

## 2025 Larvicide Field Trial Report

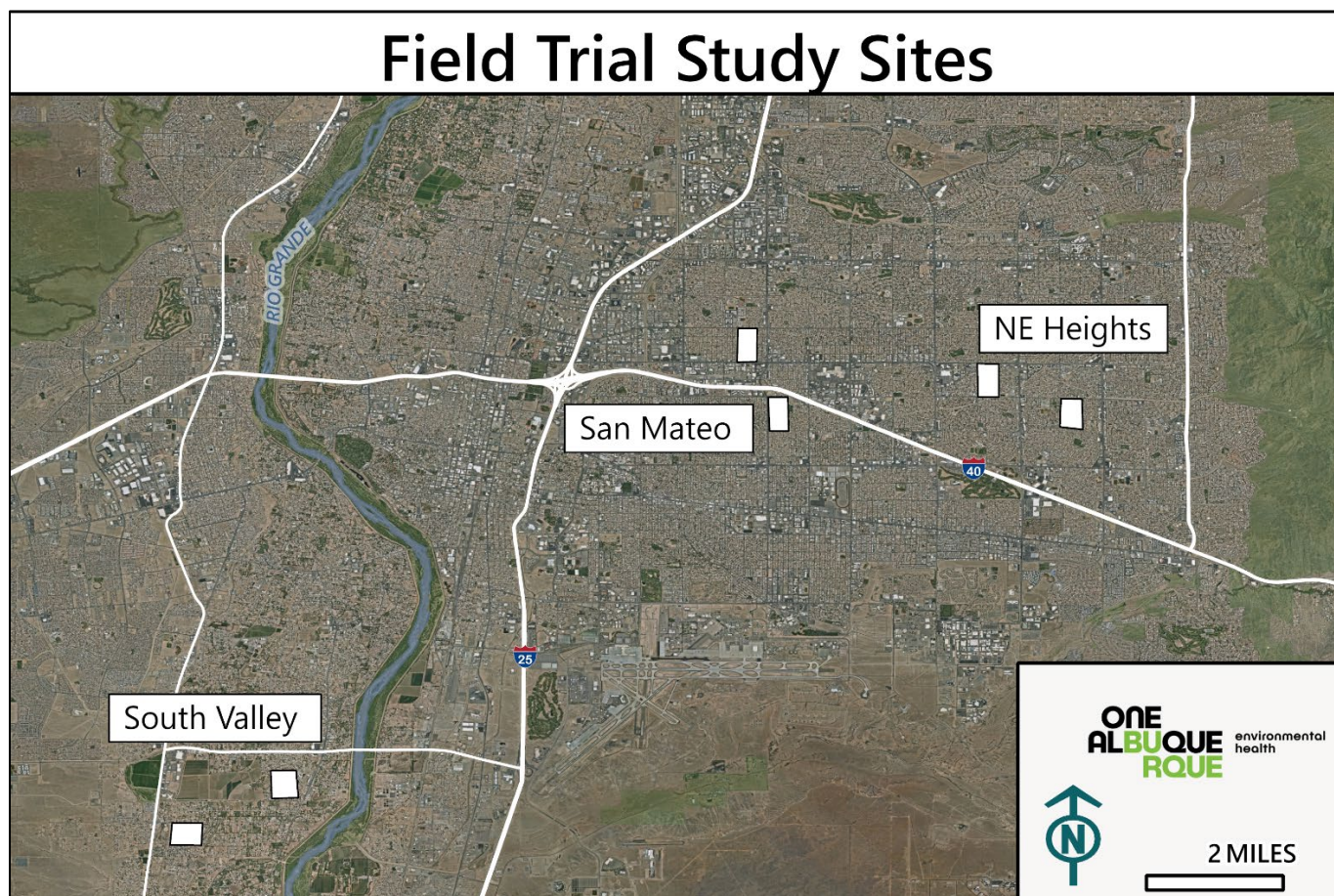
Environmental Health Department, City of Albuquerque

### Introduction

The invasive species of mosquito *Aedes aegypti* was first detected in Albuquerque in 2018 and has since become established in the City. *Aedes aegypti* is now present in high numbers during mosquito season and has become a severe nuisance. Traditional control methods have been relatively ineffective against this species. Because of this, the City of Albuquerque's Environmental Health Department in partnership with Bernalillo County conducted a field trial during the summer of 2025 with an environmentally-friendly larvicide (a pesticide that targets mosquitoes in their larval form), VectoBac WDG.

### Study Sites

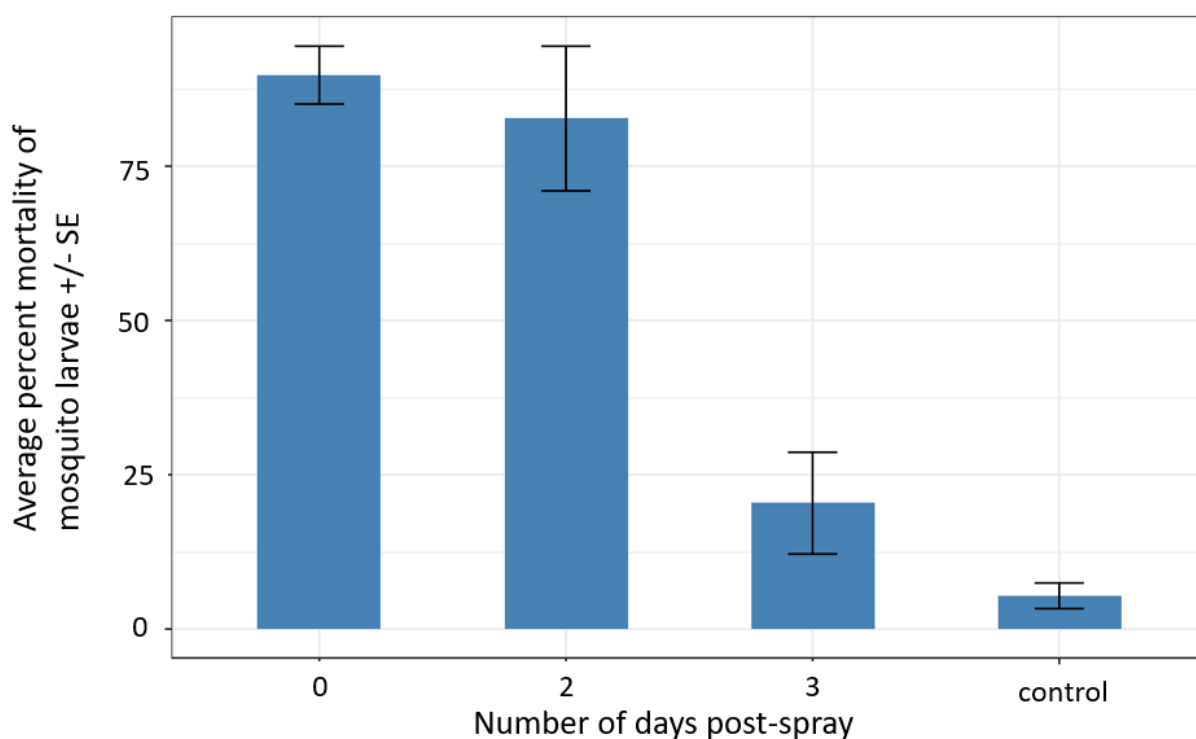
Our field trial ran for 12 weeks (mid-June to early September). We included 6 neighborhoods in our study and set mosquito traps at 8 houses in each neighborhood (white rectangles with black outlines). Two of the neighborhoods were located in the Northeast Heights, 2 were located near San Mateo and Interstate 40, and 2 neighborhoods were located in the South Valley. In the treated neighborhoods, we sprayed larvicide once per week for 4 weeks and every 2 weeks for an additional 4 weeks. Below is a map of the locations of the 6 neighborhoods included in the field trial.



## Results

### How Well the Larvicide Reached Potential Mosquito Habitat

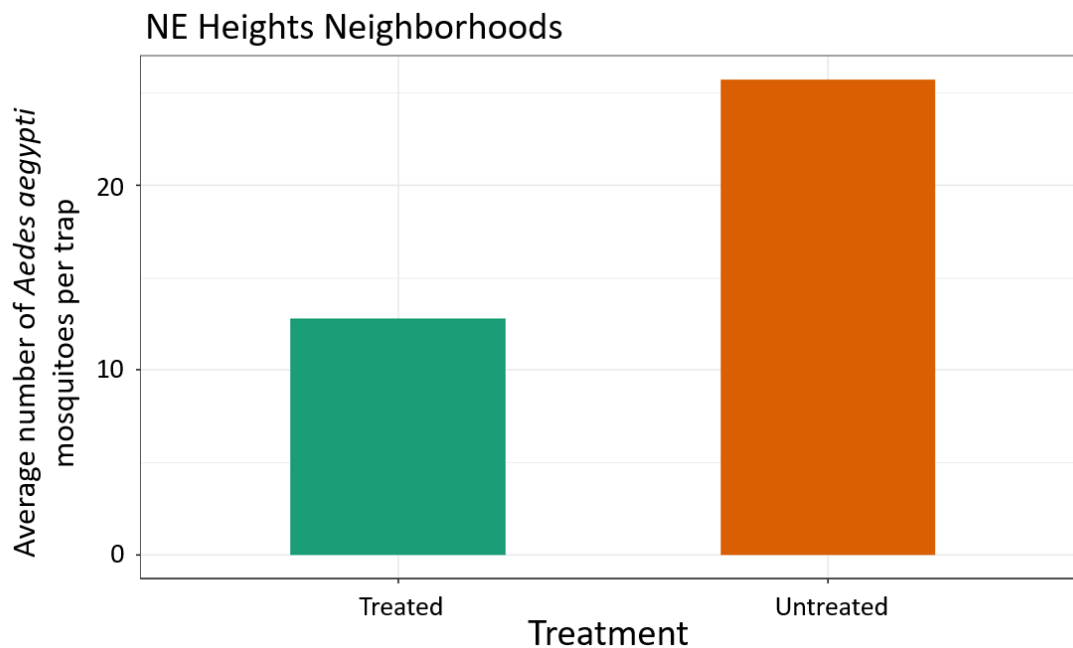
In each of the treated neighborhoods, we set out plastic cups in front and back yards to see how well the larvicide reached potential mosquito breeding habitat. We collected the cups between 0-3 days after the neighborhood was sprayed. We then took the cups back to the laboratory and added water and mosquito larvae and measured how many larvae died. We found that for the cups collected 0-2 days after the area was sprayed, an average of 88% of the mosquito larvae died, indicating that the larvicide effectively reached potential mosquito breeding habitats where it would kill mosquito larvae it came into contact with. Only an average of 20% of mosquito larvae died in the cups that were collected after 3 days, showing that the larvicide degraded in a few days in a dry environment. However, the larvicide is activated when it comes into contact with water, so in the event of a rainstorm following a larvicide spray, any mosquitoes that hatch would come into contact with it and die.



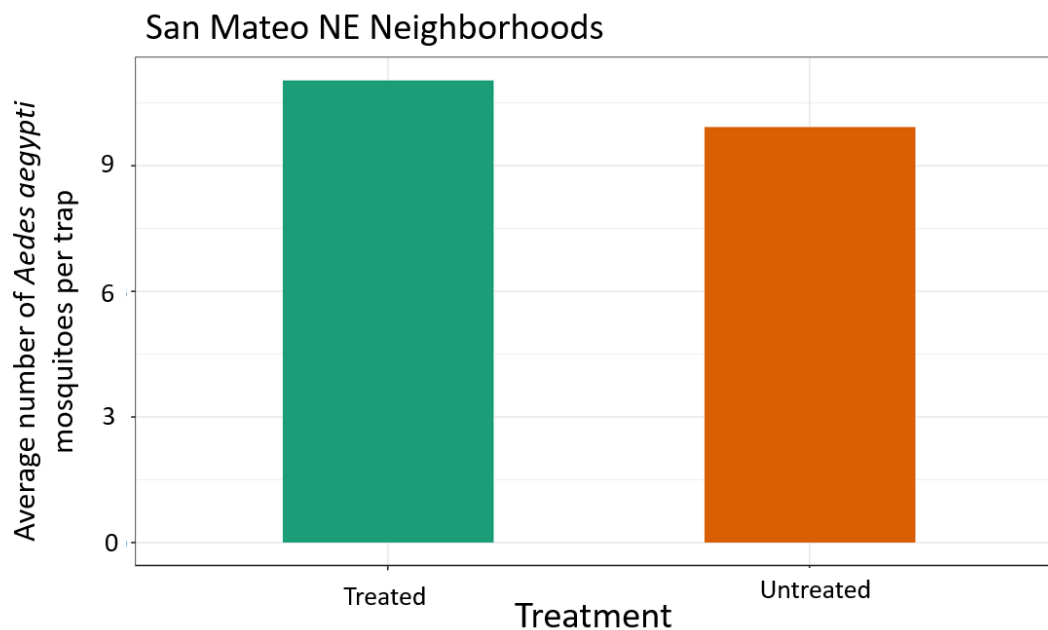
The data we collected from mosquitoes caught in our traps also provided us with information about how well the larvicide worked. For each pair of neighborhoods, we compared the treated and untreated control neighborhoods. The following page shows the results of the three pairs of treated and untreated neighborhoods.

### Adult Mosquito Abundance in Treated and Untreated Neighborhoods

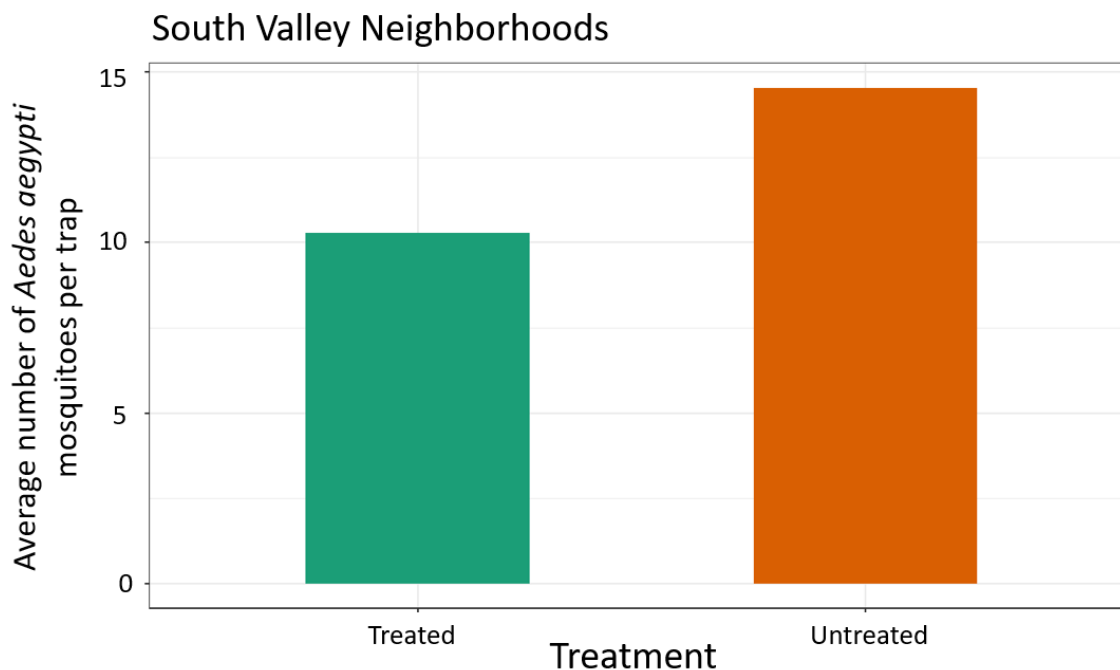
In the Northeast Heights neighborhoods, where there was a 50% reduction in the average number of *Aedes aegypti* mosquitoes per trap in the treated neighborhood compared to the untreated neighborhood.



In the San Mateo NE neighborhoods, there were 11% more *Aedes aegypti* mosquitoes per trap in the treated neighborhood compared to the untreated neighborhood.



In the South Valley, there was a 29% reduction in the average number of *Aedes aegypti* mosquitoes per trap in the treated neighborhood compared to the untreated neighborhood.



The mixed results of our field trial may be due to factors such as wind speed and direction when the larvicide spray was applied, or the layout of the neighborhood streets.

Based on the results of the field trial, we will continue to utilize this larvicide as a tool for managing mosquito populations during future mosquito seasons.

### Mosquito species

*Aedes aegypti* was by far the most common mosquito species collected in 5 of the 6 neighborhoods. *Aedes aegypti* mosquitoes are small black and white mosquitoes that are active during the day and are aggressive biters. While this species is a severe nuisance, *Aedes aegypti* is not currently involved in the spread of mosquito-borne disease in Albuquerque. Additionally, we collected many other mosquitoes, including species of the genus *Culex*. Mosquito species in the genus *Culex* are associated with the spread of West Nile virus, and as part of our surveillance, we tested *Culex* mosquitoes for West Nile virus. Some of these mosquito samples tested positive for West Nile virus.



The top photograph shows an *Aedes aegypti* mosquito taken with a microscope camera with its distinctive black and white markings. The bottom photograph is of a *Culex tarsalis* mosquito showing its golden color and distinctive markings.



### West Nile Virus

While most people infected by West Nile virus have no symptoms or present mild illness, infection can result in serious illness. It is important to continue to take action to reduce mosquito breeding habitat in your yard and take measures to protect yourself against mosquito bites, such as wearing long pants/long sleeves and wearing EPA-approved bug spray.

## What You Can Do

Some mosquito species, including one species of *Culex* as well as *Aedes aegypti*, use small pockets of water to complete their life cycle. It is important for everyone to check their yards for any water holding items, including clogged gutters, rain barrels, bird baths, pet dishes, plant trays, yard clutter, children's toys, etc. We hope that you spread the word and talk to your neighbors about what they can do – we need everyone's help when it comes to reducing mosquito habitat.

## For More Information

If you would like more information about the results of the field trial or have any additional questions, feel free to contact Dr. Jessica Martin by phone (505) 452-5304 or email: [jtmartin@cabq.gov](mailto:jtmartin@cabq.gov).

