

AN ACT PROVIDING FOR THE PUBLIC HEALTH BY ESTABLISHING AN ECOLOGICALLY BASED MOSQUITO MANAGEMENT PROGRAM IN THE COMMONWEALTH



Purpose of H. 937 & S. 556: replaces the Commonwealth's outdated and expensive mosquito management system with one that is more effective, affordable, transparent, ecologically responsible, and scientifically based.

Summary:

1. Creates a Mosquito Management Office within the EOEPA
2. Creates a Mosquito Management Board within that new office, replacing the existing state Mosquito Control and Reclamation Board. The bill changes the composition of the Board to prioritize public health and the environment.
3. Charges the Board with creating a state mosquito management plan, with detailed instructions on what should be included in the plan. The state plan must adopt a **tiered approach to management based on quantifiable thresholds for action**. It prioritizes education, monitoring, and habitat modification; requires thresholds for larviciding and adulticiding; allows pesticide use only for disease control; and **prohibits aerial application of larvicides or adulticides**.
4. Preserves the existing mosquito control districts and allows new ones to be formed, but requires districts to either adopt the state management plan or modify the plan, subject to approval by the Board. In this way, district plans must still follow the ecological approach of the state plan.
5. Makes districts responsible for all mosquito management monitoring and control within participating municipalities. Makes the Board responsible for mosquito monitoring and management in areas of the commonwealth that are not within a mosquito control district.
6. Empowers municipalities to choose from a "menu" of mosquito management services, ranging from public education up to adulticiding. **Municipalities only pay for the services they choose**, in contrast to the existing one-size-fits-all system in which municipalities pay the full cost of being in a district even if they don't want certain services, like adulticiding.
7. Requires 72 hour notice before adulticiding, and **allows residents to opt out of spraying**. Beekeepers and organic farmers are opted-out by default.
8. Establishes quantifiable conditions for declaring an arbovirus public health emergency and puts responsibility for responding to the emergency with the department of public health. **Aerial spraying is still prohibited** during a state of emergency.
9. **Bans pesticides containing PFAS** from being used in mosquito control activities.
10. Requires transparent record keeping of Board and district activities.

Effective Mosquito-borne Disease Management is Science-Based

- Mosquito-borne diseases (eg. EEE and WNV), are spread through the bite of infected mosquitoes that feed on both birds and mammals, also known as "bridge vectors".¹
- Proper mosquito-borne disease management emphasizes increased monitoring and surveillance, elimination of breeding sites, enhancing habitat for mosquito predators, biological controls of mosquito larvae, and public education.²
- Attempting to kill adult mosquitoes in the air through ultra-low volume (ULV) pesticides is the least effective means of management.^{3, 4}
- Mosquitoes may also develop resistance when pesticides such as Sumithrin are overused.³

Eliminate Mosquito Breeding Sites Where You Live



1. Keep gutters clean
2. Repair leaky faucets
3. Eliminate debris that holds water
4. Drain excess water from plant pots and saucers
5. Change birdbaths twice a week
6. Maintain pools and spas; keep water from pooling on covers
7. Turn toys and equipment upside down to prevent water from collecting inside
8. Avoid overwatering

Mosquito Control Pesticides Are Toxic Synthetic Chemicals

Products containing synthetic pyrethroids are synthetic chemical formulations that also contain other or “inert” ingredients. Neither Massachusetts agencies nor the EPA adequately test environmental samples for components of the pesticides to determine health or environmental impacts of mixtures of active and inert ingredients.⁴

Sumithrin can result in lung irritation, and has been documented to cause asthmatic responses in those exposed.⁵

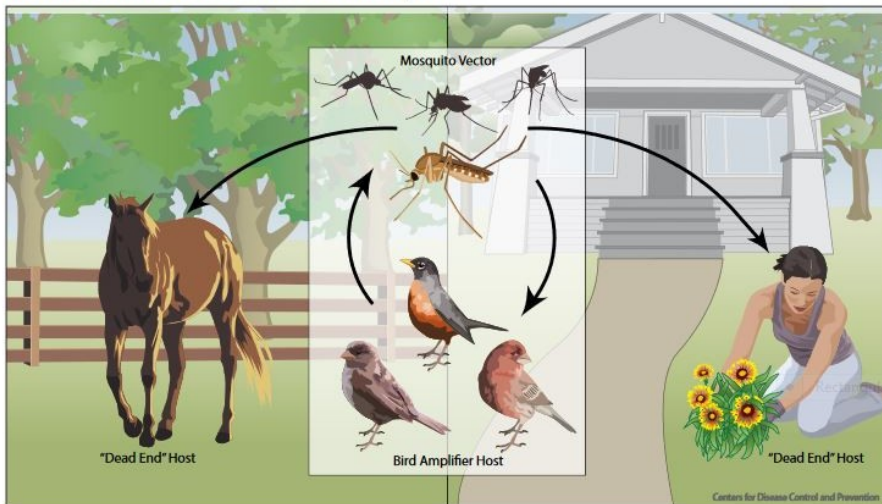
Piperonyl-butoxide, a synergist intended to magnify the toxicity of pyrethroids, has not been tested in combination with these active ingredients, and is considered a possible human carcinogen by EPA.⁶

ULV applications of Resmethrin have been found to kill pollinators, particularly adult and larval monarch butterflies,⁷ of which Eastern monarch populations have declined by 80% since the 1990s.⁸

Bird populations have also declined by 30% since 1970. Science suggests pesticides are a driver.⁹

Most ULV mosquito pesticides will not make contact with a target mosquito; the remaining pesticide will run-off into the environment and contaminate groundwater and local waterways.¹⁰

West Nile Virus Transmission Cycle



1-CDC. 2019. [Transmission. EEE](#). CDC. 2018. [Transmission Cycle for WNV](#).

2-Xerces Society. 2014. [Help Your Community Create and Effective Mosquito Management Plan](#).

3-Cox, Caroline. 2003. [Insecticide Factsheet: Sumithrin](#). Journal of Pesticide Reform. Volume 23 #2.

4-Donley, Nathan. 2016. [Toxic Concoctions: How the EPA Ignores Dangers of Pesticide Cocktails](#). Center for Biological Diversity.

5-National Pesticide Information Center. 2020. [Sumithrin](#).

6-EPA. 2018. [Chemicals Evaluated for Carcinogenic Potential](#).

7-Oberhauser, Karen, et al. 2009. [Impacts of ultra-low volume applications on non-target insects](#). Journal of the American Mosquito Control Association. Volume 25, #1.

8-Center for Biological Diversity. 2017.

[Iconic Butterfly Has Declined by More Than 80 Percent in Recent Decades](#).

9-Greenfieldboyce, Nell. 2019. [North America has lost 3 billion birds, scientists say](#). NPR.

10-Pimentel, David. 2004. [Encyclopedia of Pest Management](#).

Common-Sense Provisions

- ❖ Require state agencies follow a defined science-based, integrated, ecological mosquito-borne disease management plan with prioritized criteria and a public health emergency spray authorization based on predefined thresholds of disease-carrying mosquitoes set by the DPH Commissioner.
- ❖ Increase funding for mosquito monitoring, surveillance, and public education efforts.
- ❖ Provide full transparency and accountability within any mosquito-borne disease management program, including publicly available notification around larviciding and adulticiding applications, honoring local opt out agreements.

PFAS - Toxic Forever Chemicals

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that includes PFOA, PFOS, GenX, and many other chemicals. PFAS are called “forever chemicals” since they do not break down in the environment and build up in our blood stream. They are associated with a variety of ailments, including suppressed immune function, thyroid disease, testicular and kidney disease, cancers, and liver damage.

Tests commissioned by Public Employees for Environmental Responsibility (PEER) of a jug of Anvil 10+10, the pesticide used in the aerial spraying programs of Massachusetts, and many other states, reveals that it contains PFOA and HFPO-DA. Subsequent tests by EPA and MassDEP confirmed PFAS in Anvil and other pesticides.

<https://www.peer.org/aerially-sprayed-pesticide-contains-pfas/>

Coalition Contacts:

Marty Dagoberto L. Driggs
Policy Director
NOFA/Mass
marty@nofamass.org
508-361-0136

Saranna Soroka
Legal Fellow
Conservation Law
Foundation
ssoroka@clf.org

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