

California Arbovirus Surveillance Bulletin # 40

Week 50 Friday, December 15, 2006

Summary for: December 4 – December 15, 2006

COMMENTS

Humans

No new human cases have been reported. As of December 1, 2006, a total of 272 human West Nile virus (WNV) cases have been identified from 36 counties: Alameda (1), Butte (31), Colusa (4), Contra Costa (8), El Dorado (2), Fresno (11), Glenn (12), Imperial (1), Kern (49), Kings (1), Lake (2), Los Angeles (13), Marin (1), Merced (4), Modoc (2), Mono (1), Napa (1), Nevada (1), Orange (6), Placer (8), Riverside (4), Sacramento (15), San Bernardino (3), San Diego (1), San Joaquin (8), San Luis Obispo (1), Santa Clara (5), Shasta (4), Solano (6), Stanislaus (11), Sutter (12), Tehama (3), Tulare (6), Ventura (3), Yolo (26), and Yuba (5). Of the 272 WNV cases, 81 (30%) have been classified as West Nile neuroinvasive disease, and 186 (68%) as West Nile fever. The median age of all cases is 49 years (range: 8-86 years). Of the cases, 175 (64%) are male. Six WNV-related fatalities have been reported in 2006, from Butte (2), Contra Costa (2), Riverside (1), and Shasta (1). Twenty-eight WNV-positive blood donation samples have been identified to date; 14 of the individuals reported symptoms and were reclassified as cases.

Horses

One new equine case from San Diego County was reported this week by the California Department of Food and Agriculture. In 2006, 57 equine cases of WNV have been reported from 23 counties: Contra Costa (1); Fresno (5); Kern (4); Lake (2); Lassen (7); Marin (1); Mendocino (2); Merced (3); Modoc (2); Placer (1); Sacramento (1); San Diego (2); San Joaquin (2); San Luis Obispo (5); Santa Barbara (2); Santa Clara (1); Shasta (4); Sonoma (1); Stanislaus (3); Sutter (1); Tehama (2); Tulare (3); and Yuba (2). Twenty-four have died or were euthanized.

Dead Birds

Last week, 7 out of 104 (6.7%) dead birds tested positive for WNV.

- 4/95 dead birds tested positive via RT-PCR.
- 3/9 dead birds tested positive via VecTest.

The WNV positive dead birds were collected from the following 5 counties: San Luis Obispo (1); Santa Barbara (1); Shasta (2); Stanislaus (1); and Ventura (2).

In 2006, 1,398 out of 5,851 (23.9%) dead birds have tested positive for WNV from 53 counties: Alameda (41); Amador (2); Butte (40); Calaveras (2); Colusa (9); Contra Costa (88); El Dorado (19); Fresno (72); Glenn (35); Humboldt (2); Inyo (8); Kern (24); Kings (13); Lake (8); Lassen (3); Los Angeles (92); Madera (3); Marin (8); Mariposa (1); Mendocino (7); Merced (41); Modoc (2); Mono (1); Monterey (5); Napa (8); Nevada (4); Orange (45); Placer (12); Riverside (3); Sacramento (87); San Benito (1); San Bernardino (33); San Diego (18); San Francisco (3); San Joaquin (47); San Luis Obispo (14); San Mateo (7); Santa Barbara (19); Santa Clara (223); Santa Cruz (7); Shasta (88); Siskiyou (1); Solano (16); Sonoma (19); Stanislaus (73); Sutter (2); Tehama (12); Trinity (1); Tulare (14); Tuolumne (1); Ventura (60); Yolo (53) and Yuba (1).

Tree Squirrels: No new tree squirrels have tested positive for West Nile virus. In 2006, 32 of 139 (23.0%) dead tree squirrels have tested positive from 9 counties: Alameda (2), Butte (1), Contra Costa (18), Los Angeles (1), Marin (1), San Bernardino (3), San Mateo (2), Santa Clara (2), and Shasta (2).

The California Department of Health Services has received a total of 45,658 dead bird reports (hotline and website) this year.

Mosquito Pools

CVEC reported 2 new WNV positive *Cx. quinquefasciatus* pools collected from Los Angeles and Orange counties.

In 2006, 837 mosquito pools have tested positive for WNV from 34 counties: Alameda (9); Butte (1); Calaveras (2); Contra Costa (18); El Dorado (2); Fresno (40); Glenn (1); Imperial (14); Inyo (3); Kern (230); Kings (34); Lake (12); Lassen (3); Los Angeles (78); Madera (4); Marin (3); Merced (6); Orange (14); Placer (23); Riverside (31); Sacramento (35); San Bernardino (25); San Joaquin (41); Santa Barbara (1); Santa Clara (9); Shasta (7); Solano (1); Sonoma (2); Stanislaus (54); 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 1 WNV seroconversion from a new flock located in Los Angeles County.

In 2006, 639 WNV seroconversions have been detected in chickens from Butte (49), Colusa (1), Contra Costa (25), Fresno (37), Glenn (11), Imperial (57), Kern (95), Kings (25), Lake (6), Los Angeles (36), Madera (9), Marin (2), Merced (15), Placer (11), Riverside (27), Sacramento (13), San Bernardino (26), San Joaquin (19), Santa Clara (1), Shasta (4), Solano (22), Sonoma (1), Stanislaus (45), Sutter (36), Tehama (3), Tulare (27), Ventura (1), Yolo (26), and Yuba (9) counties. 122 flocks have had at least one chicken test positive for WNV. WEE antibodies have been detected in 14 chickens from Kern (12) and Riverside (2) counties this year.

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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	42	0	0	0	0	0	0	0	0
	YTD	1538	0	272	0	0	0	0	0	0
Horses Tested	Week	**	0	1	0	0	0	0	0	0
	YTD	473	0	57	0	0	0	0	0	0

**no data available

Dead Birds

	Number Tested	WNV Positive
Week	104	7
YTD	5851	1398

Sentinel Chickens and Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Flavivirus* Positive
	YTD	31,730	639	14	0	15
Mosquito pools	Week	140	2	0	0	0
	YTD	16,171	665	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
YTD	5813	101	0	0	0	
RAMP	Week	0	0	N/A	N/A	N/A
	YTD	2436	71	--	--	--
VecTest	Week	0	0	N/A	N/A	N/A
	YTD	9	0	--	--	--

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POSITIVES

Mosquito Pools

Site Code	County	City	Pool #	Species	Collected	Tested	Virus
GRLA2555	Los Angeles	Encino	5714	Cx. quinquefasciatus	12/8/06	12/14/06	WNV
ORCO0017	Orange	Orange	973	Cx. quinquefasciatus	11/21/06	12/8/06	WNV

Sentinel Chicken Seroconversions

Site Number	County	Nearest City	Date Bled	Virus	BAND 01
SGVA0006	Los Angeles	Glendora	11/16/06	WNV	3030

WNV Positive Dead Birds

County	City	ZIP	Species	Date Collected	Date Tested	Tested By
San Luis Obispo	San Luis Obispo	93401	American Crow	10/03/06	12/04/06	RT-PCR
Santa Barbara	Solvang	93463	American Crow	11/20/06	12/04/06	RT-PCR
Shasta	Cottonwood	96022	Western Scrub-Jay	10/04/06	10/04/06	VecTest
Shasta	Redding	96001	Western Scrub-Jay	10/04/06	10/04/06	VecTest
Stanislaus	Turlock	95382	Yellow-billed Magpie	10/23/06	10/23/06	VecTest
Ventura	Simi Valley	93065	American Crow	11/22/06	12/04/06	RT-PCR
Ventura	Simi Valley	93062	American Crow	11/29/06	12/04/06	RT-PCR

National Comments: As of December 11, 2006, WNV activity had been reported from 48 states, the District of Columbia (DC), and New York City (NYC). A total of 4,052 human cases were reported to the Centers for Disease Control and Prevention (CDC) from 42 states and DC: Alabama (7), Arizona (148), Arkansas (28), California (272), Colorado (332), Connecticut (9), DC (1), Florida (3), Georgia (8), Idaho (889), Illinois (210), Indiana (75), Iowa (36), Kansas (30), Kentucky (6), Louisiana (172), Maryland (10), Massachusetts (3), Michigan (51), Minnesota (65), Mississippi (180), Missouri (60), Montana (34), Nebraska (255), Nevada (123), New Jersey (5), New Mexico (8), New York (23), North Dakota (137), Ohio (47), Oklahoma (47), Oregon (69), Pennsylvania (9), South Carolina (1), South Dakota (113), Tennessee (17), Texas (319), Utah (157), Virginia (4), Washington (3), West Virginia (1), Wisconsin (20), and Wyoming (65).

At the same time last year, 2,799 cases had been reported from 42 states and NYC. Of the 4,052 cases reported in 2006, 1,396 (34%) had West Nile neuroinvasive disease (i.e. encephalitis or meningitis). The median age of the 4,040 cases where data was available was 51 years (range: 3 months-99 years) and 55% were male. A total of 146 WNV-associated fatalities have been reported in 2006, from Arizona (6), Arkansas (3), California (6), Colorado (7), Connecticut (1), Georgia (1), Idaho (14), Illinois (9), Indiana (3), Kansas (4), Kentucky (1), Louisiana (8), Michigan (6), Minnesota (3), Missouri (3), Mississippi (13), Nebraska (1), Nevada (1), New York (4), North Dakota (1), Ohio (4), Oklahoma (5), Pennsylvania (2), South Dakota (3), Tennessee (1), Texas (28), Utah (5), Wisconsin (1), and Wyoming (2).

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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].