



WARREN COUNTY MOSQUITO CONTROL COMMISSION
PO Box 388 ~ 2 Furnace Street
Oxford, New Jersey 07863-0388
Tel: 908-453-3585 Fax: 908-453-2662



Partner in USEPA Pesticide Environmental Stewardship Program

Dear Designated Responsible Official:

Every year, the Mosquito Commission sends each municipality an annual packet of information regarding our adult mosquito control program. This is required under the NJ Pesticide Regulations, NJAC 7:30-9.10 (e) 1.

The Warren County Mosquito Control Commission uses an Integrated Pest Management approach (IPM) to keep mosquito populations at a tolerable level and reduce the threat of mosquito-borne diseases. Our IPM approach includes public education, source reduction, water management, biocontrol, and public health insecticides. Most of the the Commission's efforts are aimed at the larval (immature, aquatic) stage of the mosquito since it is much more efficient to control them at this stage. However, sometimes it is necessary for the Commission to perform adult mosquito control. This is typically done using truck-mounted sprayers. **Area wide notification is required for any application of insecticide used for the control of adult mosquitoes to an area larger than 3 acres.** This notification is not required for applications of insecticides for larval mosquito control.

Insecticide applications for adult mosquitoes may be necessary in your municipality at some point during the upcoming year but this is impossible to predict. Therefore, this packet is being sent to every municipality, via mail and email. **Receipt of this packet does not verify that spraying for adult mosquitoes will actually take place.** When actual insecticide applications for adult mosquito control are planned, email notification will be sent to the municipal clerk address on file as a courtesy.

Included in this packet are 1) a NJ Department of Environmental Protection (NJDEP) approved Question & Answer sheet for the Warren County Mosquito Commission's program and 2) NJDEP developed/approved fact sheets for each pesticide that might be used in Warren County for the control of **adult mosquitoes** in the current year and 3) the proposed legal/display advertisement the Warren County Mosquito Commission will publish in Warren County newspapers during the current year. If another pesticide is to be used for which information is not included, information on that pesticide will be delivered to the municipality prior to the pesticide application as soon as possible after the decision is made to utilize that product.

Municipalities are encouraged to share this information with all residents in their community. This information will also be emailed for ease of sharing on websites and social media. If you have any questions, please feel free to call.

Sincerely,

Jennifer Gruener
Superintendent

JLG/caf
Enclosures

WARREN COUNTY MOSQUITO CONTROL COMMISSION

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www.warrencountymosquito.org



Pohatcong Township
Greenwich Township

Dear Designated Responsible Official:

Every year, the Mosquito Commission sends each municipality an annual packet of information regarding our adult mosquito control program. This is required under the NJ Pesticide Regulations, NJAC 7:30-9.10 (e) 1.

The Warren County Mosquito Control Commission uses an Integrated Pest Management approach (IPM) in order to keep mosquito populations at a tolerable level and reduce the threat of mosquito-borne diseases. Our IPM approach includes public education, source reduction, water management, biocontrol, and insecticides. The majority of the Commission's efforts are aimed at the larval (immature, aquatic) stage of the mosquito since it is much more efficient to control them at this stage. However, sometimes it is necessary for the Commission to perform adult mosquito control using truck-mounted sprayers. **Area wide notification is required for any application of insecticide used for the control of adult mosquitoes.** This does not include applications of insecticides for larval mosquito control.

Insecticide applications for adult mosquitoes may be necessary in your municipality at some point during the upcoming year but this is impossible to predict. Therefore, this packet is being sent to every municipality, via mail and email. **Receipt of this packet does not verify that spraying for adult mosquitoes will actually take place.**

This year, Hunterdon County is planning on controlling Black Fly populations on portions of the Musconetcong River that border Pohatcong and Greenwich Townships in Warren County. Information is enclosed.

Included in this packet are 1) a NJ Department of Environmental Protection (NJDEP) approved Question & Answer sheet for the Warren County Mosquito Commission's program and 2) NJDEP developed/approved fact sheets for each pesticide that might be used in Warren County for the control of **adult mosquitoes** in the current year and 3) the proposed legal/display advertisement the Warren County Mosquito Commission will publish in Warren County newspapers during the current year, 4) Hunterdon County's Black Fly Biology and Control sheet, 5) Hunterdon County Bti Fact Sheet for black fly control. If another pesticide is to be used for which information is not included, information on that pesticide will be delivered to the municipality prior to the pesticide application as soon as possible after the decision is made to utilize that product.

Municipalities are encouraged to share this information with all residents in their community. This information will also be emailed for ease of sharing on websites and social media. If you have any questions, please feel free to call.

Sincerely,

Jennifer Gruener
Superintendent

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Enclosures

SAMPLE AD

The following ad will be published by the Warren County Mosquito Commission

The following notice includes the proposed language (without the specific application dates but covering a period from May into October) to be published regularly in at least two newspapers distributed within Warren County, in one newspaper as a legal ad and in the other as a display ad.

PUBLIC NOTICE

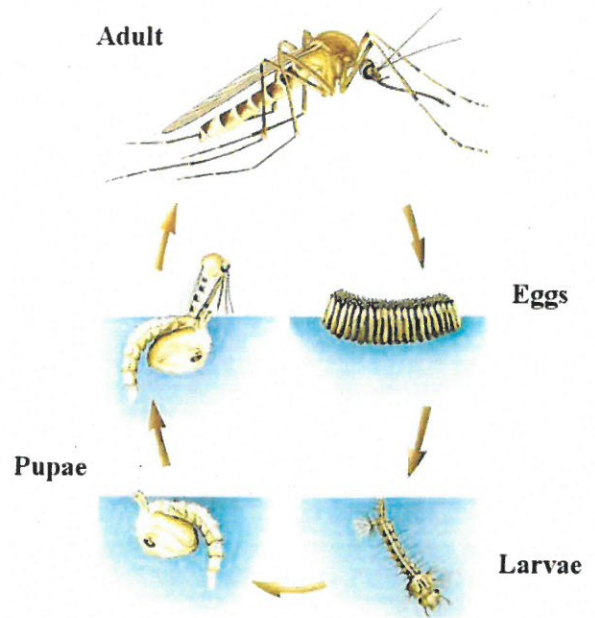
In compliance with Subchapter 9-9.10 of the NJ Pesticide Control Code (N.J.A.C. Title 7, Chapter 30), notice is hereby given that the **Warren County Mosquito Extermination Commission, PO Box 388, 2 Furnace Street, Oxford, NJ 07863**, will be applying Zenivex (active ingredient Etofenprox), DeltaGard (active ingredient Deltamethrin), Merus (active ingredient Pyrethrins), or Fyfanon (active ingredient Malathion) by truck mounted ULV (Ultra Low Volume) sprayer or by aircraft for the control of adult mosquito populations on an area wide basis, as needed, throughout the County of Warren, during the period from (*starting date*) through (*ending date*). For additional information on adulticiding activities contact Jennifer Gruener, Superintendent (pesticide applicator license #25339B) at **908-453-3585**. Call the NJ Poison Information & Education System 800-222-1222 for emergencies, the National Pesticide Information Center 800-858-7378 for routine health inquiries and to obtain information about signs and symptoms of pesticide exposure. Call NJ DEP Bureau of Pesticide Compliance and Enforcement 609-984-6568 for pesticide regulation information, pesticide complaints and health referrals. Upon request, the pesticide applicator or applicator business shall provide a resident with notification at least 12 hours prior to the application, except for Quarantine and Disease Vector Control only, when conditions necessitate pesticide applications sooner than that time. The Commission's website, www.warrencountymosquito.org provides updated information on time and location of application(s).

WARREN COUNTY MOSQUITO EXTERMINATION COMMISSION

MOSQUITOES...WHAT EVERYONE SHOULD KNOW Questions & Answers

What is the life cycle of mosquitoes?

Mosquitoes have four stages of development - egg, larva, pupa, and adult. They spend all stages in water, except the adult stage. Some female mosquitoes deposit eggs on moist surfaces, such as, mud or fallen leaves. Rain re-floods these surfaces and stimulates the hatching of the eggs, starting the life cycle. Other mosquito species lay their eggs on permanent water and, since the water is constant, there are always eggs hatching and larvae developing. Mosquitoes take approximately one week to develop from egg to flying adult. After emerging from the aquatic stages, adult mosquitoes mate. Then, only the females seek a blood meal to obtain the nutrients necessary for egg development. Adult male mosquitoes feed on plant nectar and die shortly after mating. While various species differ, the average life expectancy for adult mosquitoes is 4-6 weeks.



How many kinds of mosquitoes are there?

In Warren County, there have been 47 different species documented out of the 64 species found in the state of New Jersey. The newest species to be added to the county list was in 2021.

What human diseases do mosquitoes cause?

Mosquitoes transmit numerous diseases to humans, but thankfully there are only a few that are transmitted locally. West Nile virus is a mosquito-borne virus that can cause encephalitis but more commonly presents as flu-like symptoms. The primary vector is a mosquito commonly found around homes in container-type habitats. La Crosse encephalitis, although rare in this area, is a form of encephalitis occurring almost exclusively in children. This disease is transmitted primarily by mosquito species that also develop in tires and other containers that are often found around the home. Jamestown Canyon virus is also transmitted by the bite of an infected mosquito but rarely causes severe disease.; common symptoms are fever, headache, and fatigue but severe cases can cause inflammation of the brain. Eastern equine encephalitis (EEE) is also transmitted by mosquitoes and affects humans but is rare in the northwestern part of New Jersey.

What animal diseases do mosquitoes cause?

Dogs and horses are also targets for mosquito-borne diseases. Dog heartworm is a serious threat to your pet's life and is costly to treat once it is contracted through the bite of an infected mosquito. Preventative medication can be obtained through your veterinarian. Also, West Nile virus and EEE pose a serious threat to horses; therefore, an effort should be made to limit your horse's exposure to mosquito bites. A vaccine for horses for both West Nile virus and EEE is available; your veterinarian can provide more information. Additionally, West Nile virus has also been responsible for the death of numerous birds, particularly in the wild bird population.

What is the Mosquito Commission and what does it do?

The Warren County Mosquito Commission was established on October 18, 1956, with a mission "to control mosquito populations that present a disease and/or nuisance threat, thereby protecting the health and welfare, as well as the outdoor enjoyment, of the residents of Warren County. The commission is composed of seven members, at least three of which have experience on a Board of Health and employs a staff of well-educated and highly trained mosquito control professionals.

The Commission's activities are guided by a comprehensive surveillance program, which directs control efforts to where populations of mosquitoes, which pose a disease and/or nuisance threat, exist. Emphasis is placed on the elimination of mosquito-breeding habitat and the control of mosquitoes when they are still in the aquatic stages of their development.

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What are the winter activities of the Commission?

The seasonal control operations start in February with the hatching of snow pool mosquito species and continue into October, when a heavy frost usually occurs. Water management activities are conducted year-round. Follow-up record keeping on the season's mosquito activity at the 1,400+ breeding sites continues beyond the active mosquito season. The inspection routes are revised after additions/deletions of breeding sites. New sites, where the breeding source was not apparent due to the presence of heavy vegetation in the summer, are inspected after the foliage falls for a clearer view of the area. Breeding sites that are difficult to access are kept clear with brush clearing. Leaf dams are cleared from drainage to keep water flowing. Site evaluation occurs to target sites for fish stocking or water management potential. Every spring, registered beehive locations are verified to avoid exposure to honeybees during our adult mosquito control applications. Appropriate permits are pursued for water management projects. The equipment is maintained and ready for the upcoming mosquito season. Educational presentations on mosquito biology and control are made at schools, civic groups, and other public events throughout the year.

What control efforts are utilized by the Commission?

The Commission uses an Integrated Pest Management (IPM) approach to control mosquitoes with surveillance as the base of all that we do. IPM combines various methods of control including public education, source reduction, water management, biological control, and public health insecticides, when necessary. Control efforts focus primarily on the larval (immature, aquatic) stage of the mosquito. The larvae cannot escape control measures and are more concentrated and accessible than the adult mosquitoes, which disperse after emerging. The primary insecticide used to control the immature stage is a biological pesticide, which is a bacterial larvicide (*Bti*), which specifically targets mosquitoes. When mosquito larvae ingest the *Bti*, the high pH of the mosquito gut releases the toxins from the larvicide, which then kills the larvae. Mosquito fish (*Gambusia affinis*), and other fish species that consume mosquito larvae, can be stocked at roughly 15% of our sites as a biological control method. These fish are raised by the NJ Division of Fish, Game & Wildlife in Hackettstown as part of the State Mosquito Control Commission's bio-control program. Another control method is water management/source reduction projects, which control mosquitoes by eliminating the standing water. Hand labor and/or heavy equipment are utilized, and Best Management Practices for Water Management on Freshwater Wetlands are followed. As part of source reduction, proper tire disposal is encouraged, and the commission actively participates in tire collections programs with the county. As a final line of defense, a treatment for adult mosquitoes may be applied by truck-mounted sprayer if a significant mosquito population exists. All pesticide applications comply with guidelines published by Rutgers University and regulations set by NJ Department of Environmental Protection.

What pesticides are used to control mosquitoes in Warren County?

The majority of the pesticides used are products to control mosquito larvae in the water, some of which are applied by aircraft. Also, it is sometimes necessary to use insecticides to control adult mosquitoes. For more information regarding the pesticides which may be used for adult mosquito control, please refer to the accompanying NJ Department of Environmental Protection approved Fact Sheets. All pesticides are applied by licensed pesticide applicators/operators.

What can I do to help as a homeowner?

- Eliminate standing water on your property. Any container holding water is a potential mosquito-breeding source and is likely to cause problems around your home. Clean up clogged rain gutters and unused tires as both tend to collect leaves, then fill with water and provide very attractive sites for mosquitoes to breed. Since these containers are watertight, they dry out very slowly. Remove or overturn containers, if possible, and items such as dog water bowls and birdbaths should be emptied and refilled at least once a week.
- Small depressions in your yard can be filled to prevent the collection of water. If larger wet areas exist on your property, bring them to the attention of the Mosquito Commission personnel.
- Keep adult mosquitoes out of your home by securing window and door screens. Make sure they are properly fitted, and holes are patched to prevent mosquitoes from entering the house.
- A wide variety of repellents are available to provide relief from mosquitoes and other insects. Most repellents contain the same active ingredient, only the percentages vary. The repellents are effective, but caution should be used and directions followed carefully.

What do I do if there are adult mosquitoes or possible breeding areas around my home?

If mosquitoes present a problem in your area, contact the Commission office at (908) 453-3585. Our staff will investigate your call promptly. Each area is inspected to verify the presence of adult mosquitoes. The area of complaint is also searched to locate the source(s) of the problem and control the mosquitoes in their immature stages. Spraying for adult mosquitoes may be carried out as soon as possible if warranted based on the number and species of mosquitoes present (considering their disease or nuisance potential).

Where can I get more information? www.warrencountymosquito.org

WARREN COUNTY MOSQUITO CONTROL COMMISSION

"Zenivex"

Municipalities are encouraged to share this information with all residents in their community

This Fact Sheet answers some basic questions about mosquito control products in use in your County. The Warren County Mosquito Commission, along with several other resources (listed at the end of this sheet), can provide more detailed information.

What is *Etofenprox* and how is it used?

*Zenivex*TM contains a pesticide called Etofenprox, a member of the category of pesticides called *non-ester pyrethroids*, which are synthetic versions of pesticides produced by plants called pyrethrins. Traditional pyrethroid/piperonyl butoxide mixtures are recommended for Ultra-Low-Volume (ULV) mosquito control in New Jersey by Rutgers, The State University of New Jersey. *Zenivex*TM is a non-ester pyrethroid, and therefore does not require a synergist such as piperonyl butoxide. The U.S. Environmental Protection Agency (EPA) has classified Etofenprox as a reduced risk molecule. It poses a low risk to human health and the environment when used properly as part of an integrated mosquito control program. As formulated in *Zenivex*TM adulticide, Etofenprox is considered a non-carcinogen, non-teratogen and non-mutagen.

This non-ester pyrethroid-containing product is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in water are preferred and most used, the spraying of adult mosquitoes is necessary when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective.

How can I reduce my exposure to Etofenprox?

Because of the very small amounts of active ingredients released per acre, the risk to the general public from the use of non-ester pyrethroid-containing products is minimal. Avoiding exposure is always the safest course of action. Any possible exposure risk can be reduced by following some common sense actions:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages, or distributed by municipal, county or state agencies.
- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Move your pets, their food, and water dishes inside during ULV applications. Also bring clothing and children's toys inside.
- Stay away from application equipment, whether or not it is in use.
- Whenever possible, remain indoors with windows closed, window air conditioners on non-vent (closed to the outside air), and window fans turned off during spraying.
- Avoid direct contact with surfaces still wet from pesticide spraying. Do not allow children to play in areas that have been sprayed until they have completely dried (approximately one hour).

- If you must remain outdoors, avoid eye and skin contact with the spray. If you get spray in your eyes or on your skin, immediately flush and rinse with water.

What are the symptoms of exposure to Etofenprox?

Symptoms of over-exposure can include irritation to skin and eyes. The chance of experiencing these symptoms of over-exposure with proper use is low. You should contact your physician, other medical providers, or the New Jersey Poison Information and Education System (NJPIES) at 1-800-222-1222 if you experience these symptoms following a pesticide spraying.

How long will Etofenprox last in the environment?

The non-ester pyrethroid in Etofenprox has a half-life of 1.7 days in water and 4.4 days in soil. The Etofenprox molecule rapidly degrades in sunlight at the soil and water surface into its constituent elements Carbon, Hydrogen, and Oxygen.

Where can I get more information on this adulticide?

The following are resources for more information regarding Etofenprox and mosquito control in your area (unless otherwise noted, available during normal business hours):

For overall pesticide-specific information – 9:30am to 7:30pm:

National Pesticide Information Center **800-858-7378**

For pesticide health information & possible exposures – 24 hours:

New Jersey Poison Information & Education System **800-222-1222**

For New Jersey pesticide regulation & misuse complaints:

NJDEP Bureau of Pesticide Compliance & Enforcement **609-984-6568**

For Federal pesticide regulation:

USEPA Region 2 Office of Pesticide Programs **877-251-4575**

For statewide mosquito control information:

NJDEP Office of Mosquito Control Coordination **609-292-3649**

For local mosquito control information:

Warren County Mosquito Control Commission **908-453-3585**

For local health information:

Warren County Health Department **908-475-7960**

For mosquito control recommendations:

Rutgers University, Department of Entomology **848-932-9437**

Spraying for adult mosquitoes is a last resort. Most mosquito control work goes on "behind the scenes", using water management, fish, and products to control immature mosquitoes in the water where they begin their life cycle. Controlling adult mosquitoes is more difficult because they are spread out and moving.

If you have questions about Zenivex or any other mosquito control related products or practices, please feel free to call the Warren County Mosquito Commission at (908) 453-3585, or visit our web site at www.warrencountymosquito.org

Municipalities are encouraged to share this information with all residents in their community

“Deltamethrin”

This Fact Sheet answers some basic questions about mosquito control products in use in your County. Warren County Mosquito Commission, along with several other resources (listed at the end of this sheet), can provide more detailed information.

What is Deltamethrin and how is it used?

DeltaGard® contains an insecticide called deltamethrin which is a Type II pyrethroid insecticide – a man-made molecule modeled after pyrethrins which are natural insecticides extracted from the chrysanthemum flower (*Chrysanthemum cinerariae folium*). As a class, pyrethroids are the most widely-used insecticides for controlling adult mosquitoes by professionals in the United States and traditionally recommended for Ultra-Low-Volume (ULV) mosquito control in New Jersey by Rutgers, The State University of New Jersey. Deltamethrin is the only single-active isomer pyrethroid adulticide which ensures consistent biological activity at low rates and does not require a synergist such as piperonyl butoxide. The U.S. Environmental Protection Agency (EPA) has classified deltamethrin as a reduced risk molecule. It poses a low risk to human health and the environment when used properly as part of an integrated mosquito control program. As formulated in DeltaGard® adulticide, deltamethrin is considered a non-carcinogen, non-teratogen and non-mutagen.

This Type II pyrethroid-containing product is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in water are preferred and most commonly used, the spraying of adult mosquitoes is necessary when biting populations reach critical levels or when a disease-causing agent is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide for effective control.

How can I reduce my exposure to deltamethrin?

Because of the very small amounts of active ingredients released per acre, the risk to the general public from the use of Type II pyrethroid-containing products is minimal. Avoiding exposure is always the safest course of action. Any possible exposure risk can be reduced by following some common sense actions:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages, or distributed by municipal, county or state agencies.
- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Move your pets, their food, and water dishes inside during ULV applications. Also bring clothing and children's toys inside.
- Stay away from application equipment, whether or not it is in use.
- Whenever possible, remain indoors with windows closed, window air conditioners on non-vent (closed to the outside air), and window fans turned off during spraying.
- Avoid direct contact with surfaces still wet from pesticide spraying. Do not allow children to play in areas that have been sprayed until they have completely dried (approximately one hour).
- If you must remain outdoors, avoid eye and skin contact with the spray. If you get spray in your eyes or on your skin, immediately flush and rinse with water.

What are the symptoms of exposure to deltamethrin?

Symptoms of over-exposure can include irritation to skin and eyes. The chance of experiencing these symptoms of over-exposure with proper use is low. You should contact your physician, other medical providers, or the New Jersey Poison Information and Education System (NJPIES) at 1-800-222-1222 if you experience these symptoms following a pesticide spraying.

How long will deltamethrin last in the environment?

The Type II pyrethroid deltamethrin has a half-life of 1-2 weeks in soil and is rapidly adsorbed by sediment in surface water. It is insoluble in water and is immobile in the environment. Deltamethrin is nontoxic to plants and residues are not present after 10 days.

Where can I get more information on this adulticide?

The following are resources for more information regarding deltamethrin and mosquito control in your area (unless otherwise noted, available during normal business hours):

For overall pesticide-specific information – 9:30am to 7:30pm:

National Pesticide Information Center **800-858-7378**

For pesticide health information & possible exposures – 24 hours:

New Jersey Poison Information & Education System **800-222-1222**

For New Jersey pesticide regulation & misuse complaints:

NJDEP Pesticide Control Program **609-984-6568**

For Federal pesticide regulation:

USEPA Region 2 Office of Pesticide Programs **732-321-6759**

For statewide mosquito control information:

NJDEP Office of Mosquito Control Coordination **609-292-3649**

For local mosquito control information:

Warren County Mosquito Control Commission **908-453-3585**

For mosquito control recommendations:

Rutgers University, Department of Entomology **732-932-9437**

For local health information:

Warren County Health Department **908-475-7960**

Spraying for adult mosquitoes is a last resort. Most mosquito control work goes on "behind the scenes", using water management, fish, and other products to control immature mosquitoes in the water where they begin their life cycle. Controlling adult mosquitoes is more difficult because they are spread out and moving.

If you have questions about deltamethrin or any other mosquito control related products or practices, please feel free to call Warren County Mosquito Control Commission 908-453-3585

WARREN COUNTY MOSQUITO CONTROL COMMISSION

Municipalities are encouraged to share this information with all residents in their community

"Merus 3.0"

This **Fact Sheet** answers some basic questions about mosquito control products in use in your county. The Warren County Mosquito Control Commission, along with several other resources (listed at the end of this sheet), can provide more detailed information.

What is Merus 3.0™ and how is it used?

Merus 3.0™ contains botanical insecticides called **pyrethrins**, a class of organic compounds extracted from *Chrysanthemum* flowers. Unlike most pyrethroids (the synthetic equivalent of pyrethrins that are more commercially available), **Merus 3.0™** does not contain additional chemical synergists such as piperonyl butoxide. **Merus 3.0™** is Organic Materials Review Institute (OMRI) listed and meets National Organic Program (NOP) standards for adult mosquito control in and around organic gardens, farms and crops. It poses a low risk to human health and the environment when used properly as part of an integrated mosquito control program. Pyrethrins are considered non-carcinogenic at exposure relevant to human use, and no data is available to indicate the product or any components present at greater than 0.1% are mutagenic or teratogenic.

Merus 3.0™ is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in water are preferred and most used, the spraying of adult mosquitoes is necessary when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective.

How can I reduce my exposure to Merus 3.0™?

Because of the very small amounts of active ingredients released per acre, the risk to the general public from the use of pyrethrin-containing products is minimal. Avoiding exposure is always the safest course of action. Any possible exposure risk can be reduced by following some common sense actions:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.
- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Move your pets, their food, and water dishes inside during ULV application. Also bring clothing and children's toys inside.
- Stay away from application equipment, whether in use or not.
- Whenever possible, remain indoors with windows closed and with window air conditioners on non-vent (closed to the outside air) and window fans turned off during spraying.
- Avoid direct contact with surfaces that are still wet from pesticide spraying. Do not allow children to play in areas that have been sprayed until they have completely dried (approximately one hour).

- If you must remain outdoors, avoid eye and skin contact with the spray. If you get spray in your eyes or on your skin, immediately flush and rinse with water.

What are the symptoms of exposure to Merus 3.0™?

Symptoms of over-exposure to pyrethrins can include irritation to skin and eyes, asthma-like symptoms, nausea, and vomiting. The chance of experiencing these symptoms of over-exposure with proper use is low. You should contact your physician, other medical providers, or the New Jersey Poison Information and Education System (NJPIES) at **1-800-222-1222** if you experience these symptoms following a pesticide spraying.

How long will Merus 3.0™ last in the environment?

In the presence of sunlight, pyrethrin 1 (a component of pyrethrins) has a half-life of 11.8 hours in water and 12.9 hours on soil surfaces. In the absence of light, pyrethrin 1 breaks down more slowly in water. Half-lives of 14 to 17 days have been reported. When water was more acidic, pyrethrin 1 did not readily break down. Pyrethrins that enter the water do not dissolve well but tend to bind to sediment. Half-lives of pyrethrin 1 in sediment are 10.5 to 86 days.

Where can I get more information on this adulticide?

The following are resources for more information regarding Merus 3.0 and mosquito control in your area (unless otherwise noted, available during normal business hours):

For overall pesticide-specific information – 9:30am to 7:30pm:

National Pesticide Information Center **800-858-7378**

For pesticide health information & possible exposures – 24 hours:

New Jersey Poison Information & Education System **800-222-1222**

For New Jersey pesticide regulation & misuse complaints:

NJDEP Bureau of Pesticide Compliance & Enforcement **609-984-6568**

For Federal pesticide regulation:

USEPA Region 2 Office of Pesticide Programs **877-251-4575**

For statewide mosquito control information:

NJDEP Office of Mosquito Control Coordination **609-292-3649**

For local mosquito control information:

Warren County Mosquito Control Commission **908-453-3585**

For local health information:

Warren County Health Department **908-475-7960**

For mosquito control recommendations:

Rutgers University, Department of Entomology **848-932-9437**

If you have questions about Merus 3.0 or any other mosquito control related products or practices, please feel free to call the Warren County Mosquito Commission at (908) 453-3585, or visit our web site at www.warrencountymosquito.org

WARREN COUNTY MOSQUITO EXTERMINATION COMMISSION

"Fyfanon"

This sheet answers some basic questions about a mosquito control product in use in your county. The Warren County Mosquito Commission, along with several other resources (listed at the end of this sheet), can provide more detailed information.

What is Fyfanon and how is it used?

Fyfanon is an insecticide product that is recommended for mosquito control in New Jersey by Rutgers, The State University of New Jersey. It contains the pesticide called "Malathion." The U.S. Environmental Protection Agency's (EPA) current evaluation considers **Malathion**-containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

Fyfanon is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in water are the preferred routine approaches, the spraying of adult mosquitoes is called for when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective.

How can I avoid exposure to Fyfanon?

Risk to the general public from the use of **Fyfanon** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by following some common sense actions:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.
- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Move children's toys out of application areas.
- Move animals and their food and water dishes out of application areas.
- Stay away from application equipment, whether in use or not.
- Whenever possible, remain indoors with windows closed and with window air conditioners on non-vent (closed to the outside air) and window fans turned off during spraying.
- Avoid direct contact with surfaces that are still wet from pesticide spraying. Do not allow children to play in areas that have been sprayed until they have completely dried (approximately one hour).

- If you must remain outdoors, avoid eye and skin contact with the spray. If you get spray in your eyes or on your skin, immediately flush and rinse with water.

What are the symptoms of exposure to Fyfanon?

Symptoms of exposure can include headache, nausea, dizziness, excessive sweating, salivation, excessive tearing and a runny nose. The chance of experiencing these symptoms of exposure with proper use is low. You should contact your physician, other medical providers or the New Jersey Poison Information and Education System (**NJPIES**) at **1-800-222-1222** if you experience these symptoms following a pesticide spraying. Bring this sheet with you if you visit a physician or other medical provider.

How long will Fyfanon last in the environment?

The **Fyfanon** spray stays in the air for a short time until it lands on surfaces. **Malathion** has a low persistence and lasts no longer than 25 days in water and soil. **Malathion** breaks down faster in sunlight.

Where can I get more information on Fyfanon?

The following are resources for more information regarding **Fyfanon** and mosquito control in your area (unless otherwise noted, available during normal business hours):

For overall pesticide-specific information – 9:30am to 7:30pm:

National Pesticide Information Center **800-858-7378**

For pesticide health information & possible exposures – 24 hours:

New Jersey Poison Information & Education System
800-222-1222

For New Jersey pesticide regulation & misuse complaints:

NJDEP Bureau of Pesticide Compliance & Enforcement
609-984-6568

For Federal pesticide regulation:

USEPA Region 2 Office of Pesticide Programs **877-251-4575**

For state-wide mosquito control information:

NJDEP Office of Mosquito Control Coordination **609-292-3649**

For local mosquito control information:

Warren County Mosquito Control Commission **908-453-3585**

For mosquito control recommendations:

Rutgers University, Department of Entomology **848-932-9437**

For local health information:

Warren County Health Department **908-475-7960**

Pohatcong & Greenwich Townships

Black fly biology and control in areas of Hunterdon and Warren counties

Larval/Pupal Surveillance

Some rivers in the northwest portion of New Jersey produce the pest black fly species, *Simulium jenningsi* (Diptera: Simuliidae). Rivers that have been identified as producing the target species, and this includes the Musconetcong River, are monitored from early April through October. Sampling for black fly larvae and pupae occurs in riffle areas or areas of fast flowing water where black fly immature stages are found. Collectors remove larvae from the habitat and preserve the specimens for identification in the laboratory. The samples are identified to the species level, and these results are used to assess the need for black fly control.

Treatment Decision Making

An integrated pest management (IPM) approach is used to evaluate the need for treatment. Hunterdon County staff examine a combination of factors before any river is treated with *Bti*. The species, number and age of the black fly larvae present, presence or absence of adult black flies in the area, the affected human population, the time of the season and the results of river monitoring are all part of the decision-making process. The overall intent is to keep adult populations of *S. jenningsi* below pest levels.

Location of Treatments

The specific location of river treatments will change depending on larval monitoring and river flows. If the population of black flies is sufficient to warrant control, treatments will occur. The point of application will vary based on the water velocity at the site. When river velocities are faster, the point of application is often as much a quarter of a mile upstream of the actual production area. At low velocities, the point of application is often within feet of the production area. This is necessary to achieve proper mixing and suspension of *Bti* in the water column. In very high flow conditions, treatment operations are suspended.

Timing of Treatments

The specific timing of applications considers several factors. These include larval populations, weather conditions, water flow and impact on river users. Every effort is made to limit the overall number of applications while still providing service to the public.

Pohatcong & Greenwich Townships

Hunterdon County Mosquito & Vector Control 2021 Fact Sheet

Products Used in Larval Black Fly Control

Vectobac® 12AS

What is Vectobac® 12AS and how is it used?

Vectobac® 12AS is a liquid formulation that contains the active ingredient *Bacillus thuringiensis israelensis* (Bti). Bti stands for the name of the bacteria of which certain components of these bacteria effectively control black fly larvae. Proteins from the bacteria are pathogenic to filter feeding black flies and these proteins comprise the active ingredient of Vectobac. Vectobac is applied to black fly larval habitat (generally rivers and streams) in either a concentrated or diluted fashion (mixed with water). The US Environmental Protection Agency's current evaluation considers Bti containing products to be practically non-toxic when used according to label instructions. Method of application is either by hand or truck mounted equipment.

How can exposure to Vectobac be avoided?

Although risk to the general public from use of this of this product is minimal, avoiding exposure is always the safest course of action. Because of the physical and chemical properties of Vectobac, generally the only health concern is associated with an allergic reaction to the bacteria. Residents should therefore take precautions to avoid direct eye and skin contact with Bti. Areas of the body that have come in contact with Vectobac can be washed with water. There are no specific categories of individuals who are more susceptible to problems associated with Bti; however, residents who perceive themselves at a higher risk for exposure to other products should take extra care to avoid direct contact with Bti. Such residents might include those who have general allergic reactions to a variety of other products, young children, and chronically ill individuals. Exposure can be reduced by keeping a distance from application equipment and avoiding immediate and direct contact with habitat that has been treated. Treatment information is routinely updated during the field season on the Hunterdon County website: <http://www.co.hunterdon.nj.us>. In addition, notices containing information about the use of Vectobac are periodically placed in newspapers in the Hunterdon region throughout the season.

What are the symptoms of exposure to Vectobac?

Direct exposure could cause mild irritation from eye and skin contact. These conditions could be aggravated by pre-existing skin or eye lesions and hypersensitivity. The chance of experiencing symptoms with diluted material when properly used is low. First aid procedure includes flushing exposed areas with copious amounts of water and seeking medical attention if irritation persists. Should symptoms persist, immediate medical attention is advised by either contacting a physician or by contacting the New Jersey Poison Information and Education System (NJPIES) at 1-800-222-1222

How long does Bti last in the environment?

Bti tends to breakdown quickly in the environment, primarily due to its susceptibility to heat and sunlight. Breakdown in water generally occurs within hours of use.

Where can more information on these products be found?

Numerous publications exist on the efficacy and environmental fate of Bti. Staff of the HCMVCP can provide examples of these upon request. The following resources can also be used to attain more information on Bti as it pertains to black fly control:

National Pesticide Information Center	800-858-7378
- For overall pesticide specific information (9:30 AM – 7:30 PM)	
New Jersey Poison Information and Education System	800-222-1222
- For pesticide health information and possible exposure (24 hours)	
NJ DEP Pesticide Control Program	609-984-6057
- For NJ pesticide regulation and misuse complaints	
US EPA Region 2 Office of Pesticide Programs	732-321-6759
- For federal pesticide regulation information	
Hunterdon County Division of Health	908-788-1351
- For pesticide information and information on local black fly control	