April 29, 2020

Vector Services continue to prepare for mosquito season

MOBILE, Alabama — While the COVID-19 pandemic has captured the attention of the media, many other public health issues still must be addressed. This includes Vector Services continuing its battle with mosquitoes.

The Mobile County Health Department was formed in 1816 to help deal with the Yellow Fever epidemic that was devastating to local residents. During the epidemic of 1819 (the year of Alabama’s statehood), Mobile recorded approximately 430 deaths out of a population of about 1,000.

There were many suggestions at the time on how the disease was transmitted, but it was later determined to be spread by mosquitoes. So, from the beginning Vector Services has proven to be a valuable defender for the public’s health.

“Currently, Vector Services is conducting business as usual,” said Paul Efird, an entomologist who oversees the department. “There is as little contact with the public as possible due to the COVID-19 situation.

“Mosquito control personnel continues to respond to complaints received by spraying areas during the day. They are also doing breeding site inspections and treating known breeding areas with residual larvicides or introducing mosquitofish where appropriate.”

Although most issues with mosquitoes take place during the summer months, Vector Services prepares throughout the year.

“We began deploying light traps several weeks ago to get a read on what the mosquito population was doing,” Efird said. “In most areas the mosquito population is relatively low but there are several hot spots, especially in the southern and western portion of the county.”

Night truck activity will commence this week. Efird said because of the warm spring, mosquito numbers have reached a threshold requiring treatment in some parts of the county.

For more than 25 years, the Mobile County Health Department’s Vector Services has monitored sentinel chickens placed throughout the county to help detect the presence of viruses carried by mosquitoes. The new flock arrived February 21, just one day after they hatched.

Once mature, the chickens are vaccinated for fowl pox and the initial blood draw is made to ensure they test negative for any diseases. At this point, the hens — roosters are not included in the study — are banded for identification and tracking purposes. The birds are dispersed to 13 coops located in various predetermined locations throughout Mobile County.

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Blood samples are collected weekly from the wings of two hens at each location. MCHD processes the blood samples and sends them to a lab in Tampa, Florida. Tests results are available later that week. The tests can reveal the presence of Eastern Equine Encephalitis, West Nile Virus and St. Louis Encephalitis.

Efird further discussed a question he is often asked: Can mosquitoes transmit or vector COVID-19?

“Although mosquitoes are capable vectors of a number of viruses, it is highly unlikely they would be able to transmit COVID-19,” he said. “Coronaviruses are usually identified as colds with major symptoms, SARS, MERS, COVID-19 and the common cold. These viruses are generally spread through direct contact of the virus with mucus membranes of the eyes, nose and mouth. Expressing the need for good hygiene and frequently sanitizing and washing your hands.

“Mosquitoes are a capable vector of multiple viruses. None of the those are a coronavirus. Most are flaviviruses (West Nile Virus, Dengue Fever, Zika, St. Louis Encephalitis, Japanese Encephalitis, Yellow Fever). In order for the coronavirus to be spread by a mosquito, it would have to survive the digestive process of the gut, escape the gut and migrate to the salivary glands where it would have to replicate in order to be inoculated into the human host during subsequent feedings. It would have to do this at ambient temperature and not the 98.6-degree environment of the human host.”

In addition to mosquitoes, Vector Services also has its rodent control personnel addressing as many complaints as they can.

“Rodent control requires more contact with the public, so covering these complaints will take longer due to the limited contact requirement,” Efird said. “Rodent personnel will call the client before arriving and advise them to remain inside their homes while the inspector is performing the inspection.

“If there are more than 10 people gathered outside of a client’s residence, the inspector may not stop or attempt the inspection. While inspecting, the inspector will leave any paperwork needed to be signed at the front door and will collect the completed paperwork before they leave the site in order to socially distance themselves for the protection of the client and the inspector.”

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