools are screened for WEE, SLE, and WNV viral RNA using a Taqman multiplex RT-PCR. CVEC will cease confirmation 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) and the Viral and Rickettsial Disease Laboratory Branch, Division of Communicable Disease Control, California Department of Health Services, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Tina Feiszli by phone (510) 412-6298, FAX (510) 412-6263, or email [tfeiszli@dhs.ca.gov].