



December 12, 2016

(VIA EMAIL)

The Honorable Al Krupski
Chairperson
Public Works, Transportation & Energy Committee
Suffolk County Legislature
William J. Lindsey County Complex

Dear Legislator Krupski :

On behalf of the members of the Seatuck Environmental Association – a nonprofit organization dedicated to conserving Long Island wildlife – I am writing to urge your support for efforts to eliminate the use of the pesticide methoprene for mosquito control.

Suffolk County's estuarine marshes – where methoprene is applied by airplane and helicopter – are, as you well know, a vital part of our coastal ecosystem and an invaluable resource to county's residents. Once thought of as insignificant swamps, these coastal marshes are now recognized as one of the most ecologically productive habitats on the planet, even surpassing tropical rain forests. They provide habitat for countless marine and avian species, including both year-round residents and species stopping to rest and refuel during migration. They are especially important for many species' juvenile stages. The sanctuary they provide for young blue crabs, fluke, and countless other species has earned them the moniker as the "nurseries of the sea."

Salt marshes also provide important protection from storms, with their dense vegetation and soft substrate helping to dissipate energy from storm surges. This was a lesson many Long Islanders learned during Superstorm Sandy, when communities with intact marshes were spared some of the storm's worst damage.

Public officials on Long Island have few more important obligations in maintaining the quality of life in our region than safeguarding – and, indeed, restoring

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– the health of our estuaries. At the same time, we also recognize the primary imperative to protect the health of the citizenry. To this end, we commend the work of the Suffolk County Department of Vector Control in protecting the health of Suffolk County residents from mosquito borne diseases, particularly West Nile Virus (WNV).

However, we are always cognizant of the fact that the mosquitos that inhabit salt marsh, particularly the Eastern Salt Marsh Mosquito (*aedes sollicitans*) are not primary WNV vectors. While capable of carrying the WNV virus, positive WNV tests for *aedes sollicitans* in the wild are rare. The salt marsh mosquito is a more effective vector of Eastern Equine Encephalitis, a rare disease that poses a limited threat (only five cases have ever been reported in New York). The more common carriers of WNV are mosquitos from the genus *Culex*, which are exclusively freshwater mosquitos (and cannot breed in the brackish water of the salt marsh). In fact, of the positive WNV mosquitos confirmed in Suffolk County this past year, all were from the *Culex* genus. The point is that the most serious WNV threat comes from *Culex* and other freshwater mosquitos, not the mosquitos of the salt marsh.

In the public's mind, however, this is a distinction without a difference. Most people simply know that mosquitos can carry diseases and need to be controlled. To the extent they are even aware that different species of mosquitos exist, they perceive the disease risk as universal. In this regard, there is a conflation between public health and nuisance control. The fact that Vector Control is controlling mosquitos is good enough for most people, never mind *why* they are doing it. That salt marsh spraying is not generally advancing public health is not apparent to most citizens. And it is a distinction that is too often ignored, or not made clear, by public officials.

In the end, the issue of spraying methoprene comes down to a cost-benefit analysis. On one hand, as just discussed, the benefits to public health are limited. While the spraying may reduce the impacts of nuisance mosquitoes, especially for homeowners near the marsh, there is little evidence that the spraying of methoprene provides a significant public health benefit.

On the other hand, the costs may be significant. While some studies suggest that the low concentrations of vector control spraying have limited direct impacts on marine species, there are others that create concerns that even low concentrations of methoprene can have subtle impacts to everything from dragonflies to crabs to lobsters. There are also concerns about the cumulative impacts to the salt marsh ecosystem from multiple stressors. In an era of rising sea levels and increasing nitrogen pollution, our marshes and the species that rely on them are already under assault. In these conditions, it is wise to limit any and all additional stressors where possible. Other public officials, as you know, have already recognized this wisdom: The states of Connecticut and Rhode Island have been sufficiently convinced of methoprene's risks that they've taken proactive steps to reduce use of the chemical in their vector control programs.

In the face of limited public health benefits and potentially significant (and still unknown) costs, we think it is prudent to cease the use of methoprene at this time.

Despite this position, we remain supportive of Vector Control's other efforts to control mosquito populations, especially where they can have significant impacts to broad public enjoyment and beneficial economic activity. We are especially supportive of the department's focus on educating the public about threats from freshwater mosquitos, including those that can be reduced by the prudent elimination of standing water around our homes and neighborhoods. We also support efforts to restore marsh health and reduce mosquitos through Integrated Marsh Management. The work conducted at the Wertheim National Wildlife Refuge has produced impressive results, both in mosquito control and wildlife benefits. Importantly, the results of the pilot project have been subject to careful scientific analysis and detailed in peer-reviewed journals, which goes a long way in boosting public confidence. We support efforts to steer funding away from costly methoprene spraying to these other efforts, which have permanent, long-term impacts.

Suffolk County has lost countless acres of invaluable salt marsh habitat. In some embayments the losses exceed 90%. The harm that the loss of this acreage has done to our coastal ecosystem is hard to overstate. The 17,000 acres of marsh that remain in Suffolk County are all the more valuable because of this historic loss. We urge the Committee to safeguard this precious remaining habitat in any and all ways possible, including by eliminating the direct application of chemical pesticides such as methoprene.

Very truly yours,

Enrico Nardone

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