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MMCD F.A.Q.



Most Frequently Asked Questions

- 1
- Will that stuff you’re using hurt me (or my kid, dog, cat, ducks, fish, trees, lawn, garden, etc)?

In general, the answer is no. Our two larvicides, Bti and methoprene, pose no danger to people, pets, or wildlife, even if they drink the water. Of course, for safety we want the kids and animals to stay clear while we are making a treatment. People may be concerned that because we are killing mosquito larvae and adults, we might be depriving wildlife such as ducks and bats of their food. Animals such as ducks and bats do not rely on a single source of food, and will frequently switch diets during the year as different foods become plentiful.



As for adult mosquito spraying, the pyrethroids used by MMCD pose no measurable health risk to humans and animals, but are toxic to fish and bees. This is why we do not spray near water or blooming crops. Permethrin is only applied to dense vegetation where mosquitoes rest during the day, and resmethrin is applied as a fog during the evening when mosquitoes are active but bees are not. All of our materials are registered for use in Minnesota and are among the safest available. As professional applicators we take pride in only making a treatment when necessary, following label directions, and minimizing the potential impacts on non-target species. We live in



Jobs at MMCD



Latest Updates on X



Helicopter Activity



District Maps

this area and enjoy the outdoors too, so we take a personal as well as professional interest in protecting the environment.

2 Can you spray my yard?

The District does not spray private property unless there is the threat of mosquito-borne disease in the area. We may spray a property if the mosquito numbers are extremely high and the treatment will benefit more than one household. All treatment is performed at the discretion of MMCD.

Residents can find a private applicator in their county using the MN Department of Agriculture's Pesticide Applicator Search.

3 Do you work for the DNR or the state? Who oversees you?

Neither. We are a local government agency that serves the entire seven county metro area. We are a special taxing district funded by property taxes collected entirely within our service area. We are overseen by a board of 18 county commissioners who represent the entire seven county area we service. We also have an independent group, our Technical Advisory Board, which reviews our control programs on a yearly basis. Members of this board are from the US EPA, US Fish & Wildlife, MN DNR, MN Department of Agriculture, and other public/private organizations.

Treatment Materials

Where can I buy those control materials?

Our control materials and formulations are designed for use by professional applicators and are quite expensive. Bti is available in various forms at home and garden or farm supply stores. We strongly recommend that citizens contact MMCD first to evaluate their wetlands for mosquito breeding potential. Not all wetlands produce mosquitoes, and treating one small site in your yard won't do much good if there are other untreated breeding sites nearby.

What about using (bats, birds, citronella plants, bug zappers, etc) to control mosquitoes?

Ultraviolet (black light) electric traps, or bug zappers, are not effective in reducing mosquito annoyance. One study found that mosquitoes comprised only 6.4% of the insects in a five day catch, and only about half of the mosquitoes killed were blood-feeding females. Furthermore, these traps kill large numbers of non-pest insects such as beetles and moths. These insects are beneficial as part of the food chain, and some are natural biological controls on other insect pests. Devices that claim to repel mosquitoes using high-frequency sound waves are ineffective. Numerous studies have shown that these products have little or no effect on mosquitoes. Citronella plants also have not been proven to effectively repel mosquitoes. Many people believe that erecting purple martin and bat houses will reduce mosquito populations. However, in-depth studies have shown that mosquitoes comprise no more than 0 to 3% of the diet of purple martins. Likewise, bats are opportunists and will eat a variety of insects. They may eat mosquitoes but will also prey on beetles, moths, leafhoppers, wasps, flies, mayflies, and grasshoppers. They will most likely feed on whatever is most numerous and easiest to catch, and if necessary will travel far from their roosting sites in search of prey. Martins and bats will consume mosquitoes, but are not likely to significantly reduce the population. They should be protected and encouraged because they are interesting residents of the natural environment, not because of their ability to control pest populations.

Services and Residents

What are your helicopters doing? What are they dropping?

We use helicopters to treat large wetlands that we can't treat by ground. Our helicopters never drop liquid chemicals; our primary treatment materials, methoprene and bti, pose no significant health risk even when ingested. [Read more about helicopter activity here.](#)

Do I have to pay for your services?

Technically, yes. Our funding comes entirely from our status as a special taxing district, and no additional charge is made for any of our services. As of September 2024, we estimate that an average household pays \$10.79 per year for mosquito control.

I don't like what you're doing. Can I say no?

Yes, you can say no. We do have the authority to enter private property to respond to the threat of mosquito-borne disease, but the District has rarely had to invoke this authority. We can also provide a variety of special responses for citizens. For example, we may be able to establish a buffer around a residence where someone has an allergy to aerosols, or we can notify them before we use the helicopter near their property. If you have questions or concerns, call the Main Office at 651-645-9149.

Why don't you do more where I live?

MMCD has divided the Metro Area into two "priority zones." Priority Zone 1 encompasses most of the population; Priority Zone 2 is the less populated area surrounding Zone 1. As a public health organization, we prioritize our limited resources to reach the areas with the greatest population density first. We periodically adjust the zone boundaries to keep up with changes in population. For specific information about what's being done around your property, call the Main Office at 651-645-9149.

What can I do around my house (or cabin) to keep the mosquitoes down?

Consult our [Resident's Guide](#).

West Nile Virus

Should I be worried about West Nile Virus?

West Nile Virus (WNV) is transmitted by mosquitoes, and by the end of 2004 it had spread over much of the country. It was detected in Minnesota for the first time in 2002. In 2003 there were 148 human cases of WNV in Minnesota, with four deaths, and in 2004 there were 34 human cases with no deaths. As of the end of 2013, 2,374 cases of West Nile illness had been reported to the CDC. Seventy-nine of those were Minnesota cases, three of which were fatal. Most people who are infected will not experience any symptoms, or may experience flu-like symptoms (West Nile fever) and then recover. In rare cases, the virus may cause West Nile encephalitis with severe symptoms requiring hospitalization. While WNV can affect anyone, risk increases with age. People over 50 are at higher risk to develop serious symptoms. WNV is here to stay, and MMCD and the Minnesota Department of Health are prepared to do surveillance for the virus and to respond in the event of an outbreak. There is still much to learn about WNV, and we are working in cooperation with agencies and research facilities across North America to find out the best way to deal with it. There is a vaccine available for horses, and we recommend that horse owners consult with their veterinarian. People can reduce their risk of infection simply by reducing their exposure to mosquito bites.

Tick Surveillance

Can MMCD do anything about ticks?

There is currently no wide-scale economical and environmentally sound way to control ticks. There are repellants for humans and your veterinarian or farm supply store can recommend repellants for animals. Repellants, wearing light-colored clothing, and avoiding their habitat are the best way for people to avoid ticks. MMCD monitors deer ticks in the metro area, advises homeowners on landscaping and small scale tick control techniques, helps educate the public about Lyme disease, and offers free tick identification, but we don't control deer ticks.

How can I control ticks in my own yard?

Reducing excess brush and cutting tall grass are the main ways to reduce tick activity in your yard. MMCD Public Affairs and Tick Services are currently working on a guide to reduce ticks on homeowner property, or "tickscapeing".

Tick-Borne Disease, Lyme Disease

What tick species transmit disease?

The deer tick is the primary tick that transmits disease in Minnesota. Deer tick habitat is woods and brush. The wood tick (also known as the American dog tick) is primarily a pest, although it does transmit disease in other US states. Wood tick habitat is tall grass. The other MN tick species generally don't use humans as a host.

What are the symptoms of Lyme disease?

A rash, sometimes called a "bull's eye" rash, can appear 3-30 days after a person is infected. The rash doesn't appear in every case. Headache, fever, chills, fatigue, and muscle and joint pain can also be symptoms of early Lyme disease infection. If left untreated, early symptoms usually disappear. Later, more serious symptoms like arthritis, brain impairment, irregular heart beat, and persistent fatigue can appear.

Is Lyme disease treatable?

Yes. Early treatment with antibiotics is effective in preventing damage from Lyme disease. Later stage Lyme disease can also be treated, but early detection and treatment is simpler. See your doctor if you suspect you have become infected.

If a deer tick bites me, will I catch Lyme disease?

Not necessarily. Quickly finding and removing the deer tick is a key to preventing Lyme disease. Ticks must remain attached for at least 24 hours before they can infect you, and not all deer ticks carry the bacteria.

What other diseases can deer ticks spread?

Although Lyme disease is more common, deer ticks can also spread human granulocytic anaplasmosis and babesiosis. Read more at our [Diseases to Know](#) page.

Black flies

How does MMCD control blackflies?

A video can be found on our [Black Fly Control webpage](#) which details MMCD's approach to black fly control.

Do black flies transmit West Nile Virus?

There has been no documentation of black flies transmitting West Nile Virus to date. Black flies can transmit a disease of filarial worms, onchocerciasis, which causes blindness in people in Mexico, Central America and Africa. In addition, black flies can transmit leucocytozoonosis, a protozoan parasite, to domestic and wild birds. However, **black flies are not known to transmit any diseases in the state of Minnesota.**

How many species of black flies are there?

At last count, 1,912 species of black flies have been formally described world wide, 257 in North America. In Minnesota, 30 species have been documented.

**Contact Information**

Metropolitan Mosquito Control District
2099 University Ave. W
Saint Paul, MN 55104

📞 (651) 645-9149
✉️ mmcdmosq@mmcd.org

Connect With Us

E-Mail Updates: Get customized treatment alerts for your area or sign up for the latest mosquito news!

✉️ [Sign Up for E-Mail Updates](#)



Mosquito Control

Mosquito Prevention & Control Plan

The City of Brookings' Mosquito Control Program is integrated within the [Street Department](#). Our mission is to control mosquito larvae within the City of Brookings and the outlying areas. This includes approximately 13.25 square miles in the City and approximately a one-mile buffer around the city limits. Our goal is to keep the nuisance problem and the West Nile virus threat as low as humanly possible. This is done through the identification, mapping and treatment (larviciding) of potential mosquito breeding grounds such as standing water, tall slough grasses, wooded areas, bike paths, walking trails, soccer fields, softball fields, drainage ditches, tire piles and catch basins.

Habitat & Breeding Sites

CO2/light traps are used for monitoring mosquito populations and establishing a threshold for adulticiding. The traps are circulated along high traffic areas such as city parks, bike trails, softball fields, and other potential mosquito habitat and harborage areas.

Locations of larval and adult mosquito populations and breeding sites are recorded and targeted as needed. All control efforts are recorded by date, time, treatment substance used, wind direction, wind velocity, etc.

Source Reduction

We are continually improving drainage in our geographic area by reshaping right-of-way ditches and filling low land areas. The Street Department works cooperatively with the [Brookings Municipal Utilities Department](#) by contracting its sewer vacuum truck to clean culverts and catch basins. The Brookings Regional Landfill also holds an annual Spring Cleanup for Brookings residents. Labor and equipment are pooled from several city departments, including the Street Department.

Larval Control

Methods used for larval control are: spraying standing water, treating remote wetlands with 150-day briquettes or 30-day pellets and treating catch basins with pellets to control breeding sites.

Control of Adult Mosquitoes

The trails and parks are treated, as needed, using a mist blower for a barrier treatment. Other areas are treated similarly before any community event when traffic is high. All pesticides are used strictly according to the product label.

Certification & Staffing

Our Mosquito Control Program consists of two full-time employees who dedicate 97% of their time from April through October to the program. Mosquito control personnel attend annual recertification classes, attend mosquito control seminars and work closely with the South Dakota State University (SDSU) Extension entomologist and SDSU Extension pesticide education coordinator.

Information on West Nile Virus

Information regarding the West Nile virus may be obtained from the following sources.

- [Centers for Disease Control and Prevention](#)
- [South Dakota Department of Health](#)

 Government Websites by [CivicPlus®](#)

Sharon Hanson

From: Paul Briseno <Pbriseno@cityofbrookings-sd.gov>
Sent: Tuesday, September 30, 2025 11:45 AM
To: Sharon Hanson
Cc: John Thompson
Subject: RE: mosquito control

Sharon,

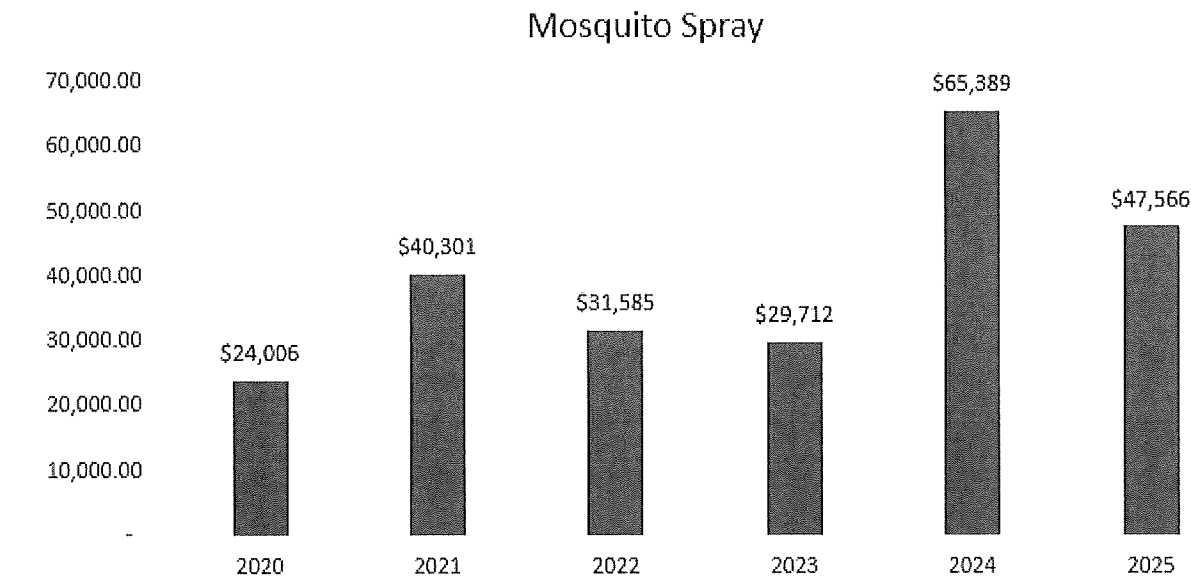
I've attached our five-year cost for our mosquito program, which only considers the chemical costs. Equipment costs are about \$40,000 each year. We dedicate 1.5 fte towards the summer process for those who are certified and trained. We utilize traps to indicate the approach necessary to address the growth. Staff works with SDSU for testing.

A budget amendment will increase the 2025 amount due to this summer's increased infestation.

Our community is fairly happy with the approach. John Thompson, our Public Works Director, is cc'd should you have additional questions.

You need to keep the state bird (mosquito) in Minnesota.

	2020	2021	2022	2023	2024	2025
Mosquito Spray	24,006.15	40,301.25	31,585.00	29,712.00	65,388.80	47,565.80



Paul M. Briseno

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I realize that my working hours may not be your working hours. Please do not feel obligated to respond outside your working hours.

The City of Moorhead's mosquito control methodology/approach toward the aerial application of pesticides balances environmental responsibility and the prevention of serious diseases such as West Nile Virus, which is transmitted to humans by mosquitoes. The symptoms of West Nile Virus range from none to deadly.

Protect Yourself with the Four D's

1. **Drain:** Mosquitoes breed in water. Drain any standing water in your yard each week. Bird baths, clogged gutters, and kiddie pools are common breeding sites.
2. **Dress:** Wear lightweight, long-sleeved shirts and long pants while outdoors. Spray clothing with insect repellent since mosquitoes may bite through clothing.
3. **Defend:** Apply insect repellent sparingly to exposed skin. Use an approved repellent according to its label. [Find the repellent that is right for you.](#)
4. **Dawn/Dusk:** Limit time spent outdoors at dusk through dawn, when mosquitoes are most active and feeding.

Cass County Vector Control (the City of Moorhead's mosquito control contractor) utilizes several key metrics to determine if aerial spraying will be recommended, including the prevalence of West Nile Virus. The following information gives a more in-depth look at some of these metrics and how property owners can opt out of spraying.

Trap Counts

Vector Control uses data from 40 different trap sites in Cass and Clay counties to determine if there is a need to spray for adult mosquitoes. When the threshold is hit and if weather conditions are appropriate, they can recommend aerial spraying.

Current Trap Counts

Mosquito Spraying Alerts

In the event that Moorhead decides to spray for mosquitoes, you can [sign up](#) for eNotifications.

Check Spraying Schedule

Interactive Mosquito Surveillance & Control Map

The City of Moorhead's mosquito control contractor, Vector Control, has an interactive mosquito surveillance and control map.

[View Map](#)

Apply To Opt Out Of Spraying

Property owners can request to opt out of spraying operations. To apply, select the **Ground Spraying Exemption Request** option and enter your address and contact information.

[Apply to Opt Out](#)

Cass County Vector Control (CCVC) provides mosquito control services to the City of Moorhead.

The services include larva control, sampling, trapping and testing. If West Nile Virus is found in mosquitos, animals or humans in our region, CCVC may recommend to utilize aerial application of pesticides to control the adult mosquito population in the metro area.

If CVCC recommends aerial spraying, Moorhead's Mayor, City Manager and Public Works Director will decide whether to follow the recommendation. The City of Moorhead's decision will be based on the presence of West Nile Virus in Cass and Clay counties. [View the April 14, 2025 City Council Meeting on this decision.](#)

The City of Moorhead will manage communications on mosquito issues from Moorhead residents and will also address Moorhead-specific media requests:

- Moorhead residents can direct questions/concerns to the City by submitting the [Mosquito Control Contact Form](#). This process will allow the City to have greater insight into residents' questions and determine areas of focus. The City and CCVC will also develop a consistent process for the City to share resident concerns and comments to CVCC.