

California Arbovirus Surveillance Bulletin # 23

Week 38 Friday, September 24, 2004

Weekly Summary

California Loses a Giant. William C. Reeves, extraordinary researcher in arboviruses and mentor to many of us, died unexpectedly earlier this week in Walnut Creek, California, at the age of 87. Next week's bulletin will have a tribute to Dr. Reeves by Dr. Bruce Eldridge. At Dr. Reeves' insistence, there will be no memorial service. He is survived by his wife, Mary Jane Reeves, and sons Bill, Jr., Bob, and Terry and their families. The family requests no flowers, but cards and letters can be sent to the home address: 2846 Kinney Drive, Walnut Creek, CA 94595. Donations in his memory can be made to the School of Public Health Fund and mailed to the Office of External Relations, UC Berkeley School of Public Health, 140 Warren Hall, Berkeley, California, 94720-7360.

California Weekly Summary Comments:

Humans:

This week, California reported 54 new humans infected with West Nile virus (WNV). As of September 24, 2004, a total of **612** WNV infections have been reported from the following local health jurisdictions: San Bernardino (184), Los Angeles (245), Riverside (94), Orange (36), Kern (23), Fresno (9), Imperial (1), Lassen (1), Ventura (1), Butte (4), Lassen (1), Merced (1), San Diego (1), Santa Clara (1), San Luis Obispo (1), Shasta (3), Tehama (5), Tulare (1) and Yolo (1) counties. Fifty-eight of the 612 WNV infections were initially detected in asymptomatic individuals through screening done at blood banks – nine of these individuals later became symptomatic. Of the 563 WNV cases with symptoms, 209 are classified as West Nile fever cases, 180 are classified as West Nile neuroinvasive disease, and 174 are of unknown status. The median age for all cases where data was available is 52 years (range: 2-91 years). Median age for West Nile fever cases is 48 years (range 7-89 years). Median age for West Nile neuroinvasive disease cases = 59 years (range: 4-91 years). Sixty-one per cent (346/563) of the cases are male. There have been 17 fatalities to date in California in San Bernardino (5), Los Angeles (8), Riverside (2), Orange (1) and Tehama (1) counties. The median age of the 17 fatalities is 75 years (range: 57-91 years).

Equine:

The California Department of Food & Agriculture confirmed 59 WNV equine cases from Butte (1), Colusa (1), Fresno (4), Kern (3), Lake (2), Los Angeles (2), Placer (5), Riverside (6), Sacramento (21), San Joaquin (1), Shasta (3), Siskiyou (2), Tehama (4), Tulare (3), and Yuba (1) counties. This was the first WNV positive horse result for San Joaquin County. Currently, the YTD total stands at 386 positive cases. A total of 164 horses have died or euthanized from the WNV infection.

Dead Birds:

The hotline received 2,863 reported dead birds last week (YTD = 82,714). The UC Davis Center for Vectorborne Diseases (CVEC) reported 124 out of 179 dead birds submitted last week have tested positive for WNV by RT-PCR: American crows (19), American kestrels (2), an American robin (1), a black phoebe (1), a black-billed magpies (2), a black-headed grosbeak (1), California towhees (2), a common raven (1), a Cooper's hawk (1), an European starling (1), hooded orioles (2), house finches (3), house sparrows (2), a lesser goldfinch (1), a mallard duck (1), a mountain quail (1), a mourning dove (1), a northern flicker (1), a northern mockingbird (1), a pigmy nuthatch (1), red-tailed hawks (3), sharp-shinned hawks (2), a song sparrow (1), a spotted towhee (1), Steller's jays (4), a Townsend's warbler (1), a western sandpiper (1), a western screech-owl (1), western scrub-jays (43), western tanager (2), a white-crowned sparrow (1), and yellow-billed magpies (19). The hooded orioles, pigmy nuthatch, Townsend's warbler, and white-crowned sparrow were the first of their species to test positive for WNV this year. The YTD total stands at 2,469 positive bird carcasses.

The positive birds were collected within the 36 counties of Alameda (3), Calaveras (1), Contra Costa (2), Fresno (9), Glenn (10), Humboldt (1), Inyo (2), Kern (2), Kings (1), Lake (3), Los Angeles (3), Marin (2), Merced (1), Mono (1), Napa (2), Nevada (1), Orange (2), Placer (3), Plumas (3), Riverside (3), Sacramento (11), San Diego (1), San Francisco (3), San Joaquin (2), San Luis Obispo (1), Santa Cruz (7), Shasta (3), Siskiyou (8), Solano (2), Stanislaus (7), Sutter (3), Tehama (10), Trinity (1), Tulare (3), Tuolumne (5), and Yuba (2).

A cumulative total of 179 dead birds were tested from 40 of the 56 WNV positive counties. Thus 69.3% (124/179) of the birds tested from these counties were WNV positive. No birds were tested this week came from the two remaining negative counties in California: Del Norte and San Benito.

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News Flash:

CVEC reported Wednesday that 98 of 142 dead birds have tested positive for WNV. The positive birds were collected within the 28 counties of Amador (1), Fresno (3), Kern (4), Kings (1), Lake (3), Lassen (1), Los Angeles (5), Mendocino (1), Merced (3), Monterey (3), Nevada (1), Placer (9), Sacramento (24), San Francisco (1), San Joaquin (2), San Luis Obispo (1), Santa Clara (1), Santa Cruz (3), Shasta (1), Siskiyou (2), Solano (3), Sonoma (2), Stanislaus (9), Sutter (3), Tulare (5), Ventura (2), Yolo (4), and Yuba (1).

Mosquito Pools:

CVEC reported 42 positive pools from Los Angeles (7), Kern (21), Lake (5), Orange (3), Placer (1), Riverside (3), Sutter (1), and Stanislaus counties. To date, 17 CA counties have reported positive mosquito activities. WNV has been isolated from nine mosquito species: *Culex tarsalis*, *Cx. erythrothorax*, *Cx. quinquefasciatus*, *Cx. stigmatosoma*, *Cx. thriambus*, *Cx. pipiens*, *Anopheles hermsi*, and *Ochlerotatus squamiger* and *Oc. melanimon*. The YTD total stands at 971 positive pools.

Chickens:

Forty-three WNV chicken seroconversions were detected in 20 flocks from Butte (15), Glenn (4), Kern (15), Placer (5), Riverside (1), San Joaquin (1), and Sutter (2) counties. The current YTD total stands at 487 WNV seroconversions.

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.

TESTING SUMMARIES

Humans and Equines

| | | Number Tested | WNV Positive | | WEE Positive | | SLE Positive | | Other Positive | |
|----------------------|------|---------------|--------------|-------|--------------|-------|--------------|-------|----------------|-------|
| | | | Imported | Local | Imported | Local | Imported | Local | Imported | Local |
| Individuals Tested | Week | 117 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 |
| | YTD | 1342 | 0 | 612 | 0 | 0 | 0 | 0 | 0 | 0 |
| Suspect Equine Cases | Week | n/a | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 0 |
| | YTD | 874 | 0 | 386 | 0 | 0 | 0 | 0 | 0 | 0 |

Dead Birds

| | Number Tested | WNV Positive |
|------|---------------|--------------|
| Week | 179 | 124 |
| YTD | 4,101 | 2,469 |

Sentinel Chickens and Mosquito Pools

| | | Number Tested | WNV Positive | WEE Positive | SLE Positive | Other Positive |
|----------------|------|---------------|--------------|--------------|--------------|----------------|
| Chicken sera | Week | 1160* | 43 | 0 | 0 | 0 |
| | YTD | 24,270 | 487 | 0 | 0 | 0 |
| Mosquito pools | Week | 770 | 42 | 0 | 0 | 0 |
| | YTD | 10,790 | 971 | 0 | 0 | 0 |

*This total has been adjusted to include local agency submissions

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POSITIVES

Human Positives Reported:

| Virus | Date of Onset | Status | Diagnosis | County | Imported/Local | From |
|-------|----------------|----------|---------------------------------|-----------------|----------------|------|
| WNV | Unknown | Probable | Unknown | Riverside | Local | |
| WNV | 8/13/04 | Probable | West Nile Fever | Riverside | Local | |
| WNV | Unknown | Probable | Unknown | Riverside | Local | |
| WNV | 8/15/04 | Probable | West Nile Fever | Orange | Local | |
| WNV | 8/28/04 | Probable | West Nile Fever | Orange | Local | |
| WNV | 8/28/04 | Probable | West Nile Fever | Kern | Local | |
| WNV | 8/25/04 | Probable | West Nile Fever | Kern | Local | |
| WNV | 8/18/04 | Probable | West Nile Fever | Kern | Local | |
| WNV | Unknown | Probable | Unknown | Tehama | Local | |
| WNV | Unknown | Probable | West Nile Neuroinvasive Disease | San Luis Obispo | Local | |
| WNV | 8/31/04 | Probable | West Nile Neuroinvasive Disease | Los Angeles | Local | |
| WNV | 8/28/04 | Probable | Unknown | Los Angeles | Local | |
| WNV | 9/04/04 | Probable | West Nile Neuroinvasive Disease | Los Angeles | Local | |
| WNV | Unknown | Probable | Unknown | Los Angeles | Local | |
| WNV | Unknown | Probable | Unknown | Los Angeles | Local | |
| WNV | 8/10/04 | Probable | West Nile Fever | Los Angeles | Local | |
| WNV | 7/24/04 | Probable | West Nile Fever | San Bernardino | Local | |
| WNV | Unknown | Probable | Unknown | San Bernardino | Local | |
| WNV | Unknown | Probable | Unknown | San Bernardino | Local | |
| WNV | Unknown | Probable | Unknown | San Bernardino | Local | |
| WNV | Unknown | Probable | Unknown | Riverside | Local | |
| WNV | Unknown | Probable | Unknown | Riverside | Local | |
| WNV | Unknown | Probable | West Nile Fever* | San Bernardino | Local | |
| WNV | 8/15/04 | Probable | West Nile Fever* | San Bernardino | Local | |
| WNV | 8/19/04 | Probable | West Nile Neuroinvasive Disease | San Bernardino | Local | |
| WNV | Unknown | Probable | West Nile Neuroinvasive Disease | San Bernardino | Local | |
| WNV | 8/11/04 | Probable | West Nile Fever | San Bernardino | Local | |
| WNV | 7/14/04 | Probable | West Nile Fever | San Bernardino | Local | |
| WNV | Unknown | Probable | Unknown | Orange | Local | |
| WNV | Unknown | Probable | Unknown | Orange | Local | |
| WNV | Unknown | Probable | Unknown | Orange | Local | |
| WNV | 9/15/04 | Probable | West Nile Fever | Riverside | Local | |
| WNV | 8/22/04 | Probable | West Nile Fever | Riverside | Local | |
| WNV | Unknown | Probable | West Nile Neuroinvasive Disease | Riverside | Local | |
| WNV | Unknown | Probable | Unknown | Los Angeles | Local | |
| WNV | Unknown | Probable | Unknown | Los Angeles | Local | |
| WNV | 8/29/04 | Probable | West Nile Fever | Los Angeles | Local | |
| WNV | Unknown | Probable | Unknown | Los Angeles | Local | |
| WNV | Unknown | Probable | Unknown | Los Angeles | Local | |
| WNV | Unknown | Probable | Unknown | Los Angeles | Local | |
| WNV | 9/03/04 | Probable | West Nile Neuroinvasive Disease | Los Angeles | Local | |
| WNV | Unknown | Probable | Unknown | Los Angeles | Local | |
| WNV | 9/09/04 | Probable | West Nile Fever | Los Angeles | Local | |
| WNV | 9/16/04 | Probable | West Nile Fever | Los Angeles | Local | |
| WNV | 9/13/04 | Probable | West Nile Fever | Los Angeles | Local | |
| WNV | Unknown | Probable | Unknown | Los Angeles | Local | |
| WNV | Unknown | Probable | Unknown | San Bernardino | Local | |
| WNV | Unknown | Probable | Unknown | Riverside | Local | |
| WNV | Unknown | Probable | Unknown | Kern | Local | |
| WNV | Unknown | Probable | Unknown | Kern | Local | |
| WNV | 8/31/04 | Probable | West Nile Neuroinvasive Disease | Kern | Local | |
| WNV | Week 37 | Probable | West Nile Neuroinvasive Disease | Shasta | Local | |
| WNV | Not Applicable | Probable | Asymptomatic – Blood Bank | Los Angeles | Local | |
| WNV | Not Applicable | Probable | Asymptomatic – Blood Bank | San Bernardino | Local | |
| WNV | Not Applicable | Probable | Asymptomatic – Blood Bank | Orange | Local | |

*Indicates fatality

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Chicken Seroconversions Reported by DHS:

| Virus | County | State | Acode | City | Location |
|--------------------------------|-------------|-------|----------|-------------|--|
| WNV | Butte | CA | BUCO0001 | Chico | Elmer Street |
| Bands: 1109, 1111 | | | | | Probable Seroconversion Date: 15-September-04 |
| WNV | Butte | CA | BUCO0002 | Biggs | Thebachs |
| Bands: 1112, 1115 | | | | | Probable Seroconversion Date: 15-September-04 |
| WNV | Butte | CA | BUCO0003 | Palermo | Turners |
| Bands: 1124, 1131, 1133 | | | | | Probable Seroconversion Date: 15-September-04 |
| WNV | Butte | CA | BUCO0004 | Gridley | Gray Lodge |
| Bands: 1139, 1141, 1144 | | | | | Probable Seroconversion Date: 15-September-04 |
| WNV | Butte | CA | BUCO0005 | Honcut | Honcut |
| Bands: 1148, 1151, 1155 | | | | | Probable Seroconversion Date: 15-September-04 |
| WNV | Butte | CA | BUCO0007 | Chico | M&T Ranch |
| Bands: 1169, 1171 | | | | | Probable Seroconversion Date: 15-September-04 |
| WNV | Glenn | CA | GLEN9701 | Willows | N.E. Willows |
| Band: 1804, 1813 | | | | | Probable Seroconversion Date: 15-September-04 |
| WNV | Glenn | CA | GLEN9710 | Orland | Orland flock |
| Band: 1841, 1843 | | | | | Probable Seroconversion Date: 15-September-04 |
| WNV | Kern | CA | KERN0104 | Bakersfield | Old River |
| Band: 1975, 1978, 1979 | | | | | Probable Seroconversion Date: 13-September-04 |
| WNV | Kern | CA | KERN0105 | Bakersfield | Wibble/Houghton |
| Band: 1981, 1985, 1988 | | | | | Probable Seroconversion Date: 13-September-04 |
| WNV | Kern | CA | KERN0106 | Bakersfield | Bakersfield |
| Band: 1994, 2044 | | | | | Probable Seroconversion Date: 13-September-04 |
| WNV | Kern | CA | KERN0107 | Arvin | John Dale |
| Band: 2003, 2006 | | | | | Probable Seroconversion Date: 13-September-04 |
| WNV | Kern | CA | KERN0110 | Bakersfield | Kern River |
| Band: 2019, 2020 | | | | | Probable Seroconversion Date: 13-September-04 |
| WNV | Kern | CA | KERN0112 | Wasco | Wells residence |
| Band: 2031, 2033, 2046 | | | | | Probable Seroconversion Date: 13-September-04 |
| WNV | Placer | CA | PLCR0021 | Lincoln | Nelson Lane |
| Band: 2716, 2717, 2719 | | | | | Probable Seroconversion Date: 13-September-04 |
| WNV | Placer | CA | PLCR0026 | Sheridan | Sheridan |
| Band: 2731, 2738 | | | | | Probable Seroconversion Date: 13-September-04 |
| WNV | Riverside | CA | WVAL0004 | Ontario | 4 th Street |
| Band: 3849 | | | | | Probable Seroconversion Date: 15-September-04 |
| WNV | San Joaquin | CA | SJCM9906 | French Camp | Roberts Island |
| Band: 3223 | | | | | Probable Seroconversion Date: 13-September-04 |
| WNV | Sutter | CA | SUYA0014 | Sutter | Dean |
| Band: 3551 | | | | | Probable Seroconversion Date: 16-September-04 |
| WNV | Sutter | CA | SUYA0031 | Rio Oso | Barker |
| Band: 3574 | | | | | Probable Seroconversion Date: 16-September-04 |

***Indicates a new flock

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Virus Isolations From Mosquito Pools:

| Virus | Mosquito species | Date Collected | ACODE | Pool # | City | County | Date Received |
|-------|------------------------|----------------|-------|--------|-----------------|-------------|---------------|
| WNV | Culex quinquefasciatus | 8-Sept | GRLA | 1826 | Santa Clarita | Los Angeles | 16-Sept |
| WNV | Culex quinquefasciatus | 7-Sept | GRLA | 1827 | Mission Hills | Los Angeles | 16-Sept |
| WNV | Culex stigmatosoma | 7-Sept | GRLA | 1829 | Mission Hills | Los Angeles | 16-Sept |
| WNV | Culex quinquefasciatus | 9-Sept | GRLA | 1844 | Los Angeles | Los Angeles | 16-Sept |
| WNV | Culex quinquefasciatus | 8-Sept | GRLA | 3158 | Rowland Heights | Los Angeles | 16-Sept |
| WNV | Culex quinquefasciatus | 9-Sept | GRLA | 3177 | Montebello | Los Angeles | 16-Sept |
| WNV | Culex quinquefasciatus | 9-Sept | GRLA | 3178 | Montebello | Los Angeles | 16-Sept |
| WNV | Culex quinquefasciatus | 8-Sept | KERN | 393 | Bakersfield | Kern | 15-Sept |
| WNV | Culex tarsalis | 8-Sept | KERN | 396 | Bakersfield | Kern | 15-Sept |
| WNV | Culex tarsalis | 9-Sept | KERN | 404 | Lamont | Kern | 15-Sept |
| WNV | Culex tarsalis | 9-Sept | KERN | 410 | Arvin | Kern | 15-Sept |
| WNV | Culex quinquefasciatus | 10-Sept | KERN | 413 | Shafter | Kern | 15-Sept |
| WNV | Culex quinquefasciatus | 10-Sept | KERN | 415 | Buttonwillow | Kern | 15-Sept |
| WNV | Culex quinquefasciatus | 10-Sept | KERN | 416 | Shafter | Kern | 15-Sept |
| WNV | Culex quinquefasciatus | 10-Sept | KERN | 417 | Shafter | Kern | 15-Sept |
| WNV | Culex quinquefasciatus | 10-Sept | KERN | 418 | Wasco | Kern | 15-Sept |
| WNV | Culex tarsalis | 8-Sept | KERN | 5572 | Arvin | Kern | 15-Sept |
| WNV | Culex tarsalis | 8-Sept | KERN | 5574 | Arvin | Kern | 15-Sept |
| WNV | Culex tarsalis | 8-Sept | KERN | 5588 | Arvin | Kern | 15-Sept |
| WNV | Culex quinquefasciatus | 8-Sept | KERN | 5601 | Arvin | Kern | 15-Sept |
| WNV | Culex quinquefasciatus | 10-Sept | KERN | 5605 | Buttonwillow | Kern | 15-Sept |
| WNV | Culex quinquefasciatus | 10-Sept | KERN | 5612 | Buttonwillow | Kern | 15-Sept |
| WNV | Culex tarsalis | 10-Sept | KERN | 5615 | Shafter | Kern | 15-Sept |
| WNV | Culex quinquefasciatus | 10-Sept | KERN | 5620 | Lost Hills | Kern | 15-Sept |
| WNV | Culex tarsalis | 10-Sept | KERN | 5626 | Lost Hills | Kern | 15-Sept |
| WNV | Culex tarsalis | 10-Sept | KERN | 5627 | Lost Hills | Kern | 15-Sept |
| WNV | Culex tarsalis | 10-Sept | KERN | 5638 | Lost Hills | Kern | 15-Sept |
| WNV | Culex quinquefasciatus | 10-Sept | KERN | 5639 | Bakersfield | Kern | 15-Sept |
| WNV | Culex stigmatosoma | 10-Sept | LAKE | 277 | Upper Lake | Lake | 16-Sept |
| WNV | Culex erythrothorax | 15-Sept | LAKE | 283 | Nice | Lake | 16-Sept |
| WNV | Culex tarsalis | 15-Sept | LAKE | 284 | Nice | Lake | 16-Sept |
| WNV | Culex stigmatosoma | 15-Sept | LAKE | 292 | Upper Lake | Lake | 16-Sept |
| WNV | Culex tarsalis | 15-Sept | LAKE | 293 | Lower Lake | Lake | 16-Sept |
| WNV | Culex tarsalis | 2-Sept | NWST | 407 | Norco | Riverside | 10-Sept |
| WNV | Culex quinquefasciatus | 8-Sept | ORCO | 1483 | Cypress | Orange | 14-Sept |
| WNV | Culex quinquefasciatus | 8-Sept | ORCO | 1485 | Anaheim | Orange | 14-Sept |
| WNV | Culex quinquefasciatus | 8-Sept | ORCO | 1486 | Orange | Orange | 14-Sept |
| WNV | Culex tarsalis | 16-Sept | PLCR | 118 | Sheridan | Placer | 16-Sept |
| WNV | Culex erythrothorax | 14-Sept | RIVR | 227 | Murrieta | Riverside | 16-Sept |
| WNV | Culex erythrothorax | 14-Sept | RIVR | 228 | Murrieta | Riverside | 16-Sept |
| WNV | Culex tarsalis | 13-Sept | SUYA | 247 | Pennington | Sutter | 15-Sept |
| WNV | Culex tarsalis | 8-Sept | TRLK | 334 | Newman | Stanislaus | 10-Sept |

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Dead Birds Tested Positive for WNV last week

| Species | County | City | Zip | Date Collected | Date Tested |
|----------------------|--------------|----------------|-------|----------------|-------------|
| Mallard Duck | Alameda | Pleasanton | 94566 | 8/31/2004 | 9/13/2004 |
| Cooper's Hawk | Alameda | San Leandro | 94579 | 9/1/2004 | 9/13/2004 |
| Mourning Dove | Alameda | San Leandro | 94577 | 8/23/2004 | 9/16/2004 |
| Black Phoebe | Calaveras | Valley Springs | 95252 | 9/1/2004 | 9/13/2004 |
| Western Scrub-Jay | Contra Costa | Alamo | 94507 | 9/3/2004 | 9/13/2004 |
| Western Scrub-Jay | Contra Costa | Walnut Creek | 94598 | 9/2/2004 | 9/13/2004 |
| American Crow | Fresno | Clovis | 93612 | 8/31/2004 | 9/13/2004 |
| American Crow | Fresno | Clovis | 93611 | 8/10/2004 | 9/15/04 |
| Western Scrub-Jay | Fresno | Fresno | 93702 | 8/26/2004 | 9/16/2004 |
| Western Scrub-Jay | Fresno | Sanger | 93657 | 8/31/2004 | 9/13/2004 |
| Western Scrub-Jay | Fresno | Sanger | 93657 | 9/2/2004 | 9/13/2004 |
| Western Scrub-Jay | Fresno | Sanger | 93657 | 9/3/2004 | 9/13/2004 |
| Western Scrub-Jay | Fresno | Sanger | 93657 | 9/3/2004 | 9/13/2004 |
| American Crow | Fresno | Sanger | 93657 | 8/24/2004 | 9/16/2004 |
| Northern Mockingbird | Fresno | Selma | 93662 | 8/31/2004 | 9/13/2004 |
| Yellow-billed Magpie | Glenn | Orland | 95963 | 9/1/2004 | 9/13/2004 |
| Yellow-billed Magpie | Glenn | Orland | 95963 | 8/6/2004 | 9/15/04 |
| Yellow-billed Magpie | Glenn | Orland | 95963 | 8/9/2004 | 9/15/04 |
| American Crow | Glenn | Orland | 95963 | 8/9/2004 | 9/15/04 |
| Red-tailed Hawk | Glenn | Willows | 95988 | 9/2/2004 | 9/13/2004 |
| American Crow | Glenn | Willows | 95988 | 9/3/2004 | 9/13/2004 |
| American Crow | Glenn | Willows | 95988 | 9/3/2004 | 9/13/2004 |
| American Crow | Glenn | Willows | 95988 | 9/3/2004 | 9/13/2004 |
| American Crow | Glenn | Willows | 95988 | 9/7/2004 | 9/13/2004 |
| Western Scrub-Jay | Glenn | Willows | 95988 | 9/1/2004 | 9/13/2004 |
| California Towhee | Humboldt | Miranda | 95559 | 8/31/2004 | 9/13/2004 |
| American Crow | Inyo | Bishop | 93514 | 9/1/2004 | 9/13/2004 |
| Common Raven | Inyo | Bishop | 93514 | 9/2/2004 | 9/13/2004 |
| Western Scrub-Jay | Kern | Bakersfield | 93308 | 9/2/2004 | 9/13/2004 |
| Western Scrub-Jay | Kern | Bakersfield | 93309 | 9/2/2004 | 9/13/2004 |
| Western Scrub-Jay | Kings | Lemoore | 93245 | 9/2/2004 | 9/13/2004 |
| American Crow | Lake | Clearlake | 95422 | 9/1/2004 | 9/13/2004 |
| Western Scrub-Jay | Lake | Clearlake | 95422 | 8/31/2004 | 9/13/2004 |
| American Crow | Lake | Lakeport | 95453 | 8/10/2004 | 9/15/04 |
| American Crow | Los Angeles | Gardena | 90247 | 8/26/2004 | 9/13/2004 |
| American Crow | Los Angeles | San Pedro | 90731 | 8/30/2004 | 9/13/2004 |
| American Crow | Los Angeles | San Pedro | 90731 | 9/1/2004 | 9/13/2004 |
| Western Scrub-Jay | Marin | San Anselmo | 94960 | 9/3/2004 | 9/13/2004 |
| California Towhee | Marin | Tomales | 94971 | 9/1/2004 | 9/13/2004 |
| American Kestrel | Merced | Atwater | 95301 | 9/7/2004 | 9/13/2004 |
| Pigmy Nuthatch | Mono | Mammoth Lakes | 93546 | 9/2/2004 | 9/13/2004 |
| Sharp-shinned Hawk | Napa | Napa | 94558 | 9/1/2004 | 9/13/2004 |
| Western Screech-Owl | Napa | Yountville | 94599 | 9/3/2004 | 9/13/2004 |
| Western Scrub-Jay | Nevada | Nevada City | 95959 | 9/3/2004 | 9/13/2004 |
| Hooded Oriole | Orange | Irvine | 92618 | 8/30/2004 | 9/13/2004 |

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| Species | County | City | Zip | Date Collected | Date Tested |
|-----------------------|-----------------|----------------|-------|----------------|-------------|
| Hooded Oriole | Orange | Laguna Woods | 92653 | 8/26/2004 | 9/13/2004 |
| Yellow-billed Magpie | Placer | Lincoln | 95648 | 9/1/2004 | 9/13/2004 |
| Yellow-billed Magpie | Placer | Lincoln | 95648 | 9/1/2004 | 9/13/2004 |
| Yellow-billed Magpie | Placer | Lincoln | 95648 | 9/1/2004 | 9/13/2004 |
| Black-headed Grosbeak | Plumas | Quincy | 95971 | 9/1/2004 | 9/13/2004 |
| Steller's Jay | Plumas | Quincy | 95971 | 9/3/2004 | 9/13/2004 |
| Steller's Jay | Plumas | Quincy | 95971 | 8/26/2004 | 9/16/2004 |
| Western Scrub-Jay | Riverside | Calimesa | 92320 | 8/26/2004 | 9/13/2004 |
| American Crow | Riverside | Menifee | 92584 | 9/1/2004 | 9/13/2004 |
| American Crow | Riverside | Palm Desert | 92211 | 9/1/2004 | 9/13/2004 |
| Western Scrub-Jay | Sacramento | Citrus Heights | 95610 | 9/2/2004 | 9/13/2004 |
| Yellow-billed Magpie | Sacramento | Rio Linda | 95673 | 9/2/2004 | 9/13/2004 |
| Yellow-billed Magpie | Sacramento | Rio Linda | 95673 | 9/3/2004 | 9/13/2004 |
| Yellow-billed Magpie | Sacramento | Rio Linda | 95673 | 9/3/2004 | 9/13/2004 |
| American Crow | Sacramento | Sacramento | 95838 | 9/3/2004 | 9/13/2004 |
| Red-tailed Hawk | Sacramento | Sacramento | 95837 | 8/31/2004 | 9/13/2004 |
| Western Scrub-Jay | Sacramento | Sacramento | 95822 | 9/2/2004 | 9/13/2004 |
| Western Scrub-Jay | Sacramento | Sacramento | 95823 | 9/2/2004 | 9/13/2004 |
| Western Scrub-Jay | Sacramento | Sacramento | 95823 | 9/3/2004 | 9/13/2004 |
| Yellow-billed Magpie | Sacramento | Sacramento | 95829 | 9/3/2004 | 9/13/2004 |
| Western Scrub-Jay | Sacramento | Sacramento | 95841 | 8/30/2004 | 9/16/2004 |
| Steller's Jay | San Diego | Julian | 92036 | 8/29/2004 | 9/16/2004 |
| American Robin | San Francisco | San Francisco | 94143 | 9/2/2004 | 9/13/2004 |
| House Sparrow | San Francisco | San Francisco | 94118 | 9/7/2004 | 9/13/2004 |
| White-crowned Sparrow | San Francisco | San Francisco | 94122 | 9/2/2004 | 9/13/2004 |
| American Crow | San Joaquin | French Camp | 95231 | 8/9/2004 | 9/15/04 |
| Western Scrub-Jay | San Joaquin | Lodi | 95242 | 9/7/2004 | 9/13/2004 |
| European Starling | San Luis Obispo | Arroyo Grande | 93420 | 8/4/2004 | 9/15/04 |
| Townsend's Warbler | Santa Cruz | Aptos | 95003 | 9/1/2004 | 9/13/2004 |
| Western Scrub-Jay | Santa Cruz | Santa Cruz | 95060 | 9/1/2004 | 9/13/2004 |
| Western Scrub-Jay | Santa Cruz | Scotts Valley | 95066 | 9/2/2004 | 9/13/2004 |
| House Finch | Santa Cruz | Watsonville | 95076 | 9/2/2004 | 9/13/2004 |
| House Finch | Santa Cruz | Watsonville | 95076 | 9/7/2004 | 9/13/2004 |
| House Sparrow | Santa Cruz | Watsonville | 95076 | 9/7/2004 | 9/13/2004 |
| Western Sandpiper | Santa Cruz | Watsonville | 95076 | 8/31/2004 | 9/16/2004 |
| Yellow-billed Magpie | Shasta | Igo | 96047 | 9/1/2004 | 9/13/2004 |
| Yellow-billed Magpie | Shasta | Millville | 96062 | 9/1/2004 | 9/13/2004 |
| Western Scrub-Jay | Shasta | Redding | 96001 | 8/20/2004 | 9/16/2004 |
| Black-billed Magpie | Siskiyou | Dorris | 96023 | 9/2/2004 | 9/13/2004 |
| Western Scrub-Jay | Siskiyou | Etna | 96027 | 9/1/2004 | 9/13/2004 |
| Black-billed Magpie | Siskiyou | Fort Jones | 96032 | 9/1/2004 | 9/13/2004 |
| Red-tailed Hawk | Siskiyou | Montague | 96064 | 9/3/2004 | 9/13/2004 |
| Northern Flicker | Siskiyou | Mount Shasta | 96067 | 9/1/2004 | 9/13/2004 |
| Spotted Towhee | Siskiyou | Mount Shasta | 96067 | 9/8/2004 | 9/13/2004 |
| Mountain Quail | Siskiyou | Weed | 96094 | 9/2/2004 | 9/13/2004 |

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| Species | County | City | Zip | Date Collected | Date Tested |
|----------------------|------------|----------------|-------|----------------|-------------|
| Western Scrub-Jay | Siskiyou | Yreka | 96097 | 9/7/2004 | 9/13/2004 |
| Western Scrub-Jay | Solano | Vacaville | 95688 | 9/1/2004 | 9/13/2004 |
| Western Scrub-Jay | Solano | Vacaville | 95687 | 9/3/2004 | 9/13/2004 |
| Western Scrub-Jay | Stanislaus | Modesto | 95355 | 8/31/2004 | 9/13/2004 |
| Western Scrub-Jay | Stanislaus | Modesto | 95356 | 9/1/2004 | 9/13/2004 |
| Western Scrub-Jay | Stanislaus | Modesto | 95356 | 9/2/2004 | 9/13/2004 |
| Yellow-billed Magpie | Stanislaus | Modesto | 95358 | 9/1/2004 | 9/13/2004 |
| Yellow-billed Magpie | Stanislaus | Modesto | 95356 | 9/1/2004 | 9/13/2004 |
| Yellow-billed Magpie | Stanislaus | Modesto | 95350 | 9/1/2004 | 9/13/2004 |
| Western Scrub-Jay | Stanislaus | Modesto | 95350 | 8/30/2004 | 9/16/2004 |
| Yellow-billed Magpie | Sutter | Pleasant Grove | 95668 | 9/3/2004 | 9/13/2004 |
| Western Scrub-Jay | Sutter | Yuba City | 95993 | 9/1/2004 | 9/13/2004 |
| Yellow-billed Magpie | Sutter | Yuba City | 95993 | 9/8/2004 | 9/13/2004 |
| Western Scrub-Jay | Tehama | Corning | 96021 | 9/2/2004 | 9/13/2004 |
| Yellow-billed Magpie | Tehama | Corning | 96021 | 8/30/2004 | 9/13/2004 |
| Steller's Jay | Tehama | Manton | 96059 | 9/2/2004 | 9/13/2004 |
| American Crow | Tehama | Red Bluff | 96080 | 8/31/2004 | 9/13/2004 |
| Sharp-shinned Hawk | Tehama | Red Bluff | 96080 | 9/2/2004 | 9/13/2004 |
| Western Scrub-Jay | Tehama | Red Bluff | 96080 | 9/2/2004 | 9/13/2004 |
| Western Scrub-Jay | Tehama | Red Bluff | 96080 | 9/2/2004 | 9/13/2004 |
| Western Scrub-Jay | Tehama | Red Bluff | 96080 | 9/3/2004 | 9/13/2004 |
| Western Scrub-Jay | Tehama | Red Bluff | 96080 | 9/3/2004 | 9/13/2004 |
| Yellow-billed Magpie | Tehama | Red Bluff | 96080 | 9/2/2004 | 9/13/2004 |
| American Kestrel | Trinity | Hayfork | 96041 | 8/31/2004 | 9/13/2004 |
| Western Scrub-Jay | Tulare | Tulare | 93274 | 9/1/2004 | 9/13/2004 |
| Western Scrub-Jay | Tulare | Tulare | 93274 | 9/2/2004 | 9/13/2004 |
| Western Scrub-Jay | Tulare | Visalia | 93277 | 9/2/2004 | 9/13/2004 |
| Song Sparrow | Tuolumne | Columbia | 95310 | 9/1/2004 | 9/13/2004 |
| Western Tanager | Tuolumne | Columbia | 95310 | 8/30/2004 | 9/16/2004 |
| Lesser Goldfinch | Tuolumne | Jamestown | 95327 | 8/31/2004 | 9/16/2004 |
| Western Tanager | Tuolumne | Sonora | 95370 | 9/1/2004 | 9/13/2004 |
| House Finch | Tuolumne | Sonora | 95370 | 8/30/2004 | 9/16/2004 |
| Western Scrub-Jay | Yuba | Loma Rica | 95901 | 9/2/2004 | 9/13/2004 |
| Western Scrub-Jay | Yuba | Loma Rica | 95901 | 9/8/2004 | 9/13/2004 |

National Comments:

As of September 21, 2004, West Nile Virus (WNV) activity has been detected in 47 states, Puerto Rico, and New York City. Over 1600 human WNV cases have been reported in 39 states and New York City. At this time in 2003, 4827 cases had been reported from 40 states. Of the 1,541 WNV cases where data is available, the median age is 51 years (range: 1 month – 99 years) and 58% are male. Thirty-four percent of the cases were neuroinvasive, compared with 29% at this time in 2003. There have been 45 WNV-related fatalities nationwide in 2004. The median age of the 45 fatalities where data were available was 75 years.

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Dead Birds:

Dead bird kidney tissues are tested at CVEC using the PCR Taqman assay, subsequent to carcass necropsy at the California Animal Health and Food Safety (CAHFS) Laboratories. Organ pools from PCR positive carcasses are tested using cell culture for virus isolation. The WNV Dead Bird Surveillance Coordinator, Ryan Carney, can be reached directly at (510) 412-6251.

Crows from positive zip codes are no longer accepted for necropsy. Positive Vec-tests from oral swabs from crows are no longer confirmed. Other bird species tested by RT-PCR using singleplex and confirmed with a second primer set.

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) and IgM Capture – Enzyme Linked Immunosorbent Assay (MAC-ELISA)) on specimens from sentinel chickens in which antibodies are detected in new geographic areas. The VRDL also forwards selected serum to the UC Davis Center for Vectorborne Diseases (CVEC) for additional testing for WNV, WEE, and SLE antibodies as needed.

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. There will be an elimination of *in situ* EIA testing for all mosquito species.

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 Al Hom by phone (510) 412-6254, FAX (510) 412-6263, or email [ahom@dhs.ca.gov].