

SAL-4060 RISK ASSESSMENT AS OF

06/25/09

Table 1. Mosquito-borne Virus Risk Assessment.

| WNV Surveillance Factor | Assessment Value | Benchmark | Assigned Value | |
|---|------------------|--|----------------|-----------------------|
| | | | Cx tars | Cx pip |
| 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 $> 79^{\circ}\text{F}$ | | |
| | | | Cx tars | Cx pip |
| 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 | | 1 |
| | 2 | MIR = 0.1 - 1.0 | 2 | |
| | 3 | MIR = 1.1 - 2.0 | | |
| | 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 | 2 | |
| | 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 | | |
| 5. Dead bird infection 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 | | 1 |
| | 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 | | |
| 6. Human cases Do not include this factor in calculations if no cases are detected in region. | 3 | One or more human cases in broad region | | |
| | 4 | One human case in specific region | | |
| | 5 | More than one human case in specific region | | |
| | | | Cx tars | Cx pip |
| Response Level / Average Rating: | | | TOTAL | 11 10 |
| Normal Season (1.0 to 2.5) | | | AVERAGE | 2.2 2 |
| Emergency Planning (2.6 to 4.0) | | | | |
| Epidemic (4.1 to 5.0) | | | | |

* 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.