

HUDSON REGIONAL HEALTH COMMISSION  
MEADOWVIEW COMPLEX  
595 COUNTY AVENUE, BUILDING 1, SECAUCUS, NEW JERSEY 07094  
TEL. (201) 223-1133 FAX (201) 223-0122

John P. Sarnas, President

Carrie Nawrocki, Director

March 24, 2025

TO: Municipal Clerk  
FROM: Dr. Gregory M. Williams  
Superintendent, Mosquito and Vector Control

In compliance with Sections 9.10 and 9.15 of the New Jersey Pesticide Control Regulations (N.J.A.C. Title 7, Chapter 30), the Hudson Regional Health Commission is distributing this packet of materials to provide municipal officials with pertinent information regarding our area-wide pesticide program for mosquito control and spotted lanternfly control. **Municipalities are encouraged to share this information with all residents in their communities.**

In our area-wide programs, the only pesticides used will be those registered by the USEPA and NJDEP. Please note that upon request, a resident is entitled to 12 hours notification prior to the scheduled application; except for Quarantine and Disease Vector Control only, when conditions necessitate pesticide applications sooner than that time.

The following pages include our area-wide adult mosquito control notice, area-wide spotted lanternfly notice, mosquito control questions and answers and fact sheets for mosquito adulticides. For the most updated information please check our website at [www.hudsonregional.gov/program/mosquito/](http://www.hudsonregional.gov/program/mosquito/). If you have any questions, contact Dr. Gregory M. Williams at 201-223-1133.



Dr. Gregory M. Williams  
Superintendent of Mosquito Control  
Hudson Regional Health Commission

“SERVING BAYONNE, EAST NEWARK, GUTTENBERG, HARRISON, HOBOKEN,  
JERSEY CITY, KEARNY, NORTH BERGEN, SECAUCUS,  
UNION CITY, WEEHAWKEN, WEST NEW YORK.”

## **PUBLIC NOTICE**

In Compliance with sections 9.10 and 9.15 of the New Jersey Pesticide Control Code (N.J.A.C Title 7, Chapter 30), the Hudson Regional Health Commission, Mosquito Control Unit, may apply pesticides for the control of adult mosquitoes on an area-wide basis, as needed, throughout Hudson County during the period of April 1<sup>st</sup> through November 30<sup>th</sup>, 2025.

The pesticides used will be those recommended for the control of adult mosquitoes by the New Jersey Agricultural Experiment Station (NJAES), Rutgers University, which include: sumithrin, prallethrin and piperonyl butoxide (Duet, AquaDuet, Duet HD) and/or etofenprox (Zenivex E4, Zenivex E20, Aqua Zenivex) and/or sumithrin and piperonyl butoxide (AquaAnvil, Anvil 2+2, Anvil 10+10) and/or malathion (Fyfanon, Fyfanon EW). Products may be applied by truck, handheld equipment, and/or by aircraft, all using thermal fog, low volume and/or ultra-low volume techniques. All applications will be made according to product labelling.

Upon request, the Hudson Regional Health Commission 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. For updated information on time and location of adult mosquito control application(s), call (201) 223-1133 or follow us on Twitter @HCMosquito.

Contact the New Jersey Poison Information and Education System at (800) 222-1222 for any pesticide emergencies or the National Pesticide Information Center at (800) 858-7378 for routine pesticide related health inquiries, and to obtain information about signs and symptoms of pesticide exposure. Call the New Jersey Pesticide Control Program at (609) 984-6568 for pesticide regulation information, pesticide complaints, and health referrals.

Those seeking further information regarding the Hudson Regional Health Commission mosquito control activities are invited to check our website at [www.hudsonregional.gov/program/mosquito](http://www.hudsonregional.gov/program/mosquito) or contact Dr. Gregory M. Williams, Superintendent of Mosquito and Vector Control, NJDEP LIC. No. 29507B, at (201) 223-1133, 595 County Ave., Bldg. 1, Secaucus, NJ 07094.

## **PUBLIC NOTICE**

In Compliance with sections 9.10 and 9.15 of the New Jersey Pesticide Control Code (N.J.A.C Title 7, Chapter 30), the Hudson Regional Health Commission may apply pesticides for the control of spotted lanternflies on an area-wide basis, as needed, throughout Hudson County during the period of May 1<sup>st</sup> through November 30<sup>th</sup>, 2025.

The pesticides used will be those recommended for the control of spotted lanternflies by the New Jersey Department of Agriculture, which include: bifenthrin (Omni Brand Bifenthrin 2EC or Bifen I/T). Products may be applied by truck, handheld equipment, and/or by aircraft, all using low volume techniques. All applications will be made according to product labelling.

Upon request, the Hudson Regional Health Commission 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. For updated information on time and location of adult mosquito control application(s), call (201) 223-1133 or follow us on Twitter @HCMosquito.

Contact the New Jersey Poison Information and Education System at (800) 222-1222 for any pesticide emergencies or the National Pesticide Information Center at (800) 858-7378 for routine pesticide related health inquiries, and to obtain information about signs and symptoms of pesticide exposure. Call the New Jersey Pesticide Control Program at (609) 984-6568 for pesticide regulation information, pesticide complaints, and health referrals.

Those seeking further information regarding the Hudson Regional Health Commission mosquito control activities are invited to check our website at [www.hudsonregional.gov/program/mosquito](http://www.hudsonregional.gov/program/mosquito) or contact Dr. Gregory M. Williams, Superintendent of Mosquito and Vector Control, NJDEP LIC. No. 29507B, at (201) 223-1133, 595 County Ave., Bldg. 1, Secaucus, NJ 07094.

## Hudson Regional Health COMMISSION

595 COUNTY AVENUE  
SECAUCUS, N.J. 07094

TELEPHONE: (201) 223-1133  
Fax: (201) 223-0122

PROGRAM COORDINATOR:  
GREGORY M. WILLIAMS, Ph.D.

### Questions and Answers

Mosquito control in New Jersey is mandated under Title 26, Chapters 3 and 9 of the New Jersey Health Statutes. Each county in New Jersey is responsible for providing mosquito control for its citizens. The Hudson Regional Health Commission is empowered by Hudson County to provide mosquito control for the citizens of Hudson County. Our mission is to protect the citizens and visitors of Hudson County from mosquito-borne diseases such as West Nile Virus while minimizing the negative impact of nuisance mosquitoes on outdoor recreational activities. These goals are achieved through a comprehensive approach, employing integrated pest management principles in a program that is environmentally sensitive, fiscally prudent, and operationally effective. The program is based on standards adopted by the New Jersey Mosquito Control Association as an EPA sub-partner of the American Mosquito Control Association's, Pesticide Environmental Stewardship Program.

### ***How do you control mosquitoes in Hudson County?***

#### **Surveillance**

This is the largest component of our program. We do not like to apply pesticides until we have confirmed that a problem exists. The goal of our surveillance program is to find and eliminate sources of mosquitoes before they become a problem.

- **Larval Surveillance:** Our inspectors routinely check over 250 sites in Hudson County for the presence of mosquito larvae. This lets us know where the mosquitoes come from. When larvae are found the site is treated with a larvicide.
- **Adult Surveillance:** In addition to our larval surveillance, we also maintain a series of adult mosquito traps positioned throughout the county. These traps give us information such as the species of mosquitoes present and their relative abundance. This information is used to determine when adult control is necessary.
- **Disease Surveillance:** The most important part of our program is monitoring for diseases such as West Nile virus and Eastern Equine Encephalitis. We use special traps to collect female mosquitoes from across the county that have already taken a blood meal. These

mosquitoes are then identified and sent to the State Department of Health to be screened for viruses.

### **Control**

Once a problem has been identified, we take the necessary actions to eliminate or reduce the problem.

- **Larval Control:** A relatively small body of water can produce thousands of mosquitoes. By targeting the sources of larval production, we can eliminate huge numbers of mosquitoes at one time before they become adults. We use low impact products for our larval control such as bacteria and insect growth regulators.
- **Adult Control:** Unfortunately, we cannot find every source of mosquito larvae. When large populations of adult mosquitoes emerge, or when disease transmission is of concern, we apply adulticides to reduce the number of adult mosquitoes in an area. We use short-lived low toxicity products for our adult control. See the accompanying literature for more information about the products that we use for adult mosquito control.
- **Biocontrol:** Biocontrol is a method of controlling mosquitoes utilizing natural enemies which eat the mosquitoes. The New Jersey State Mosquito Control Commission operates a program which provides organisms for the biological control of mosquitoes to the county mosquito control agencies.

### **Source Reduction**

The best method of mosquito control is to eliminate the sources of mosquito production. Unfortunately, this is usually the most labor intensive, expensive, and complicated method. However, we conduct many activities to eliminate sources of mosquito production.

- **Tire Removal:** Illegally dumped tires are a big problem in Hudson County. Not just from a pollution standpoint, but because of the mosquitoes they produce. When the mosquito season dies down, we focus on collecting and properly disposing of tires from around the county.
- **Water Management:** In areas that chronically produce mosquitoes, it is sometimes worthwhile to manage the land to reduce mosquito production. For example, restoring tidal flow to wetland areas washes immature mosquitoes out into the rivers before they can emerge. Improving drainage eliminates standing water and prevents mosquito production altogether. Filling in low spots prevents water from accumulating there.

## **Service Requests**

We can't check everywhere, so we rely on resident complaints to help target mosquito problems. Requests are investigated as quickly as possible, and we will take whatever actions are necessary to help reduce or eliminate mosquito problems. When necessary, local Health Officers are involved to issue abatement notices to citizens who do not correct mosquito problems around their homes.

## ***What pesticides are used to control adult mosquitoes?***

The professional staff of the HRHC strives to reduce our reliance on pesticides for controlling mosquitoes. When pesticides are necessary, our staff of licensed pesticide applicators use pesticides that are registered with the NJ Department of Environmental Protection and the US Environmental Protection Agency (EPA). When targeting adult mosquito populations, we use synthetic pyrethroids and/or malathion. For more information regarding these pesticides, please refer to the accompanying fact sheets.

## ***How can I avoid exposure to mosquito adulticides?***

The EPA does not require relocating or taking special precautions during mosquito control spraying. However, some individuals with preexisting health problems or concerns may prefer to avoid or minimize exposure by exercising common sense measures such as staying indoors, shutting windows, and shutting off air conditioners and/or window fans during spraying.

## ***What can I do to help?***

An effective strategy for mosquito control is to eliminate potential habitat. If there is no standing water, there will be no mosquitoes emerging in the area. There are many things you can do to reduce the number of mosquitoes in your backyard and neighborhood.

- Dispose of or invert all containers. Tires especially can produce thousands of mosquitoes.
- Maintain proper drainage in gutters and ditches.
- Maintain, cover, or drain pools when not in use.
- Change water in bird baths weekly.
- Eliminate low spots in yard which hold water.
- Repair or replace window screens to prevent mosquitoes from entering your home.

## ***How can I protect myself from mosquitoes?***

The following steps can be taken to reduce the frequency of mosquito bites and the risk of mosquito-borne disease transmission.

- Avoid mosquito habitat such as shaded areas where mosquitoes rest.
- Limit outdoor activity during peak mosquito activity.
- Wear protective clothing such as long-sleeved shirts and pants.
- Use insect repellants, following the manufacturer's recommendations.

### ***What do I do if I have a mosquito problem around my home?***

If you suspect that a mosquito problem exists in your area, contact the Commission at (201) 223-1133. Our professional staff will investigate your call usually within 48 hours. If the results of the inspection verify a mosquito problem, the appropriate remedial action will be taken possibly including a request for sanitary actions from the homeowner.

### ***Where can I get additional information?***

Anyone interested in obtaining additional information regarding the Hudson Regional Health Commission pesticide application activities are asked to contact our office at (201) 223-1133 or check our website at [www.hudsonregional.gov/program/mosquito](http://www.hudsonregional.gov/program/mosquito).

In the case of any pesticide emergency please contact the New Jersey Poison Information and Education System at (800) 222-1222.

For routine pesticide related health inquiries please contact the National Pesticide Information Center at (800) 858-7378.

For information regarding pesticide regulations, pesticide complaints and health referrals, contact the New Jersey Pesticide Control Program at (609) 984-6568.

Citizens have the right to ask the HRHC for specific information about a planned adulticiding application in the county prior to the application. Attached is an example of a newspaper notice that the Commission places in the Jersey Journal and Star Ledger throughout the season. Our website [www.hudsonregional.gov/program/mosquito](http://www.hudsonregional.gov/program/mosquito) has the latest information regarding adulticide applications.

## **Duet/AquaDuet/Duet HD**

**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 Hudson Regional Health Commission, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Duet adulticide and how is it used?**

Duet contains two pesticides called prallethrin and sumithrin, and a synergistic compound called piperonyl butoxide which increases the effectiveness of the pesticides. AquaDuet is a water-based formulation of Duet. Duet HD is a heavier formulation developed for aerial applications. Prallethrin and sumithrin are members of a category of pesticides called pyrethroids, which in turn are synthetic versions of pesticides produced by plants called pyrethrins. Pyrethroid/piperonyl butoxide mixtures have been recommended for Ultra-Low-Volume (ULV) mosquito control in New Jersey by Rutgers, The State University of New Jersey. The U.S. Environmental Protection Agency's (EPA) current evaluation considers pyrethroid-containing products to be slightly toxic with minimal potential risk to people when used properly as part of an integrated mosquito control program.

This 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 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 for it to be effective. The combination of the two pesticides has been shown to produce what the manufacturer calls 'benign agitation'. In other words, mosquitoes are agitated from a resting state to a non-biting flying state where they are more vulnerable to pesticide exposure. This makes Duet Dual-Action® adulticide more effective against hard-to-control species like *Aedes albopictus* which typically rest during the evening hours when adulticiding usually takes place.

### **How can I reduce my exposure to Duet?**

Because of the very small amounts of active ingredients released per acre, the risk to the public from the use of 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 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 Duet?**

Symptoms of over-exposure can include irritation to skin and eyes, respiratory and nasal irritation, irritability to sound or touch, abnormal facial sensation, sensation of prickling, tingling, or creeping of skin, numbness, headache, dizziness, nausea, vomiting, diarrhea, excessive salivation, and fatigue. 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 at 1-800-222-1222 if you experience these symptoms following a pesticide spraying.

### **How long will Duet last in the environment?**

Pyrethroids have a soil half-life of 12 days. They have an extremely low pesticide movement rating because they bind tightly to the soil. Pyrethroids are unstable in light and air. They rapidly degrade in sunlight, at the soil surface and in water. Piperonyl butoxide has a soil half-life of approximately 4 days.

### **Where can I get more information on this adulticide?**

The following are resources for more information regarding Duet 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:

**NJ Poison Information & Education System** **800-222-1222**

For pesticide regulation & misuse complaints:

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

For pesticide regulation:

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

For mosquito control insecticide recommendations:

**Rutgers University, Department of Entomology** **732-932-9774**

Where can I get more information about local mosquito control?

**Hudson Regional Health Commission**

**201-223-1133**

For state-wide mosquito control information:

**NJDEP Office of Mosquito Control Coordination**

**609-292-3649**

Spraying 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 Duet or any other mosquito control related products or practices, please feel free to call the Hudson Regional Health Commission at (201) 223-1133, or visit our web site at [www.hudsonregional.gov/program/mosquito](http://www.hudsonregional.gov/program/mosquito)

## Fyfanon/Fyfanon EW

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

This Fat Sheet answers some basic questions about a mosquito control product in use in your county. The Hudson Regional Health 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 a pesticide called malathion. Fyfanon EW is a low-odor formulation of Fyfanon. 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 for it to be effective.

### **How can I avoid exposure to Fyfanon?**

Risk to the 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?**

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:

**NJ 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** **877-251-4575**

For state-wide mosquito control information:

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

For local mosquito control information:

**Hudson Regional Health Commission** **201-223-1133**

For mosquito control recommendations:

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

Spraying 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 Fyfanon or any other mosquito control related products or practices, please feel free to call the Hudson Regional Health Commission at (201) 223-1133, or visit our web site at [www.hudsonregional.gov/program/mosquito](http://www.hudsonregional.gov/program/mosquito).

## **Zenivex E4/Zenivex E20/Aqua 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 Hudson Regional Health Commission, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Zenivex and how is it used?**

Zenivex 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 is a non-ester pyrethroid, and therefore does not require a synergist such as piperonyl butoxide. Zenivex E4 is a ready to use formulation, Zenivex E20 is a concentrated formulation meant to be diluted and Aqua Zenivex is a water-based formulation. 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 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 for it to be effective.

### **How can I reduce my exposure to Zenivex?**

Because of the very small amounts of active ingredients released per acre, the risk to the 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 Zenivex?**

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 Zenivex last in the environment?**

The etofenprox in Zenivex 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 Zenivex?**

The following are resources for more information regarding zenivex 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:

**NJ 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** **877-251-4575**

For statewide mosquito control information:

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

For local mosquito control information:

**Hudson Regional Health Commission** **201-223-1133**

For mosquito control recommendations:

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

Spraying 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 Hudson Regional Health Commission at (201) 223-1133 or visit our web site at [www.hudsonregional.gov/program/mosquito](http://www.hudsonregional.gov/program/mosquito).

## **Anvil 2+2/Anvil 10+10/Aqua Anvil**

**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 Hudson Regional Health Commission, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Anvil adulticide and how is it used?**

Anvil contains a pesticide called sumithrin, and a synergistic compound called piperonyl butoxide which increases the effectiveness of the pesticides. Sumithrin is a member of a category of pesticides called pyrethroids, which in turn are synthetic versions of pesticides produced by plants called pyrethrins. Anvil 2+2 contains 2% sumithrin, Anvil 10+10 contains 10% sumithrin, and Aqua Anvil is a water-based formulation of Anvil 10+10. Pyrethroid/piperonyl butoxide mixtures have been recommended for Ultra-Low-Volume (ULV) mosquito control in New Jersey by Rutgers, The State University of New Jersey. The U.S. Environmental Protection Agency's (EPA) current evaluation considers pyrethroid-containing products to be slightly toxic with minimal potential risk to people when used properly as part of an integrated mosquito control program.

This 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 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 for it to be effective.

### **How can I reduce my exposure to Anvil?**

Because of the very small amounts of active ingredients released per acre, the risk to the public from the use of 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 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 Anvil?**

Symptoms of over-exposure can include irritation to skin and eyes, respiratory and nasal irritation, irritability to sound or touch, abnormal facial sensation, sensation of prickling, tingling, or creeping of skin, numbness, headache, dizziness, nausea, vomiting, diarrhea, excessive salivation, and fatigue. 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 Anvil last in the environment?**

Pyrethroids have a soil half-life of 12 days. They have an extremely low pesticide movement rating because they bind tightly to the soil. Pyrethroids are unstable in light and air. They rapidly degrade in sunlight, at the soil surface and in water. Piperonyl butoxide has a soil half-life of approximately 4 days.

### **Where can I get more information on this Anvil?**

The following are resources for more information regarding Anvil® 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:

**NJ Poison Information & Education System** **800-222-1222**

For pesticide regulation & misuse complaints:

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

For pesticide regulation:

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

For mosquito control insecticide recommendations:

**Rutgers University, Department of Entomology** **732-932-9774**

Where can I get more information about local mosquito control?

**Hudson Regional Health Commission** **201-223-1133**

For state-wide mosquito control information:

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

Spraying 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 Anvil or any other mosquito control related products or practices, please feel free to call the Hudson Regional Health Commission at (201) 223-1133, or visit our web site at [www.hudsonregional.gov/program/mosquito](http://www.hudsonregional.gov/program/mosquito).

## **Bifen I/T / Omni Brand Bifenthrin 2EC**

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

This Fact Sheet answers some basic questions about spotted lanternfly control products in use in your county. The Hudson Regional Health Commission, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is bifenthrin and how is it used?**

Bifen I/T and Bifenthrin 2EC contain a pesticide called bifenthrin. Bifenthrin is a member of a category of pesticides called pyrethroids, which are synthetic versions of pesticides produced by plants called pyrethrins. Bifen I/T contains 7.9% bifenthrin, and Bifenthrin 2EC contains 25% bifenthrin. Both are diluted in water before spraying. Bifenthrin has been recommended for control of spotted lanternflies in New Jersey by the New Jersey Department of Agriculture. The U.S. Environmental Protection Agency's (EPA) current evaluation considers pyrethroid-containing products to be slightly toxic with minimal potential risk to people when used properly as part of an integrated pest management program.

These pyrethroid-containing products are used for the control of spotted lanternflies. While mechanical control and applications directly to individual infested trees are preferred and most used, the area-wide spraying of spotted lanternflies is called for when populations reach critical levels or when infested areas are too large to spray individual trees. A mist is sprayed into the air which then settles on the vegetation and kills the spotted lanternflies when they come in contact with it.

### **How can I reduce my exposure to bifenthrin?**

Because of the very small amounts of active ingredients released per acre, the risk to the public from the use of 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 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 bifenthrin?**

Symptoms of over-exposure can include irritation to skin and eyes, respiratory and nasal irritation, irritability to sound or touch, abnormal facial sensation, sensation of prickling, tingling, or creeping of skin, numbness, headache, dizziness, nausea, vomiting, diarrhea, excessive salivation, and fatigue. 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 bifenthrin last in the environment?**

Bifenthrin is a residual pesticide intended to last in the environment to provide extended control. Treated surfaces can remain toxic to insects for several weeks depending upon the application rate, the surface treated, and environmental conditions.

### **Where can I get more information on these products?**

The following are resources for more information regarding bifenthrin and spotted lanternfly 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:

**NJ Poison Information & Education System** **800-222-1222**

For pesticide regulation & misuse complaints:

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

For pesticide regulation:

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

For spotted lanternfly control insecticide recommendations:

**New Jersey Department of Agriculture** **609-292-3976**

Where can I get more information about local spotted lanternfly control?

**Hudson Regional Health Commission** **201-223-1133**

Spotted lanternflies are an invasive pest with a potential impact on several agricultural commodities as well as a significant household pest. Spraying spotted lanternflies is necessary to prevent their spread, protect the plants they feed on, and keep homes free from infestation. If you have questions about Bifen I/T, Omni Brand Bifenthrin 2EC, or any other spotted lanternfly control related products or practices, please feel free to call the Hudson Regional Health Commission at (201) 223-1133, or visit our web site at [www.hudsonregional.gov/program/mosquito](http://www.hudsonregional.gov/program/mosquito).