

2017 PRESEASON UPDATE

The winter of 2016-2017 lingered well into April. Spring snow helped ease the drought conditions but reminded us that April can feel more like winter than spring. Above average snow fall this past winter coupled with spring rains has set the stage for a healthy crop of mosquitoes in May. Predicting the summer crop of mosquitoes is more difficult and is dependent on summer rainfall totals.

Crews begin checking wetlands during the month of April to assess the mosquito population. The data guides our decision to larvicide in the swamps and salt marshes. The mosquito species that hatch early are not a public health threat. These early spring mosquitoes are a biting nuisance but not carrying EEE or WNV. That threat doesn't become apparent until late July through October.

Control of mosquito larvae, called larviciding, is done in the spring and after heavy rains. In towns with salt marsh, larviciding is done after a flood tide or heavy rains. The main insecticide used to kill larvae is a *Bacillus* bacterium known as Bti. A bacterial spore imbedded on ground up corncob or on sand to create a granular material that is applied to the water where larvae exist. The larvae are filter feeders and ingest the Bti. They die after the pH in their midgut is disrupted. This product is not toxic to nontarget organisms like beetles, dragonflies, birds, fish, reptiles, amphibians, mammals including humans and their pets.

Larvae go through a pupal stage before they hatch into adult mosquitoes and fly off in search of blood or plant nectar. Once the adults are on the wing, trapping begins. Traps are set in fixed location throughout town each week. The catches are brought back to our headquarters where they are frozen, sorted, identified to species and pooled into tubes which are sent to the State Lab in Concord for disease testing. The State begins testing on July 1st. Only select species are accepted for testing.

This year, Dragon will be utilizing newly acquired traps specifically designed to capture ZIKA mosquitoes. The BG-Sentinel traps will be deployed throughout the southeastern part of the state to monitor the presence of *Aedes albopictus*, one of the two species known to transmit the ZIKA virus worldwide. This mosquito has spread to Massachusetts and survives the winter. If it becomes established in NH, then it will likely survive our winters too. The other mosquito that transmits ZIKA is a tropical mosquito. While it's possible that species could be imported into NH, it's highly unlikely it could survive our winter temperatures.

Dealing with the ZIKA virus presents new challenges for everyone involved. It's a mosquito borne disease like no other. The ZIKA virus causes microcephaly in unborn children; can be sexually transmitted; and the mosquitoes can be difficult to control. I'm participating in a series of NH ZIKA Response Plan Workshops sponsored by the NH State Department of Health & Human Services this year. The existing plan is a work-in-progress and will be released to the public at a later date.

Respectfully submitted,
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