

# Vector Control Program

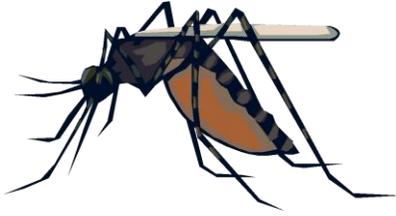


The objective of the City of Dickinson's Vector Control Program is to control nuisance mosquitoes, reduce the potential of mosquito-borne disease transmission and provide a comfortable healthy atmosphere for community residents. The City accomplishes this task by using an Integrated Pest Management plan of attack. Integrated Pest Management is the combining of appropriate pest control tactics into a single strategy to reduce pests to an acceptable level.

Conducting field studies and monitoring abundance, distribution and life stages of mosquitoes as related to effective treatments. Develop and conduct an effective mosquito larvicide program, while maintaining accurate records to the requirements of Pesticides to Waters of the State of North Dakota Department of Health, Water Quality Division.

The Vector Control Program monitors adult mosquito populations via a trapping network to enable a proactive response to suppress vector mosquito populations prior to a public health emergency outbreak. This enables a decline in overall mosquito populations to an acceptable "annoyance level" at the least cost, and with the least possible impact on the people and natural environment. The Vector Control Program employs trained field and surveillance technicians who observe constant changing mosquito populations to enable quick response to variations of weather. The variability of North Dakota climate comes as no surprise, seasonal fluctuation in temperature and precipitation alters the production rate and the abundance of mosquitoes.

Culex mosquitos are opportunistic when searching for an aquatic habitat to deposit eggs, therefore, increasing the challenge for mosquito control technicians to locate potential breeding sites. When water is sparse mosquitos will select smaller habitats and may increase migration distance in search of habitats. An aggressive larvicide program targets mosquito larvae in standing water areas. Larval mosquito control through bacterial bio-rational products has become the cornerstone of mosquito control programs throughout the world. When used properly successful control without impact to aquatics, fish, mammals, and humans can be achieved. Larvacides give vector control 95% mortality rate on mosquito larvae.



Adult mosquitos can come from unknown unidentified sites or may migrate in from uncontrolled areas. The Vector Control Program available data from New Jersey light traps, data from daily counts determine if adulticide applications are necessary. Culex Tarcalis mosquitos a known vector of West Nile Virus may also determine an adulticide applications. The Culex mosquito is most aggressive at the beginning of July each year. Adulticide application is a method of last resort, using mosquito spray to kill large numbers of adults as they fly and feed, trying to kill them before they have a chance to lay eggs. All adult mosquito control is accomplished by using calibrated ultra low volume (ULV) equipment and performed at dusk. These treatments take place in the evening when mosquitos are flying in greater numbers and other activity is reduced. Using this application technique, the overall goal of minimal environmental impact and effective adult control is achieved in the targeted area. The ultra low volume spray equipment is mounted on a truck spraying neighborhoods and recreational areas. None of these methods are effective by themselves, but need to be combed to attack every stage of the mosquito life cycle. Otherwise, no matter how many bugs the crews kill, there would be millions more waiting to take their place.

- Dispose of old tires, any other container that hold water
- Don't allow water to accumulate on the base of flower pots or pet dishes for more than a few days. Clean your dog dishes regularly.
- Clean debris from rain gutters and remove any standing water on patios or flat roofs
- Check around air conditioners, repair leaks or puddles that remain several days
- Change water in bird baths and wading pools at least once a week
- Removal tall weeds and grass in yard to eliminate the mosquito favorite resting places.

### **MOSQUITO AWARENESS**

#### **West Nile Virus – Who is at Risk?**

- People over the age of 50
- Young children

Those with conditions that compromise the immune system may have more severe symptoms

**Reduce your odds of West Nile Virus by:**

- Wearing protective clothing
- Using repellants containing EPA-registered active ingredient

For More Information, check out the following PDF document regarding the life cycle of mosquitos.