



Decatur, GA

Bee City USA®-Decatur, GA Statement Opposing Residential Mosquito Spraying, Fogging and Misting

Mosquitoes are an annoyance. While they can pose some health risks to Georgians, documented cases of illness and death due to mosquitos are few statewide. In fact, most mosquito species are not vectors for disease. (See Appendix A). Bee City USA®-Decatur, GA believes that the negative ecological impacts of the non-targeted, broad-spectrum insecticides commonly used in residential mosquito control are disproportionate to the threat – real or perceived – that mosquitoes pose. It is our position that City of Decatur property owners should refrain from using backyard mosquito spraying/fogging services and mosquito misting systems.

The past decade has seen the rapid proliferation of mosquito control services in our community. These services typically consist of residual barrier treatments applied via backpack sprayers/foggers or automated misting systems installed in residential yards. Regardless of the delivery method, the pesticidal agents most commonly applied are pyrethroids, synthetic forms of botanical pyrethrin insecticides.^{1,2,3,4,5,6}

Pyrethroids, as a class, are the most widely-used insecticides for controlling mosquitoes nationwide.⁷ They do not discriminate between mosquitoes and non-target insects.⁸ Pyrethroids are highly toxic to bees and remain so for days after application.⁹ They also kill other beneficial invertebrates, including butterflies, moths, ladybugs, dragonflies, lightning bugs, beetles and spiders.¹⁰ In waterways, they are highly toxic to fish and other aquatic life.¹¹

Because of their toxicity, U.S. Federal Labeling Requirements for Pesticides require pyrethroids to include an Environmental Hazards caution stating that they are “highly toxic to bees and other pollinating insects” and should not be allowed “to drift to blooming crops or weeds if bees or other pollinating insects are visiting the treatment area.”^{12,13} (See Appendix) Unfortunately, mosquito spraying/fogging services are routinely performed during daytime business hours, when these pollinators are most active. The American Mosquito Control Association does not endorse misting systems, stating that they are “not consistent with sound Integrated Mosquito Management practices” and that “timed-release sprays will negatively impact beneficial insect populations and other non-target organisms on site and through uncontrolled off-site drift.”^{14,15} Mosquito misting systems are not EPA-approved. In 2018, citing their dangers, Connecticut banned mosquito misting systems. New York has also restricted their use.¹⁶

The Georgia Department of Agriculture has confirmed that pyrethroids have killed honey bees in Decatur. (See Appendix C) The honey bee – Georgia’s state insect – is only one of approximately 500 different species of bees found in our state. Broad-spectrum pyrethroid insecticides also kill beneficial native bee species like bumble bees, ceratina bees, sweat bees, leaf cutters, squash bees and others, all of which are found in our city.

Collectively, Decatur’s backyards form an important part of our community’s larger ecosystem. Foregoing the use of backyard pesticides is a vital first step city residents can take in order to help keep Decatur environmentally healthy and pollinator friendly. (See Appendix D) Eliminating human made mosquito breeding

grounds is the most effective way to deal with mosquito problems in yards. Bee City USA®-Decatur, GA advocates that residents take an Integrated Pest Management approach to controlling mosquito populations, as recommended by the Centers for Disease Control and Prevention and the U.S. Environmental Protection Agency.¹⁷ We endorse the recommendations made in 2018 by Georgia’s Department of Public Health¹⁸, including:

- Eliminating sources of standing water (flower pots, buckets, etc.) where mosquitos breed
- Cutting back overgrown vegetation that can harbor mosquitos
- Keeping rain gutters clear of wet leaves and standing water
- Applying skin-based insect repellents to exposed skin when outside (DEET is proven safe and the most effective repellent against mosquito bites; Picaridin and Oil of Lemon Eucalyptus are proven alternatives.)^{19,20,21}
- Avoiding outdoor activity at dawn and dusk when mosquitoes are most active
- Using fans circulate air when entertaining outside²²
- Wearing loose-fitting pants and long-sleeved shirts to reduce skin exposure
- Fixing damaged window screens to deny mosquitoes entry
- Adding mosquito larvicides (e.g., BTI “dunks”) to fountains, ornamental ponds, etc.²²

– Peter Helfrich, Chairperson



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Appendix A

Mosquito spraying/fogging/misting services are commonly advertised and marketed by appealing to homeowners' fears of mosquito-borne illnesses. In reality, the risks posed by mosquitoes to Decaturites are low when compared to other health risks.

MOSQUITO HEALTH RISKS TO GEORGIANS, 2018



West Nile Virus²³

According to the CDC, fewer than 1% (1 out of 150) of West Nile cases develop into a serious illness.



Zika²⁴

There were no cases of Zika acquired through presumed local mosquito-borne transmission anywhere in the continental U.S. in 2018.



Chikungunya²⁵

There were no cases of Chikungunya acquired through presumed local mosquito-borne transmission anywhere in the continental U.S. in 2018.



Eastern Equine Encephalitis²⁶

There have been only 6 reported cases statewide in the decade between 2008 and 2018.



Malaria²⁷

Malaria was declared eliminated in the United States in 1951. Approximately 1,500 malaria cases and five deaths are reported in the U.S. annually by travelers returning from abroad.



Dengue Fever²⁸

There has never been a case of locally-acquired Dengue reported in Georgia.

NON-MOSQUITO HEALTH RISKS TO GEORGIANS, 2018



Influenza Deaths²⁹



Gun Violence Deaths³⁰



Average Vehicular/Roadway Deaths Per Day³¹



Lightning Strike Deaths³²



664

Number of licensed mosquito control service providers in Georgia, January 2019³³

3000

Number of mosquito species worldwide³⁴

3

Number of mosquito species commonly associated with human disease³⁴

Appendix B

FEDERAL LABELING REQUIREMENTS FOR PESTICIDES AND DEVICES Subpart E—Environmental Hazard and Precautionary Statements

\$156.85 Non-target organisms.

(5) If a product is intended for or involves foliar application to agricultural crops, forests or shade trees, or mosquito abatement treatments, and contains a pesticide toxic to pollinating insects, the label must bear appropriate label cautions.

<https://www.epa.gov/sites/production/files/2015-03/documents/chap-08-sep-2012.pdf>

https://www.ecfr.gov/cgi-bin/text-idx?SID=b58115e21f2699d783a74e22851ec817&mc=true&node=se40.26.156_185&rgn=div8

Example:



For use in, on and around buildings and structures for the control of listed pests, including on lawns, ornamental trees and shrubs around residential, institutional, public, commercial, agricultural and industrial buildings; and parks, recreational areas and athletic fields. Do not use on golf course turf.

Active ingredient: Cypermethrin 0.7%

KEEP OUT OF REACH OF CHILDREN. CAUTION/PRECAUCIÓN

1 quart Net Contents

if on skin or clothing	Wash immediately with plenty of water.
if in eyes	Hold eye open. Flush thoroughly with water for at least 15 minutes.
if swallowed	Do not induce vomiting. Drink plenty of water.
if inhaled	Move to fresh air. If symptoms persist, seek medical attention.
Keep this product away from children and pets.	
PRECAUTION	Environmental Hazards
	<p>This product is extremely toxic to fish and aquatic invertebrates. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters, or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run-off to water bodies or drainage systems. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Apply this product only as specified on this label. When making applications, care should be used to avoid household pets, particularly fish and reptile pets.</p> <p>This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.</p> <p>Physical and Chemical Hazards</p> <p>Do not use this product in or on electrical equipment due to the possibility of shock hazard.</p>

Appendix C



Decatur Honey Bee Colony Kill (9/4/2018)

Georgia Department of Agriculture analysis determined this honey bee kill was the result of non-targeted exposure to pyrethroid insecticides commonly used in mosquito sprays, granules and powders including Bifenthrin (Talstar) and Lamda-Cyhalothrin (Demand CS, Cyzmic CS, Surrender CS, etc).

Appendix D

Residential properties provide important habitat for bees and other beneficial pollinator species. For a bee-friendly yard:

- Avoid using insecticides and herbicides
- Leave patches of bare earth for soil-dwelling mining bees, and hole-dwelling mason bees which use mud for nest construction
- Leave fallen logs and snags for nesting habitats
- Plant native, perennial plants (bees love flowers like Black Eyed Susan, Coreopsis, Blazing Star, Bee Balm, Coneflower, Asters, Rattlesnake Master, Milkweed, Mountain Mint, and Joe Pye Weed)
- Provide a water source for bees to drink
- In Fall, leave the leaves – they provide warm shelter for over-wintering insects like bumble bee queens³⁵
- In Spring, leave last season's dead flower stalks in place well into warm temperatures, to allow stem-dwelling bees to emerge

Citations:

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<https://mosquitojoe.com/services/barrier-sprays/>
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<https://www.mrmr.biz/mosquito-control-faq/>
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<http://mosqitonixatlanta.com/mosquito-misting-system/frequently-asked-questions/>
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- ⁷ "Bayer DeltaGard," ADAPCO Innovative Mosquito Solutions
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<https://homeguides.sfgate.com/difference-narrow-spectrum-broad-spectrum-pesticides-40096.html>
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<http://npic.orst.edu/factsheets/PermGen.html>
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- ¹² Electronic Code of Federal Regulations, Title 40: Protection of Environment PART 156—LABELING REQUIREMENTS FOR PESTICIDES AND DEVICES Subpart E—Environmental Hazard and Precautionary Statements §156.85 Non-target organisms.
https://www.ecfr.gov/cgi-bin/text-idx?SID=b58115e21f2699d783a74e22851ec817&mc=true&node=se40.26.156_185&rgn=div8
- ¹³ Label Review Manual Chapter 8: Environmental Hazards, United States Environmental Protection Agency
<https://www.epa.gov/sites/production/files/2015-03/documents/chap-08-sep-2012.pdf>
- ¹⁴ "Should You Spray Your Yard for Mosquitoes and Ticks?" Jeneen Interlandi, Consumer Reports
<https://www.consumerreports.org/insect-repellent/should-you-spray-your-yard-for-mosquitoes-and-ticks/>
- ¹⁵ "Position on Misting Systems," The American Mosquito Control Association (AMCA)
<https://www.mosquito.org/page/mistingsystems>
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<https://beyondpesticides.org/dailynewsblog/2018/05/connecticut-state-legislature-bans-residential-mosquito-misters/>
- ¹⁷ <https://www.epa.gov/managing-pests-schools/introduction-integrated-pest-management>
- ¹⁸ "Georgians Urged to Protect Themselves from Mosquito Bites," Georgia Department of Public Health, August 29, 2018
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Beecatur



City of Decatur

About Bee City USA®-Decatur, GA (a.k.a. “Beecatur”)

In July 2016, the City of Decatur became the first Bee City USA® in Georgia. As a Bee City, Decatur affirms its support for creating sustainable habitats for pollinators and educating residents about the critical role bees play in our ecosystem. “Beecatur” plans and presents bee-related educational opportunities throughout the year.



About Bee City USA®

Bee City USA® (beecityusa.org) is an initiative of the Xerces Society for Invertebrate Conservation (xerces.org), an international nonprofit organization that protects wildlife through the conservation of invertebrates and their habitats. The Bee City USA program endorses a set of commitments, defined via city resolution, for creating sustainable habitats for pollinators, which are vital to feeding our planet.