

# Hudson Regional Mosquito Control Unit hunting down larvae

By Celeste Regal  
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Superintendent and program coordinator Dr. Gregory M. Williams and his staff at the Hudson Regional Mosquito and Vector Control Unit are happy to keep health challenges like the mosquito-borne diseases such as West Nile Virus from infecting any person either living in or visiting Hudson County. Another objective is to keep mosquitoes on any outdoor recreational activities to a bare minimum. As many locals may have noticed, those annoying mosquitoes are not nearly the problem they used to be around town both insider and outside our homes and gardens.

Hudson County is a peninsula bounded by Newark Bay and the Passaic and Hackensack Rivers on the west, the Hudson River and New York Harbor on the east, the Kill Van Kull on the south and Bergen County on the north. The Hackensack River bisects the county, which is surrounded by the Hackensack Meadowlands, a 10,000-acre wetland tidal

marsh.

Since 25 percent of our terra firma is permanently or periodically under water, these tidal wetlands are what *Ochlerotatus sollicitans* (aka the Golden Salt marsh mosquito) love to call home because of the ideal breeding conditions. Within the above-mentioned wetlands, there are permanent pockets that produce *Culex salinarius*, a medium sized mosquito that is considered one of the most likely bridge vectors involved in the human transmission cycle of West Nile virus. *Aedes vexans*, one of the most widespread pest mosquitoes in the world, is produced in large numbers in any inland marsh. The oh-so-often, neglected drainage ditches and culverts give rise to expansive populations of *Culex pipiens*, the house mosquito.

Some mosquitoes are better at transmitting West Nile Virus than other mosquitoes, Williams said.

"Those are the ones we go after, primarily but we basically go after any mosquitoes we can find."

Who knew there were so



Greg Williams, left, Robert Sasso, Michael Iverson, Jomo Richards, Maureen LoCascio, Gary Cardini.

many species, those? There are over 2500 different species of mosquitoes throughout the world. Luckily, only of those 150 species occur in the United States, according to one Web site. It appears that Hudson County is inhabited by four – and judging by the problems they have caused in the past, that is quite enough.

The inspectors will in-

spect the water and will bring back immature mosquitoes to the Hudson Regional Mosquito and Vector Control Unit offices where employees identify those pesky mosquitoes by species.

I ran into inspector Albert Lombardo at West Hudson Park last week, who was checking the variety of traps in the area that the Unit installs in order to catch the adult mosquitoes.

"We've surveyed the county; we know where all the major sources of mosquitoes are on public and some private properties. We'll go out and check those sources daily and whenever we find mosquitoes, the inspectors will treat those sources of water to kill the immature mosquitoes before they become adults and go out biting people," Dr. Williams explained. "We know how many and what types of mosquitoes are around. Identifying the adult mosquitoes also helps us decide what type of control measures to take."

Mosquitoes lay their eggs in water where they can hatch. Under ideal environmental conditions larvae,

within two to three days can emerge from the eggs, so the inspectors primary goal is to find them at the larvae stage before they hatch.

"You'll have a lot of (larvae) in one location and we can treat that water (treated



The helicopter is used for large areas inaccessible by foot.

with a larvicide) and kill all of them at once," he added. "Once they hatch and start flying around, they're much more difficult to control. When populations get large enough and there is a significant adult presence then we will apply adulticides when needed."

In certain areas that are

too large or too inaccessible to treat by foot, especially the marshes, a helicopter is used to treat the problem areas.

"The are mosquitoes sources everywhere around the County from North Bergen down to Bayonne – anything that going to hold water for about a week or so, is going to produce mosquitoes eventually," Williams said.

Currently, one of the biggest problems is open water in containers in resident's backyards.

"The average homeowner doesn't understand the whole biology of mosquitoes and how to prevent them (from spawning.) They don't realize that the bucket of water, children's toy, or dog dish can produce hundreds of mosquitoes," he said. "Those are the areas that we can't check – we don't have the manpower to check in everybody's backyard."

Williams added that usually when someone calls with

a mosquito complaint, the mosquitoes are being produced in their own or a neighbor's backyard. There are also mosquitoes that relay on habitat areas in backyards that are continuously flooded and dry down intermittently.

"They prefer that type of habitat actually, so that can be a problem," William added.