

# SAC-YOLO MUCD

AS OF 7/1/10

Table 1. Mosquito-borne Virus Risk Assessment.

| WNV Surveillance Factor   | Assessment Value | Benchmark  | Assigned Value |               |
|---|------------------|--|----------------|---------------|
| <b>1. Environmental Conditions</b><br>High-risk environmental conditions include above-normal temperatures with or without above-normal rainfall, runoff, or snowpack.<br>Weather data link: <a href="http://ipm.ucdavis.edu">http://ipm.ucdavis.edu</a>  | 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 $66 - 72^{\circ}\text{F}$   |                |               |
|   | 4                | Avg daily temperature during prior 2 weeks $73 - 79^{\circ}\text{F}$   | 4              |               |
|   | 5                | Avg daily temperature during prior 2 weeks $> 79^{\circ}\text{F}$  |                |               |
|   |                  |  | <i>Cx tars</i> | <i>Cx pip</i> |
| <b>2. Adult <i>Culex tarsalis</i> and <i>Cx. pipiens</i> complex relative abundance*</b><br>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 ( $> 300\%$ )  |                |               |
| <b>3. Virus infection rate in <i>Culex tarsalis</i> and <i>Cx. pipiens</i> complex mosquitoes*</b><br>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  | 2              | 2             |
|   | 3                | MIR = 1.1 - 2.0  |                |               |
|   | 4                | MIR = 2.1 - 5.0  |                |               |
|   | 5                | MIR > 5.0  |                |               |
| <b>4. Sentinel chicken seroconversion</b><br>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   | 1              |               |
|   | 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 |                |               |
|   | 5                | More than two seroconversions per flock in multiple flocks in specific region                                    |                |               |
| <b>5. Dead bird infection</b><br>Number of birds that have tested positive 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   | 4              |               |
|   | 5                | More than five positive dead birds in specific region  |                |               |
| <b>6. Human cases</b><br>Do not include this factor in calculations if no cases are detected in region.   | 3                | One or more human infections in broad region   |                |               |
|   | 4                | One human infection in specific region   |                |               |
|   | 5                | More than one human infection in specific region   |                |               |
|   |                  |  | <i>Cx tars</i> | <i>Cx pip</i> |
| <b>Response Level / Average Rating:</b>   |                  |  |                |               |
| Normal Season (1.0 to 2.5)  |                  | TOTAL  | 14             | 14            |
| Emergency Planning (2.6 to 4.0)   |                  | AVERAGE  | 2.8            | 2.8           |
| Epidemic (4.1 to 5.0)   |                  |  |                |               |

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\* 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.