

Mosquito Control Update

March 18, 2011

Mosquito activity has begun to increase with the arrival of warmer temperatures. When temperatures are generally below 55 degrees, mosquitoes are relatively inactive. Mosquito development from egg stage to the adult stage is considerably extended in time, and biting activity is greatly reduced. These conditions recently have begun to change. Recent rainfalls from one to two weeks ago have produced scattered breeding of the *Aedes vexans* mosquito. This is a common mosquito that breeds mainly in woodland areas that are poorly drained. The mosquito deposits its eggs on the soil surface and hatches when it is flooded by rainfall or high tides. Many of the sites observed to be breeding have almost completed their development. Typically at this time of the year, biologists and mosquito control inspectors treat the known floodwater mosquito breeding sites with methoprene briquets. This product is an insect juvenile hormone and acts to keep the developing mosquito larvae in the immature or aquatic stage of development. The briquette slowly releases the juvenile hormone when flooded and will remain effective for approximately 5 months. The material provides excellent control by not allowing the mosquito to develop into the adult stage.

Larviciding of roadside ditches for the control of the southern house mosquito, the primary vector of West Nile virus, began in the second week of February. Even though larval population levels of this species are low in the winter, the strategy is to attempt to maintain the low populations, so as to prevent large population buildups in the spring and early summer. St. Tammany Parish has approximately 350 miles of ditches that commonly breed the southern house mosquito. As a result, in order to maintain control, it requires 6 larvicide units working 5 days of the week. The product used to control the southern house mosquito larvae is *Bacillus thuringiensis israelensis* (*Bti*), a bacterial spore that acts specifically on mosquito larvae and is highly effective.

So far no adulticide has been employed, however that will change very soon. Light trap counts have begun to show evidence of increased adult mosquito activity. Lately, fewer cold weather mosquito species have been collected in the light traps and have been replaced by some pestiferous species common in the spring and summer. All of the truck mounted sprayers have been calibrated and are ready to go. Both aircraft have received annual maintenance and are also ready for operation.

Monitoring for the presence of West Nile virus in mosquitoes increased at the start of March. Gravid traps and CO₂ baited CDC traps have begun to be utilized to capture live mosquitoes to be tested for viral activity. Approximately 100 sampling sites throughout St. Tammany Parish will be used to collect adult mosquitoes for testing. These traps are run twice a week and are set out in about 35 locations each week.