



2020 IMVCA District Report

District/LHD: The Desplaines Valley Mosquito Abatement District

Geography and population info: We service 77 sq. miles of western Cook County that includes 5 townships and all or part of 31 villages with a population of approximately 370,000.

Summary of prevention activities: Street catch basins were treated three times starting in the middle of May. Basins were treated twice with an Altosid 30-day briquet (72,365 pieces applied). For the final treatment an Altosid XR inget was applied (38,147 pieces applied).

Off-road catch basins were treated twice beginning in mid-May with Altosid XR ingets (11,613 pieces applied).

Over 2300 open water sources were inspected, and if necessary, treated between 5 and 13 times. Due to the COVID-19 pandemic the use of Altosid pellets was expanded this season and that is why some sources were only inspected and treated 5 times. To accomplish these treatments 6,705 lbs. of Altosid pellets were applied, 7,217 lbs. of granular BTI and 21.6 gal. of larval oil.

Adult control operations were initiated in August due to rising positive WNV tests. 789 linear miles of residential streets were sprayed using 44 gal. of Anvil 10 + 10 and 142 gal. of Duet.

Summary of surveillance activities: 18 Gravid traps and 8 NJ Light traps ran from 5/10/20 to 10/12/20. BG Sentinel trap and 4 Gravid Aedes Traps (GAT) ran from late June to late September to monitor for *Ae. albopictus*.

Cumulative *Ae. albopictus*: 18 male and 65 female, almost exclusively between our 2 Oak Park gravid traps. Additional BG-Sentinel trap and GAT were set up between both trap locations. Standard gravid traps running at night was the most effective collection method when side-by-side in our case.

Possibly record *Culex spp.* were collected from gravid traps for the month of August during this year's mosquito season with 2 weeks exceeding 11,000 collected and another exceeding 10,000.

Primary use of PCR for testing was implemented for 2020 and beyond.

New Jersey light traps had generally very low activity due to few major rain events.

Positive human cases: 2 reported to the DVMAD by the CCDPH as of 10-26-20. Based on mosquito infection rate, likely many more unreported or w/ delayed reporting, especially with COVID being the main focus of disease testing/monitoring throughout the season. Uncertain of how COVID affected testing and reporting of WNV illness.

Percent positive mosquitoes: 588 WNV positive tests of 1779 total (33.1%)
Total Season 7.4, MIR, 18.7 Peak Weekly MIR

Positive horses and other animals: Unknown for district.

Trends: Significant WNV activity began in the week ending 7/12 with steady weekly. Earlier detection was noted due to higher sensitivity of PCR. Peak infection rate observed during week ending 8/20, subsequently decreasing at the same rate of increase. The week ending was the 7/26 first week where the district wide MIR exceeded 10 per 1000. The maximum at a single location was the North Oak Park trap during the week ending 8/30 with 19 of 20 positive (utilizing smaller pool sizes) at 31.0 MIR and 105.4 MLE. Re-testing of samples yielded identical results.

Light trap collections were generally very low throughout the season with some small spikes in the early season and another small late August spike attributed to heavy *Ur. sapphirina* collections.

Obstacles faced in 2020: Use of PCR implemented over RAMP for WNV testing for likely over-time cost saving, flexibility, etc. Training of lab crew for PCR methods proved somewhat difficult at times, but overall was successful.

Ae. albopictus appear to be better established in residential areas with steady increase/spread over the past few years (specifically Oak Park, which borders Chicago, Berwyn and Cicero) with likely increased overwintering capabilities. These mosquitoes were cause for many mosquito annoyance reports from residents near and along Austin Blvd. in Oak Park despite the dry conditions when annoyance reports are few and far between. Possible increase in collections/spread to other suburbs will take place over the next few years.

High peak infection rate due to extended periods of high temperatures of low rain and large vector mosquito population.

Surveillance activities and catch basin treatments were not affected by the pandemic. That was not the case for larval control of the District's open water sources. In a typical mosquito season two-man crews are used to inspect/treat open water sources, primarily applying granular BTI. Due to social distancing guidelines, operations had to adapt to one-man crews with an expanded used of Altosid 30-day pellets. While this proved challenging at the start, the crews adapted quickly and subsequent treatments went well.