

California Arbovirus Surveillance Bulletin # 7

Week 14 Monday, April 12, 2010

Weekly Summary

WEEKLY COMMENTS



Humans

No human cases have been reported in 2010.

Horses

No equine cases have been reported in 2010.

Dead Birds & Tree Squirrels

Three West Nile virus (WNV) positive dead birds were reported last week from Butte, Los Angeles, and Sacramento counties. These are the first WNV positive birds reported from Butte and Sacramento counties this year.

In 2010, a total of five WNV positive dead birds have been reported from three counties. At this time last year, five birds from three counties (Fresno, Orange, and San Diego) had tested positive for WNV.

Update on testing protocols: In 2010, The University of California, Center for Vectorborne Diseases (CVEC) and the California Department of Public Health, Vector-Borne Disease Section will begin differentiating between chronic and acute West Nile virus positive dead birds in reports sent to local vector control agencies and county health departments. Birds considered to have positive chronic infection with WNV are unlikely to have been infected recently with WNV and have limited surveillance utility. However, all WNV positive birds (acute and chronic infections) will continue to be included in the statewide surveillance data and posted on the West Nile virus website.

Mosquito Pools

No positive mosquito pools have been reported in 2010.

At this time last year, three WNV positive mosquito pools had been reported from Contra Costa County.

Sentinel Chickens

No seroconversions have been reported in 2010.

At this time last year, three WNV positive chickens from Los Angeles County had been reported.

YTD WNV Activity by Element and County, 2010

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Butte			1			
Los Angeles			3			
Sacramento			1			
Totals	0	0	5	0	0	0

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2009 & 2010 YTD West Nile Virus Comparisons		
	2009	2010
Total # Dead Bird Reports	2,171	1,129
# Positive Counties	5	3
# Human Cases	0	0
# Horse Cases	0	0
# Positive Dead Birds / # Tested	5 / 236	5 / 153
# Positive Mosquito Pools / # Tested	3 / 974	0 / 946
# Seroconversions / # Tested	3 / 181	0 / 256
# Positive Squirrels / # Tested	0 / 5	0 / 6

TEST SUMMARIES

Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested*	Week	23	0	0	0	0	0	0	0	0
	YTD	180	0	0	0	0	0	0	0	0
Horses Tested	Week	9	0	0	0	0	0	0	0	0
	YTD	34	0	0	0	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
Dead Birds	Week	75	3
	YTD	153	5
Tree Squirrels	Week	2	0
	YTD	6	0

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	SLE Positive	WEE Positive
Chicken Sera	Week	0	0	0	0
	YTD	256	0	0	0
Mosquito Pools: RT-PCR	Week	552	0	0	0
	YTD	946	0	0	0
Mosquito Pools: RAMP	Week	0	--	N/A	N/A
	YTD	0	--	N/A	N/A

POSITIVES

Agency	County	City	Zip	Species	Reported	Type of Infection	Test Method
Butte Co. MVCD	Butte	Biggs	95917	House Finch	3/24/10	Chronic	RT-PCR
Los Angeles Co. Vet	Los Angeles	Northridge	91324	European Starling	3/25/10	Chronic	RT-PCR
Sac-Yolo MVCD	Sacramento	Fair Oaks	95628	Red-Shouldered Hawk	3/19/10	Chronic	RT-PCR

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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 by plaque reduction neutralization test (PRNT).

*Human denominator data only includes specimens tested at VRDL and does not include additional negative specimens that are tested by local agencies only.

Horses:

Serum or brain tissue specimens from horses displaying neurological symptoms are submitted to the California Animal Health and Safety Laboratory (CAHFS) and tested by EIA and PRNT.

Dead Birds and Tree Squirrels:

Dead birds and tree squirrels are necropsied at CAHFS laboratory at University of California, Davis. Oral swabs from American Crows and kidney tissue from all other dead birds and squirrels are forwarded to the UC Davis Center for Vectorborne Diseases (CVEC) for West Nile virus testing using the singleplex RT-PCR Taqman assay and confirmed with a second primer set. The WNV Dead Bird Surveillance Coordinator, Erin Parker, can be reached directly at (510) 412-6254.

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 (WEE), and St. Louis encephalitis (SLE) viruses by EIA and IFA. Positive samples are confirmed by western-blot or PRNT.

Mosquito Pools:

Mosquito pools are submitted to CVEC and 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), 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

Website Information: For updated information on WNV in California, please visit the California WNV website, www.westnile.ca.gov, or the California Vectorborne Disease Surveillance System website, www.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov.