

SAC - Yolo MUCD

as of 10/9/2010

Table 1. Mosquito-borne Virus Risk Assessment.

WNV Surveillance Factor	Assessment Value	Benchmark	Assigned Value	
1. Environmental Conditions High-risk environmental conditions include above-normal temperatures with or without above-normal rainfall, runoff, or snowpack. Weather data link: http://ipm.ucdavis.edu	1	Avg daily temperature during prior 2 weeks $\leq 56^{\circ}\text{F}$		
	2	Avg daily temperature during prior 2 weeks $57 - 65^{\circ}\text{F}$		
	3	Avg daily temperature during prior 2 weeks $66 - 72^{\circ}\text{F}$	3	
	4	Avg daily temperature during prior 2 weeks $73 - 79^{\circ}\text{F}$		
	5	Avg daily temperature during prior 2 weeks $> 79^{\circ}\text{F}$		
			<i>Cx tars</i>	<i>Cx pip</i>
2. Adult <i>Culex tarsalis</i> and <i>Cx. pipiens</i> complex relative abundance* Determined by trapping adults, enumerating them by species, and comparing numbers to those previously documented for an area for the prior 2-week period.	1	Vector abundance well below average ($\leq 50\%$)		
	2	Vector abundance below average (51 - 90%)		
	3	Vector abundance average (91 - 150%)	3	3
	4	Vector abundance above average (151 - 300%)		
	5	Vector abundance well above average ($> 300\%$)		
3. Virus infection rate in <i>Culex tarsalis</i> and <i>Cx. pipiens</i> complex mosquitoes* Tested in pools of 50. Test results expressed as minimum infection rate per 1,000 female mosquitoes tested (MIR) for the prior 2-week period.	1	MIR = 0		
	2	MIR = 0.1 - 1.0		
	3	MIR = 1.1 - 2.0	3	3
	4	MIR = 2.1 - 5.0		
	5	MIR > 5.0		
4. Sentinel chicken seroconversion Number of chickens in a flock that develop antibodies to WNV during the prior 2-week period. If more than one flock is present in a region, number of flocks with seropositive chickens is an additional consideration. Typically 10 chickens per flock.	1	No seroconversions in broad region		
	2	One or more seroconversions in broad region		
	3	One or two seroconversions in a single flock in specific region		
	4	More than two seroconversions in a single flock or two flocks with one or two seroconversions in specific region	4	
	5	More than two seroconversions per flock in multiple flocks in specific region		
5. Dead bird infection Number of birds that have tested positive (recent infections only) for WNV during the prior 3-month period. This longer time period reduces the impact of zip code closures during periods of increased WNV transmission.	1	No positive dead birds in broad region		
	2	One or more positive dead birds in broad region		
	3	One positive dead bird in specific region		
	4	Two to five positive dead birds in specific region		
	5	More than five positive dead birds in specific region	5	
6. Human cases Do not include this factor in calculations if no cases are detected in region.	3	One or more human infections in broad region	3	
	4	One human infection in specific region		
	5	More than one human infection in specific region		
			<i>Cx tars</i>	<i>Cx pip</i>
Response Level / Average Rating:				
Normal Season (1.0 to 2.5)			TOTAL	21
Emergency Planning (2.6 to 4.0)				21
Epidemic (4.1 to 5.0)			AVERAGE	3.5
				3.5

* Calculation of separate risk values for *Cx. tarsalis* and the *Cx. pipiens* complex may be useful if their spatial distributions (e.g., rural vs. urban) differ within the assessment area.