



## **Zoonotic Disease Report**

### **August 11 – August 17, 2019 (Week 33)**

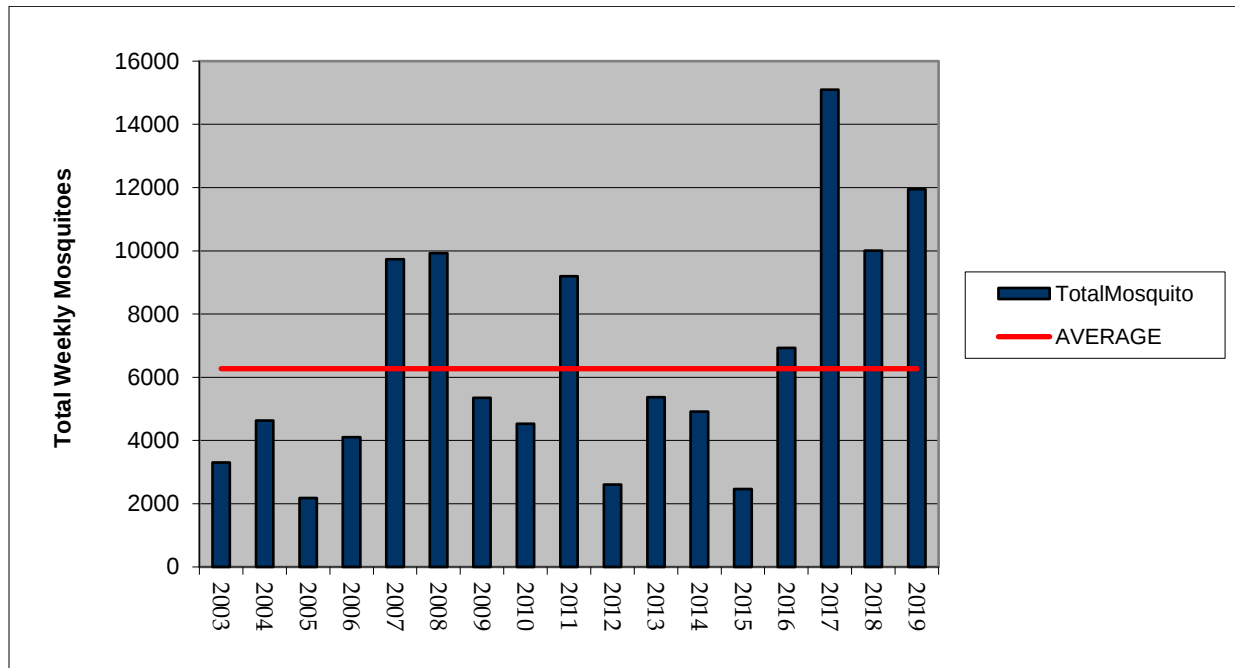
#### **Executive Summary**

- Sixteen mosquito pools were submitted for WNV testing; three pools tested positive. Sentinel Zone 1 (Boulder) had one positive with a calculated Vector Index of 0.23. Sentinel Zone 2 (Longmont) had two positives with a calculated Vector Index of 0.71. While the Vector Index (VI) in both zones are below the “high-risk” threshold of 0.75, increasing West Nile virus activity indicates continuing risk of transmission in all areas of Boulder County. Residents should be encouraged to use personal protective measures.
- Thirty-one mosquito pools have tested positive for WNV in Colorado this season: Larimer (13), Weld (9), Boulder (4), La Plata (3), Mesa (2), Pueblo (1) Adams (1). Two birds have tested positive in Weld County: Great Horned Owl (1), Red Tail Hawk (1).
- Mosquito traps this week were significantly higher than average with nuisance and vector species. Of the 11,950 recorded mosquitoes, 54% were *Culex*.
- Statewide, 120 specimens have tested positive for rabies in 2019.
- 2019 Colorado rabies positive specimens: Skunk (89), Bat (25), Raccoon (2), Dog (2), Fox (1), Bovine (1)
- Boulder County has three positive rabies specimens to date, all are bats.
- Two bats one racoon and one mouse were submitted for rabies testing from Boulder County this week; all tested negative.

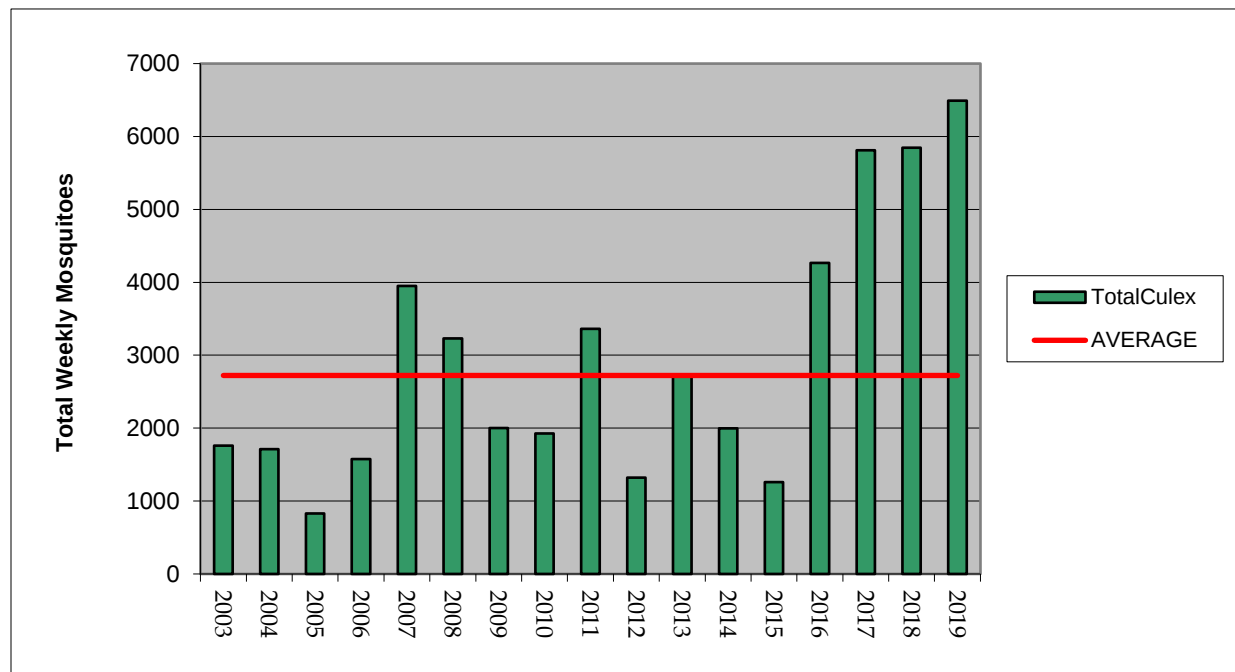
#### **West Nile virus (WNV) Activity**

| <b>SEASON-TO-DATE (Aug. 6) HUMAN WEST NILE VIRUS (WNV) ACTIVITY</b> |                                        |                                    |               |
|---------------------------------------------------------------------|----------------------------------------|------------------------------------|---------------|
| <b>Location</b>                                                     | <b>Non-Neuroinvasive Disease Cases</b> | <b>Neuroinvasive Disease Cases</b> | <b>Deaths</b> |
| <b>Boulder County</b>                                               | 1                                      | 0                                  | 0             |
| <b>Colorado</b>                                                     | 1                                      | 0                                  | 0             |
| <b>United States</b>                                                | 39                                     | 89                                 | 4             |

## Mosquito Activity



\* Data from University of Colorado unavailable



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## West Nile virus (WNV) Vector Index

The vector index is a function of calculated infection rate, adjusted for *Culex* mosquito population size, within a given area. It is used to estimate human West Nile virus (WNV) transmission risk. A vector index of **0.75** or above in Boulder County is an indicator of high risk for WNV transmission to humans, and influences the Mosquito Control District's adult mosquito emergency control measures. A vector index is calculated for [three monitoring zones in Boulder County](#).

| VECTOR INDEX |              |              |              |
|--------------|--------------|--------------|--------------|
|              | ZONE 1       | ZONE 2       | ZONE 3       |
| Season Week  | Vector Index | Vector Index | Vector Index |
| Week 21      | ----         | ----         | ----         |
| Week 22      | ----         | ----         | ----         |
| Week 23      | ----         | ----         | ----         |
| Week 24      | 0.00         | 0.00         | 0.00         |
| Week 25      | 0.00         | 0.00         | 0.00         |
| Week 26      | 0.00         | 0.00         | 0.00         |
| Week 27      | 0.00         | 0.00         | 0.00         |
| Week 28      | 0.00         | 0.00         | 0.00         |
| Week 29      | 0.00         | 0.00         | 0.00         |
| Week 30      | 0.00         | 0.00         | 0.00         |
| Week 31      | 0.00         | 0.00         | 0.00         |
| Week 32      | 0.00         | 0.32         | 0.00         |
| Week 33      | 0.23         | 0.71         | 0.00         |

## Animal Disease Activity

Each week, Boulder County and municipal Animal Control Units responds to animal complaints throughout the county. When deemed necessary, these specimens are sent to state laboratories for zoonotic disease testing.

### Caveats

- Data are provided from the Colorado Department of Public Health and Environment (CDPHE) Zoonotic database and may not include samples submitted for testing prior to publishing of this report.
- Data reflect all samples submitted by Boulder County Public Health by other agencies or private veterinary practices.
- ‘Positive Vectors’ include only samples that have tested positive. Some samples submitted may be deemed untestable.
- ‘Submitted Vectors’ denoted with (\*) indicate that at least one sample was untestable. Untestable samples may be treated as positive for follow-up protocol.

## Submissions and Results by Disease

| TESTED VECTORS |        |        |           |           |             |       | POSITIVE VECTORS |         |            |            |              |       |
|----------------|--------|--------|-----------|-----------|-------------|-------|------------------|---------|------------|------------|--------------|-------|
|                | RABIES | PLAGUE | TULAREMIA | WNV POOLS | HANTA VIRUS | TOTAL | RABIES+          | PLAGUE+ | TULAREMIA+ | WNV POOLS+ | HANTA VIRUS+ | TOTAL |
| Wk 1-20        | 18     | 2      | 2         | 0         | 0           | 22    | 1                | 0       | 0          | 0          | 0            | 1     |
| Wk21           | 1      | 0      | 0         | 0         | 0           | 1     | 0                | 0       | 0          | 0          | 0            | 0     |
| Wk22           | 2      | 0      | 0         | 0         | 0           | 2     | 1                | 0       | 0          | 0          | 0            | 1     |
| Wk23           | 5      | 0      | 0         | 0         | 0           | 5     | 0                | 0       | 0          | 0          | 0            | 0     |
| Wk24           | 4      | 0      | 0         | 3         | 0           | 7     | 0                | 0       | 0          | 0          | 0            | 0     |
| Wk25           | 4      | 0      | 0         | 3         | 0           | 7     | 0                | 0       | 0          | 0          | 0            | 0     |
| Wk26           | 3      | 0      | 0         | 3         | 0           | 6     | 0                | 0       | 0          | 0          | 0            | 0     |
| Wk27           | 4      | 0      | 0         | 5         | 0           | 9     | 0                | 0       | 0          | 0          | 0            | 0     |
| Wk28           | 9      | 0      | 0         | 19        | 0           | 28    | 0                | 0       | 0          | 0          | 0            | 0     |
| Wk29           | 8      | 2      | 2         | 27        | 0           | 39    | 1                | 0       | 0          | 0          | 0            | 1     |
| Wk30           | 8      | 1      | 0         | 31        | 0           | 40    | 0                | 0       | 0          | 0          | 0            | 0     |
| Wk31           | 8      | 0      | 0         | 36        | 0           | 44    | 0                | 0       | 0          | 0          | 0            | 0     |
| Wk32           | 4      | 0      | 0         | 32        | 0           | 36    | 0                | 0       | 0          | 1          | 0            | 1     |
| Wk33           | 1      | 0      | 0         | 16        | 0           | 17    | 0                | 0       | 0          | 3          | 0            | 3     |
| Wk34           |        |        |           |           |             |       |                  |         |            |            |              |       |
| Wk35           |        |        |           |           |             |       |                  |         |            |            |              |       |
| Wk36           |        |        |           |           |             |       |                  |         |            |            |              |       |
| Wk37           |        |        |           |           |             |       |                  |         |            |            |              |       |
| Wk38           |        |        |           |           |             |       |                  |         |            |            |              |       |
| Wk39           |        |        |           |           |             |       |                  |         |            |            |              |       |
| Wk40           |        |        |           |           |             |       |                  |         |            |            |              |       |
| TOTAL TO DATE  | 79     | 5      | 4         | 175       | 0           | 263   | 3                | 0       | 0          | 4          | 0            | 4     |

## Submissions and Results by Species

| SEASON-TO-DATE DISEASE TESTING BY SPECIES |           |          |           |          |
|-------------------------------------------|-----------|----------|-----------|----------|
| <i>Species</i>                            | Rabies    | Plague   | Tularemia | Hanta    |
| Bat                                       | 57        | 0        | 0         | 0        |
| Skunk                                     | 2         | 0        | 0         | 0        |
| Raccoon                                   | 8         | 0        | 0         | 0        |
| Squirrel                                  | 0         | 0        | 0         | 0        |
| Cat                                       | 4         | 2        | 1         | 0        |
| Flea                                      | 0         | 0        | 0         | 0        |
| Dog                                       | 5         | 2        | 2         | 0        |
| Fox                                       | 0         | 0        | 0         | 0        |
| Prairie Dog                               | 0         | 0        | 0         | 0        |
| Rabbit                                    | 0         | 0        | 1         | 0        |
| Other                                     | 3         | 1        | 0         | 0        |
| <b>TOTALS</b>                             | <b>79</b> | <b>5</b> | <b>4</b>  | <b>0</b> |

| SEASON-TO-DATE DISEASE POSITIVES BY SPECIES |          |          |           |          |
|---------------------------------------------|----------|----------|-----------|----------|
| <i>Species</i>                              | Rabies   | Plague   | Tularemia | Hanta    |
| Bat                                         | 3        | 0        | 0         | 0        |
| Skunk                                       | 0        | 0        | 0         | 0        |
| Raccoon                                     | 0        | 0        | 0         | 0        |
| Squirrel                                    | 0        | 0        | 0         | 0        |
| Cat                                         | 0        | 0        | 0         | 0        |
| Flea                                        | 0        | 0        | 0         | 0        |
| Dog                                         | 0        | 0        | 0         | 0        |
| Fox                                         | 0        | 0        | 0         | 0        |
| Prairie Dog                                 | 0        | 0        | 0         | 0        |
| Rabbit                                      | 0        | 0        | 0         | 0        |
| Other                                       | 0        | 0        | 0         | 0        |
| <b>TOTALS</b>                               | <b>3</b> | <b>0</b> | <b>0</b>  | <b>0</b> |

## Testing by Disease

