



Arbovirus Surveillance Report

City of Chicago
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Environmental Health

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West Nile Virus 2016 End of Season Summary

Overall Assessment

The risk of West Nile virus infection in Chicago for the 2016 season was moderate. The number of reported human cases was 49, more than triple the number reported in 2015. A principal factor contributing to this increase was a much higher average temperature.

Larviciding

Pre-season larviciding was conducted in areas that have greater historic prevalence of disease. Pre-season larviciding was a cooperative venture between the Department of Public Health, Department of Family and Support Services, Westside Health Authority and sister agencies. In total, over 115,000 catch basins were treated with Altosid[®] XR - Briquets, meant to inhibit the development of larvae into adults. To evaluate the effectiveness of these efforts, a total of 2,760 catch basins were sampled. Of these, 337 (12%) had larvae recovered of which 150 (46%) had adult emergence.

Environmental Surveillance

Eighty-three gravid traps were placed throughout the city and mosquitoes were collected on a twice-weekly basis from June – September. All mosquito species were identified and recorded, and female mosquitos of the *Culex* genus were tested for both West Nile virus and St. Louis encephalitis. The total number of mosquitoes collected was 49,784, of which 36,776 were female *Culex* species. Of these, a total of 2,029 mosquito pools were prepared and tested, of which 463 (22.8%) were positive for WNV (none were positive for St. Louis encephalitis). In comparison, 25,034 mosquitoes were collected during the same period in 2015, only 6.5% of which were positive for West Nile virus. Additionally, a total of 4 birds were collected and tested. Of these, 2 were negative and 2 were found unsuitable for testing.

Cumulative Mosquito Testing for WNV	
Number of Female <i>Culex</i> Trapped and Tested	36,776
Number of Mosquito Pools Tested	2029
Number of Mosquito Pools Positive	463
Number of Community Areas* with Positive Mosquitoes	43

*Community areas with positive mosquito pools: ARCHER HEIGHTS, ARMOUR SQUARE, ASHBURN, AUSTIN, AVALON PARK, AVONDALE, BELMONT CRAGIN, BEVERLY, CHATHAM, CHICAGO LAWN, CLEARING, DUNNING, EAST GARFIELD PARK, EDGEWATER, EDISON PARK, ENGLEWOOD, FOREST GLEN, GAGE PARK, GREATER GRAND CROSSING, HEGEWISCH, HUMBOLDT PARK, IRVING PARK, LAKE VIEW, LINCOLN PARK, LINCOLN SQUARE, NEAR WEST SIDE, NEW CITY, NORTH LAWNSDALE, NORTH PARK, NORWOOD PARK, O'HARE, PORTAGE PARK, PULLMAN, RIVERDALE, ROGERS PARK, SOUTH DEERING, SOUTH LAWNSDALE, SOUTH SHORE, UPTOWN, WASHINGTON HEIGHTS, WEST LAWN, WEST PULLMAN, WEST TOWN

Human Surveillance

Forty-nine human cases of West Nile virus were reported, 2 of which were fatal. In comparison, 16 cases, of which 3 were fatal, were reported in 2015.

Adulticiding

Adulticiding was conducted when an area showed a vector index greater than 1 for two consecutive weeks. Prior to adulticiding, a press release was issued, aldermanic offices were notified, and door hangers were distributed (some 12,000 in total). Adulticiding occurred on nine separate occasions, covering 27 wards and 427.4 linear miles, using Zenivex®.

Surveillance for *Aedes* Mosquitoes

Up to four BG Sentinel traps were placed at one time to monitor for the presence of *Aedes* species the vector for Zika virus, including at or near residences of human Zika virus cases. Mosquitoes were collected and identified as per the protocol for *Culex* species. A total of 4,492 *Aedes albopictus* mosquitoes were collected from one trap located near a tire recycling facility; no *Aedes* species mosquitoes were collected from any of the other traps. Larviciding, adulticiding and the removal of tires were all implemented to address this situation.

For WNV surveillance data in Illinois: [Illinois Data](#)

For national WNV surveillance data: [National Data](#)

For more information on WNV: [Environmental Health Homepage](#)

For U.S. Climate data: [NOAA National Overview](#)