

Mosquito Management - Health Department Role Fact Sheet

BACKGROUND

Since the 1930's, the Town of Fairfield has been actively involved in mosquito control starting with programs to improve drainage of areas with standing water. In the 1950's the Health Department began their program of monitoring potential breeding sites and utilizing larvicides. During fiscal year 1985-86, the Health Department utilized a Preventive Health Block Grant to conduct a comprehensive mosquito surveillance and control program for the Town of Fairfield.

Valuable information was gathered during this process which enabled us to redesign our program into a less intensive, however still effective, mosquito larvicide (killing the mosquito while it is in the larval stage) program each year since 1986. During these past 15 years we were dealing with what is labeled "nuisance mosquitoes." The actual threat of traditional mosquito-borne diseases such as malaria and yellow fever has been reduced through 70 years of local mosquito control efforts. Even when the deadly Eastern Equine Encephalitis was discovered in Rhode Island in the mid 90's, there were never any positive isolates of trapped mosquitoes (we have a trapping site on Catamount Rd.) in this part of the State.

However 1999 was a different story. Signs of West Nile Virus (see West Nile Virus Fact Sheet), a less severe form of encephalitis, was first observed this fall in the NYC metro area and later in the southwestern coastal area of Connecticut. This was the first time this virus had ever appeared in the United States. Birds, crows in particular, were found dying of the disease and scientific evidence has concluded that the disease has been able to survive in dormant adult mosquitoes this winter. The big question at this point in time is what are we (municipalities and State) going to do about it.

The following are some questions and hopefully answers that outline the role of the Fairfield Health Department in the prevention of mosquito-borne diseases, specifically West Nile Virus.

What strategies will be employed?

- Our Town is working very closely with the State Department of Environmental Protection, State Department of Public Health, and the Connecticut Agricultural Experiment Station, and we will be a part of the State's response plan.
- Education campaign via media targeting simple solutions that residents can undertake (See Mosquito Fact Sheet). DEP will also air public service announcements.
- Application of larvicide to approximately 6,000-9,000 storm drain catch basins with emphasis on no less than a ½-mile radius of 41 major outdoor recreation areas.
- Application of larvicide to at least 30 stagnated wetland areas throughout the Town.

- Application of larvicide to at least 80 smaller areas such as those found on some private properties.
- Assist the Department of Environmental Protection (DEP) in mosquito trapping and collection.
- Document areas that could benefit from drainage work and submit this information to our Public Works and Conservation Departments. Marsh restoration is an important natural control.

Which mosquito will we be targeting?

Of the 12 or so species of “pest” mosquitoes in Connecticut, the *Culex pipiens* is the one known to carry the West Nile Virus. At least four traps at 2 different sites in Fairfield will be used to monitor mosquitoes and diseases.

How will we kill mosquitoes?

We will apply products that kill mosquitoes at the larval stage (larvicides) before they become flying adults. The products are solid particles and are not sprayed.

Which larvicide product will be used?

There are several available, each with pros and cons. Most of our experience has been with B.t.i. briquettes, which resemble donuts or can be in granular form. B.t.i. has an active ingredient called *Bacillus thuringiensis israelensis* which is a bacteria that attacks the stomach of mosquito larvae and kills the larva before it becomes a biting adult. A similar product called VectoLex® with an active bacterial ingredient of *Bacillus sphaericus* is also a very good larvicide especially in highly organic environments. Other options include Altosid®, which contains 0.2% methoprene, which is an insect growth regulator, and mono-molecular surface films, which affect the surface of water suffocating the larvae and pupae. We are still awaiting State DEP guidance (and money) at which time a decision will be made as to which larvicide will be used and when.

Are larvicides toxic to humans?

We use larvicides that contain specially cultured bacteria that target mosquito larvae. These bacteria are the safest method of control from both an environmental and human health perspective. Larvicides have also withstood the test of time as far as governmental approval and effectiveness. People should not confuse adulticides (spraying of adult mosquitoes) with larvicide. The aerial (from a plane) spraying of some chemical insecticides may pose health risks especially to chemically sensitive people and are certainly controversial as well as less effective and more costly than larviciding.

Where will we apply the larvicide?

We only apply larvicide to standing water with active larvae. Over the years, we have established a list of areas in Town which contain mosquito larvae and thus produce mosquitoes. If you know of any areas and would like to know if they are on our list, please call as you may be able to help

us by adding important sites. Some areas may also be good candidates for marsh restoration which is overseen by our Conservation Department. In addition to standing water areas we will also be treating catch basins, which also hold water and can be a perfect breeding area for Culex pipiens. The Department of Public Works is in the process of cleaning catch basins that need it, and will continue through the spring.

Who will apply the larvicide?

Most likely it will continue to be Health Department staff, assisted by The Department of Public Works (DPW) and Conservation employees.

When will we start?

Our goal is to apply initial application to our stagnant areas April through May, to catch basins mid to late May, and to re-treat as needed (weather dependent).

Will there be spraying?

The Town has no plans to spray since we will be applying larvicide in its solid form. In the event of a public health emergency, State agencies are prepared to perform isolated low volume ground spraying at specific target areas where disease-carrying mosquitoes have been found. This method of adult mosquito control will be a coordinated effort with State and local officials and would be employed only in extreme conditions as outlined in the State plan. Public notification will be of utmost importance. Although we don't anticipate this need because of our larvicide program, in reality, we must be prepared.

What about dead birds?

The State has decided that it is no longer necessary to track or test dead birds. Therefore, you can bury those birds found on your property or wrap them in newspaper, double plastic bag them, and dispose in your garbage. You or your pets cannot contract the disease from the those birds, although you should not handle birds with bare hands.

Will we be able to eliminate the chance of contracting the disease?

No, however we will reduce the risk by reducing the overall numbers of mosquitoes.

The following are some important phone numbers to call for information:

TOWN

Health Department – 256-3020

Conservation Department – 256-3071

Department of Public Works – 256-3010

Animal Control Office – 254-4857

Town Website for updates – <http://www.fairfieldct.org>

STATE

Connecticut Department of Environmental Protection

Mosquito Management Program – (860) 642-7239

Hotline (recorded message) – (860) 424-4184

Pesticide Unit – (860) 424-3369

DEP Website – <http://dep.state.ct.us>

Connecticut Department of Public Health - Epidemiology Section

(860) 509-7994

Connecticut Agricultural Experiment Station

(860) 974-8510

Connecticut Department of Agriculture – Office of the State Veterinarian

(860) 713-2504