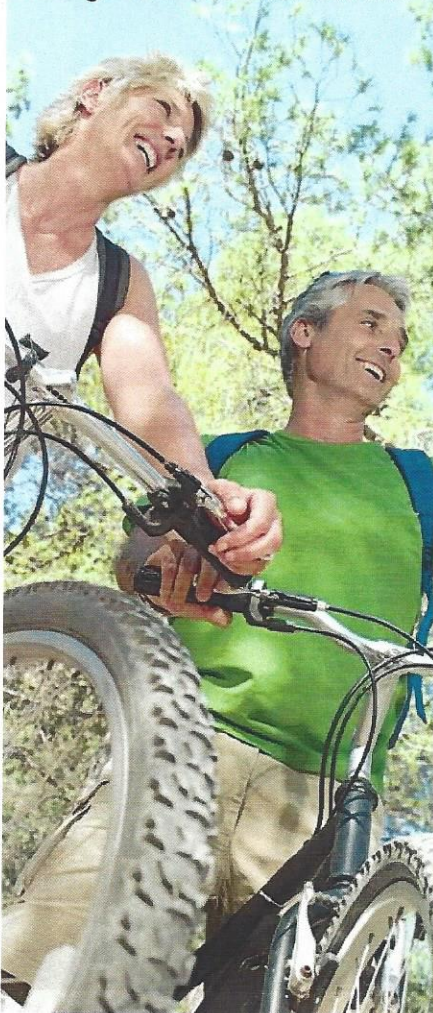


# Mosquito Control Services

## A Community-Wide Public Health Program

### Outdoor Living

The program began in 1977 after an outbreak of St. Louis encephalitis occurred in Michigan and seeks to protect the health and quality of life of county residents from disease and annoyance caused by mosquitoes. Bay County residents enjoy spending time outdoors each summer, but the presence of mosquitoes can interfere with outdoor recreation. Bay County Mosquito Control tries hard, therefore, to reduce mosquito numbers so residents can enjoy Michigan's all-too-short summer.



## 1 Aerial Larviciding (April)

Early spring mosquitoes develop quickly in flooded woodlots as the weather begins to warm. Aerial larviciding is the use of aircraft to apply mosquito control products to standing water to control mosquito larvae. Airplanes will treat during daylight hours from 7:00am-7:00pm when weather conditions permit. The airplanes will apply a material called *Bti*, which is a naturally occurring soil bacterium. When eaten by mosquito larvae, their stomach cells dissolve causing death within 24 hours. *Bti* won't harm humans or other animals including fairy shrimp, frogs, fish, or honeybees. Nearly 50,000 acres of woodlots are treated each spring, which is a considerable component of the entire program.

## 2 Larviciding (May-Sept.)

As temperatures begin to warm, the program shifts focus to routine surveillance to find and control mosquito larvae and pupae in breeding habitats to limit adult mosquito emergence. Efforts directed at larval control are accomplished using bacterial, chemical, or sanitary methods. When possible, containers are turned over to get rid of standing water. Over 10,000 site inspections are conducted each summer to locate and reduce mosquito breeding. Habitats that are monitored include rain barrels, catch basins, ponds, tires, flooded fields and woodlots, ditches, and county drains.

## 3 Adulticiding (May-Sept.)

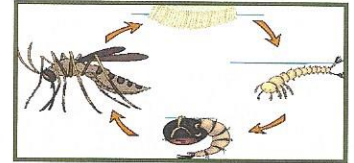
While larval control is the preferred method of treatment, it is virtually impossible to find and treat all breeding sites, so adulticiding (fogging to control adult mosquitoes in flight) is part of the Integrated Mosquito Management program. Ultra Low Volume (ULV) equipment mounted on trucks allows a small amount of material to be dispensed to control adult mosquitoes. Route maps are also utilized so efficient routes are followed and all county roads are treated without skips or over-treatment.

## 4 Biology Department

All operations are guided by biological surveillance of both larval and adult mosquito populations. Treatments are based on trapping and dipping information, which guide technicians to areas of most concern. Disease surveillance is also conducted to monitor for mosquito-transmitted diseases in Bay County.

### Mosquito Life Cycle

Mosquitoes are aquatic insects with four life stages—egg, larva, pupa, and adult. Adult female mosquitoes feed on blood before they can lay eggs. Then they lay up to 200 eggs in damp soil or water. In the summer, it takes 7-10 days for a mosquito to complete the life cycle. The warmer the water, the more quickly the cycle is complete.



### Scrap Tire Drives

Two scrap tire drives are held annually to remove tire breeding sources from the environment. Bay County residents may bring up to 10 rimless passenger car or truck tires to the tire drive at no cost. No commercial businesses or agricultural tires are allowed.

### 2016 Bay County Data

- \* 35,021 female mosquitoes collected in traps
- \* 2 West Nile virus-positive mosquito samples
- \* 2 West Nile virus-positive wild birds
- \* 42 human cases of West Nile virus in MI with 2 fatalities
- \* 48,567 wooded acres treated for spring mosquitoes
- \* 12,616 larval site inspections
- \* 3,948 miles of roadside ditches treated
- \* 27,723 catch basins treated
- \* 20,327 miles fogged for adult mosquitoes



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