

The West Nile Seasonal

How does 2017 look?

Predictions for statewide risk in 2017, made on August 7th, are displayed below in Figure 1. Currently, we estimate that 65 human cases are most likely for the year. This is up from the previous week's estimate of 58 cases.

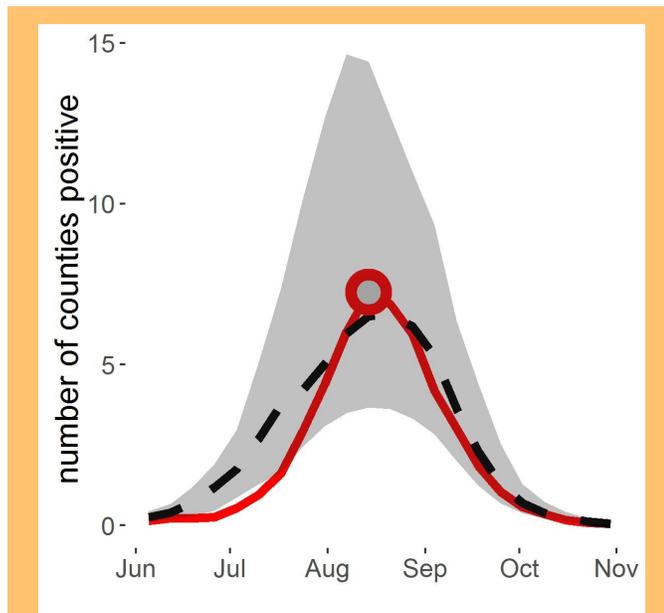


Figure 1: Estimated risk for 2017 (red), with average risk in other years (dashed) and 50% CI for historical risk (grey). Week of Aug 7 circled.

While [drought still prevails](#), the state has become much more humid and storms are expected in the coming week. The combination is likely to help out mosquitoes, which have been suppressed by extremely dry weather. Precipitation is expected to [return to normal](#) over the next month.

Although it will be [cooler than normal](#) in the next month, it is not expected to be cold enough to suppress mosquito populations: a cooler August is still a warm month.

Most importantly, the mosquito infection rate rose from 1.9% of pools positive to 2.5% (rose by around

50%) in the past week. Not all of these positive pools were recent - five positive pools were collected around mid-July, but were only now reported.

Counties that have been reporting positive pools continue to report positive pools - the increase in estimated risk is not just a consequence of older data, and it reflects genuine growth of the virus in mosquito populations.

We had hoped that the mosquito infection rate would level off - in the previous two weeks, it risen from 1.7% to just 1.9%, which might indicate that the virus was slowing down in the mosquito population and that the infection rate might even begin to fall.

Since the infection rate rose rapidly and the environment is becoming more hospitable for the mosquito, we believe the early, low risk in 2017 was merely a stall. Therefore, while 2017 still looks average, we caution again that “average” means a substantial number of cases and a great deal of disease burden.

How do other states look?

Generally, the feeling we get from reading news and data from other states is that 2017 is not a 2012 - this does not look like a large outbreak year for anyone. By this point last year, mosquito control officials were issuing warnings that used words like “early” and “dangerous” and “outbreak.”

The general feeling seems to be exactly what we are estimating in South Dakota: there will be substantial transmission and human disease, but the year looks average and we should sound average alarms.

As an example, [California](#) has 11 cases so far in 2017, which is lower than its 5-year average of 19. Positive sentinel chickens are down by almost half from last year, and there are far fewer (only 16% as many) dead birds reported as last year. Hence, while the virus is circulating, it does not appear to be an outbreak year in CA.