



Frequently Asked Questions

Aerial Salt Marsh Larviciding Treatment

What is Aerial Salt Marsh Larviciding?

Aerial salt marsh larviciding is a site-specific application of an insecticide to control mosquitoes in their aquatic stages, before they emerge as adult mosquitoes.

When are these Aerial Salt Marsh Larviciding treatments conducted?

Two species of salt marsh mosquitoes lay their eggs in moist, muddy areas, such as depressions and stagnant ditches, along the upper edges of the salt marsh. High tides (lunar tides) flood these areas once a month, as well as storm or rain events, which trigger the hatching of mosquito eggs. They progress through aquatic stages and can emerge as adult mosquitoes in as little as four days in hot weather.

Why is it important to control these salt marsh mosquitoes?

Salt marsh mosquitoes are known for being aggressive day biters. Without treatment, they can have massive breeding numbers from June to September and are an extreme coastal nuisance. This not only affects local tourism, but overall quality of life for residents.

How is Aerial Salt Marsh Larviciding conducted?

When larval counts are high following a lunar tide, a bacterial liquid larvicide, *Bacillus thuringiensis* var. *israelensis*, commonly known as Bti, is applied by helicopter along the upland edge of our coastal salt marsh where mosquitoes are breeding.

What Larvicide products are you using on the salt marsh?

Bacillus thuringiensis var. *israelensis* (Bti) is a naturally occurring bacterium that produces a crystalline protein toxin. This protein toxin is specific to mosquito larvae and black fly larvae. Bti only works on species with an alkaline pH stomach and the specific protein receptors for the toxin. The crystals must be ingested to show a toxic effect. This very specific mode of action makes it very safe for non-target organisms present in the same environment.

Follow this link to learn more about the larvicide products NEMMC uses:

<https://www.nemassmosquito.org/public-education/pages/larvicide>