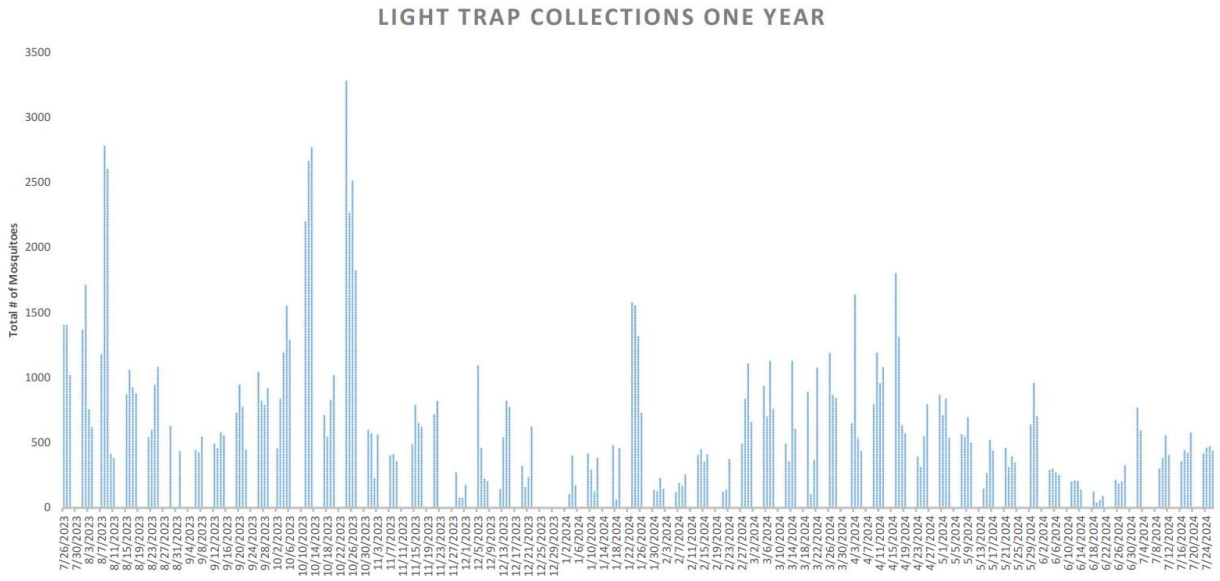
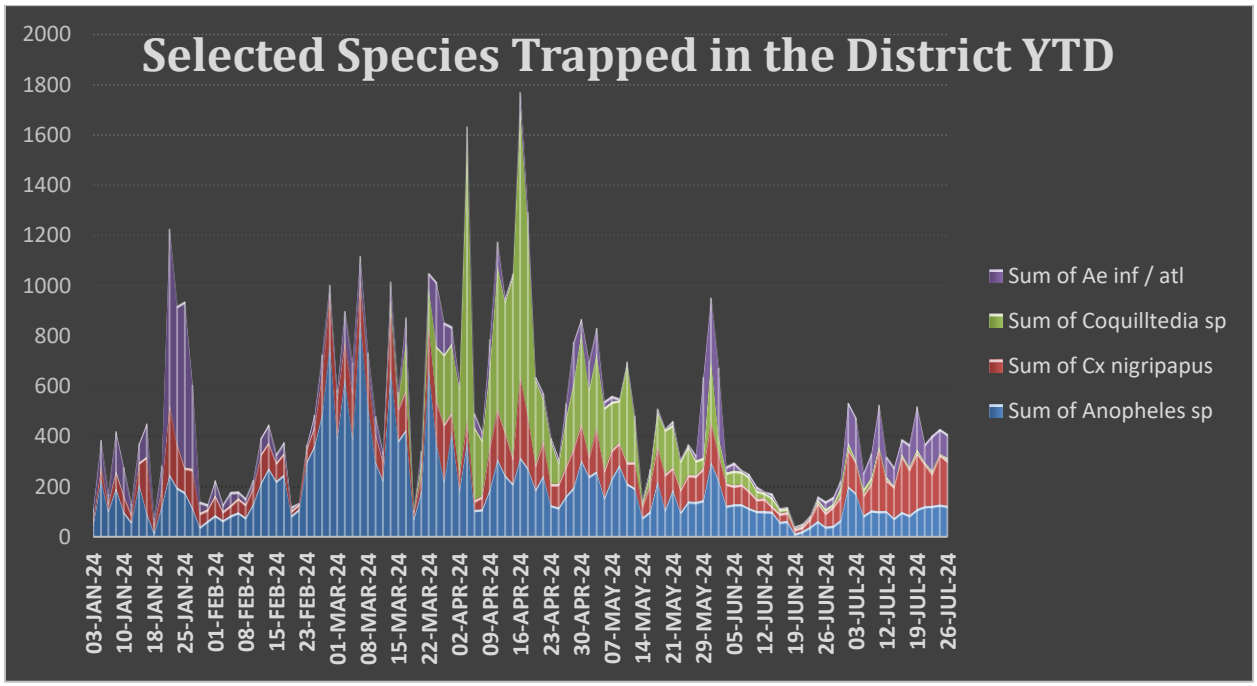
Week of 7/22/2024 Operations Update (30)

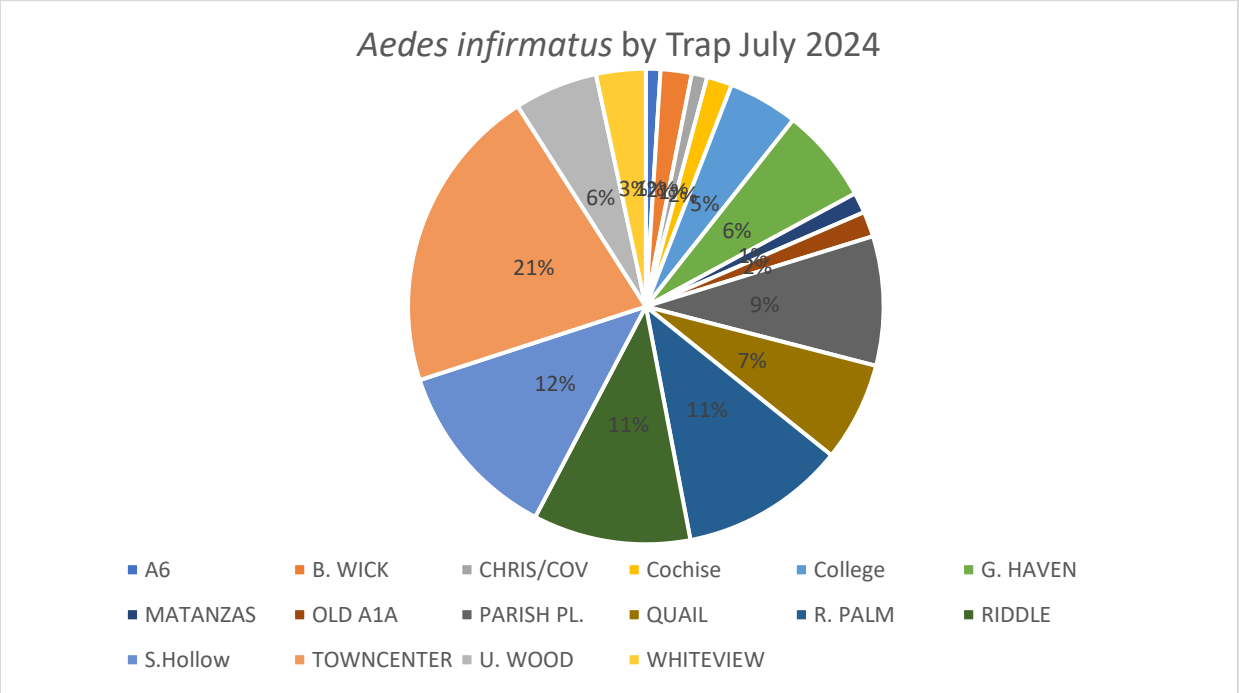
This week, like most of the month of July, has featured moderate mosquito activity in limited locations. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



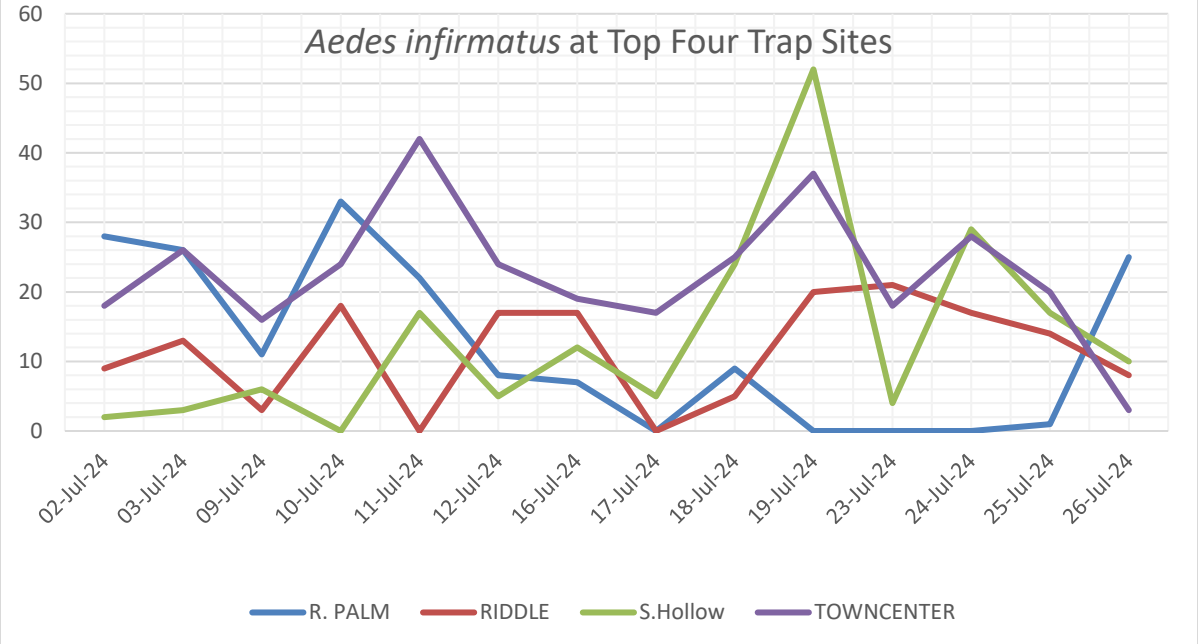
Floodwater species of mosquitoes have stayed at roughly the same levels for four weeks, albeit at varied abundance at different locations. Permanent-water species of mosquitoes have also continued to stay steady at baseline levels after rebounding from almost non-existent.



The Town Center trap location registered the highest proportion of the floodwater species *Aedes infirmatus*, accounting for one-fifth of the abundance in July. Sleepy Hollow was next at 12%, followed by Riddle and Royal Palm each with 11%.



The Town Center trap has also been remarkable at producing a consistent number of mosquitoes of this species. We have speculated in previous reporting that the source of the consistent level of mosquitoes of this species in Town Center is construction both in Town Center and across Highway 100 for the BJ's. Artificial flooding from construction would explain the consistent presence of this floodwater species when rain has been a limiting factor and there is little abundance elsewhere.

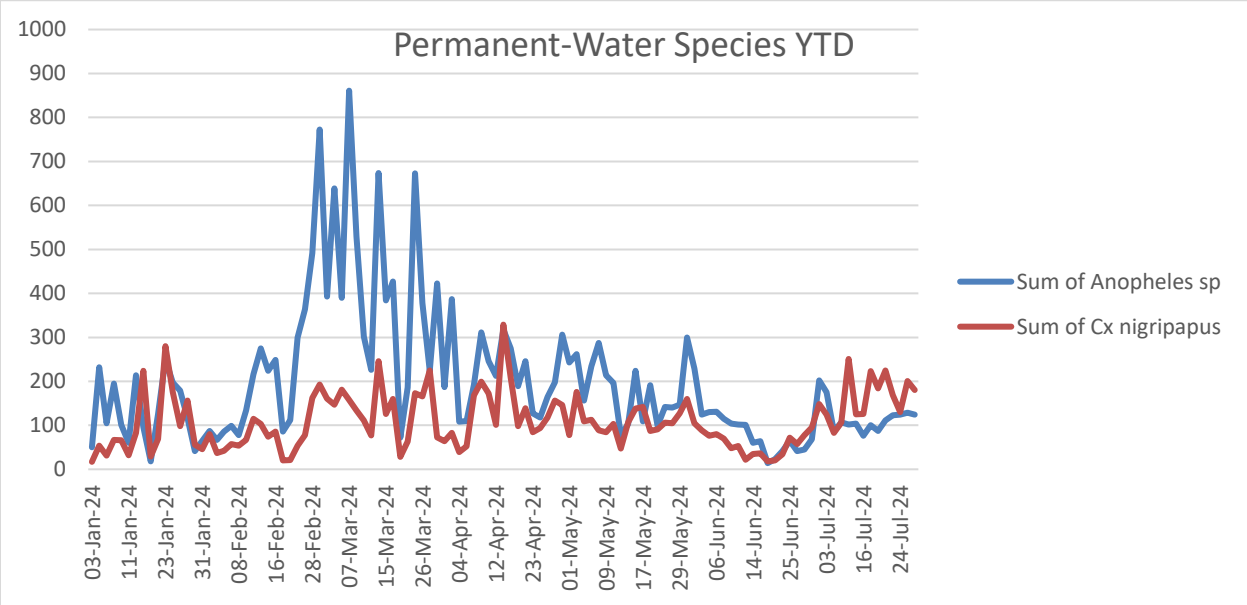


After the first few days in July, *Anopheles spp.* has been at a consistent level, which is very unusual. Normally the population of any mosquito species fluctuates from day to day based on wind speed and direction (towards the trap or not), as well as factors like rain, humidity, and temperature that affect the activity of mosquitoes.

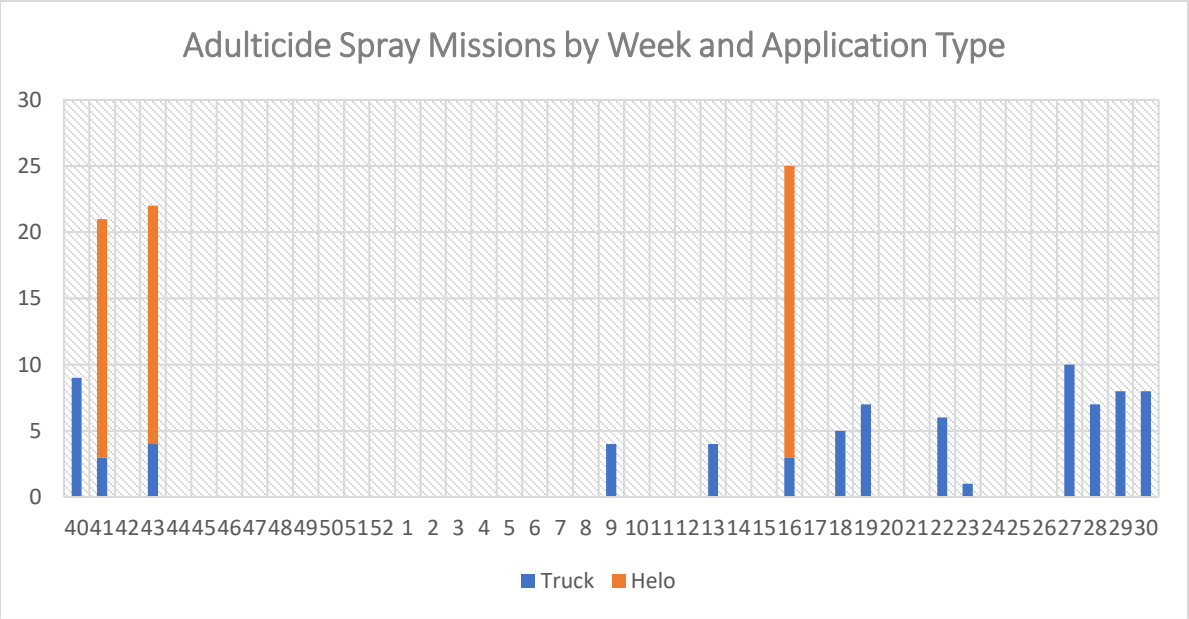
Culex nigirpalpus is another permanent water species, but it prefers a slightly different habitat. Last week we described the differences in habitat preferences:

"We normally see two permanent water species year-round in our surveillance traps, and one is consistently more abundant than the other. This is because the two species prefer slightly different habitats which differ in abundance throughout the District. Anopheles spp. prefer open, more natural bodies of water such as natural ponds, lakes, and basin wetlands. Culex spp. prefer ditches, man-made retention ponds, and swamps. A contributing factor is the quality of the water."

Culex nigirpalpus is at roughly the same population numbers as it has been over the course of the year, whereas *Anopheles spp.* numbers are still depressed. Since we had an extended dry period that all but eliminated mosquito activity in mid-June the two species have rebounded differently. *Culex nigirpalpus* will need less rainfall to replenish its habitat because rainfall will accumulate in the man-made structures it prefers more quickly as run off from impervious surfaces fills these areas more easily, as compared to larger natural areas that receive less runoff that *Anopheles spp.* prefer.



Spraying consisted of isolated zones experiencing moderate levels of mosquito activity.



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Advisories/Alerts: Holmes, Madison, Marion, Nassau, Pasco, and Walton counties are currently under a mosquito-borne illness advisory. Hillsborough, Miami-Dade, and Monroe counties are currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert

West Nile Virus Illnesses Acquired in Florida: In 2024, two asymptomatic positive blood donors were reported from Marion (July) and Walton (July) counties.

2024 Dengue Cases Acquired in Florida: In 2024, 17 cases of locally acquired dengue have been reported in Hillsborough (2), Miami-Dade (11), Monroe (3), and Pasco counties with onset in January (3), February, March (2), April, and June (9).

Zones highlighted in yellow were treated by truck this week.