FY 2024 - 2025 Annual Operations Report





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Operations Overview

This report will discuss operations for the fiscal year beginning October 1, 2024, through September 30, 2025. Subtropical Florida is capable of producing mosquitoes any time of year, therefore operational readiness is constantly maintained. Operations consist of directly monitoring the mosquito population through the use of a network of traps placed near breeding sites that are monitored daily, collections are identified to species and counted and ultimately used for justification of treatments of adult flying mosquitoes.

These treatments are always done at night when most pollinators are not active. These pesticides break down quickly and do not have any residual effectiveness. The strategy of applying pesticides only when necessary, using products that break down quickly, leave no residue, and are applied in very low volumes (less than one ounce per acre), provides a safe and effective means to reducing mosquito-borne diseases while minimizing environmental impacts, protecting beneficial insects and pollinators, and reducing the risk of pesticide resistance in mosquito populations.

The District was established in 1952 to suppress the production of saltmarsh mosquitoes and make the area habitable by people year-round. Suppressing the production of saltmarsh mosquitoes through the preemptive application of larvicides and continuously surveying the areas that produce mosquitoes constitutes the bulk of our daytime operations.

Weekly Operations Summaries and Analysis

In the weekly operations updates that are part of this report we examine the mosquito population, which is tracked year-round (Figure 1), and its relationship with weather, as well as explain how control measures are applied in response to elevated mosquito populations. These reports emphasize control responses to adult mosquito populations. Controlling adult mosquitoes is highly weather dependent and there is more variability in the output of adulticides from year to year (Figure 2). Weekly reports are produced April through October and as needed outside of that time period.

The District works to prevent mosquitoes from emerging in the saltmarsh in the first place by proactively applying pesticides. These pesticides work by targeting mosquito larvae that hatch in saltmarsh areas that flood intermittently, in elevations above the intertidal zone. Surveilling and preemptively treating areas that produce mosquitoes in the saltmarsh constitute the bulk of the District's day-time operations.

Controlling immature mosquitoes using pretreatment larvicide is less weather dependent with output variability stemming from extended dry periods or extensive flooding in the saltmarsh (Figure 3). These conditions allow us to forgo treatments for longer periods and reduce the total applications as it is the oscillation of wet and dry periods that allow the saltmarsh mosquito species to lay eggs in exposed soil and then hatch when flooded to complete the life cycle. The trend has been to increase the amount we are larviciding, while the adulticiding trend remains virtually flat (Figure 4).

Targeting the immature mosquitoes while they are still in the water means less pesticide is needed and control is more complete. Using an extended-release product means operations can be planned in advance and require less equipment as more time is available. In undeveloped areas away from the saltmarsh, breeding sites are too numerous for this strategy and a reactive approach is necessary.

The use of pesticides to kill adult mosquitoes is always on as needed basis with more abundant and widespread populations necessitating a greater response. More area in terms of zones is then treated in response (Figure 5).

Seasonal Overview

At the beginning of the fiscal year, in October, the mosquito population reached the highest numbers for the year. Hurricane Milton impacted the area on 10/10/2024, with the District responding with aerial spraying to reduce the population quickly in late October (week 43). The Flagler EOC requested aerial spraying through the State in response to widespread flooding following the hurricane once the storm had passed, but contracted planes did not arrive until November, completing county-wide spraying on the fourth (Figure 6). The District is self-sufficient in controlling mosquito population in our geographical area, but we do not possess the capacity to treat the entirety of the County. The significant delay in the arrival of contracted planes to reduce the population of mosquitoes following natural disasters increases the risk of mosquito-borne disease transmission, as the more time the mosquitoes persist in high numbers the more likely they are to become infected and transmit diseases to humans.

Spring began with low temperatures, low humidity and low rainfall. Elevated fire danger was a bigger concern than mosquitoes. The first week of April saw some emergence of *Coquillettidia perturbans*, but this species never increased to its typical population size because of the permanent water sites it breeds in over winter dried down due to drought (Figure 7).

The first larvicide pre-treatments in the saltmarsh began in mid-April. This is typical timing, but these treatments can begin as early as the second week of March (2024). When the saltmarsh is in a dry-down phase we can prevent the emergence of saltmarsh mosquitoes from potential floodwaters by treating mosquito breeding sites. Once these saltmarsh breeding sites flood, they immediately activate dormant eggs laid in the soil and mosquito production can occur uninterrupted unless treatments are conducted within three days of the flood event. Since the window of time to conduct treatments is limited, treating in advance is preferred.

A few areas began to flood by the end of April followed by a major flood in late May (Figure 8). The flood status of mosquito breeding sites then oscillated between wet and dry, which is ideal for mosquito production in the saltmarsh. By August the saltmarsh was mostly flooded and remained so. Flooded sites prevent certain species of mosquitoes from laying their eggs in dry soil, thus interrupting the lifecycle.

Week 19, at the start of May, significant rainfall was received and by week 21, Mid-May, limited spraying by truck was conducted weekly until week 30, Late-July, when sufficient mosquitoes were present to justify widespread adulticide treatments. Significant rainfall at the end of August lead to

a level of mosquito activity similar to the aftermath of a hurricane by September. However, no hurricanes directly impacted the area this year.

Rainfall is the main driver of floodwater mosquito production outside of the saltmarsh. Mosquito production is reasonably well predicted by rainfall accumulation (Figure 9). Due to extended drought during Spring and most of Summer, the mosquito population remained low for an extended portion of the season.

Suppression of Mosquito-borne Diseases

Despite the prevalence of mosquito-borne disease around the state this year, there were no cases in the District. The primary means to abate mosquito disease is by suppressing the mosquito population. This is accomplished by preventing the continued presence of high numbers of mosquito species that are vectors of disease. For people living in or visiting areas in the District, the prevalence of mosquito-borne disease elsewhere in the state has little bearing, as the District is self-sufficient in controlling mosquitoes and can quickly reduce the mosquito population to prevent disease transmission.

There are several mosquito-borne diseases that remain a threat to the human population in Florida such as West Nile Virus, Eastern Equine Encephalitis, and more recently Dengue. In 2023 there were 175 cases of locally acquired Dengue in Florida, occurring in Miami-Dade, Broward, Hardee, Palm Beach and Polk Counties. In 2024 at the end of September, 45 cases of locally acquired dengue have been reported in Florida. Counties reporting locally acquired Dengue were Broward, Hillsborough (3), Manatee, Miami-Dade (28), Monroe (3), Orange (2), Palm Beach (2), and Pasco (5) counties with onset in January (3), February, March (2), April, June (11), July (8), August (13), and September (6). In 2025, 47 cases of locally acquired dengue have been reported in Brevard (31), Hillsborough, Miami-Dade (14), and Pasco counties with onset in February, May, June, July, August, and September.

Dengue remains a primary concern. The species of mosquitoes that vector Dengue are backyard mosquitoes, meaning they do not reproduce in the natural environment, but instead use primarily containers commonly found around homes. Because of this, a simple strategy of applying pesticides is not sufficient. Instead, a laborious sweep of neighborhoods to find and eliminate containers is the most effective means of permanently eliminating these mosquitoes. To supplement limited District staff, we set up training for community volunteers from C.E.R.T. (Community Emergency Response Team) to perform this function with the help of the local emergency operation center.

A significant contributor to the prevalence of Dengue in South America and the Caribbean is that all serotypes of the disease were found to be circulating. This means even when people have previously been infected by one of the four serotypes of Dengue, they remain susceptible to the other serotypes. Many more people were thus susceptible to the disease than in a typical year.

The Florida Department of Health monitors mosquito-borne diseases around the state and a summary graphic for the year is included in this report (Figure 10).

Accomplishments

Last year services were expanded to include the newly added areas to the District. The Flagler County Board of Commissioners formally approved expansion of district boundaries in December of 2022. The County had requested the District expand to developing areas to aid in economic growth of the County. The cost of serving the expanded areas will exceed collected revenues at the beginning, but over time it will likely contribute more to the tax base.

An additional field technician was added in 2023 to complete training ahead of the start of services. A second pilot was brought on this season as well. However, the total number of staff has decreased by leaving vacant all 4 seasonal spray technician positions, 2 seasonal field technician positions and the surveillance coordinator position. This was made possible by the adoption of remote field monitoring equipment that expedites field surveillance and allows more efficient use of employee time. Additionally, a more complete picture of conditions in the field is immediately available for analysis aiding mosquito management decisions.

Mosquito control can operate with a small number of employees because it makes use of specialized equipment to treat large areas quickly in response to the verified presence of mosquitoes. The main treatment vehicle remains the helicopter. However, mosquito control has for years used UAS's (Unmanned Aerial Systems) commonly referred to as "drones" to pretreat areas that breed mosquitoes. The District received a new treatment drone that replaces a unit that is no longer allowed for use by Florida law, FS 934.50 (7), over concerns of Chinese terrorism. The American made and compliant with Sections 848 & 889 NDAA Hylio AG-230 will be ready for service next season.

Finally, a long-term project that is more mundane but is critical to effective operations, is the ongoing replacement of trucks. The District began replacing its fleet of trucks in 2017 on a replacement schedule of two or three trucks every year. Previously, we had some vehicles that were over twenty years old, and this hindered operations as they were unreliable. Mosquito control operations are time sensitive and not having reliable equipment can delay spray operations. The last outdated truck was 14 years old and was surplused this year. We now have completed the transition to a "one truck" fleet where equipment can be swapped out quickly for multiple mission sets on the same vehicle, reducing the total number of vehicles needed.

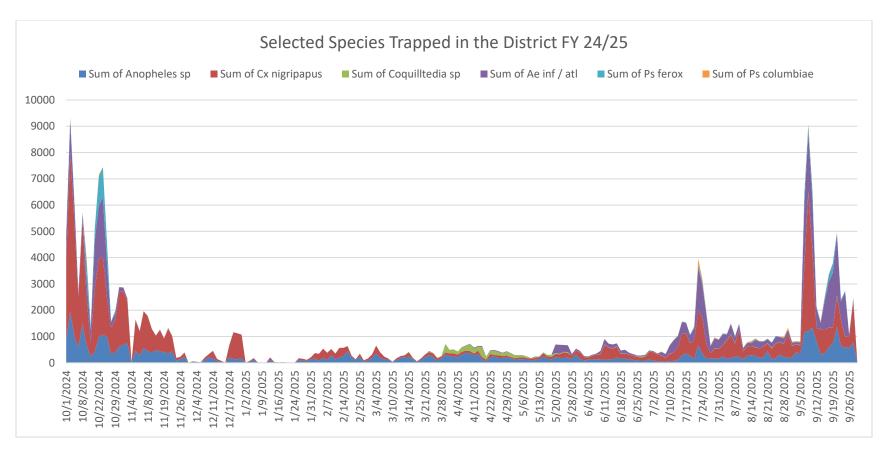


Figure 1. The District maintains a network of traps that are monitored daily on a year-round basis. This information provides the required justification for applications to control adult mosquitoes.

Pesticide Usage by Fiscal Year

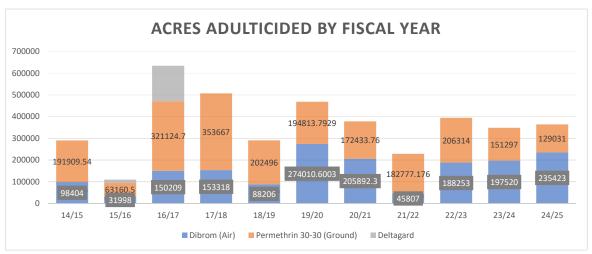


Figure 2. Controlling adult mosquitoes is highly weather dependent and there is more variability in the output of adulticides from year to year.

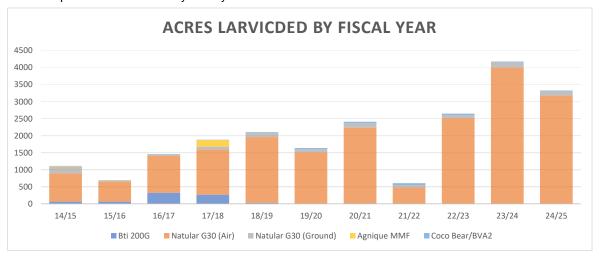


Figure 3. Controlling immature mosquitoes using pretreatment larvicide is less weather dependent with output variability stemming from extended dry periods or extensive flooding in the saltmarsh.

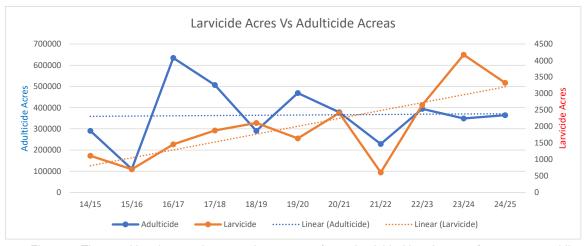


Figure 4. The trend has been to increase the amount of area larvicided in advance of emergence, while the adulticiding trend remains virtually flat.

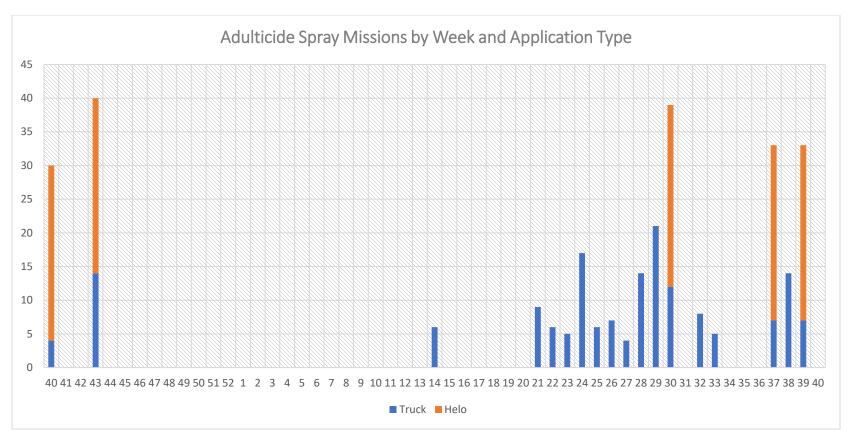
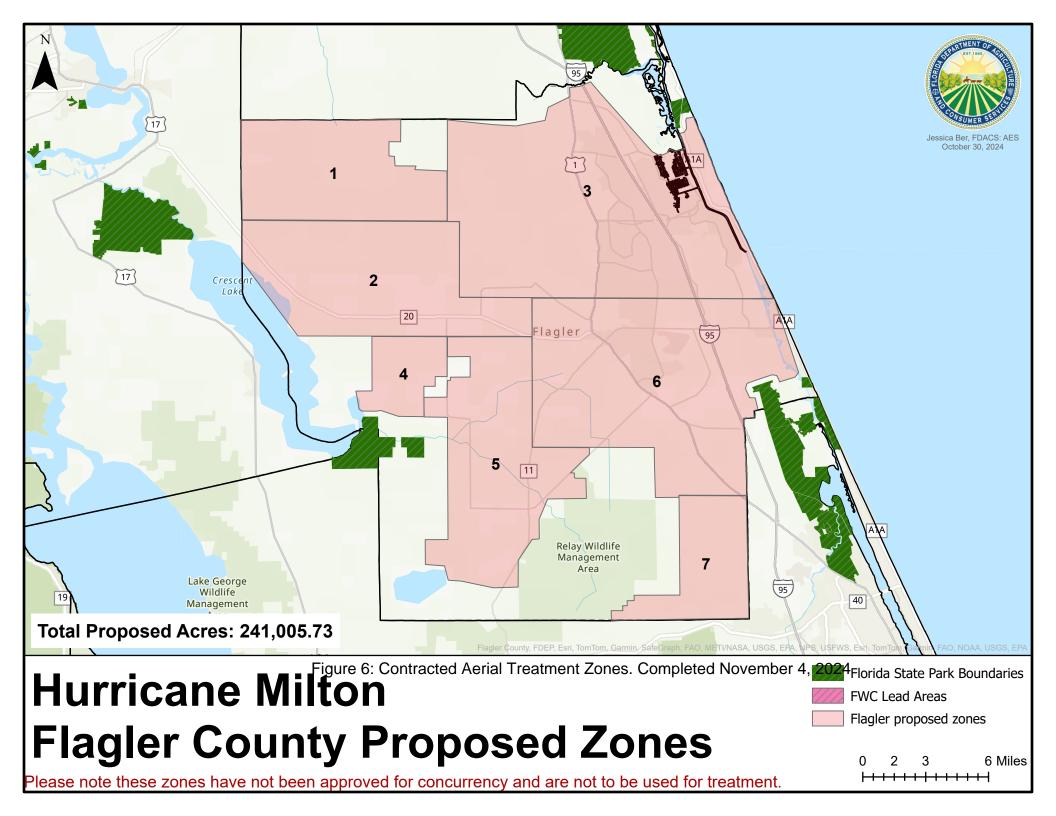


Figure 5. The use of pesticides to kill adult mosquitoes is always on as needed basis with more abundant and widespread populations necessitating a greater response. More area, in terms of zones, is then treated in response to a greater abundance of mosquitoes. No spray missions are conducted when the mosquito population is at low levels.



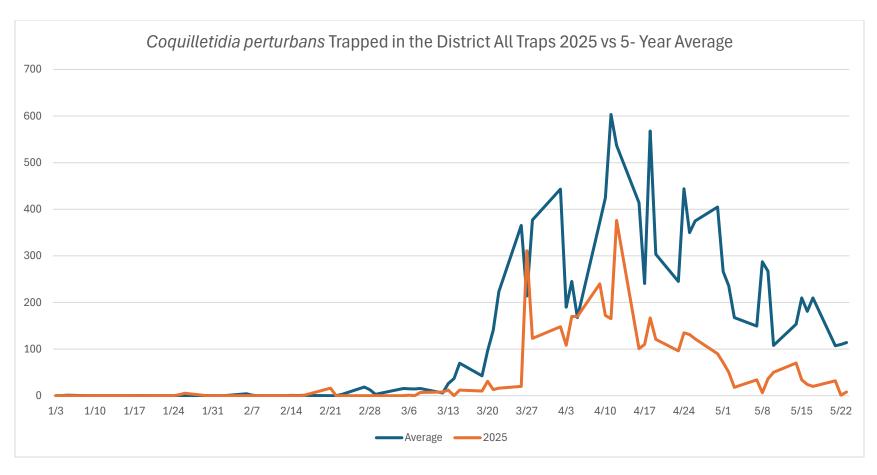


Figure 7: A species of permanent-water mosquito that overwinters as larvae, *Coquilletidia perturbans*, typically emerges in high numbers by mid-April. This species inhabits cattail ponds and utilizes a modified siphon to pierce the stem of the cattail plants and remain submerged until emergence. This adaptation severely limits natural predation.

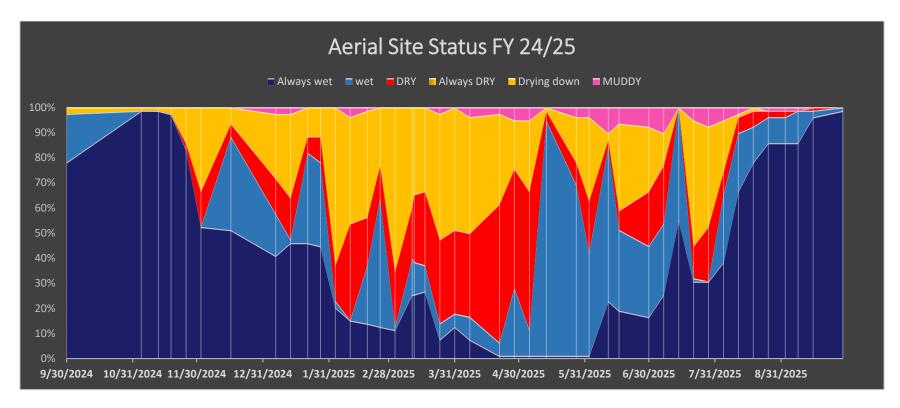


Figure 8. Aerial surveillance of major saltmarsh sites flood status.

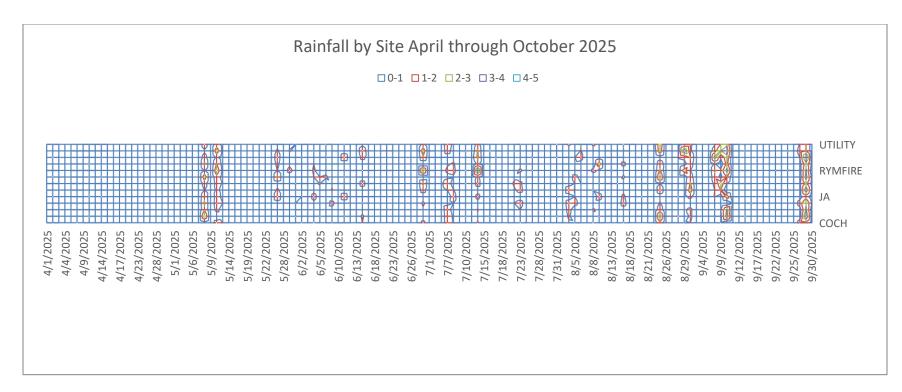


Figure 9: Rainfall by Site April through October 2025.

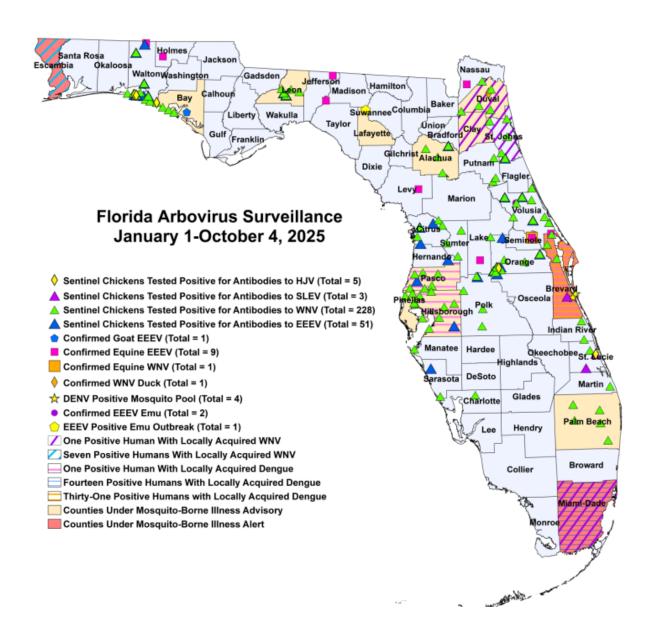
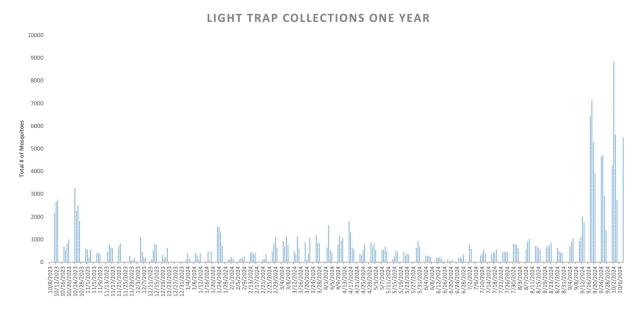


Figure 10. From the Florida Department of Health Weekly Arbovirus Surveillance Report, Week 40 https://www.floridahealth.gov/diseases-and-conditions/mosquito-bornediseases/_documents/2025-40-arbovirus-surveillance.pdf

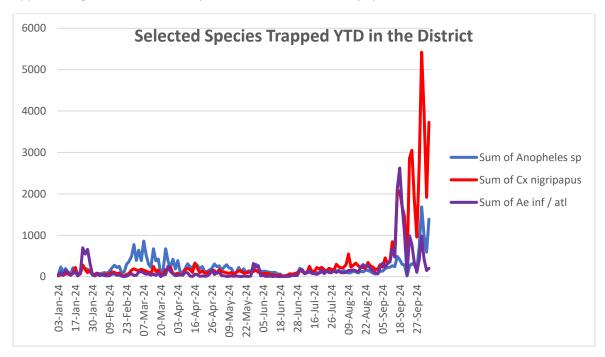


Week of 10/7/2024 Operations Update (41)

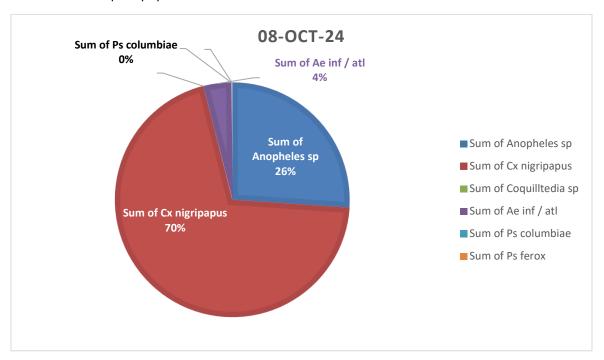
The District closed down for Hurricane Milton with only one day of trap data collected. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



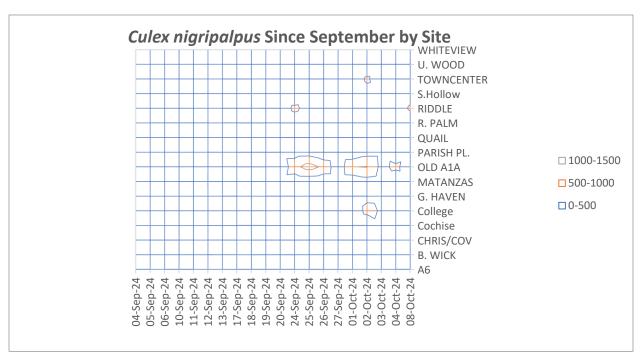
After four weeks of high floodwater mosquito activity, *Culex nigripalpus*, a permanent water species, was the main species trapped. Aerial adulticiding in previous weeks was focused on controlling *Aedes infirmatus*. The one day of trap data this week suggests the population is below baseline. However, an approaching hurricane will likely reverse that in 7 to 14 days post event.



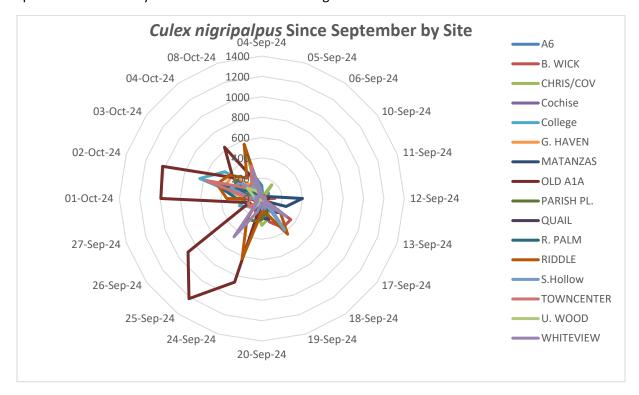
The pie chart below shows the main target of aerial adulticidng in previous weeks contributed very little to the total mosquito population this week.



The surface chart below shows the main area for *Culex nigripalpus* had been focused in one location. *Last week we* said, "*Culex nigripalpus* was primarily present in the vicintiy of Washington Oaks Gardens State Park. The County is working on drainage around the park. The park has limited access to permit the proper treatment coverage by Spray-Truck. Both of these factors, lack of effective drainage and insufficient road access for Spray-Truck, contributed to continued rebounding of this species in this location."



The scale of the problem is easier to see in the radar chart below. This week the population of this species is more evenly distributed but remains at high levels.



Florida Arbovirus Surveillance Week 41: October 6 - 12, 2024 View the full report

Advisories/Alerts: Alachua, Bay, Broward, Citrus, Holmes, Madison, Mantatee, Nassau, Orange, Pinellas, Putnam, Sarasota, Sumter, and Volusia counties are currently under a mosquito-borne illness advisory. Duval, Hillsborough, Marion, Miami-Dade, Monroe, Palm Beach, Pasco, and Walton counties are currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. 2 There are currently multiple travel health notices from the Centers for Disease Control and Prevention related to mosquito-borne diseases.

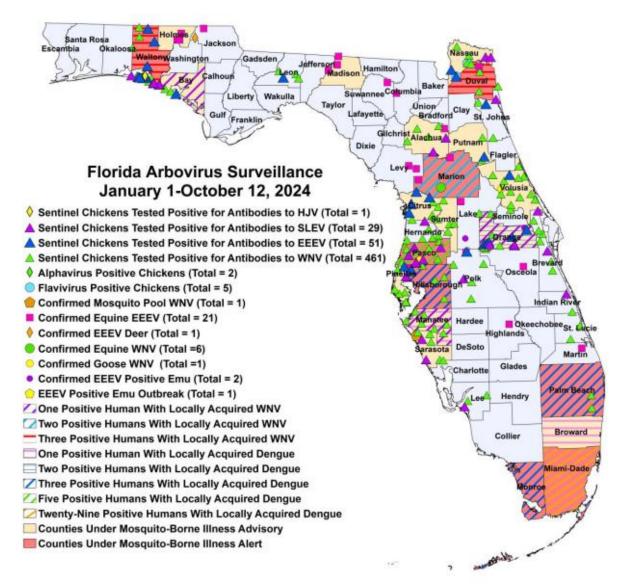
WNV activity: In 2024, five human cases of WNV illness acquired in Florida have been reported in Bay (August), Duval (July, September), Marion (July), and Walton (July) counties. Six asymptomatic positive blood donors were reported from Duval (August), Manatee (August), Marion (July), Orange (September), and Walton (July, August) counties.

EEEV activity: No human cases of EEEV infection were reported this week. No horses with EEEV infection were reported this week. No sentinel chickens tested positive for antibodies to EEEV this week. In 2024, positive samples from 51 sentinel chickens, 21 horses, two emus, one emu flock, and one deer have been reported from 26 counties.

2024 Dengue Cases Acquired in Florida: In 2024, 47 cases of locally acquired dengue have been reported in Broward, Hillsborough (3), Manatee, Miami-Dade (29), Monroe (3), Orange (2), Palm Beach

(3), and Pasco (5) counties with onset in January (3), February, March (2), April, June (11), July (8), August (14), and September (7). Three cases were reported in non-Florida residents

2024 International Travel-Associated Oropouche Cases: Eighty-six cases with onset in 2024 have been reported in individuals with travel history to an Oropouche-endemic area in the two weeks prior to onset. Counties reporting cases were: Broward (3), Duval, Hillsborough (11), Lee (5), Marion, Miami-Dade (51), Orange (3), Palm Beach (2), Pasco (3), Polk (4), Sarasota, and St. Lucie. Country of origin was Cuba (86)



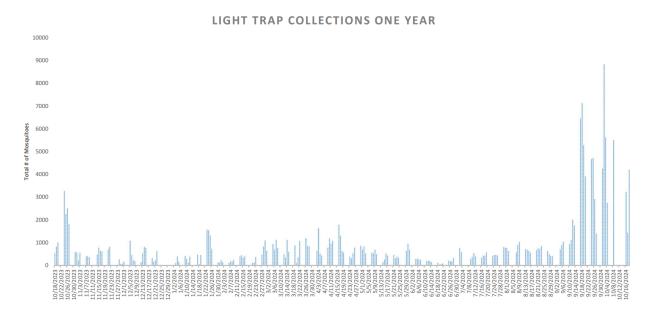
^{*}This is the first report of fiscal year 2024-2025. Weekly operations updates are typically produced April through October.

No Spraying this week.

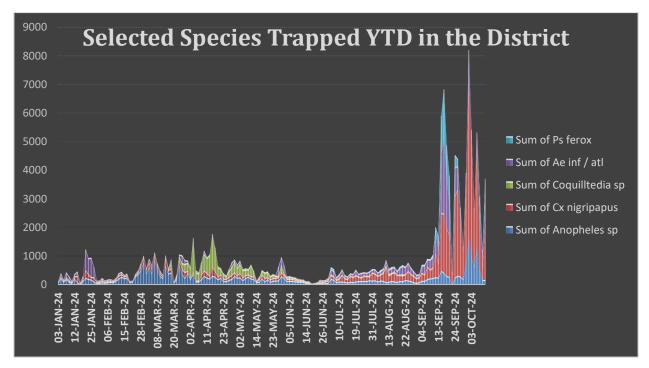


Week of 10/14/2024 Operations Update (42)

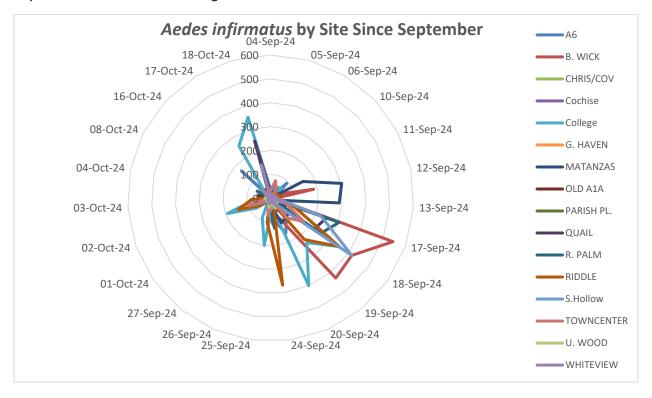
The District resumed normal operation after Hurricane Milton passed to the South on 10/10/2024. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



The population of permanent water mosquito species was much reduced this week. The reduction despite flooding rain form the hurricane can be explained by the flushing effect a large volume of continuous rain has on this species breeding areas.



The floodwater mosquito species Aedes infirmatus began to emerge post-Hurricane Milton, about eight days after the storm at the "College Site."



Florida Arbovirus Surveillance Week 42: October 13 - 19, 2024 View the full report

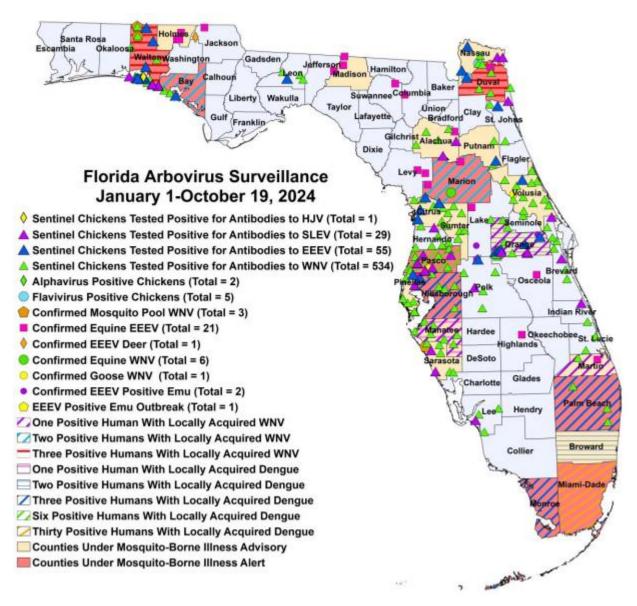
Advisories/Alerts: Alachua, Broward, Citrus, Holmes, Madison, Mantatee, Martin, Nassau, Orange, Pinellas, Putnam, Sarasota, Sumter, and Volusia counties are currently under a mosquito-borne illness advisory. Bay, Duval, Hillsborough, Marion, Miami-Dade, Monroe, Palm Beach, Pasco, and Walton counties are currently 2 under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. There are currently multiple travel health notices from the Centers for Disease Control and Prevention related to mosquito-borne diseases.

WNV activity: Two human cases of WNV infection were reported this week in Bay and Martin counties. No horses with WNV infection were reported this week. Seventy-three sentinel chickens tested positive for antibodies to WNV this week in Alachua, Brevard, Citrus, Duval, Hillsborough, Hernando, Lee, Manatee, Martin, Nassau, Orange, Palm Beach, Pasco, Pinellas, Polk, Seminole, St. Johns, Sumter, Volusia, and Walton.

EEEV activity: No human cases of EEEV infection were reported this week. No horses with EEEV infection were reported this week.

2024 Dengue Cases Acquired in Florida: In 2024, 50 cases of locally acquired dengue have been reported in Broward (2), Hillsborough (3), Manatee, Miami-Dade (30), Monroe (3), Orange (2), Palm Beach (3), and Pasco (6) counties with onset in January (3), February, March (2), April, June (11), July (8), August (14), and September (10).

2024 International Travel-Associated Oropouche Cases: : Eighty-seven cases with onset in 2024 have been reported in individuals with travel history to an Oropouche-endemic area in the two weeks prior to onset. Counties reporting cases were: Broward (3), Collier, Duval, Hillsborough (11), Lee (5), Marion, Miami-Dade (51), Orange (3), Palm Beach (2), Pasco (3), Polk (4), Sarasota, and St. Lucie. Country of origin was Cuba (87).



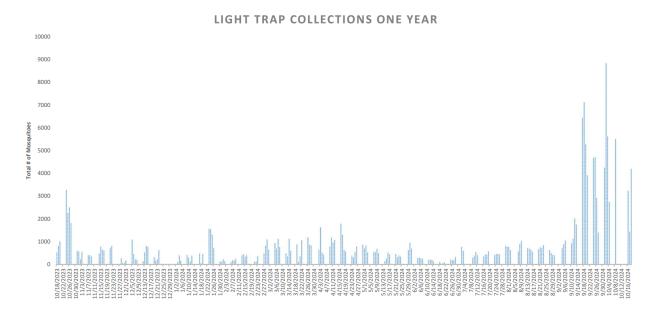
The Flagler County Emergency Operations Center has requested emergency aerial spraying from the State Department of Agriculture and Consumer Services.

No Spraying this week.

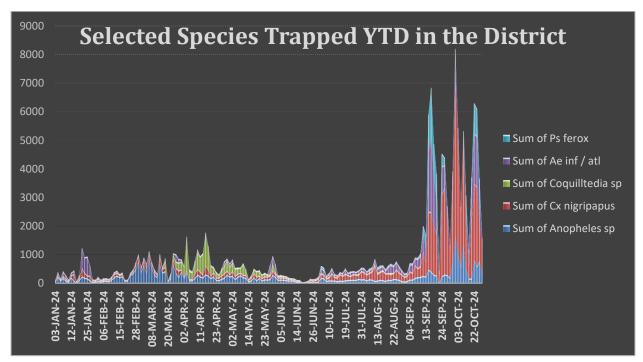


Week of 10/21/2024 Operations Update (43)

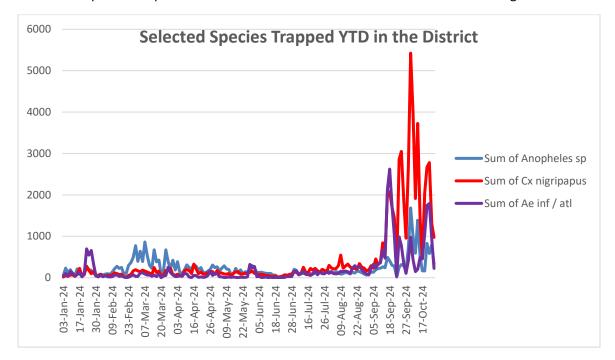
The District conducted aerial adulticiding this week in response to a surge in mosquitoes associated with Hurricane Milton. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



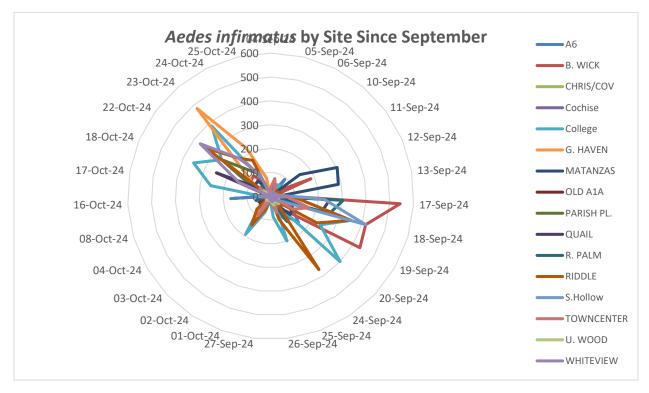
The population of permanent water mosquito species was much reduced. Floodwater mosquito species began to emerge 8 days after the hurricane.



Typically after the significant rainfall from a hurricane an emergency level of loodwater mosquitoes emerges seven to fourteen days later. While the numbers have returned to high levels, they are similar to what was experienced prior to Hurricane Milton and reduced to low levels following aerial treatments.



The floodwater mosquito species *Aedes infirmatus* surge post-hurricane was less than the previous initial surge. This can be explained by the fact that these mosquitoes lay their eggs in dry soil that tends to flood and much of these areas have remained flooded, thus preventing further oviposition (egg laying).



Florida Arbovirus Surveillance Week 43: October 20 - 26, 2024 View the full report

Advisories/Alerts: Alachua, Brevard, Broward, Citrus, Hernando, Holmes, Madison, Mantatee, Martin, Nassau, Orange, Pinellas, Polk, Putnam, Sarasota, Sumter, and Volusia counties are currently under a mosquito-borne illness advisory. Bay, Duval, Hillsborough, Marion, Miami-Dade, Monroe, Palm Beach, Pasco, and Walton counties are currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. There are currently multiple travel health notices from the Centers for Disease Control and Prevention related to mosquito-borne diseases.

WNV activity: One human case of WNV infection was reported this week in Marion County. One horse with WNV infection was reported this week in Brevard County. Eighty-eight sentinel chickens tested positive for antibodies to WNV this week in Alachua, Brevard, Citrus, Duval, Hernando, Hillsborough, Lee, Leon, Manatee, Orange, Palm Beach, Pasco, Pinellas, Polk, Putnam, Sarasota, St. Johns, St. Lucie, Sumter, Volusia, and Walton. One goose, one flamingo, and two ducks with WNV infection were reported this week in Duval and Orange County.

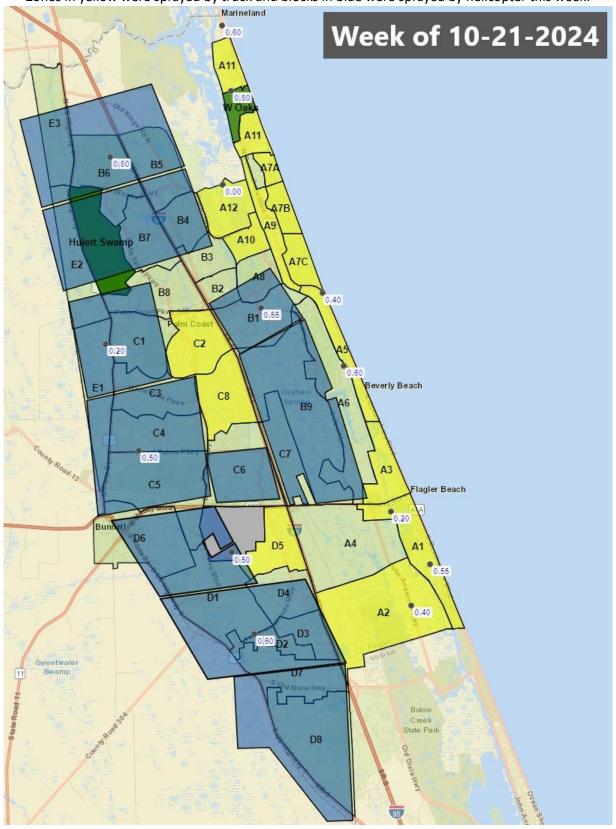
EEEV activity: No human cases of EEEV infection were reported this week. No horses with EEEV infection were reported this week.

2024 Dengue Cases Acquired in Florida: Five cases of locally acquired dengue were reported this week. In 2024, 55 cases of locally acquired dengue have been reported from nine counties.

2024 International Travel-Associated Oropouche Cases: Eighty-eight cases with onset in 2024 have been reported in individuals with travel history to an Oropouche-endemic area in the two weeks prior to onset. Counties reporting cases were: Broward (3), Collier, Duval, Hillsborough (12), Lee (5), Marion, Miami-Dade (51), Orange (3), Palm Beach (2), Pasco (3), Polk (4), Sarasota, and St. Lucie. Country of origin was Cuba (88).

The Flagler County Emergency Operations Center has requested emergency aerial spraying from the State Department of Agriculture and Consumer Services. However, contractors will not be able to respond in a timely manner so the District will conduct treatments as usual.

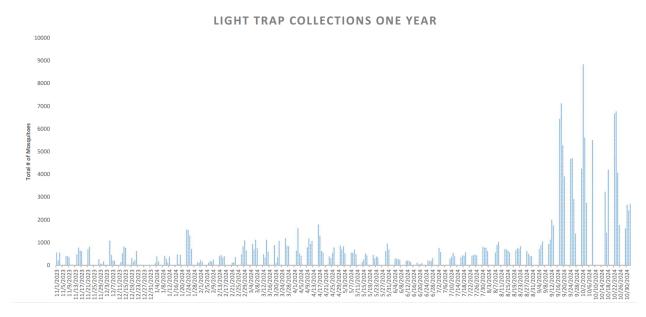
Zones in yellow were sprayed by truck and blocks in blue were sprayed by helicopter this week.



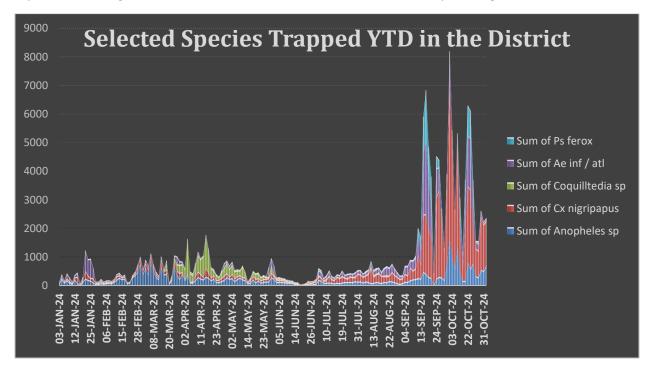


Week of 10/28/2024 Operations Update (44)

Permanent water species of mosquitoes remain elevated, but floodwater species have been reduced to baseline following last week's treatments. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



High numbers of permanent water mosquitoes remain but at lower numbers than previous weeks since mid-September. Many areas remain flooded after Hurricane Milton but since no new rain has fallen to replenish standing water with nutrients from run off, the larvae are likely running out of food.



Florida Arbovirus Surveillance Week 44: October 27 – November 2, 2024 View the full report

Advisories/Alerts: Alachua, Brevard, Broward, Citrus, Hernando, Holmes, Madison, Mantatee, Martin, Nassau, Orange, Pinellas, Polk, Putnam, Sarasota, Seminole, Sumter, and Volusia counties are currently under a mosquito-borne illness advisory. Bay, Duval, Hillsborough, Marion, Miami-Dade, Monroe, Palm Beach, Pasco, and Walton counties are currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. There are currently multiple travel health notices from the Centers for Disease Control and Prevention related to mosquito-borne diseases.

WNV activity: Four human cases of WNV infection were reported this week in Duval, Marion, Polk, and Seminole counties. Two horses with WNV infection were reported this week in Marion County. Fifty-nine sentinel chickens tested positive for antibodies to WNV this week in Alachua, Brevard, Citrus, Hernando, Hillsborough, Indian River, Lee, Martin, Orange, Pinellas, Polk, Putnam, St. Lucie, Sumter, and Volusia counties. In 2024, positive samples from ten humans, eight asymptomatic blood donors, nine horses, two geese, one flamingo, two ducks, three mosquito pools, and 681 sentinel chickens have been reported from 28 counties.

EEEV activity: No human cases of EEEV infection were reported this week. No horses with EEEV infection were reported this week.

2024 Dengue Cases Acquired in Florida: Four cases of locally acquired dengue were reported this week. In 2024, 59 cases of locally acquired dengue have been reported from ten counties. In 2024, 59 cases of locally acquired dengue have been reported in Broward (2), Hillsborough (4), Manatee, Miami-Dade (34), Monroe (3), Orange (2), Palm Beach (3), Pasco (8), Polk, and Sarasota counties with onset in January (3), February, March (2), April, June (11), July (8), August (14), September (18), and October

2024 International Travel-Associated Oropouche Cases: Ninety cases with onset in 2024 have been reported in individuals with travel history to an Oropouche-endemic area in the two weeks prior to onset. Counties reporting cases were: Broward (3), Collier, Duval, Hillsborough (12), Lee (5), Marion, Miami-Dade (53), Orange (3), Palm Beach (2), Pasco (3), Polk (4), Sarasota, and St. Lucie. Country of origin was Cuba (90).

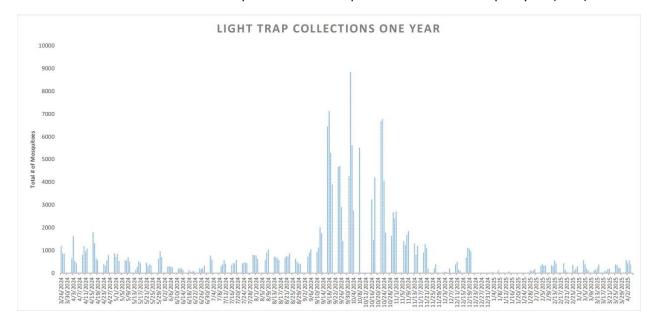
The Flagler County Emergency Operations Center has requested emergency aerial spraying from the State Department of Agriculture and Consumer Services. Contractors will begin spraying Saturday November 2.

No spraying this week.



Week of 3/31/2025 Operations Update (14)

Some treatments this week for adult mosquitoes on the periphery of the District. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



The winter months have been quiet following Hurricane Milton. Low rainfall amounts coupled with mild temperatures and low humidity have caused many mosquito breeding sites to remain dry for an extended period of time.

Some adulticide treatments were conducted this week on the periphery of the District in response to the emergence of a single species, *Coquilletidia perturbans*. Cooler temperatures will delay the emergence of this species as it overwinters as larvae. Cooler temperatures reduce the activity of the adults once emerged. Another factor is the degree to which bodies of water have dried down when there is an extended drought.

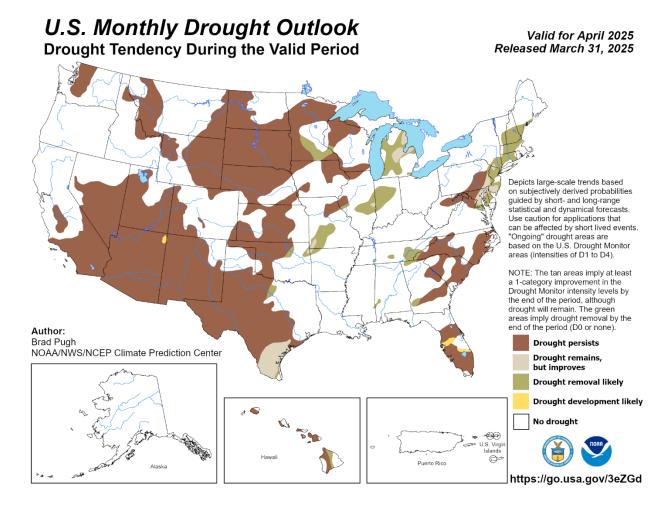


Southeast: What to Expect This Spring?

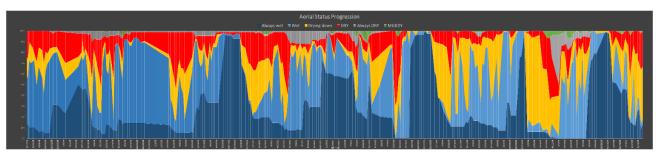


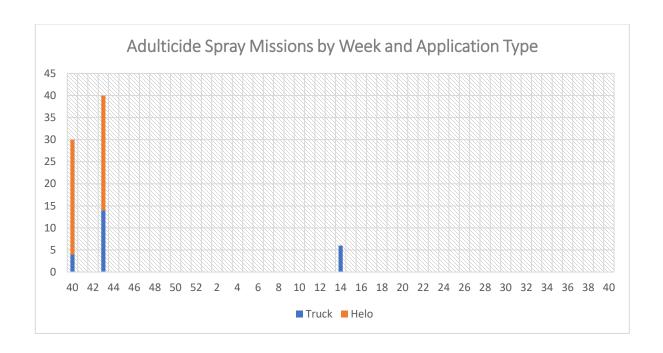
- April is likely to start off with above-normal temperatures with near to belownormal precipitation. Drought coverage is expected to remain steady or increase by mid-April.
- Later in the spring, uncertainty increases with the April-May-June (AMJ) precipitation outlook having equal chances of below, near, or abovenormal precipitation.
- ➤ Since the AMJ outlook favors above-normal temperatures, the Southeast will be vulnerable to rapid onset drought.

Brad Pugh is sharing



The drought conditions are evident in our daily surveillance of mosquito breeding sites. One way we monitor mosquito breeding sites is by surveillance flights using the District's Helicopter. The graph below is data going back to 2016. The yellow and red portions indicate the total sites observed by air that are drying down or dry respectively. On the right side of the chart, you can see the areas are mostly dry or drying down and have been for some time.





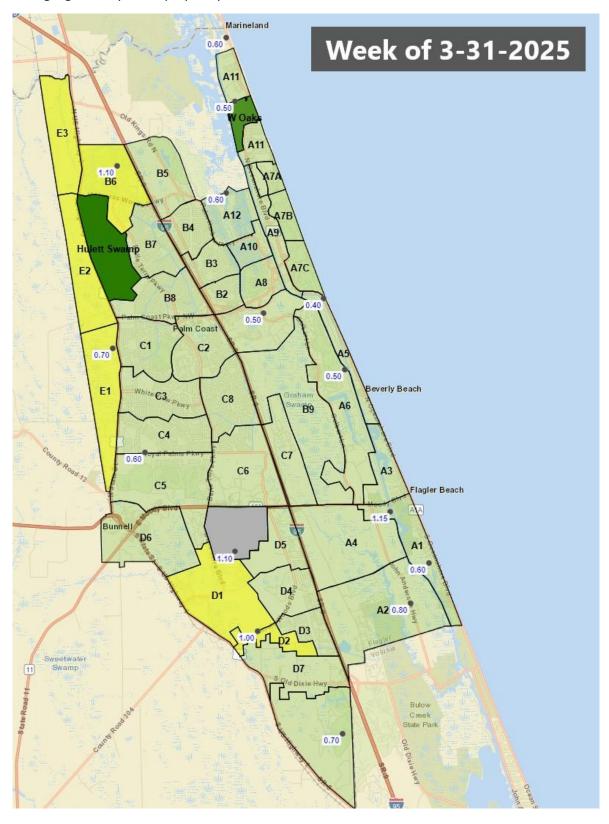
2025 Mosquito-Borne Disease Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Brevard			1 WNV (2/7)	
Citrus			4 WNV (1/6), (2/10), (2/17)	
Indian River			2 WNV (1/2)	
Miami-Dade	1 dengue (February)			
Orange			1 EEEV (2/24)	1 EEEV emu (1/1)
Palm Beach			5 WNV (1/7), (1/21), (1/27), (2/10)	
Pasco			1 WNV (1/13)	
Pinellas			1 WNV (1/6)	
Seminole		1 EEEV (1/5) 1 WNV (1/5)		
Volusia			1 EEEV (1/14)	1 EEEV emu (1/2)

See the full **DOH Report**

This is the first weekly operations report for the year. The District continues monitoring and controlling mosquitoes year-round, but we only produce a weekly report from April through October. You can read last year's annual Operations Report here

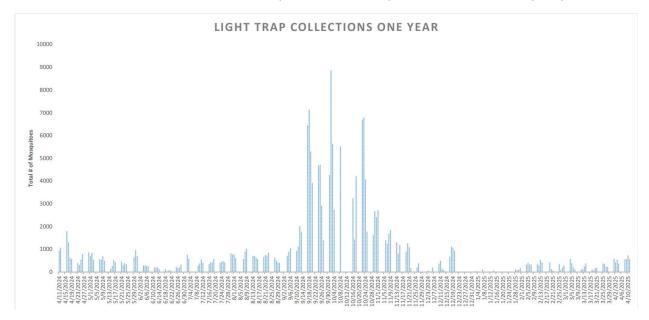
Zones highlighted in yellow sprayed by truck.



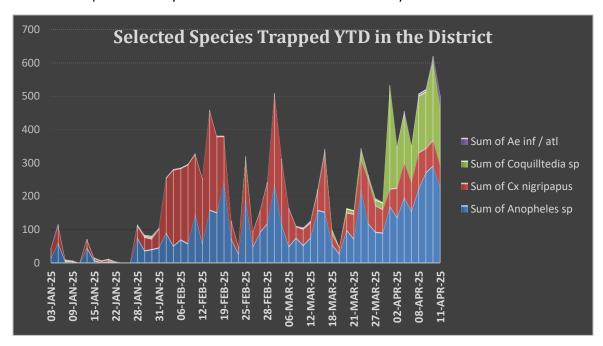


Week of 4/7/2025 Operations Update (15)

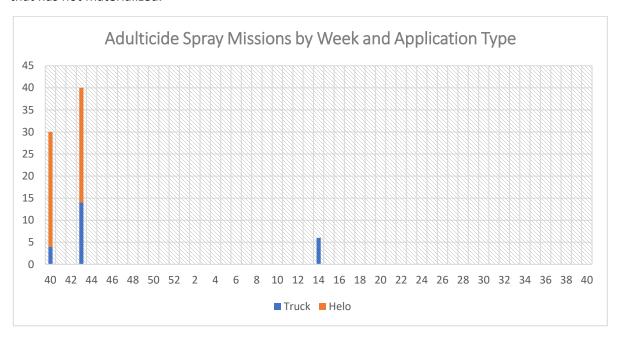
Overnight temperatures were cooler this week, reducing potential mosquito activity. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



We haven't seen much of our main pest mosquito species for this time of year. A species of permanent water mosquito that overwinters as larvae, *Coquilletidia perturbans*, typically emerges in high numbers by mid-April. The pattern of low rainfall and low humidity have continued, but temperatures are increasing. These conditions limit their numbers by both reducing larval habitat and limiting the life span of adult mosquitoes as they desiccate under low relative humidity conditions.



We would expect to see much higher numbers of this pest mosquito in a typical year by mid-April, but that has not materialized.



No spraying this week for adult mosquitoes.

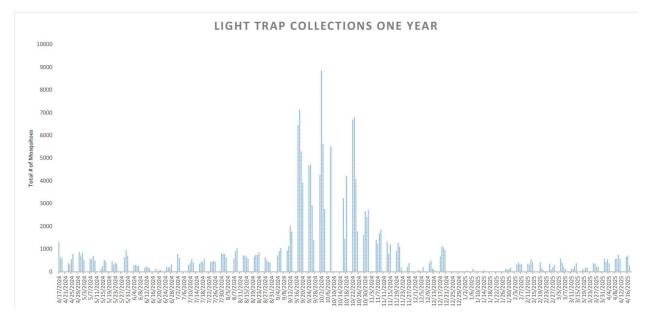
2025 Mosquito-Borne Disease Activity by County					
County	Humans	Equines	Sentinel Chickens	Other	
Bay			1 WNV (3/24)		
Brevard			1 WNV (2/7)		
Citrus			4 WNV (1/6), (2/10), (2/17) 2 EEEV ((3/11), (4/1)		
Indian River			2 WNV (1/2)		
Miami-Dade	1 dengue (February)				
Orange			1 EEEV (2/24)	1 EEEV emu (1/1)	
Palm Beach			10 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17)		
Pasco			1 WNV (1/13)		
Pinellas			1 WNV (1/6)		
				_	
Bay			1 WNV (3/24)		
Brevard			1 WNV (2/7)		
Seminole		1 EEEV (1/5) 1 WNV (1/5)			
Volusia			1 EEEV (1/14)	1 EEEV emu (1/2)	

See the full DOH Report

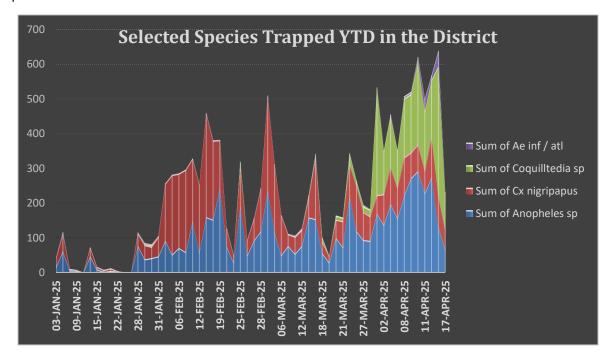


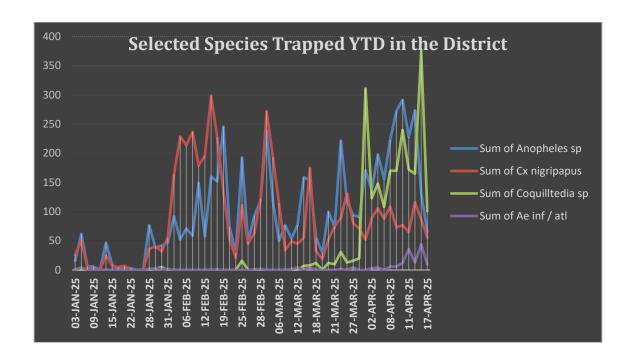
Week of 4/14/2025 Operations Update (16)

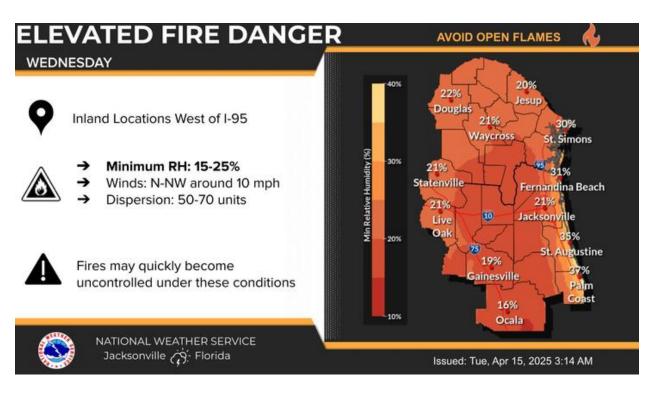
Lower mosquito population numbers this week and continued low humidity. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).

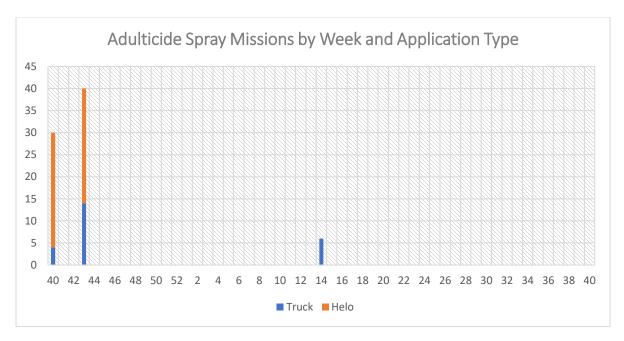


The stacked area chart below shows a decline in all represented mosquito species this week. It's a little hard to see, so we added a second non-stacked line graph below it. Two influences: a lack of replenishment stemming from a lack of water for the mosquitoes to reproduce in and, to a lesser degree, low relative humidity, reducing the survivability of flying adult mosquitoes, are driving the population lower.









No spraying this week for adult mosquitoes.

The first application of larvicide pre-treatments was started this week.

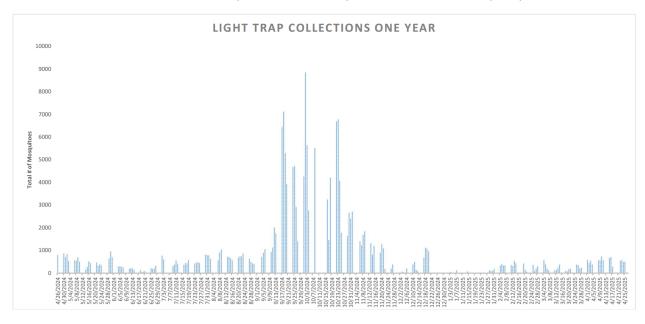
2025 Mosquito-Borne Disease Activity by County					
County	Humans	Equines	Sentinel Chickens	Other	
Bay			1 WNV (3/24)		
Brevard			1 WNV (2/7)		
Citrus			4 WNV (1/6), (2/10), (2/17) 3 EEEV (3/11), (4/1), (4/8)		
Indian River			2 WNV (1/2)		
Miami-Dade	1 dengue (February)				
Orange			2 EEEV (2/24), (4/7)	1 EEEV emu (1/1)	
Palm Beach			10 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17)		
Pasco			1 WNV (1/13)		
Pinellas			1 WNV (1/6)		
Seminole		1 EEEV (1/5) 1 WNV (1/5)			
Volusia			2 EEEV (1/14), (4/8)	1 EEEV emu (1/2)	

See the full **DOH Report**

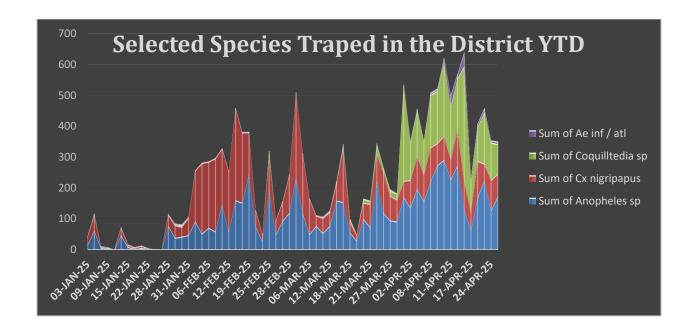


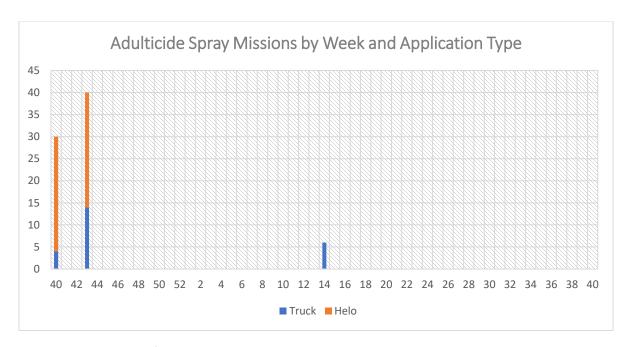
Week of 4/21/2025 Operations Update (17)

Continued low mosquito population numbers this week with elevated fire danger. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



Last week, mosquito activity initially decreased but subsequently returned to a level that was lower than that of the previous week.





No spraying this week for adult mosquitoes.

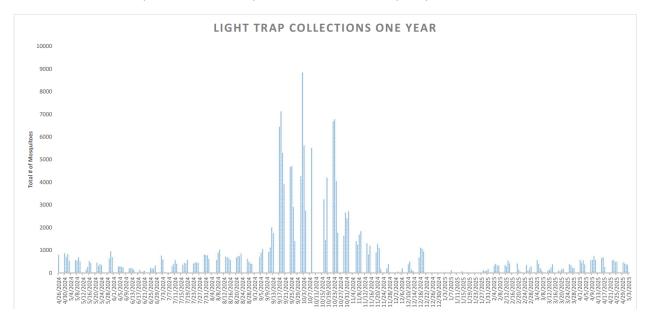
	2025 Mosquito-Borne Disease Activity by County					
County	Humans	Equines	Sentinel Chickens	Other		
Bay			1 WNV (3/24)			
Brevard			1 WNV (2/7)			
Citrus			4 WNV (1/6), (2/10), (2/17) 3 EEEV (3/11), (4/1), (4/8)			
Indian River			2 WNV (1/2)			
Lake		1 EEEV (4/2)				
Miami-Dade	1 dengue (February)					
Orange			2 EEEV (2/24), (4/7)	1 EEEV emu (1/1)		
Palm Beach			10 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17)			
Pasco			1 WNV (1/13)			
Pinellas			1 WNV (1/6)			
Seminole		1 EEEV (1/5) 1 WNV (1/5)				
Volusia			2 EEEV (1/14), (4/8)	1 EEEV emu (1/2)		

See the full **DOH Report**

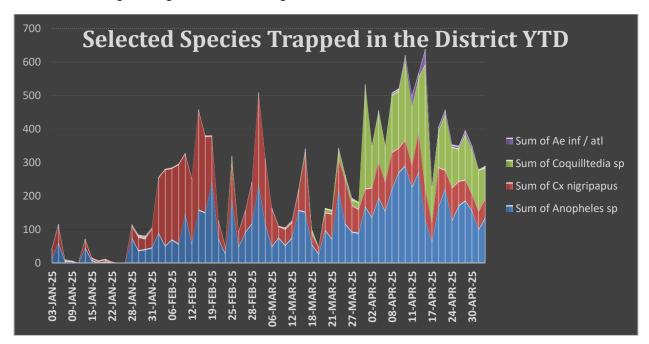


Week of 4/28/2025 Operations Update (18)

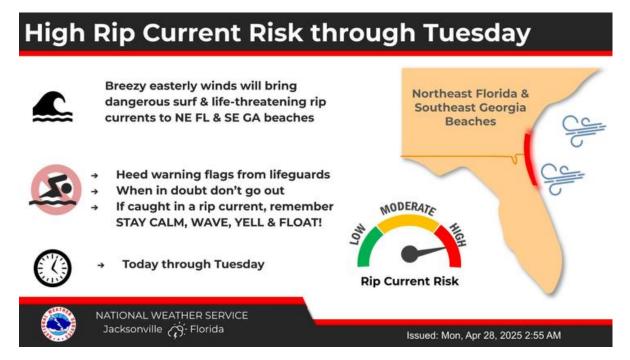
The mosquito population numbers continued to decline this week. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



A burn-ban remained in effect for a second week. We anticipate the population of the various species to continue declining until significant rainfall begins.

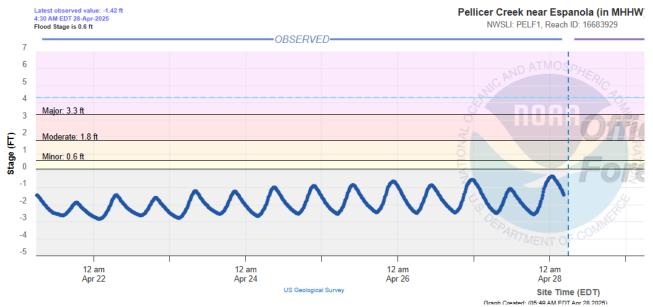


A few sites in the salt marsh went wet this week. An offshore wind pushed the tide higher.

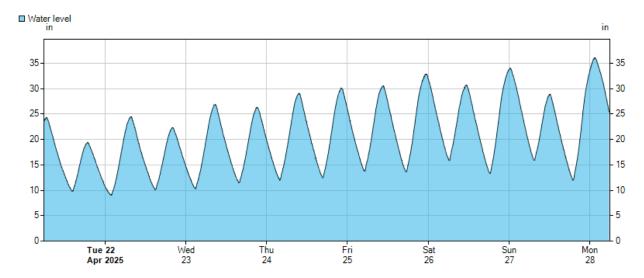


Flood stage wasn't reached.

Warning: no valid ratings curve available. Transformations to and from FEET/N No secondary data available. Transformations for Flow data and a secondary Y α :



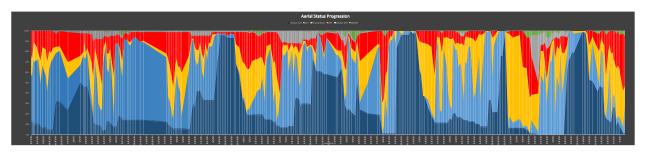
At 38" on our gauge we would have seen more areas become inundated.

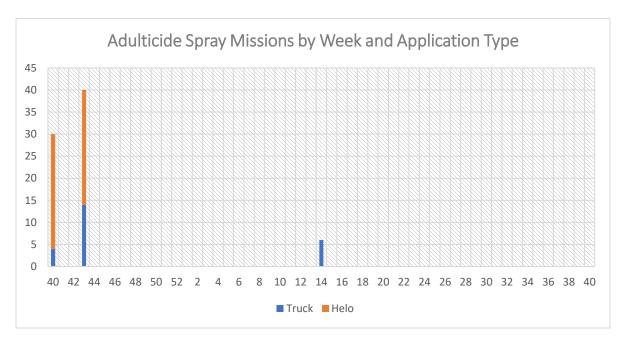


This mark was missed and many sites that typically hold some water are very close to drying down.



A significant number of major sites in the salt marsh have dried up (red area on the chart below, far right is current conditions).





No spraying this week for adult mosquitoes.

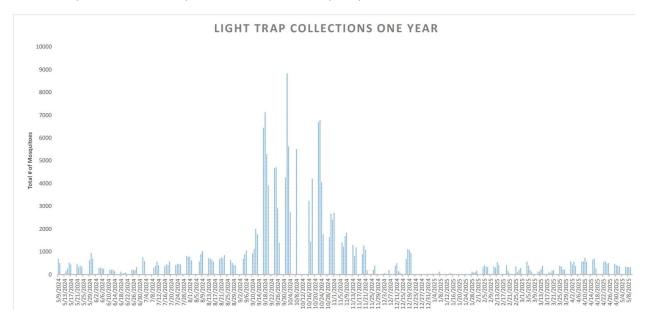
2025 Mosquito-Borne Disease Activity by County					
County	Humans	Equines	Sentinel Chickens	Other	
Bay			1 WNV (3/24)		
Brevard			1 WNV (2/7)		
Citrus			4 WNV (1/6), (2/10), (2/17) 3 EEEV (3/11), (4/1), (4/8)		
Indian River			2 WNV (1/2)		
Lake		1 EEEV (4/2)			
Miami-Dade	1 dengue (February)				
Orange			2 EEEV (2/24), (4/7)	1 EEEV emu (1/1)	
Palm Beach			10 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17)		
Pasco			1 WNV (1/13)		
Pinellas			1 WNV (1/6)		
Seminole		1 EEEV (1/5) 1 WNV (1/5)			
Volusia			2 EEEV (1/14), (4/8)	1 EEEV emu (1/2)	

See the full DOH Report

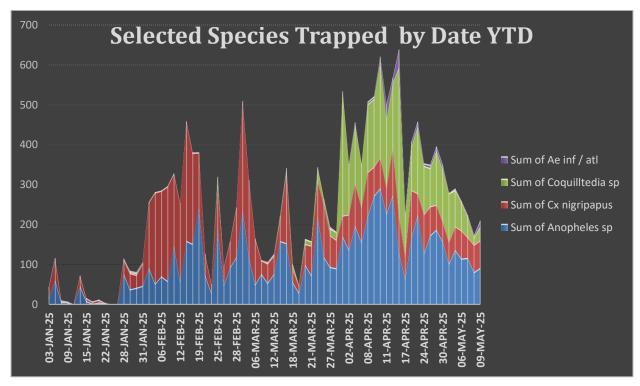


Week of 5/5/2025 Operations Update (19)

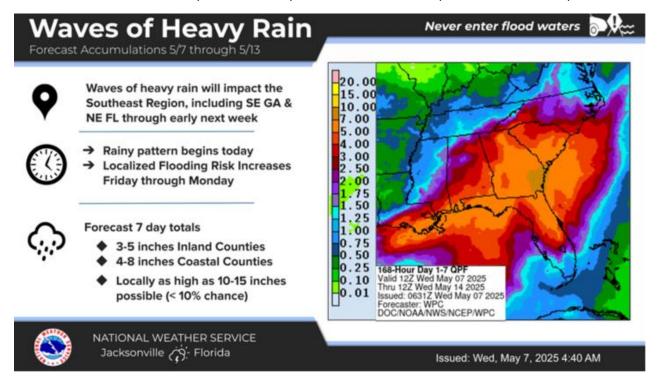
Third week of declining mosquito population numbers. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



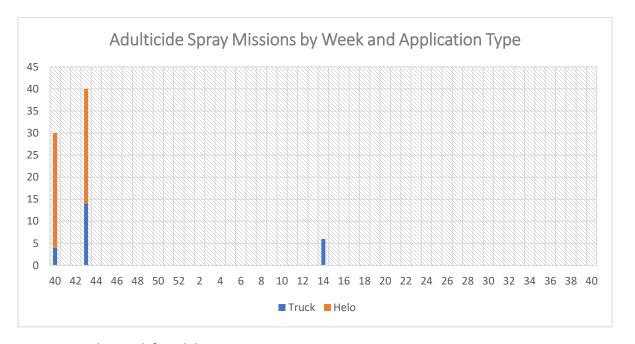
A burn-ban remained in effect for a third week. The total population of mosquitoes has declined precipitously over the past month due to a lack of rainfall and low relative humidity.



Some rainfall this week. Weekly total rainfall by locations are on the map at the end of this report.



The rain received this week will not contribute significantly to mosquito breeding but will set the stage for further rainfall being able to accumulate.



No spraying this week for adult mosquitoes.

2025 Mosquito-Borne Disease Activity by County Sentinel Chickens Other County Humans **Equines** Bay 1 WNV (3/24) Brevard 1 WNV (2/7) 4 WNV (1/6), (2/10), (2/17) Citrus 3 EEEV (3/11), (4/1), (4/8) Hillsborough 1 WNV (4/21) Indian River 2 WNV (1/2) Lake 1 EEEV (4/2) Miami-Dade 1 dengue (February) 2 EEEV (2/24), (4/7) **Orange** 1 EEEV emu (1/1) 1 WNV (3/31) 10 WNV (1/7), (1/21), (1/27), Palm Beach (2/10), (2/17), (2/24), (3/10), (3/17) 1 WNV (1/13) Pasco 1 WNV (1/6) Pinellas 1 EEEV (1/5) Seminole

2 EEEV (1/14), (4/8)

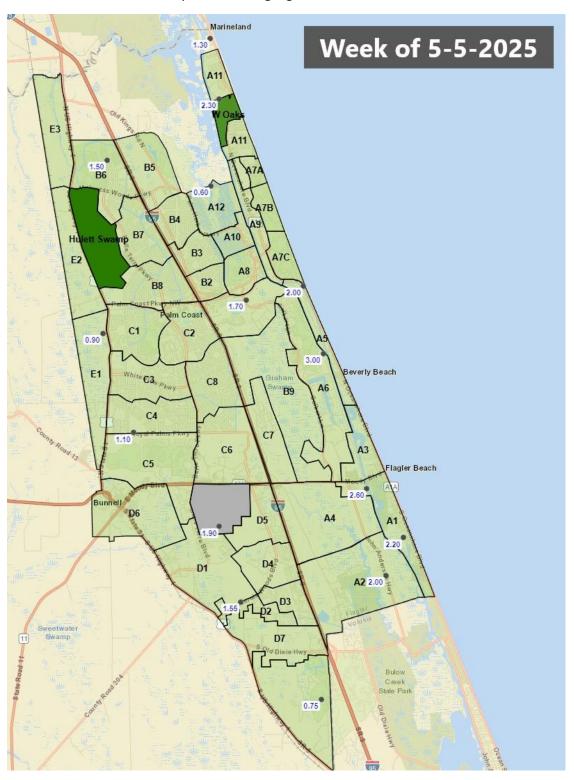
1 EEEV emu (1/2)

1 WNV (1/5)

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Volusia

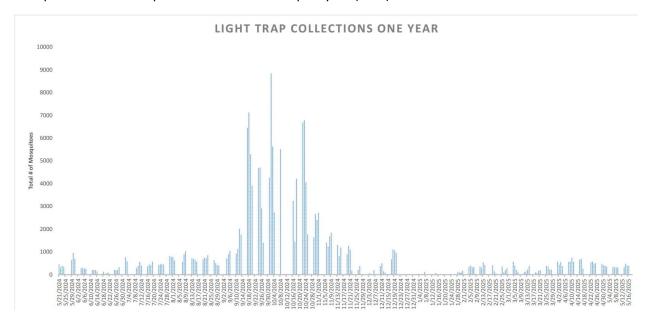
Rain fall totals for the week by manual rain gauge location.



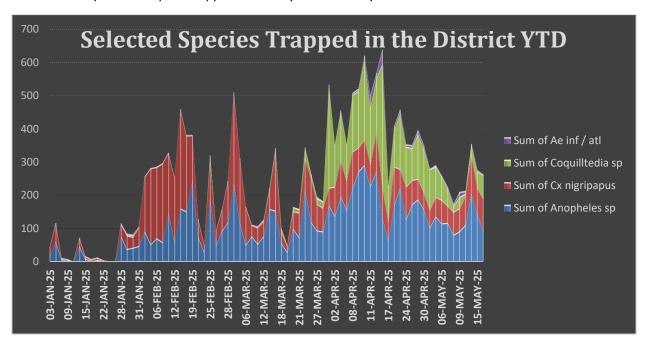


Week of 5/12/2025 Operations Update (20)

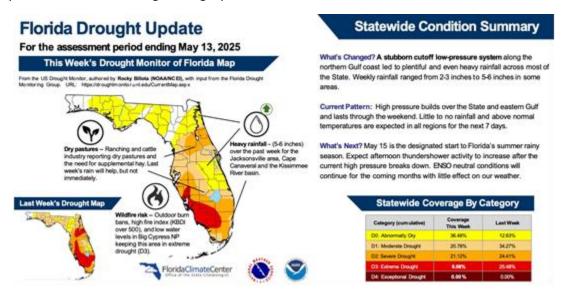
Additional rainfall this week with accumulation. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



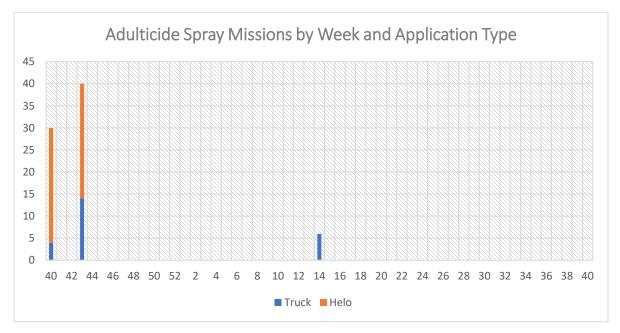
Intermittent spike in Anopheles spp. but activity remains very low.



Last week we said, "Some rainfall this week. Weekly total rainfall by locations are on the map at the end of this report. The rain received this week will not contribute significantly to mosquito breeding but will set the stage for further rainfall being able to accumulate." Additional 2-3" of rain District-wide received this week and will likely contribute to increased mosquito abundance in 7-10 days post rainfall. Flagler County was in the severe drought category.



No spraying this week for adult mosquitoes.



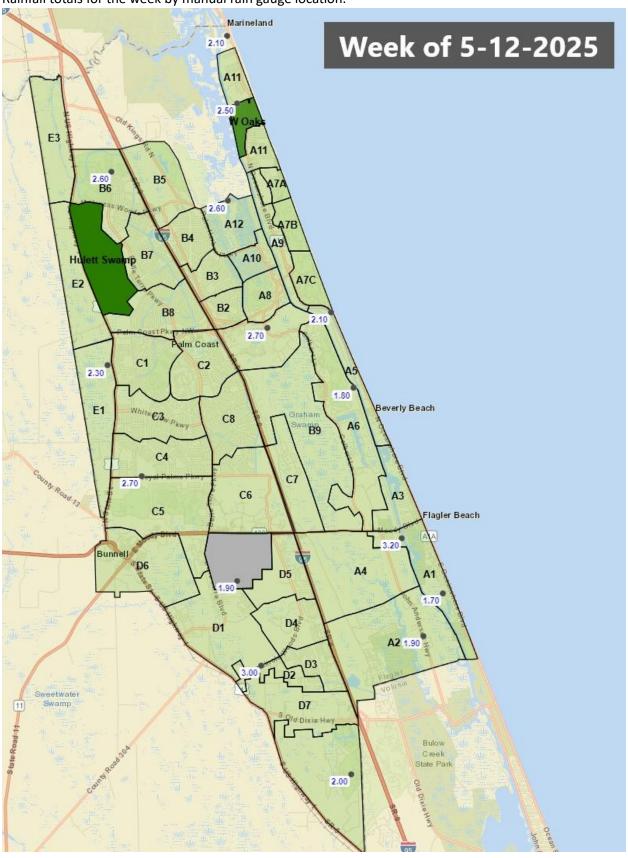
Second round of larviciding began this week.

2025 Mosquito-Borne Disease Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Bay			1 WNV (3/24)	
Brevard			1 WNV (2/7)	
Citrus			4 WNV (1/6), (2/10), (2/17) 3 EEEV (3/11), (4/1), (4/8)	
Hillsborough			1 WNV (4/21)	
Indian River			2 WNV (1/2)	
Lake		1 EEEV (4/2)		
Miami-Dade	1 dengue (February)			
Orange			2 EEEV (2/24), (4/7) 1 WNV (3/31)	1 EEEV emu (1/1)
Palm Beach			10 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17)	
Pasco			1 WNV (1/13)	
Pinellas			1 WNV (1/6)	
Seminole		1 EEEV (1/5) 1 WNV (1/5)		
Volusia			2 EEEV (1/14), (4/8)	1 EEEV emu (1/2)
Walton			1 EEEV (5/5)	

See the full DOH Report

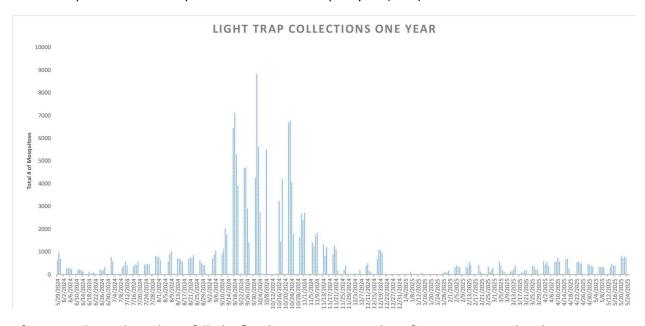
Rainfall totals for the week by manual rain gauge location.



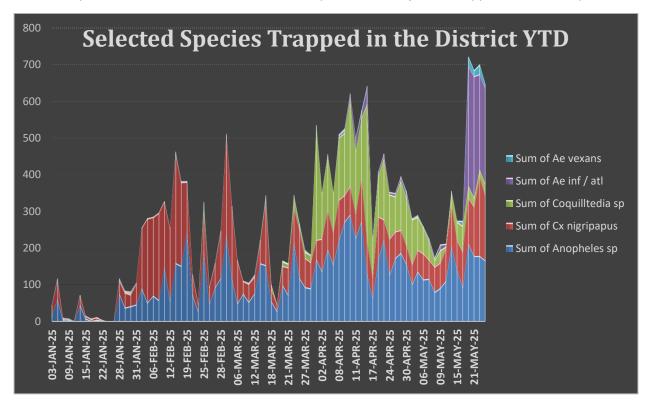


Week of 5/19/2025 Operations Update (21)

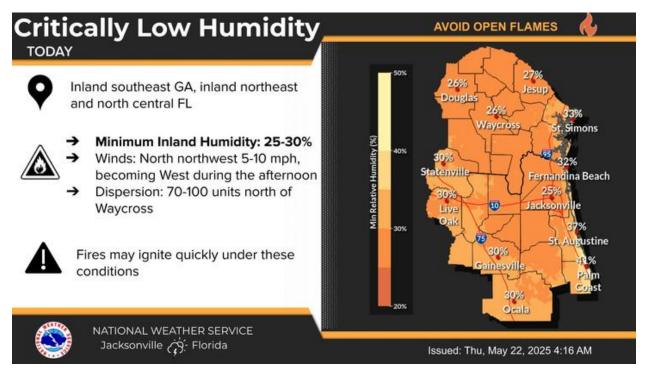
A spike in floodwater species in a limited area this week. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



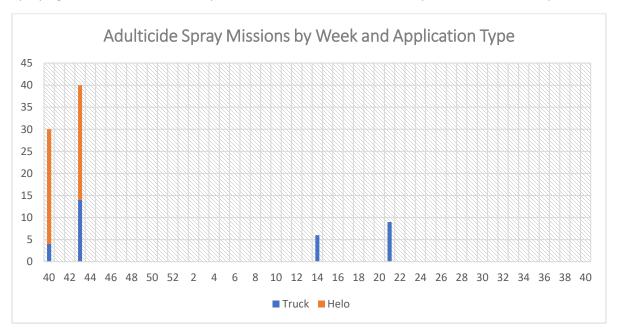
After a couple weeks with rainfall, the flood water species Aedes infirmatus appeared in the traps.



To recapitulate, "Some rainfall this week (19). Weekly total rainfall by locations are on the map at the end of this report. The rain received this week will not contribute significantly to mosquito breeding but will set the stage for further rainfall being able to accumulate." Additional 2-3" of rain District-wide received this week (20) and will likely contribute to increased mosquito abundance in 7-10 days post rainfall. Flagler County was in the severe drought category and despite the previous rainfall, humidity was very low and temperatures were in the 90's this week (21).



Spraying this week for adult mosquitoes was in limited areas (see map at the end of the report).

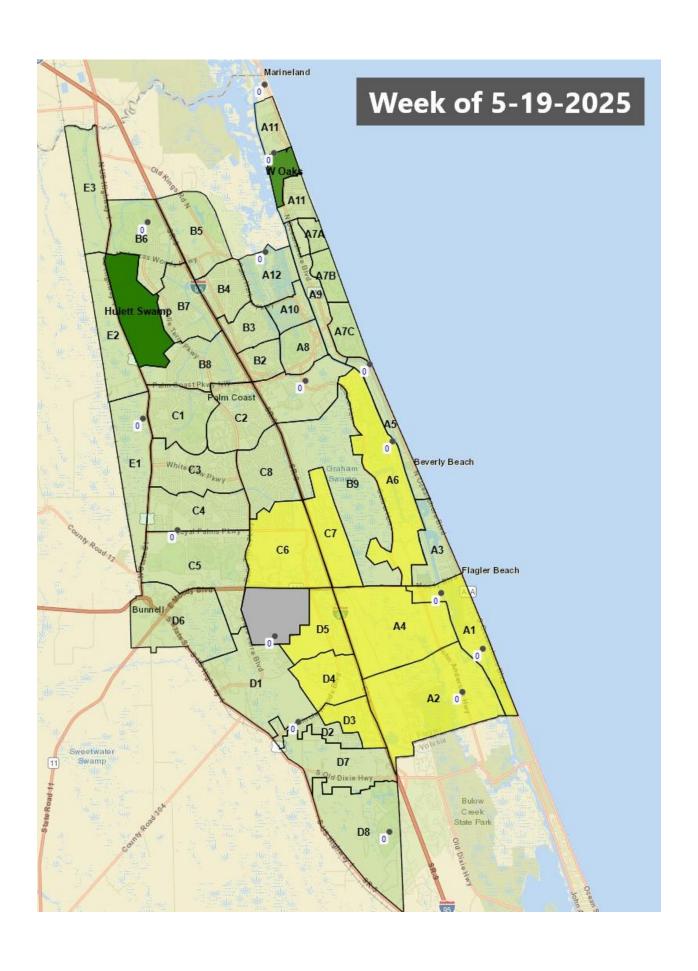


2025 Mosquito-Borne Disease Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Bay			1 WNV (3/24)	
Brevard			1 WNV (2/7)	
Citrus			4 WNV (1/6), (2/10), (2/17) 3 EEEV (3/11), (4/1), (4/8)	
Hillsborough			1 WNV (4/21)	
Indian River			2 WNV (1/2)	
Lake		1 EEEV (4/2)		
Miami-Dade	1 dengue (February)			
Orange			2 EEEV (2/24), (4/7) 1 WNV (3/31)	1 EEEV emu (1/1)
Palm Beach			12 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17), (5/13)	
Pasco			1 WNV (1/13)	
Pinellas			1 WNV (1/6)	
Seminole		1 EEEV (1/5) 1 WNV (1/5)		
Volusia			2 EEEV (1/14), (4/8)	1 EEEV emu (1/2)
Walton			1 EEEV (5/5)	

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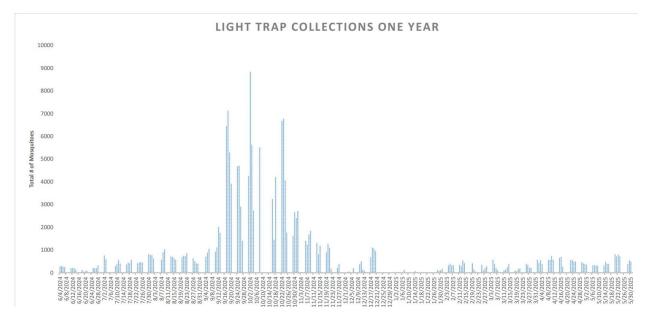
Rainfall totals for the week by manual rain gauge location (no rainfall this week). Zones highlighted in yellow were sprayed by truck this week.



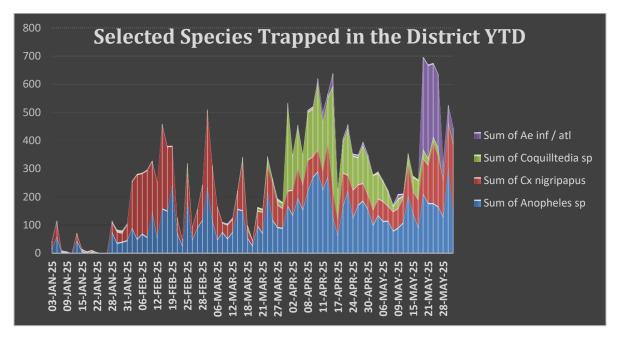


Week of 5/26/2025 Operations Update (22)

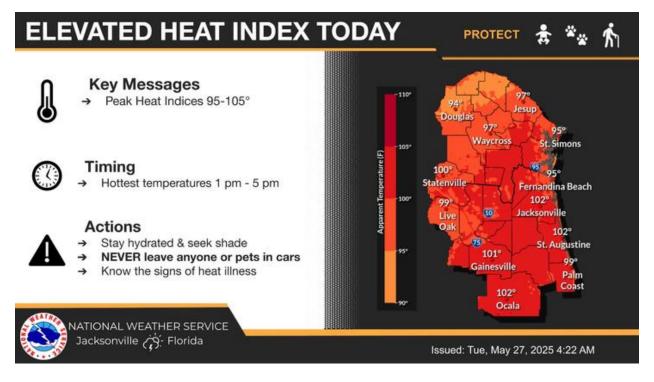
The second week of limited truck spraying and only the third week this calendar year. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



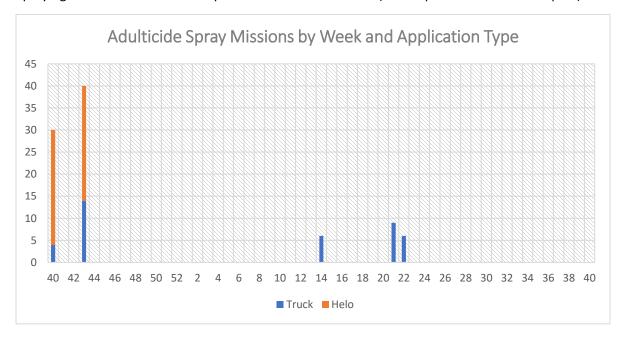
Rainfall has had a chance to accumulate over the past few weeks and led to an increase in permanent water species of *Anopheles spp*.



A regime of high heat and at times low humidity has limited the production of mosquitoes even as rainfall has been more regular recently.



Spraying this week for adult mosquitoes was in limited areas (see map at the end of the report).

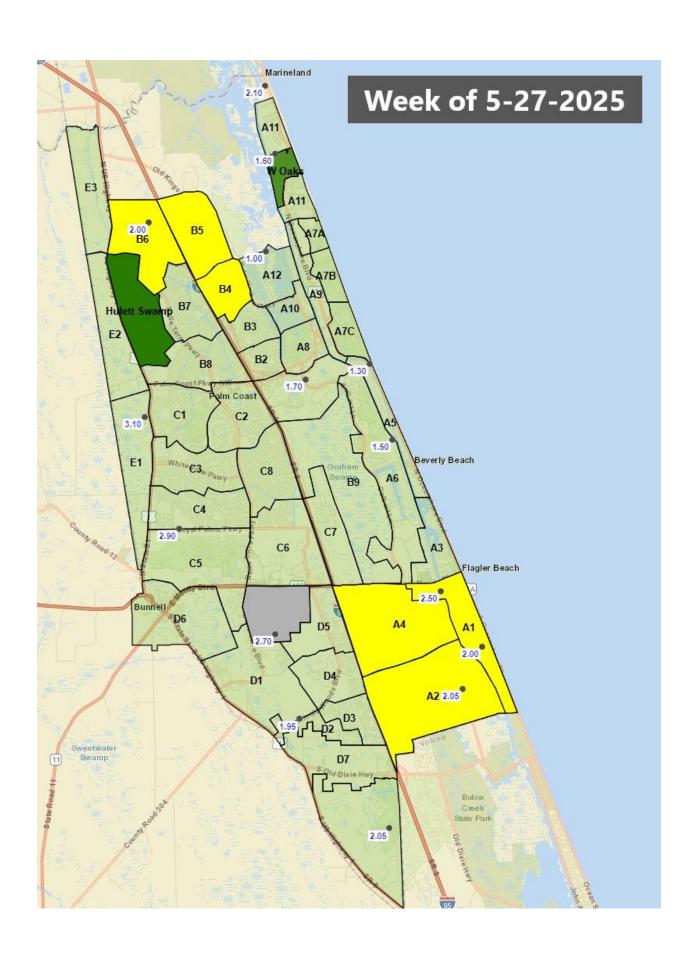


2025 Mosquito-Borne Disease Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Bay			1 WNV (3/24)	
Brevard			1 WNV (2/7)	
Citrus			4 WNV (1/6), (2/10), (2/17) 3 EEEV (3/11), (4/1), (4/8)	
Hillsborough			1 WNV (4/21)	
Indian River			2 WNV (1/2)	
Lake		1 EEEV (4/2)		
Miami-Dade	1 dengue (February)			
Orange			2 EEEV (2/24), (4/7) 1 WNV (3/31)	1 EEEV emu (1/1)
Palm Beach			13 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17), (4/29), (5/13)	
Pasco			1 WNV (1/13)	
Pinellas			1 WNV (1/6)	
Seminole		1 EEEV (1/5) 1 WNV (1/5)		
Volusia			2 EEEV (1/14), (4/8)	1 EEEV emu (1/2)
Walton			1 EEEV (5/5) 1 WNV (5/19)	

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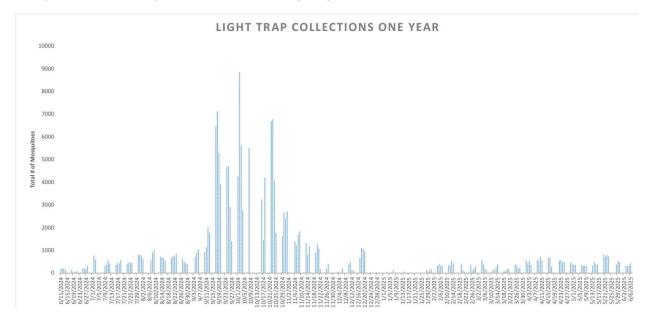
Rainfall totals for the week by manual rain gauge location. Zones highlighted in yellow were sprayed by truck this week.



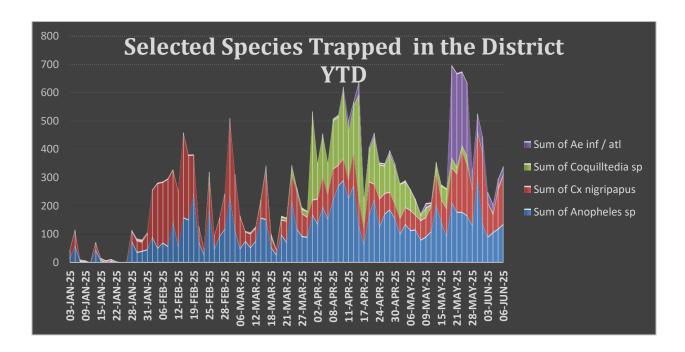


Week of 6/2/2025 Operations Update (23)

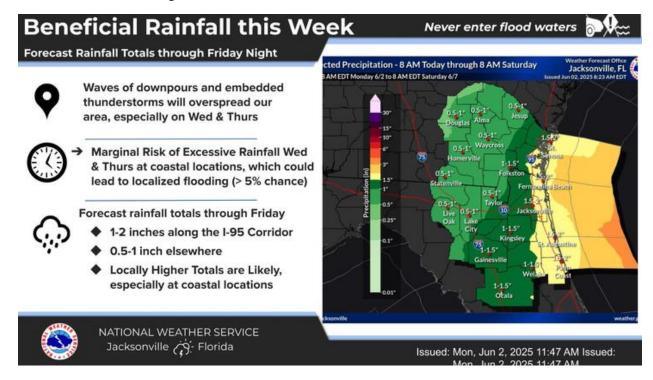
This was the third week of limited truck spraying. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



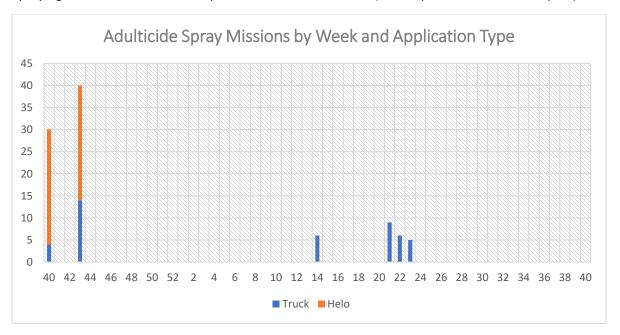
Permanent water mosquito species are higher month over month but still at a low level.



Rainfall in the District ranged from 1 - 3" for the week.



Spraying this week for adult mosquitoes was in limited areas (see map at the end of the report).

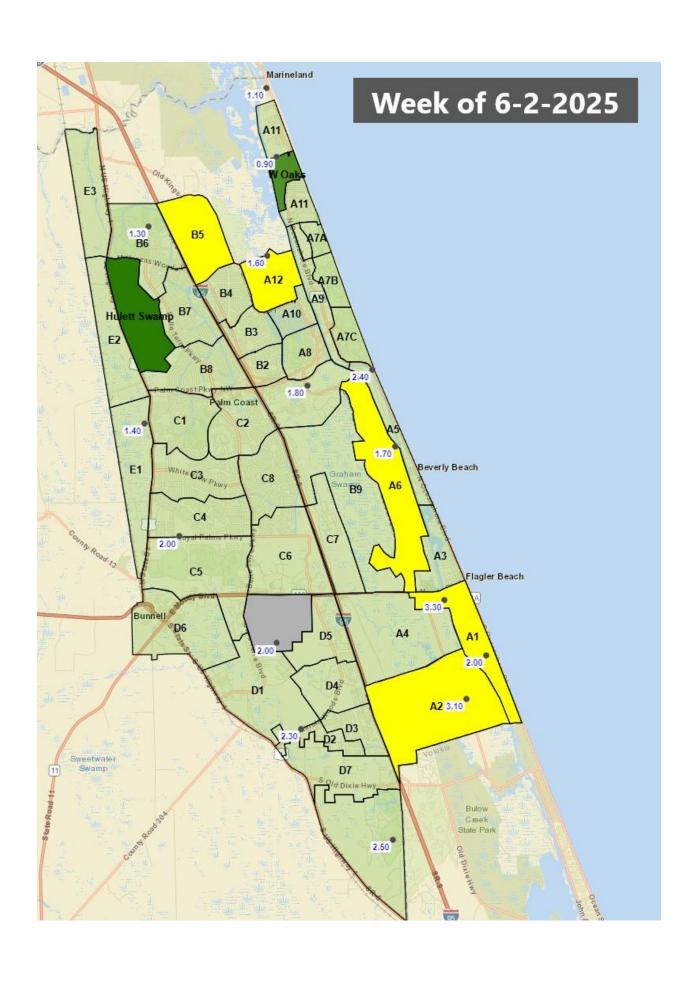


2025 Mosquito-Borne Disease Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Bay			1 WNV (3/24)	
Brevard			1 WNV (2/7)	
Citrus			4 WNV (1/6), (2/10), (2/17) 5 EEEV (3/11), (4/1), (4/8), (5/28)	
Hillsborough			1 WNV (4/21)	
Indian River			2 WNV (1/2)	
Lake		1 EEEV (4/2)		
Miami-Dade	1 dengue (February)			
Orange			2 EEEV (2/24), (4/7) 1 WNV (3/31)	1 EEEV emu (1/1)
Palm Beach			13 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17), (4/29), (5/13)	
Pasco			1 WNV (1/13)	
Pinellas			1 WNV (1/6)	
Seminole		1 EEEV (1/5) 1 WNV (1/5)		
Volusia			2 EEEV (1/14), (4/8)	1 EEEV emu (1/2)
Walton			1 EEEV (5/5) 1 WNV (5/19)	

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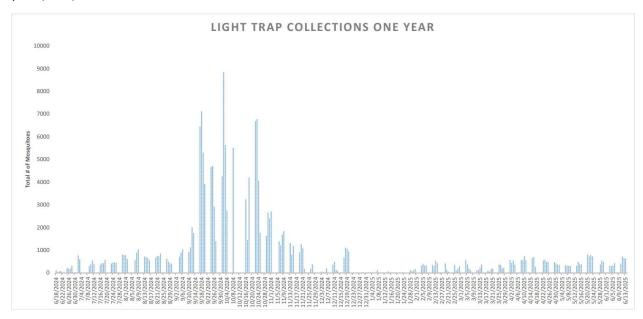
Rainfall totals for the week by manual rain gauge location. Zones highlighted in yellow were sprayed by truck this week.



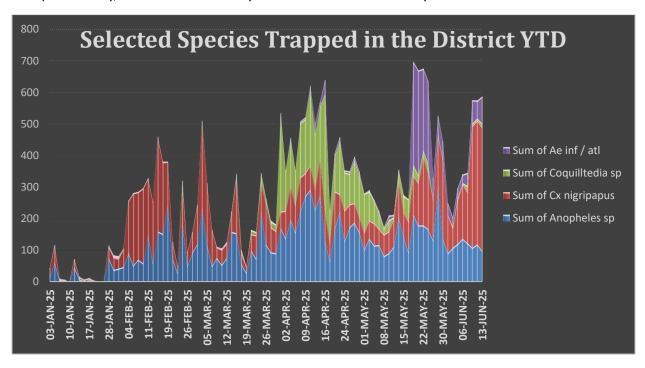


Week of 6/9/2025 Operations Update (24)

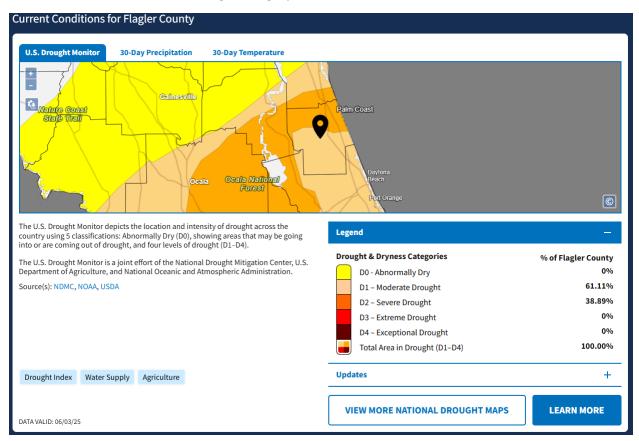
The District was treated more broadly this week by truck, but the mosquito population remains low. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



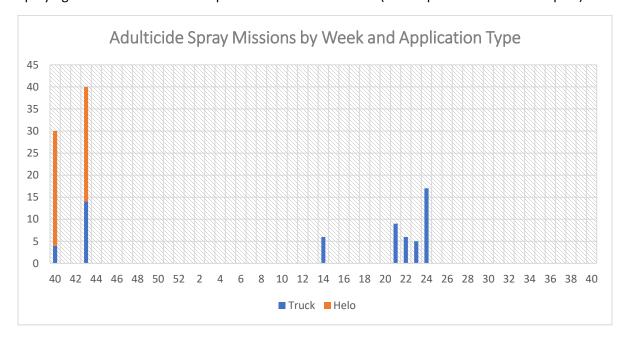
Truck spraying along the western perimeter zones of the District was in response to high flood-water mosquito numbers infiltrating in from undeveloped areas. We also experienced some salt marsh mosquito activity, with increased activity closest to the Volusia County line.



Rainfall in the District ranged from less than one inch to more than two inches. With minimal rain, we're still in the moderate to severe drought category.



Spraying this week for adult mosquitoes was in limited areas (see map at the end of the report).



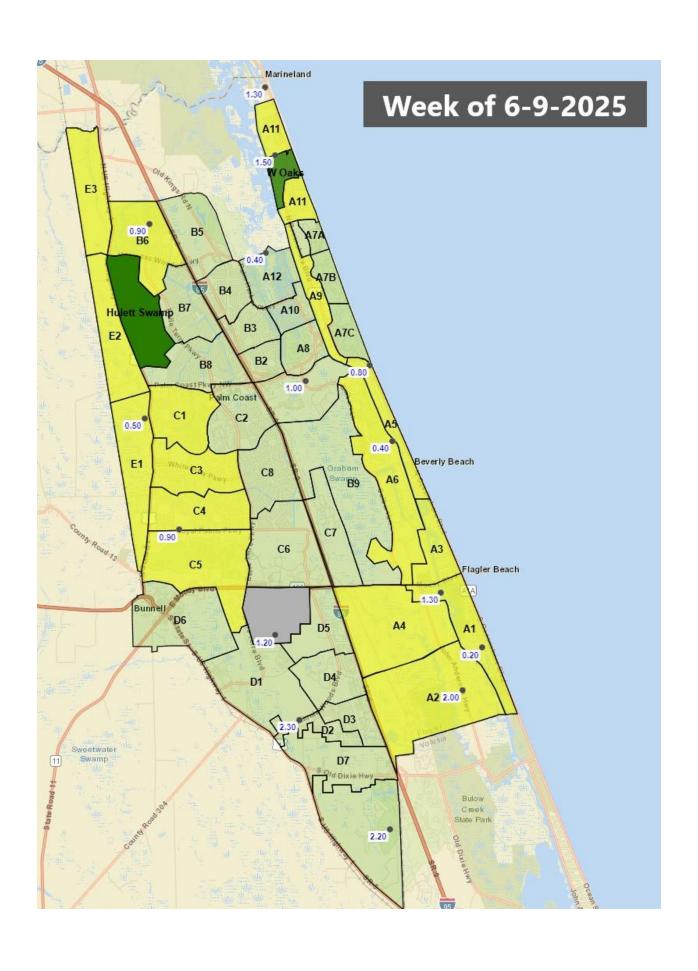
2025 Mosquito-Borne Disease Activity by County					
County	Humans	Equines	Sentinel Chickens	Other	
Bay			1 WNV (3/24)		
Brevard			1 WNV (2/7)		
Citrus			4 WNV (1/6), (2/10), (2/17) 5 EEEV (3/11), (4/1), (4/8), (5/28)		
Hillsborough			1 WNV (4/21)		
Indian River			2 WNV (1/2)		
Lake		1 EEEV (4/2)			
Miami-Dade	1 dengue (February)				
Orange			3 EEEV (2/24), (4/7), (6/2) 1 WNV (3/31)	1 EEEV emu (1/1)	
Palm Beach			13 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17), (4/29), (5/13)		
Pasco			1 WNV (1/13)		
Pinellas			1 WNV (1/6)		
Polk			1 EEEV (6/2)		
Seminole		1 EEEV (1/5) 1 WNV (1/5)			
Volusia			2 EEEV (1/14), (4/8)	1 EEEV emu (1/2)	

2 EEEV (5/5), (6/2) 1 WNV (5/19)

See the full <u>DOH Report</u>

Walton

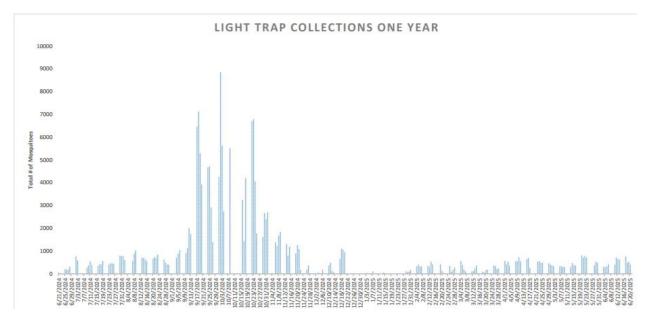
Rainfall totals for the week by manual rain gauge location. Zones highlighted in yellow were sprayed by truck this week.



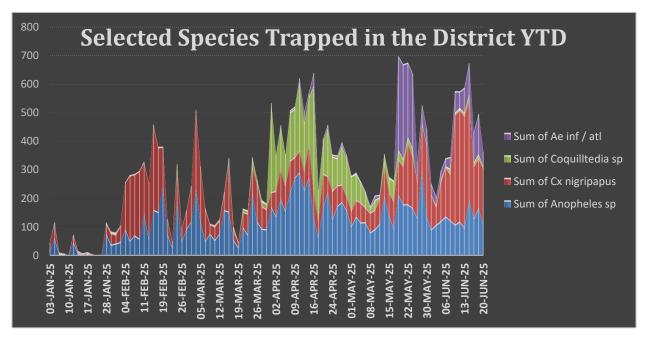


Week of 6/16/2025 Operations Update (25)

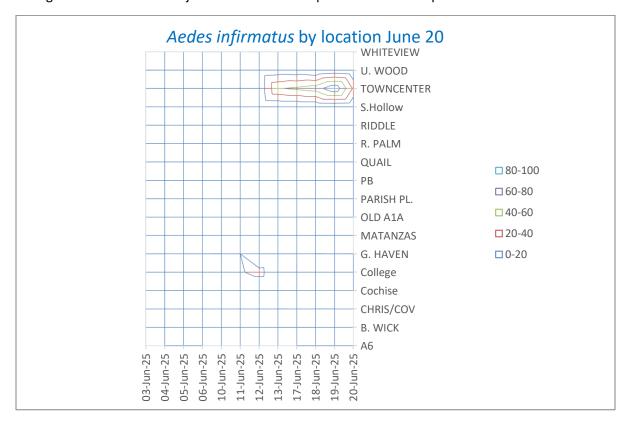
This was the fifth consecutive week of limited truck spraying. Overall, the population of mosquito species remains low. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



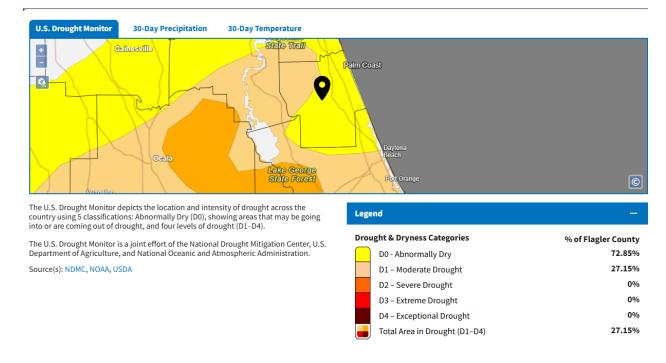
Two hot spots in this week's surveillance. There was continued salt marsh mosquito activity closest to the Volusia County line. Salt mash mosquitoes are very aggressive and can fly twenty miles. A short flight from Volusia County lands this species of mosquito in the vicinity of Flagler Beach. The other hot spot was Town Center due to ongoing construction related flooding activity.



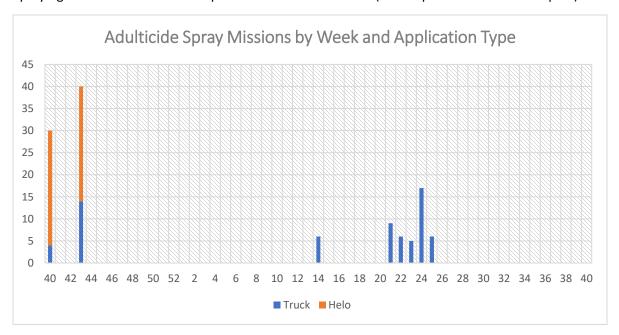
Town Center has experienced intermittent floodwater mosquito activity due to construction related flooding. This has been the major contributor to the production of this species in the District this week.



Rainfall in the District ranged from 0.2 inches to 3.3 inches. This week Flagler County transitioned to abnormally dry (D0) from moderate drought (D1).



Spraying this week for adult mosquitoes was in limited areas (see map at the end of the report).



2025 Mosquito-Borne Disease Activity by County

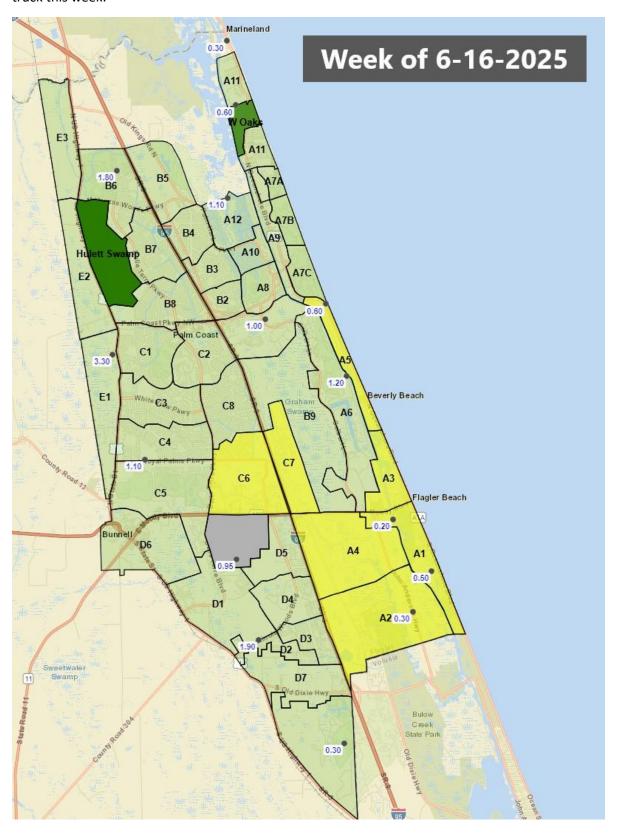
County	Humans	Equines	Sentinel Chickens	Other
Bay			1 WNV (3/24)	
Brevard			1 WNV (2/7)	
Citrus			4 WNV (1/6), (2/10), (2/17) 5 EEEV (3/11), (4/1), (4/8), (5/28)	
Hillsborough			1 WNV (4/21)	
Indian River			2 WNV (1/2)	
Lake		1 EEEV (4/2)		
Miami-Dade	1 dengue (February)			
Orange			4 EEEV (2/24), (4/7), (6/2), (6/9) 1 WNV (3/31)	1 EEEV emu (1/1)
Palm Beach			13 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17), (4/29), (5/13)	
Pasco			1 WNV (1/13)	
Pinellas			1 WNV (1/6)	
Polk			2 EEEV (6/2), (6/9)	
Seminole		1 EEEV (1/5) 1 WNV (1/5)		
St. Johns	1 asymptomatic WNV (June)			
Volusia			2 EEEV (1/14), (4/8)	1 EEEV emu (1/2)
Walton			2 EEEV (5/5), (6/2) 1 WNV (5/19)	

WNV activity: One human case of WNV infection was reported this week in St. Johns County.

Advisories/Alerts: St. Johns County is currently under a mosquito-borne illness advisory. Miami-Dade County is currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert.

See the full DOH Report

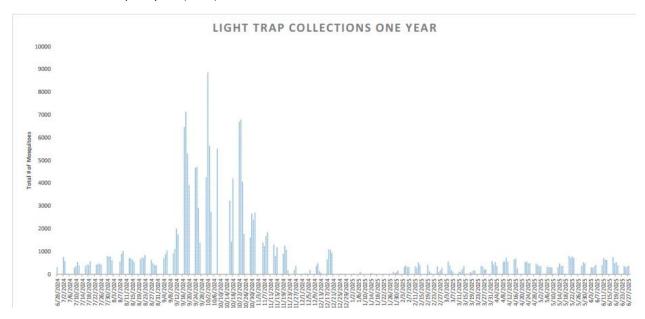
Rainfall totals for the week by manual rain gauge location. Zones highlighted in yellow were sprayed by truck this week.





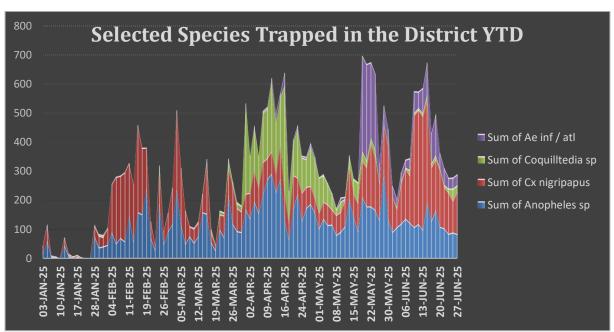
Week of 6/23/2025 Operations Update (26)

The mosquito population remains low with infiltration of saltmarsh mosquitoes from Volusia in the Flagler Beach area. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).

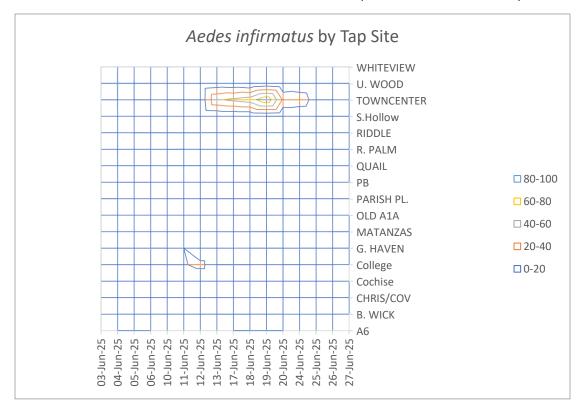


More infiltration of saltmarsh mosquitoes from Volusia. Last week we said:

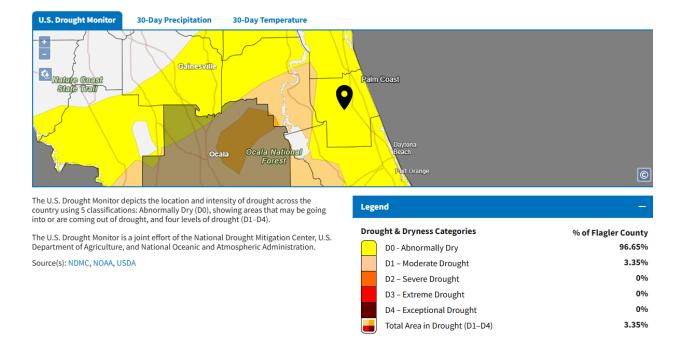
"There was continued salt marsh mosquito activity closest to the Volusia County line. Salt mash mosquitoes are very aggressive and can fly twenty miles. A short flight from Volusia County lands this species of mosquito in the vicinity of Flagler Beach."



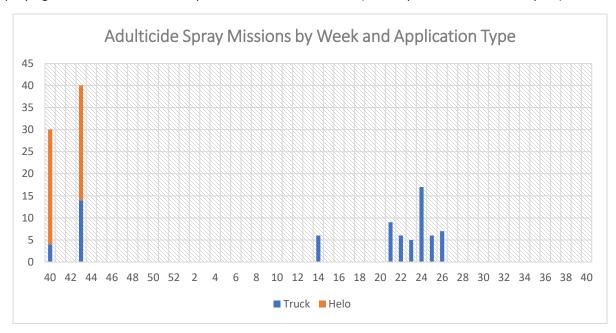
Town Center had been the sole area with floodwater mosquitoes last week but was quiet this week.



Rainfall in the District was limited to one site in the south of the District at 0.5". The percentage of area in Flagler County that was in moderate drought (D1) decreased from 27.15% to 3.35%. The rest of Flagler County is abnormally dry (D0) at 96.65%.



Spraying this week for adult mosquitoes was in limited areas (see map at the end of the report).

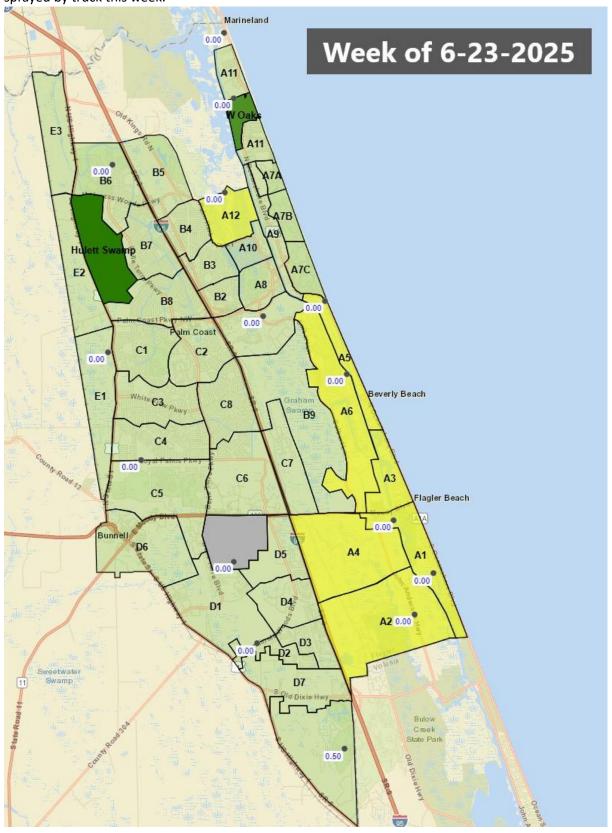


2025 Mosquito-Borne Disease Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Bay			1 WNV (3/24)	
Brevard			1 WNV (2/7)	
Citrus			5 EEEV (3/11), (4/1), (4/8), (5/28) 4 WNV (1/6), (2/10), (2/17)	
Hillsborough			1 WNV (4/21)	
Indian River			2 WNV (1/2)	
Jefferson		1 EEEV (6/12)		
Lake		1 EEEV (4/2)		
Levy		1 EEEV (6/20)		
Miami-Dade	2 dengue (February, June)			
Orange			5 EEEV (2/24), (4/7), (6/2), (6/9), (6/16) 1 WNV (3/31)	1 EEEV emu (1/1)
Palm Beach			15 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17), (4/29), (5/13), (6/16)	
Pasco			1 WNV (1/13)	
Pinellas			1 WNV (1/6)	
Polk			2 EEEV (6/2), (6/9) 1 WNV (6/16)	
Seminole		1 EEEV (1/5) 1 WNV (1/5)		
St. Johns	1 asymptomatic WNV (June)			
Volusia			2 EEEV (1/14), (4/8)	1 EEEV emu (1/2)
Walton			2 EEEV (5/5), (6/2) 1 WNV (5/19)	

Advisories/Alerts: St. Johns County is currently under a mosquito-borne illness advisory. Miami-Dade County is currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. See the full <u>DOH Report</u>

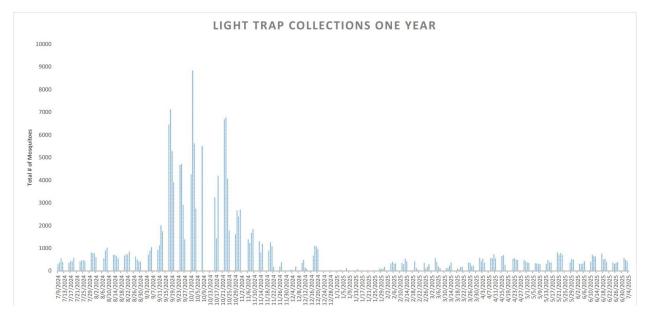
Rainfall totals for the week by manual rain gauge location in blue. Zones highlighted in yellow were sprayed by truck this week.



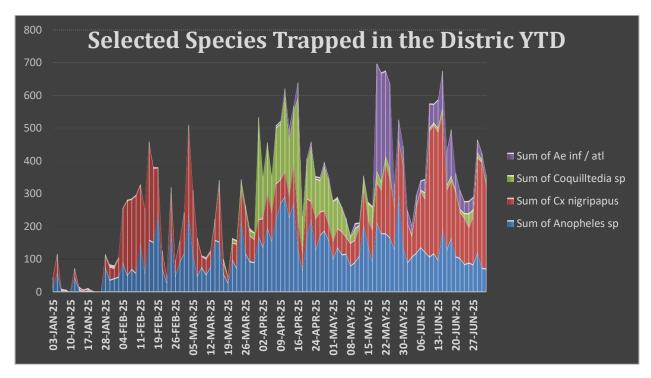


Week of 6/30/2025 Operations Update (27)

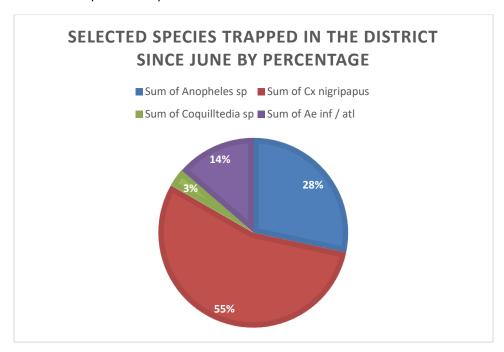
Another weak of low mosquito activity. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



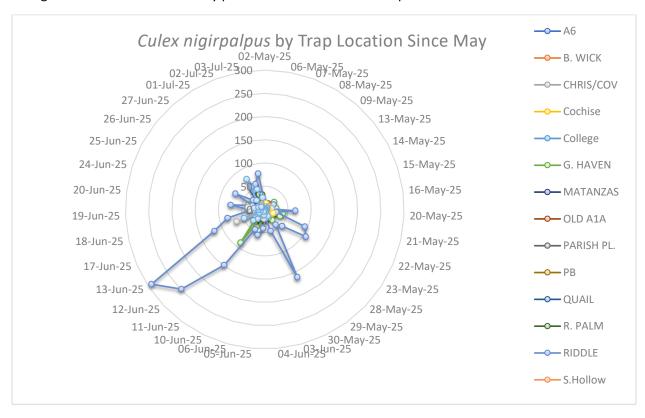
The last time the district-wide daily collection of mosquitoes was above 1,000 was in December. We're still seeing infiltration of salt marsh mosquitoes primarily in Flagler Beach close to the Volusia County line.



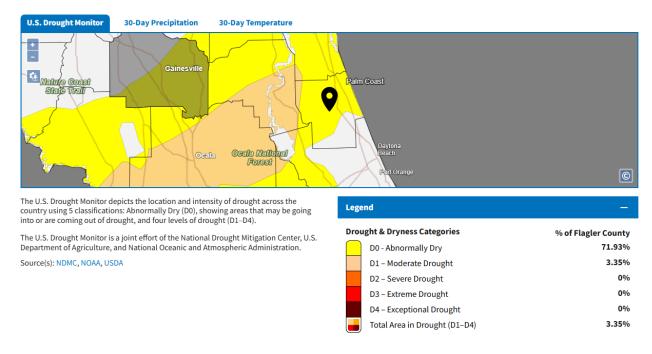
The permanent-water species Culex nigirpalpus represented more than half the mosquitoes in the traps since June. The dominance of this species is more about the lack of the other species than any substantive increase in a particular species.



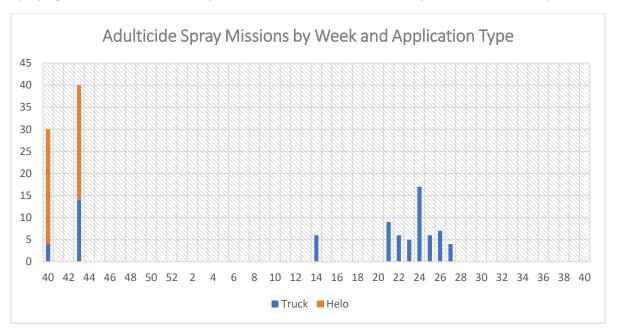
A single location has intermittently produced an increase in this species.



Rainfall in the District ranged from 0.1" to 3.3". The percentage of area in Flagler County that was in moderate drought (D1) remained at 3.35%. The majority of Flagler County is abnormally dry (D0) at 71.93%, down from 96.65%.



Spraying this week for adult mosquitoes was in limited areas (see map at the end of the report).

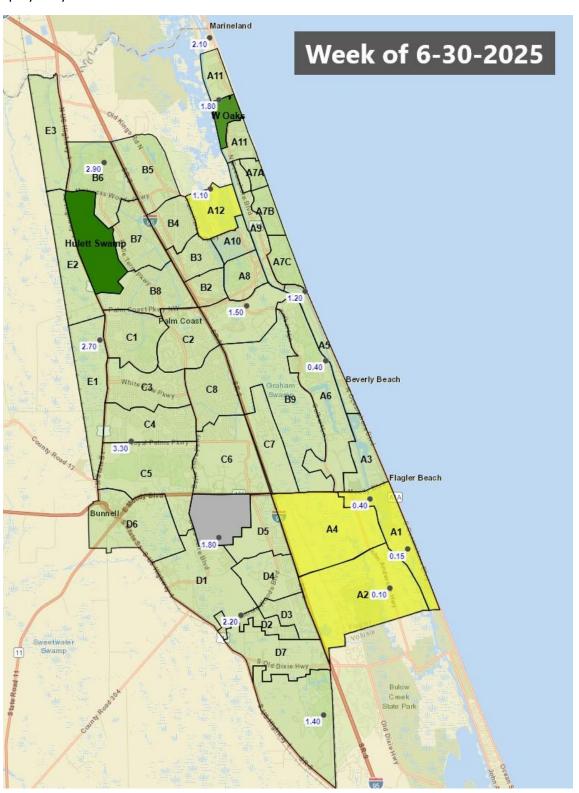


2025 Mosquito-Borne Disease Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Bay			1 WNV (3/24)	
Brevard	1 dengue (May)		1 WNV (2/7)	
Citrus			5 EEEV (3/11), (4/1), (4/8), (5/28) 4 WNV (1/6), (2/10), (2/17)	
Escambia	2 asymptomatic WNV blood donors (June)			
Hillsborough			1 WNV (4/21)	
Indian River			2 WNV (1/2)	
Jefferson		1 EEEV (6/12)		
Lake		1 EEEV (4/2)		
Levy		1 EEEV (6/20)		
Miami-Dade	2 dengue (February, June)			
Orange			7 EEEV (2/24), (4/7), (6/2), (6/9), (6/16), (6/23) 1 WNV (3/31)	1 EEEV emu (1/1)
Palm Beach			15 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17), (4/29), (5/13), (6/16)	
Pasco			1 WNV (1/13)	
Pinellas			1 WNV (1/6)	
Polk			2 EEEV (6/2), (6/9) 1 WNV (6/16)	
Seminole		1 EEEV (1/5) 1 WNV (1/5)		
St. Johns	1 asymptomatic WNV blood donor (June)			
Volusia			2 EEEV (1/14), (4/8) 1 WNV (6/23)	1 EEEV emu (1/2)
Walton			3 EEEV (5/5), (6/2), (6/23) 1 WNV (5/19)	

Advisories/Alerts: Brevard, Escambia, and St. Johns counties are currently under a mosquito-borne illness advisory. Miami-Dade County is currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. See the full **DOH Report**

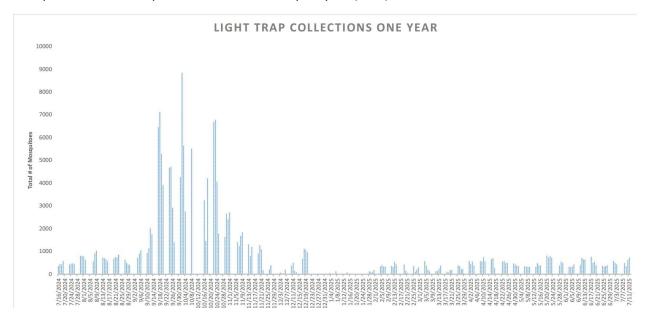
Rainfall totals for the week by manual rain gauge location in blue. Zones highlighted in yellow were sprayed by truck this week.



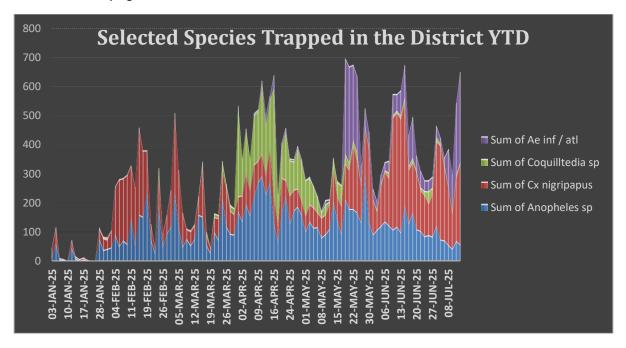


Week of 7/7/2025 Operations Update (28)

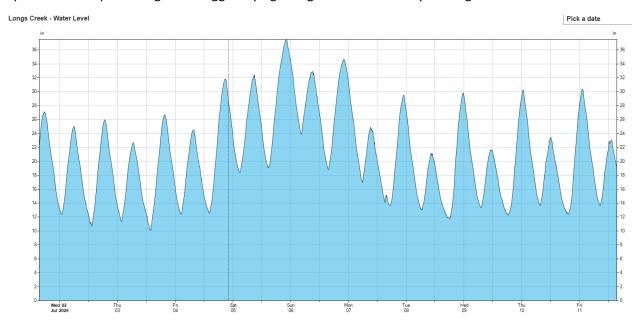
For most of the week the mosquito population was low with a continuation of infiltration of saltmarsh mosquitoes from Volusia in the Flagler Beach area. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



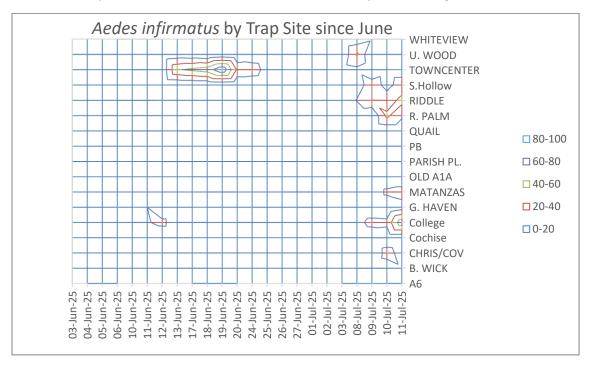
On the last day of trap reporting for the week we saw a spike in the number of *Aedes infirmatus*. We continue to see saltmarsh mosquito activity primarily in Flagler Beach. We also saw an increase in salt marsh mosquito activity North of Palm Coast around Long's Creek. Areas of the saltmarsh that normally are wet were drying down and then flooded.



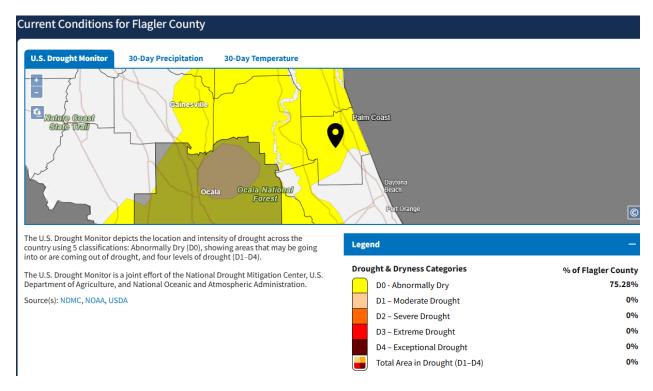
We expect to see additional saltmarsh mosquito (*Aedes taeniorhynchus*) activity from the lower areas of the high-saltmarsh (not intertidal) flooding from higher than usual tide experienced on July 6. This species of mosquito can go from egg to flying biting adult in seven days during the summer months.



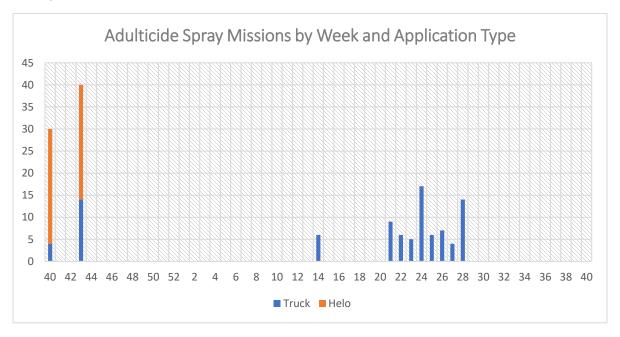
Town Center had been the sole area with floodwater mosquitoes last week but was quiet this week. This area is under construction and can produce mosquito breeding independent of rainfall. Rainfall has increased and produced a more natural distribution of mosquito breeding this week.



Rainfall in the District ranged from 0.4" to 3.6". Flagler County no longer has area in the moderate drought (D1) category, it was at 3.35%. The percentage of Flagler County that is abnormally dry (D0) decreased from 96.65% to 75.28%.



Spraying this week for adult mosquitoes was more broadly than in previous weeks (see map at the end of the report).

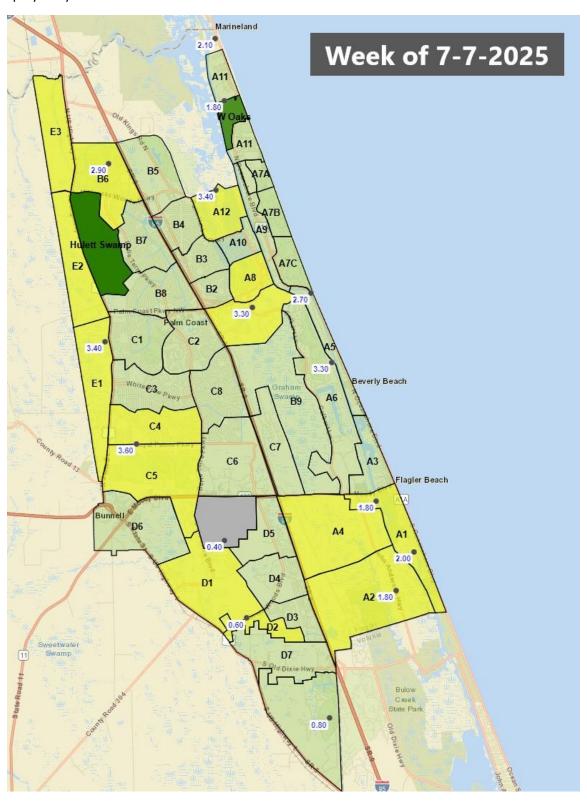


2025 Mosquito-Borne Disease Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Bay			1 WNV (3/24)	
Brevard	1 dengue (May)		1 WNV (2/7)	
Citrus			5 EEEV (3/11), (4/1), (4/8), (5/28) 4 WNV (1/6), (2/10), (2/17)	
Escambia	3 asymptomatic WNV blood donors (June (2), July)			
Hillsborough			1 WNV (4/21)	
Indian River			2 WNV (1/2)	
Jefferson		1 EEEV (6/12)		
Lake		1 EEEV (4/2)		
Levy		1 EEEV (6/20)		
Madison		1 EEEV (6/30)		
Miami-Dade	2 dengue (February, June)			
Orange			8 EEEV (2/24), (4/7), (6/2), (6/9), (6/16), (6/23), (6/30) 1 WNV (3/31)	1 EEEV emu (1/1)
Palm Beach			15 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17), (4/29), (5/13), (6/16)	
Pasco			1 WNV (1/13)	
Pinellas			1 WNV (1/6)	
Polk			2 EEEV (6/2), (6/9) 1 WNV (6/16)	
Seminole		1 EEEV (1/5) 1 WNV (1/5)		
St. Johns	1 asymptomatic WNV blood donor (June)			
Volusia			2 EEEV (1/14), (4/8) 1 WNV (6/23)	1 EEEV emu (1/2)
Walton			6 EEEV (5/5), (6/2), (6/23), (6/30) 1 WNV (5/19)	

Advisories/Alerts: Brevard and St. Johns counties are currently under a mosquito-borne illness advisory. Escambia and Miami-Dade counties are currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. See the full <u>DOH Report</u>

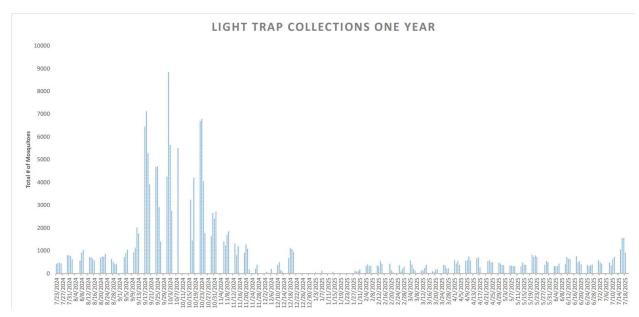
Rainfall totals for the week by manual rain gauge location in blue. Zones highlighted in yellow were sprayed by truck this week.



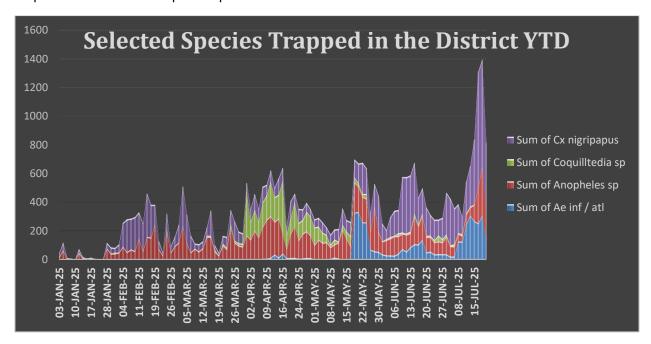


Week of 7/14/2025 Operations Update (29)

We saw a spike in the traps at the end of last week, but wind direction factored significantly in this week's distribution of mosquito population. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).

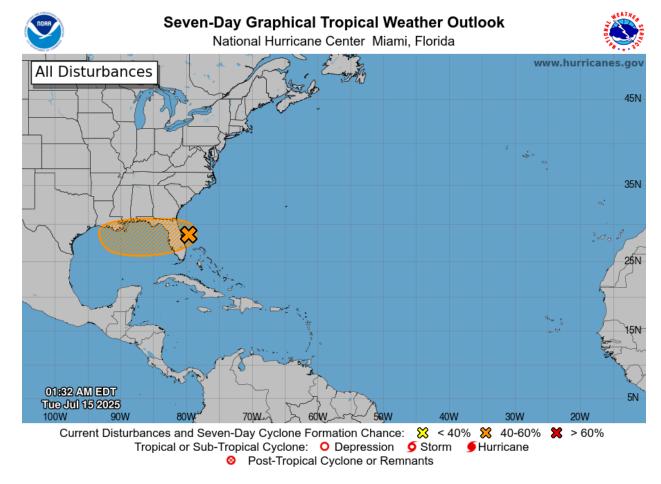


On the last day of trap reporting last week, we saw a spike in the number of *Aedes infirmatus*. Numbers did increase compared to last week but did not continue to build as they typically would. Wind both helped and hindered mosquito dispersal this week.



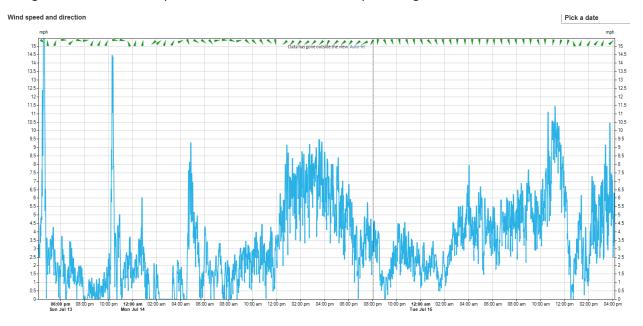
An area of low pressure moved across the State from the Atlantic this week. Rainfall was significant, but winds from the passing storm had an impact on the distribution of the mosquito population.

East of the Florida Peninsula into the Northeastern Gulf (AL93): Recent satellite-derived wind data indicate that the area of low pressure located just offshore of the east coast of Florida is gradually becoming better defined. However, the shower and thunderstorm activity remains disorganized. This system is forecast to move westward across the Florida Peninsula today and tonight, then reach the northeastern Gulf by the middle part of this week.



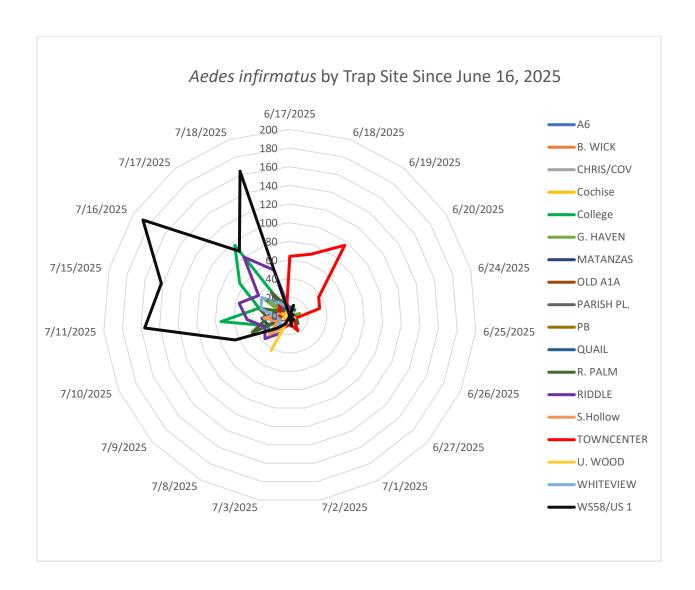
For most of Monday and Tuesday as the storm passed winds were out of the north. This sustained wind direction pushed saltmarsh mosquitoes in Longs Creek south into the District and swept flood water mosquitoes that emerged west of the District to the south, preventing a major incursion eastward into the populated areas.

The green arrows at the top of the chart below indicate the prevailing wind direction.

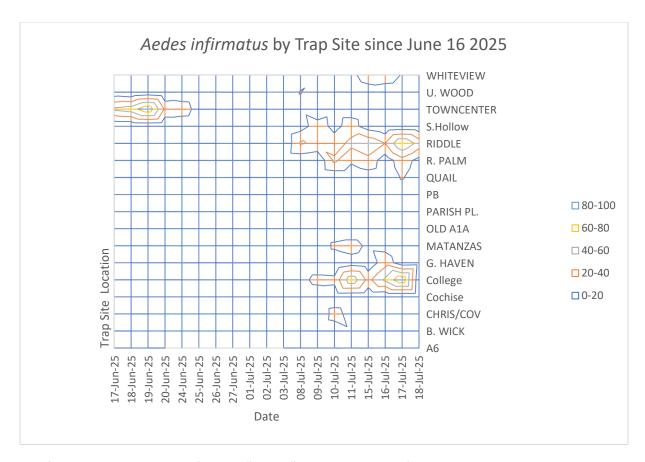


Typically, when we see a spike in floodwater mosquitoes, the numbers build in what is referred to as irruptive growth. The data indicates that this process stalled, and the reason likely has to do with the winds. Adult flood water mosquitoes can fly up to ten miles. Of course, the migration of mosquitoes is influenced by the wind speed and direction, allowing the tiny mosquito to glide great distances much as an eagle soars.

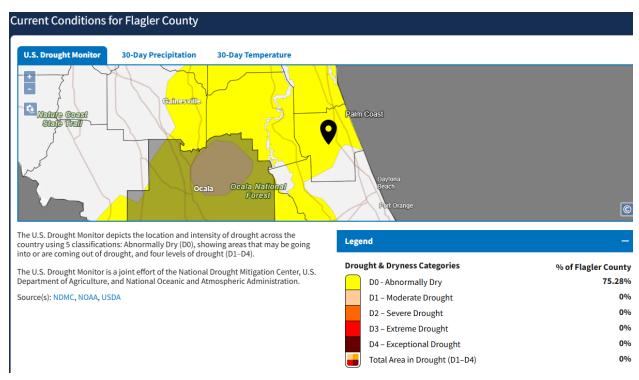
From the chart below you can see two big spikes in the population of this species. The first, earlier spike, was isolated in Town Center and is related to construction in the area. The second, more recent spike is a rain driven event and is District-wide. The black-line on the chart is from the sentinel trap west of the District boundary. You can see the smaller spikes in the District, but because the wind had little easterly component, the numbers never approach those from the source area outside the District.



Distribution of this species within the District is shown in the chart below.

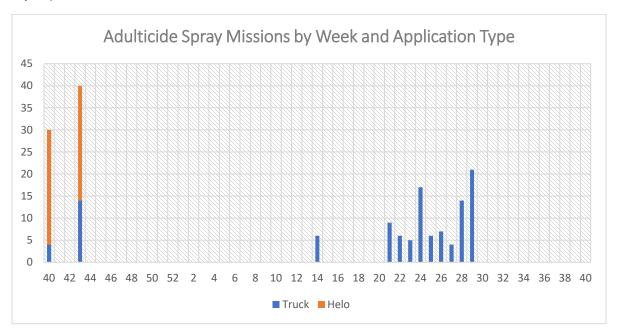


Rainfall in the District ranged from 0.8" to 5.0". The percentage of Flagler County that is abnormally dry (D0) remained at 75.28%.





This week was the highest number of zones sprayed this calendar year (see map at the end of the report).

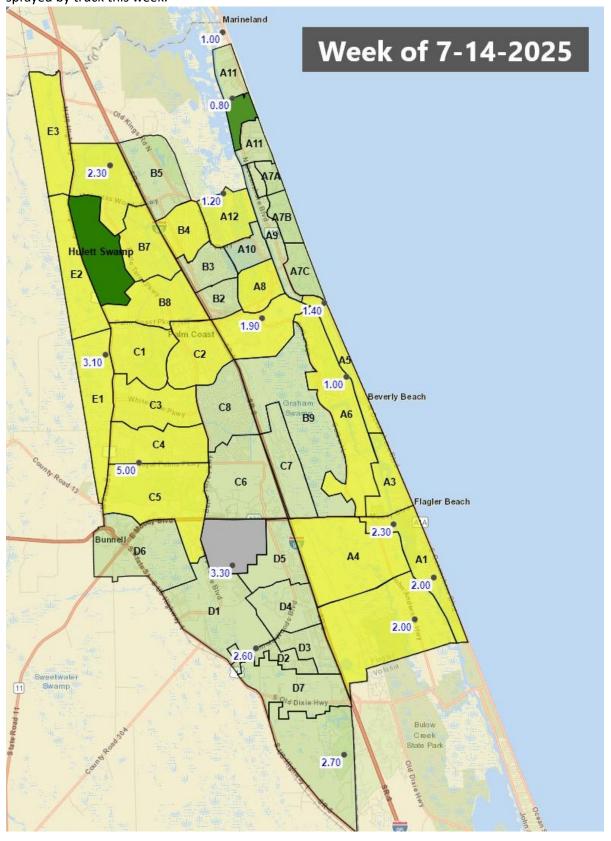


2025 Mosquito-Borne Disease Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Bay			1 WNV (3/24)	
Brevard	1 dengue (May)		1 WNV (2/7)	
Citrus			5 EEEV (3/11), (4/1), (4/8), (5/28) 4 WNV (1/6), (2/10), (2/17)	
Escambia	3 asymptomatic WNV blood donors (June (2), July)			
Hillsborough			1 WNV (4/21)	
Indian River			2 WNV (1/2)	
Jefferson		1 EEEV (6/12)		
Lake		1 EEEV (4/2)		
Levy		1 EEEV (6/20)		
Madison		1 EEEV (6/30)		
Miami-Dade	2 dengue (February, June)			
Orange			8 EEEV (2/24), (4/7), (6/2), (6/9), (6/16), (6/23), (6/30) 1 WNV (3/31)	1 EEEV emu (1/1)
Palm Beach			15 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17), (4/29), (5/13), (6/16)	
Pasco			1 WNV (1/13)	
Pinellas			1 WNV (1/6)	
Polk			2 EEEV (6/2), (6/9) 1 WNV (6/16)	
Seminole		1 EEEV (1/5) 1 WNV (1/5)		
St. Johns	1 asymptomatic WNV blood donor (June)			
Volusia			2 EEEV (1/14), (4/8) 1 WNV (6/23)	1 EEEV emu (1/2)
Walton			6 EEEV (5/5), (6/2), (6/23), (6/30) 1 WNV (5/19)	

Advisories/Alerts: Brevard and St. Johns counties are currently under a mosquito-borne illness advisory. Escambia and Miami-Dade counties are currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. See the full <u>DOH Report</u>

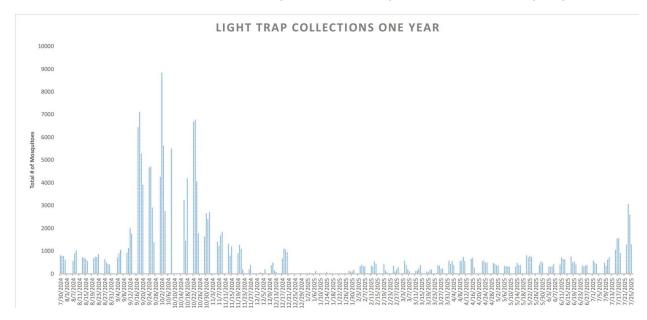
Rainfall totals for the week by manual rain gauge location in blue. Zones highlighted in yellow were sprayed by truck this week.



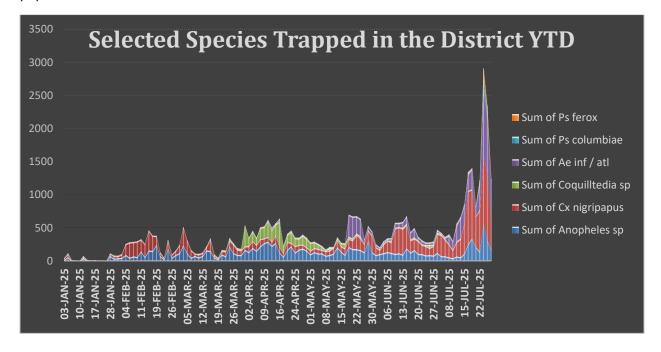


Week of 7/21/2025 Operations Update (30)

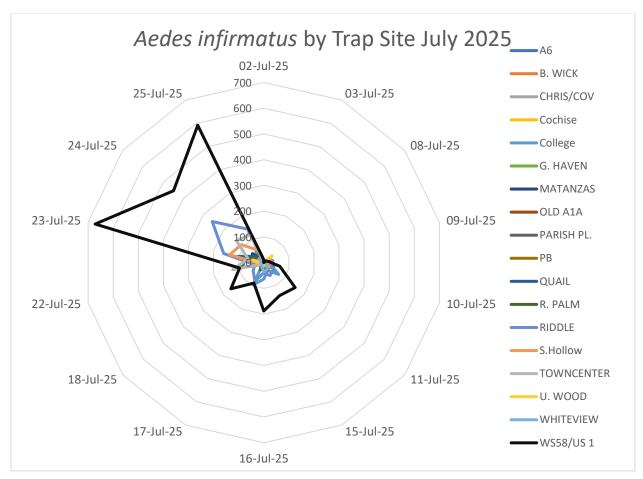
A typical spike in floodwater mosquitoes this week, the first of its kind this calendar year. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



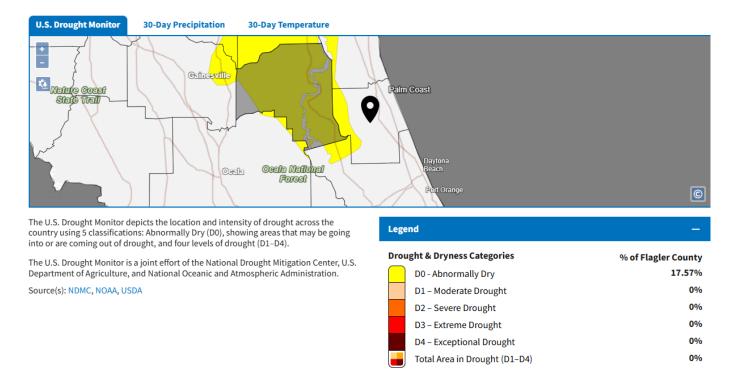
After a false start last week, the mosquitoes showed up in force this week. Treatments did not conclude until Saturday morning. Since we pick up traps for the week Friday morning it is likely the mosquito population will be lower next week.



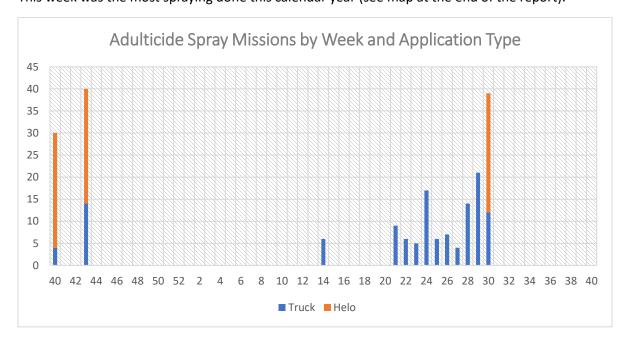
In the graph below we look at the floodwater mosquito species *Aedes infirmatus* both within the District and west of US1 beyond the District's boundaries (Black line). The vast undeveloped area west of US1 is the major source of this species of mosquito, infiltrating into the populated areas of the District by wind dispersal and flying a distance of up to ten miles.



Rainfall in the District ranged from 0.3" to 2.7". The percentage of Flagler County that is abnormally dry (D0) decreased from 75.28% to 17.57%.



This week was the most spraying done this calendar year (see map at the end of the report).

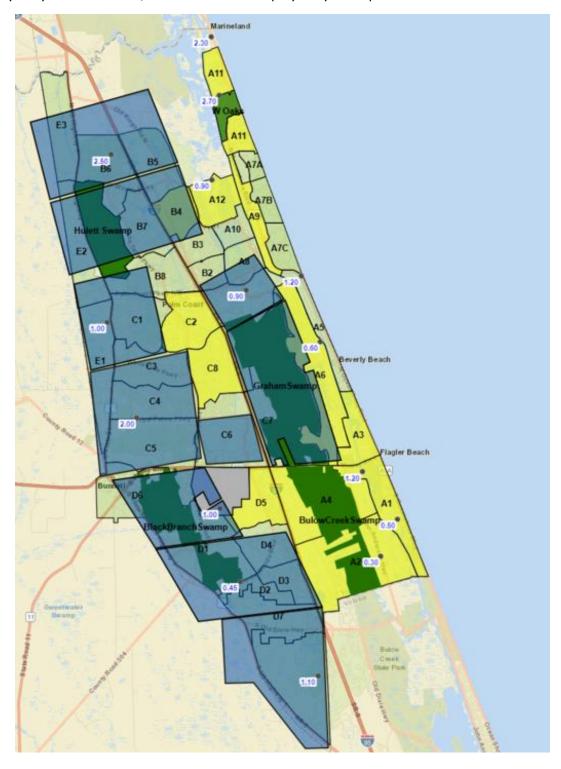


2025 Mosquito-Borne Disease Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Bay			1 WNV (3/24)	
Brevard	2 dengue (May, July)	1 EEEV (7/18)	1 SLEV (7/9) 1 WNV (2/7)	
Citrus			8 EEEV (3/11), (4/1), (4/8), (5/28), (6/24), (7/7), (7/9) 4 WNV (1/6), (2/10), (2/17)	
Escambia	3 asymptomatic WNV blood donors (June (2), July)			
Hillsborough			1 WNV (4/21)	
Indian River			2 WNV (1/2)	
Jefferson		1 EEEV (6/12)		
Lafayette				1 EEEV emu flock outbreak (7/6 for the first emu)
Lake		1 EEEV (4/2)		
Levy		1 EEEV (6/20)		
Madison		1 EEEV (6/30)		
Miami-Dade	2 dengue (February, June) 1 asymptomatic WNV blood donor (July)			
Orange			9 EEEV (2/24), (4/7), (6/2), (6/9), (6/16), (6/23), (6/30), (7/14) 1 WNV (3/31)	1 EEEV emu (1/1)
Palm Beach			15 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17), (4/29), (5/13), (6/16)	
Pasco			1 EEEV (7/7) 1 WNV (1/13)	
Pinellas			2 WNV (1/6), (7/7)	
Polk			2 EEEV (6/2), (6/9) 1 WNV (6/16)	
Sarasota			1 EEEV (7/8)	
Seminole		1 EEEV (1/5) 1 WNV (1/5)		
St. Johns	1 asymptomatic WNV blood donor (June)			
St. Lucie			1 SLEV (7/10)	
Volusia			2 EEEV (1/14), (4/8) 2 WNV (6/23), (7/7)	1 EEEV emu (1/2)
Walton			9 EEEV (5/5), (6/2), (6/23), (6/30), (7/7), (7/14) 1 HJV (6/23) 3 WNV (5/19), (7/14)	

Advisories/Alerts: Lafayette and St. Johns counties are currently under a mosquito-borne illness advisory. Brevard, Escambia and Miami-Dade counties are currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. See the full <u>DOH</u> <u>Report</u>

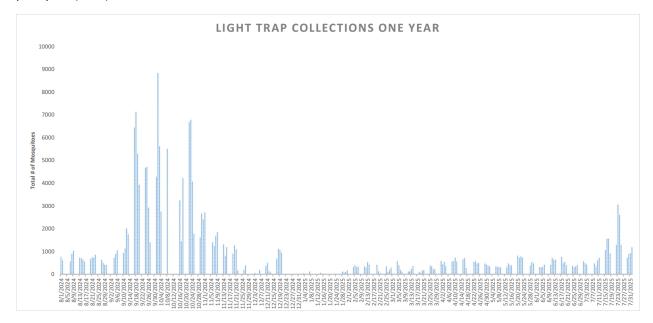
Rainfall totals for the week by manual rain gauge location in blue. Zones highlighted in yellow were sprayed by truck this week, blocks in blue were sprayed by helicopter.



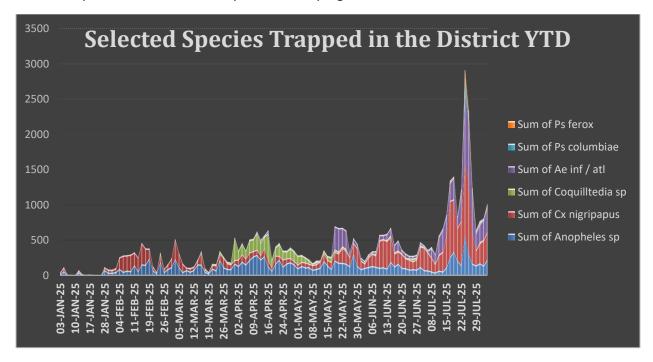


Week of 7/28/2025 Operations Update (31)

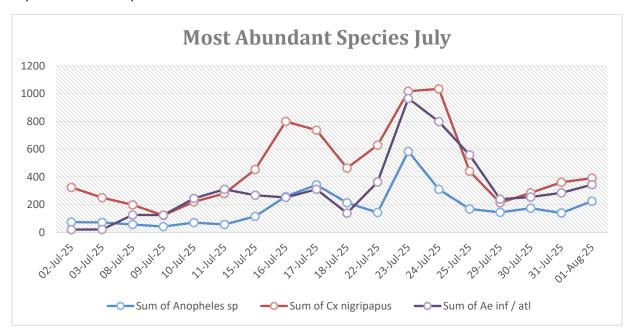
The mosquito population was much reduced after the first round of aerial adulticiding this calendar year. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



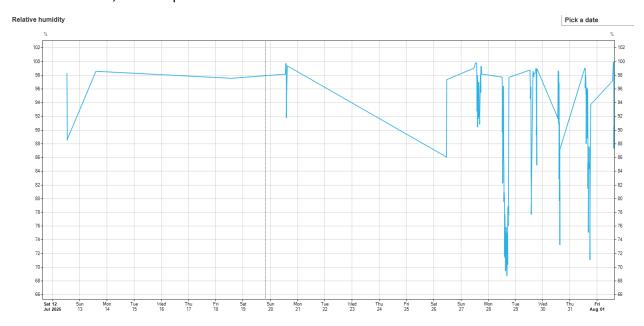
Treatments did not conclude until Saturday morning the previous week. The populations of the most abundant species increased modestly as the week progressed.



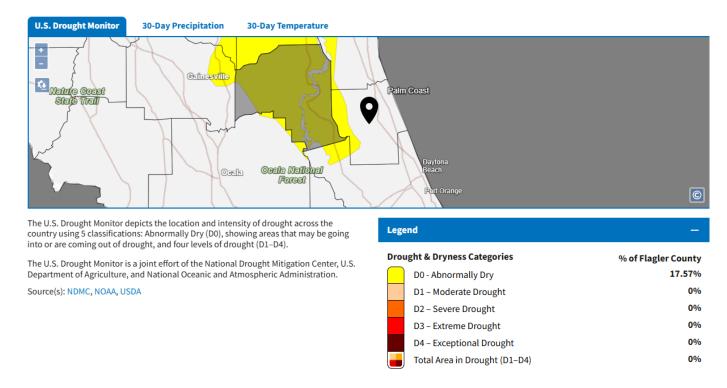
As compared to typical, this week's rebound was minimal. As always, there is a weather dependent explanation for this pattern.



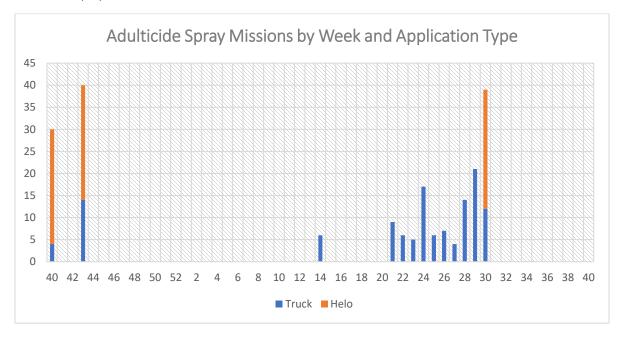
Extreme heat warnings were issued for each day this week. Hotter air holds more moisture and reduce relative humidity. Mosquitoes must avoid activity when the humidity is low or succumb to desiccation. This is why mosquitoes stay close to vegetation and the shade and humidity it provides. However, our mosquito traps only measure the active population, so even when the population is growing at a normal rate, it is less active, reducing the counts in the mosquito traps which we use for spray justification. The chart of relative humidity below shows dramatic dips each day as temperatures rise. Once the humidity is more favorable, the mosquitoes will be more active.



Rainfall in the District ranged from 0.0" to 1.0". The percentage of Flagler County that is abnormally dry (D0) Stayed steady at 17.57%.



No spraying this week (see map at the end of the report). Larvicide treatments in the saltmarsh to begin next week (32).

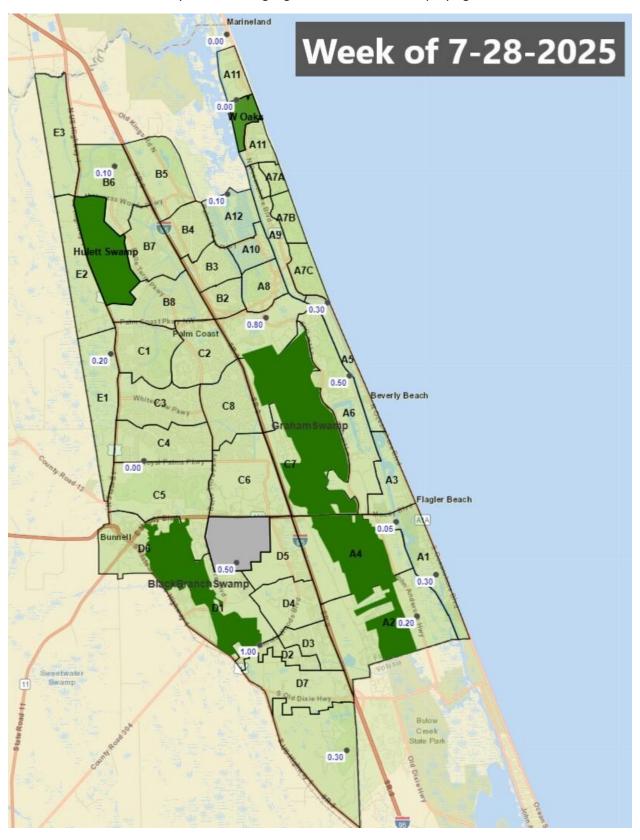


2025 Mosquito-Borne Disease Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Bay			1 WNV (3/24)	
Brevard	6 dengue (May, July (5))	1 EEEV (7/18)	1 SLEV (7/9) 2 WNV (2/7), (7/18)	1 DENV-3 mosquito pool (Ae. aegypti 7/24)
Citrus			8 EEEV (3/11), (4/1), (4/8), (5/28), (6/24), (7/7), (7/9) 4 WNV (1/6), (2/10), (2/17)	
Escambia	3 asymptomatic WNV blood donors (June (2), July)			
Hernando			1 EEEV (7/21)	
Hillsborough			1 WNV (4/21)	
Indian River			2 WNV (1/2)	
Jefferson		1 EEEV (6/12)		
Lafayette				1 EEEV emu flock outbreak (7/6 for the first emu)
Lake		1 EEEV (4/2)		
Levy		1 EEEV (6/20)		
Madison		1 EEEV (6/30)		
Miami-Dade	2 dengue (February, June) 1 asymptomatic WNV blood donor (July)			
Orange			10 EEEV (2/24), (4/7), (6/2), (6/9), (6/16), (6/23), (6/30), (7/14), (7/21) 1 WNV (3/31)	1 EEEV emu (1/1)
Palm Beach			15 WNV (1/7), (1/21), (1/27), (2/10), (2/17), (2/24), (3/10), (3/17), (4/29), (5/13), (6/16)	
Pasco			1 EEEV (7/7) 1 WNV (1/13)	
Pinellas			2 WNV (1/6), (7/7)	
Polk			2 EEEV (6/2), (6/9) 1 WNV (6/16)	
Sarasota			1 EEEV (7/8)	
Seminole		1 EEEV (1/5) 1 WNV (1/5)		
St. Johns	1 asymptomatic WNV blood donor (June)			
St. Lucie			1 SLEV (7/10)	
Volusia			2 EEEV (1/14), (4/8) 2 WNV (6/23), (7/7)	1 EEEV emu (1/2)
Walton			9 EEEV (5/5), (6/2), (6/23), (6/30), (7/7), (7/14) 1 HJV (6/23) 3 WNV (5/19), (7/14)	

Advisories/Alerts: Lafayette and St. Johns counties are currently under a mosquito-borne illness advisory. Brevard, Escambia, and Miami-Dade counties are currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. See the full <u>DOH</u>
Report

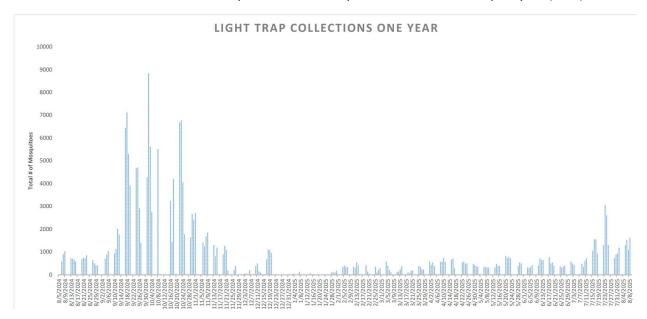
Rainfall totals for the week by manual rain gauge location in blue. No spraying this week.



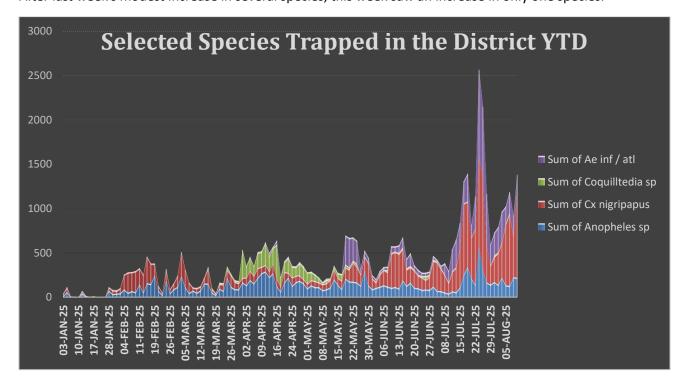


Week of 8/4/2025 Operations Update (32)

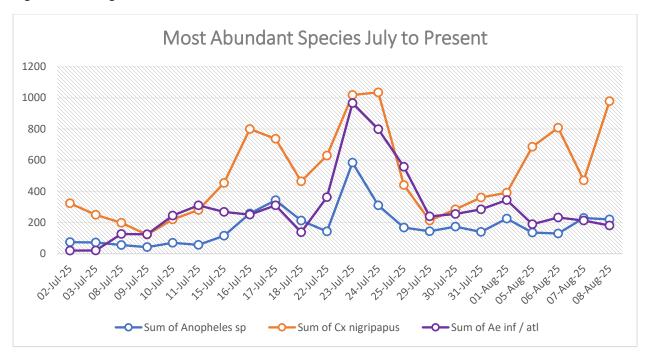
A single species, *Culex nigripalpus*, dominated the trap collections this week, but overall, there was a limited rebound from aerial spraying two weeks previous despite regular rainfall. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



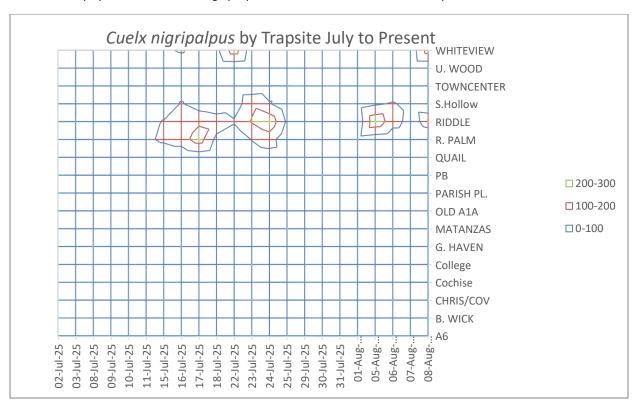
After last week's modest increase in several species, this week saw an increase in only one species.



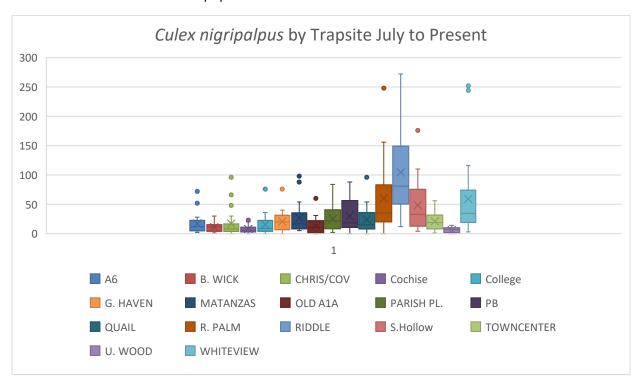
For the week, floodwater species *Aedes infirmatus* declined and permanent-water species of the genus *Anopheles* were largely unchanged. Another permanent-water species, Culex nigripalpus, increased. Overall, *Anopheles* numbers remain low and *Culex nigripalpus* numbers are closer to average, a little higher due to regular rainfall.



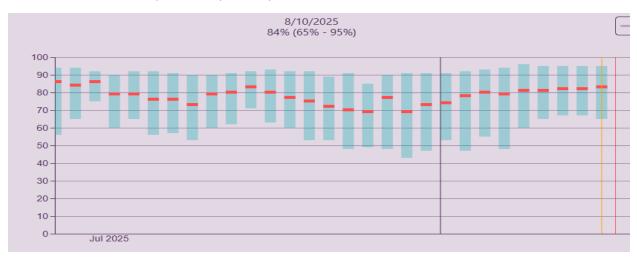
Most of the population of *Culex nigripalpus* has been limited to a few traps.



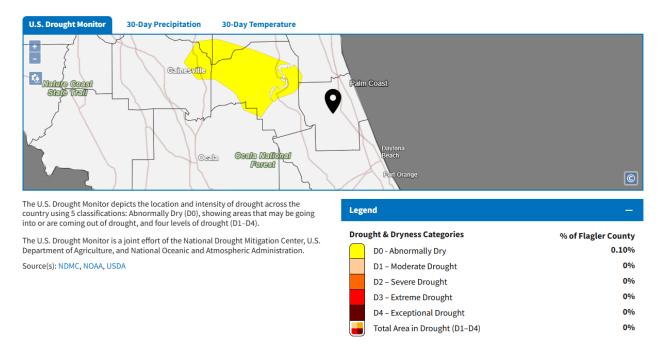
A closer look at the distribution of *Culex nigripalpus* with some basic statistics in the graph below. Putting this into perspective, a trap count of 50 of this species factored across seventeen traps yields an expected count of 850 total per day. Only one day in the past two weeks was this amount surpassed. This is important because keeping the population of mosquitoes low reduces the potential spread of disease where there is a human population.



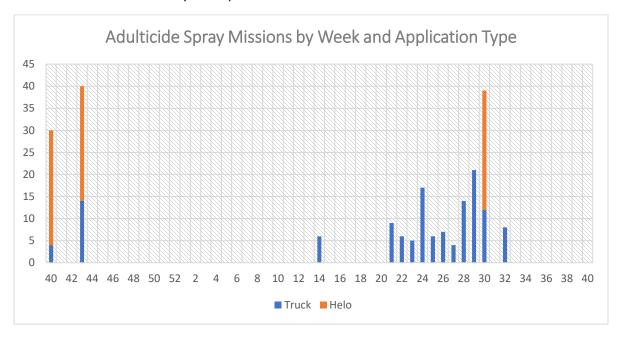
Temperatures were normal this week as compared to last week when extreme heat warnings were issued for each day the week. Hotter air holds more moisture and reduces relative humidity. Mosquitoes must avoid activity when the humidity is low or succumb to desiccation. This is why mosquitoes stay close to vegetation and the shade and humidity it provides. However, our mosquito traps only measure the active population, so even when the population is growing at a normal rate, it is less active, reducing the counts in the mosquito traps which we use for spray justification. The chart of relative humidity below shows dramatic dips each day as temperatures rise and more normal values this week.

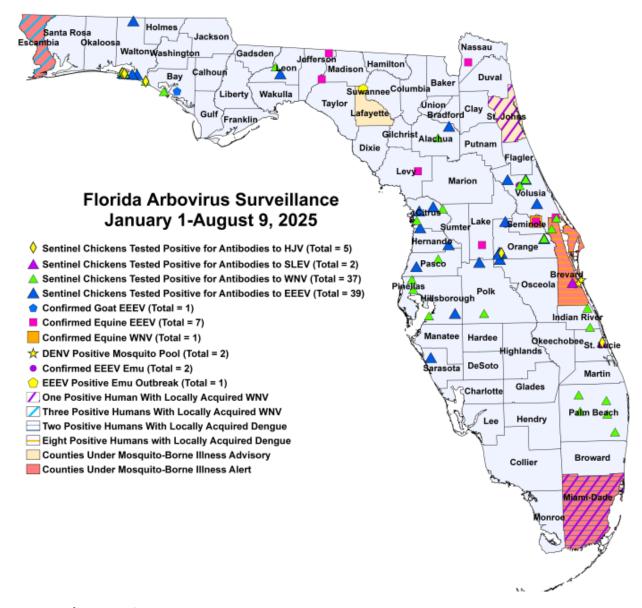


Rainfall in the District ranged from 1.3" to 4.2". The percentage of Flagler County that is abnormally dry (D0) decreased from 17.57% to 0.1%.



Limited spraying by truck this week (see map at the end of the report). Larvicide pretreatments in the saltmarsh were conducted by helicopter.

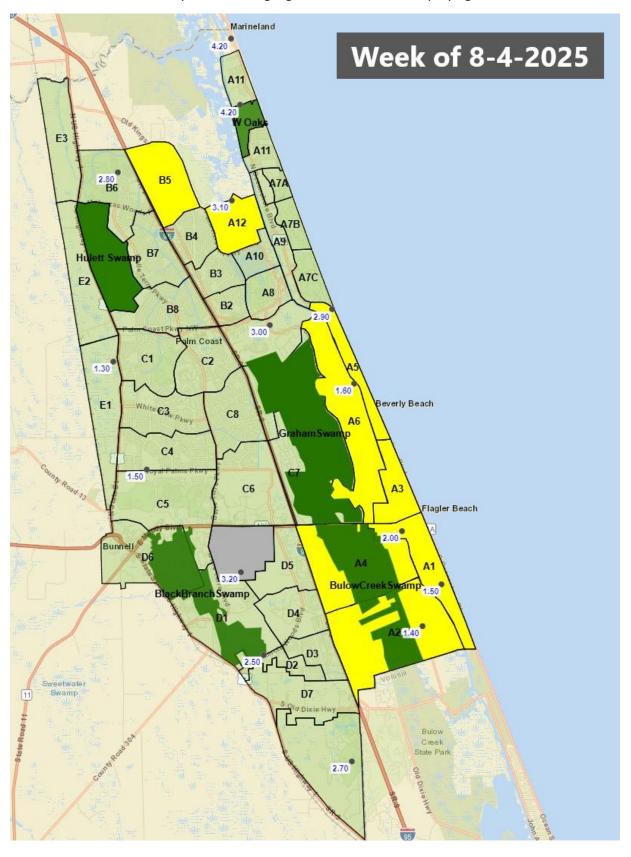




Advisories/Alerts: Lafayette and St. Johns counties are currently under a mosquito-borne illness advisory. Brevard, Escambia, and Miami-Dade counties are currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. See the full DOH Report

*Explainer- Mosquito-borne diseases are routinely spread by many species of mosquitoes in Florida. Mosquito control programs work to keep the population of mosquitoes at low numbers to minimize disease spread. A higher likelihood of disease transmission exists when mosquito populations are allowed to persist for a long enough time to become infected and spread diseases. The more mosquitoes there are, the greater the chances of encountering an infected mosquito. The strategy is simple: monitor the mosquito population for increases and knock them down quickly, either before they become adults or before they have a chance to spread diseases.

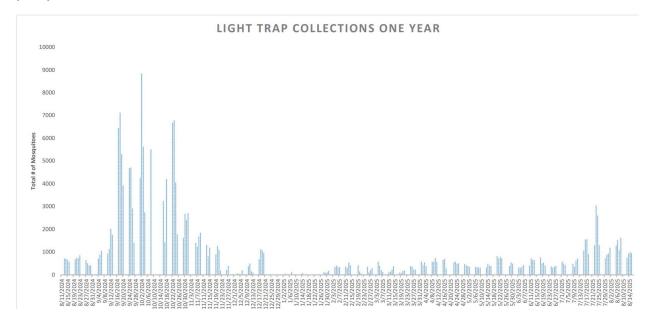
Rainfall totals for the week by manual rain gauge location in blue. No spraying this week.



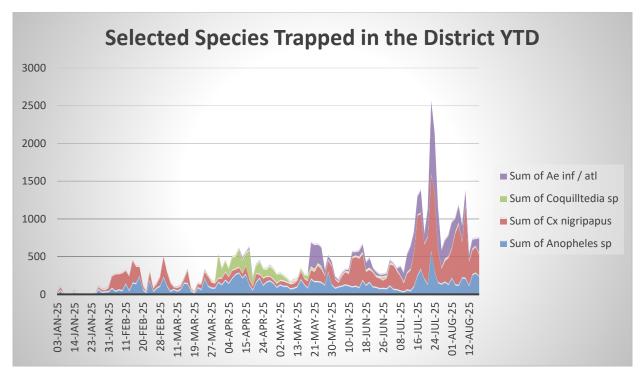


Week of 8/11/2025 Operations Update (33)

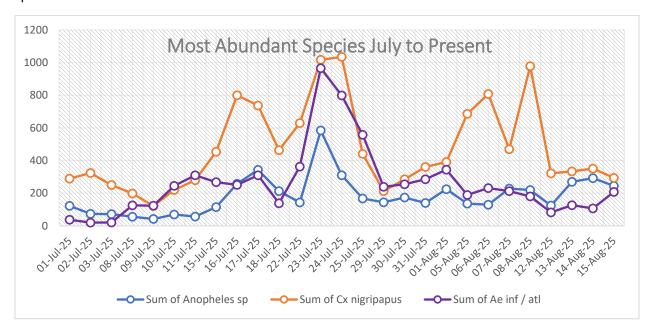
Mosquito population was at low numbers this week. Elevated activity remains in the saltmarsh. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



For most of 2025 the mosquito population has been at low levels. If you look at the graph above we currently have about same level of mosquitoes as we did in December.



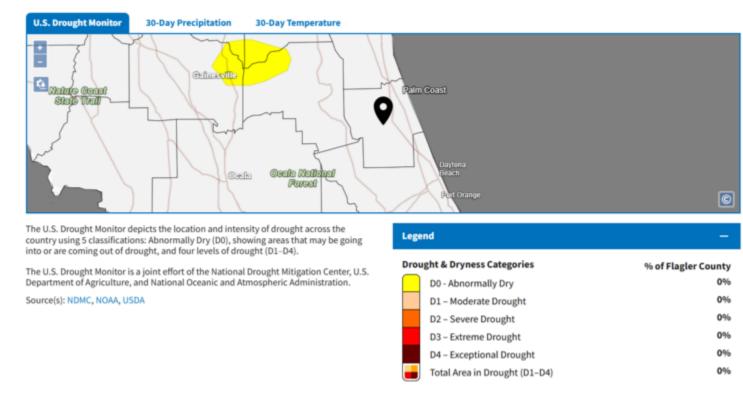
Last week we saw a spike in *Culex nigripalpus*, a permanent water species of mosquito. This week all species are at low levels.



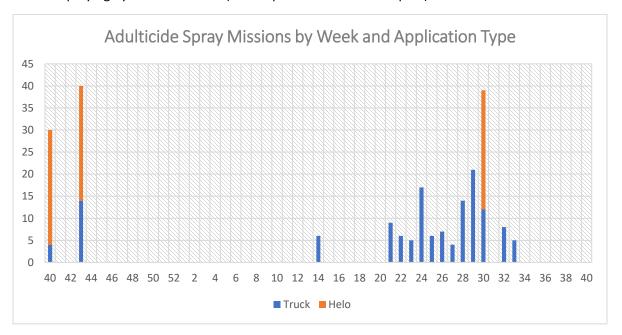
This week had mix of humidity and that can affect mosquito activity. Hotter air holds more moisture and reduces relative humidity. Mosquitoes must avoid activity when the humidity is low or succumb to desiccation. This is why mosquitoes stay close to vegetation and the shade and humidity it provides. The chart of relative humidity below shows dramatic dips on days the temperature rises, whereas last week was more normal.

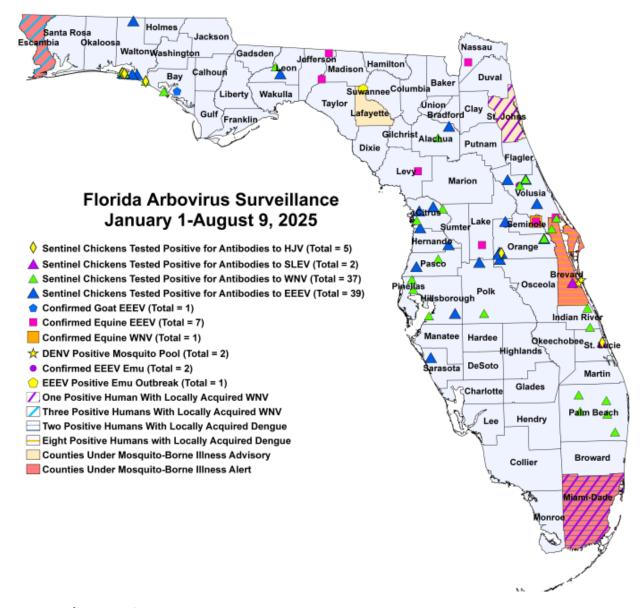


Rainfall in the District ranged from 0.7" to 3.9". The percentage of Flagler County that is abnormally dry (D0) decreased from 0.1% to zero.



Limited spraying by truck this week (see map at the end of the report).

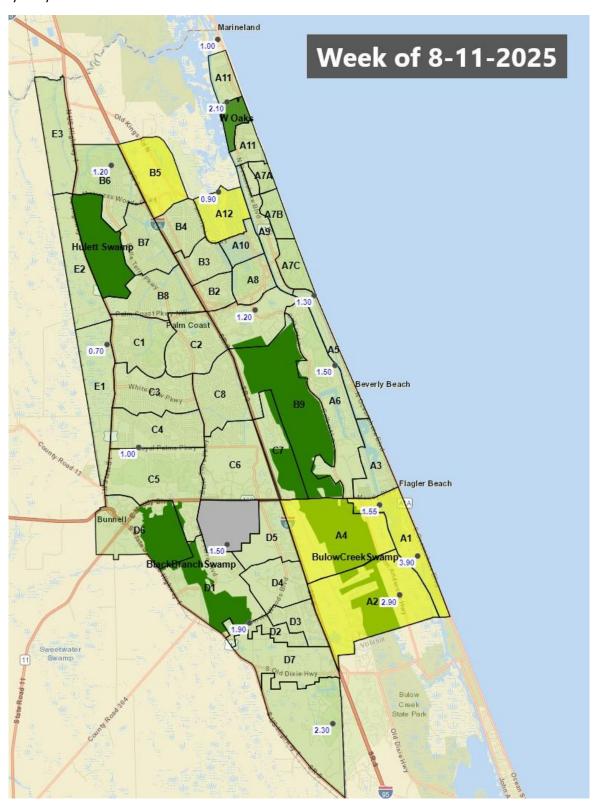




Advisories/Alerts: Lafayette and St. Johns counties are currently under a mosquito-borne illness advisory. Brevard, Escambia, and Miami-Dade counties are currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. See the full DOH Report

*Explainer- Mosquito-borne diseases are routinely spread by many species of mosquitoes in Florida. Mosquito control programs work to keep the population of mosquitoes at low numbers to minimize disease spread. A higher likelihood of disease transmission exists when mosquito populations are allowed to persist for a long enough time to become infected and spread diseases. The more mosquitoes there are, the greater the chances of encountering an infected mosquito. The strategy is simple: monitor the mosquito population for increases and knock them down quickly, either before they become adults or before they have a chance to spread diseases.

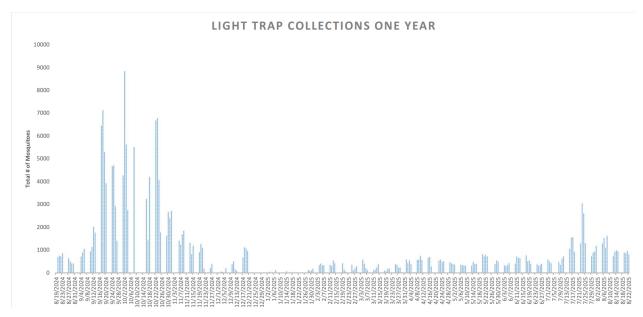
Rainfall totals for the week by manual rain gauge location in blue. Zones highlighted in yellow were sprayed by truck this week.



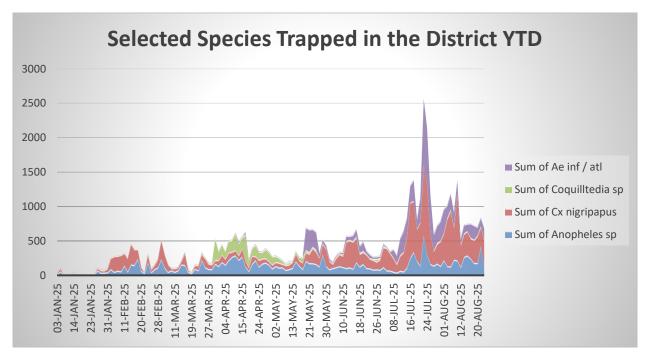


Week of 8/18/2025 Operations Update (34)

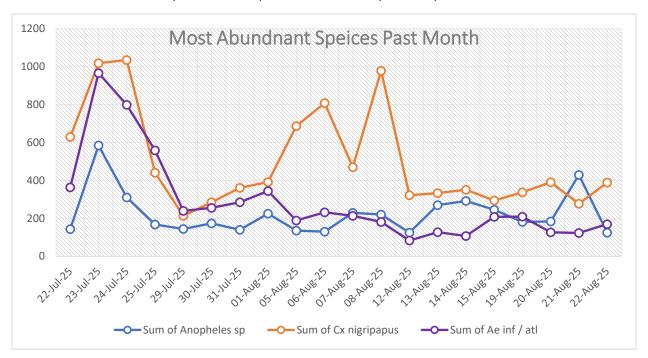
The mosquito population remained at low levels this week with no spraying for adult mosquitoes. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



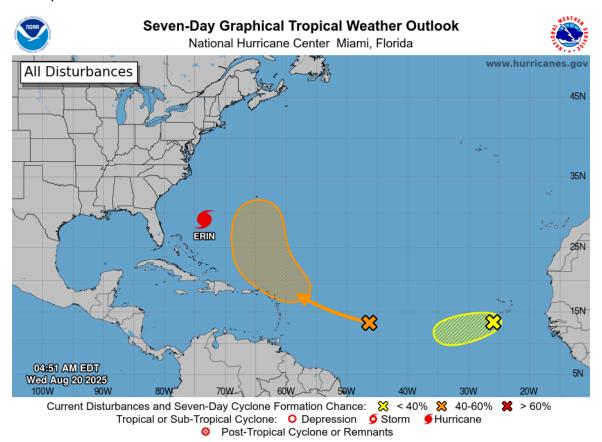
For most of 2025 the mosquito population has been at low levels. If you look at the graph above, we had about the same level of mosquitoes as we did in December. Rainfall was minimal the last two weeks, but we experienced high tides from Hurricane Erin passing by this week.



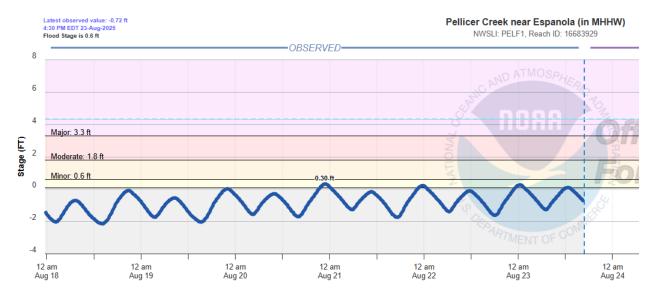
The three most abundant species of mosquito were essentially flat the past two weeks.



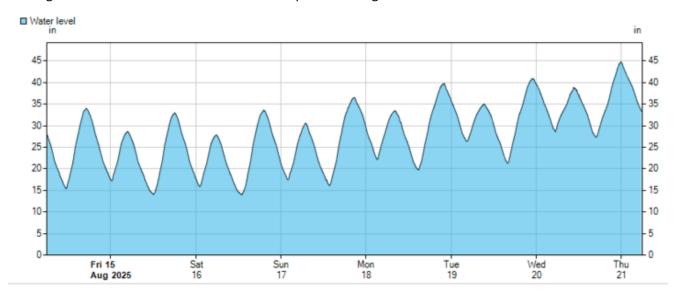
As Hurricane Erin passed by this week, well out in the Atlantic, it pushed up the tidal elevation, particularly on the back side of the storm.



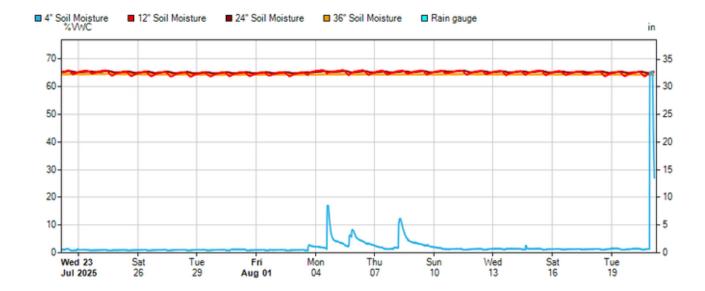
NOAA tide data from Pellicer Creek below.



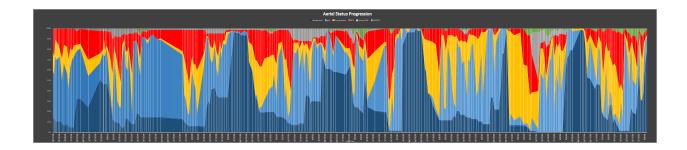
The District measures water level in the high saltmarsh areas where saltmarsh mosquitoes breed. A reading above 38" will flood some of these mosquito breeding areas.



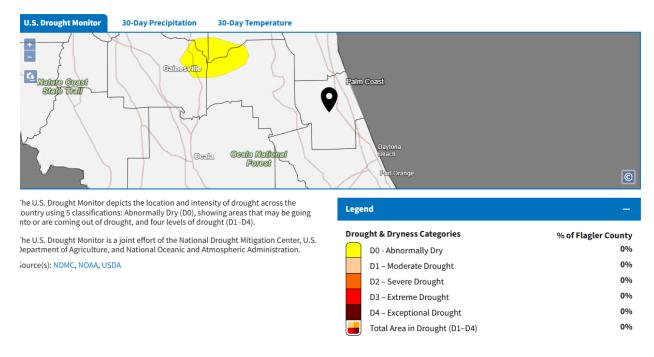
We can correlate the increase in tidal elevation to flooding at monitored sites instantaneously using soil moisture probes. The data below shows the sensor at surface level becoming inundated with flood water at the high tide mark. Once mosquito breeding sites flood, eggs laid in the soil previously will hatch and begin the lifecycle. However, these areas are treated with larvicide in advance of flooding to prevent this from happening.



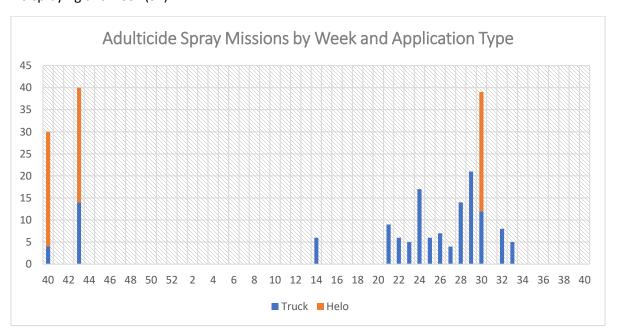
Conditions in the saltmarsh can ebb and flow significantly. Every time there is a dry down followed by a flood, saltmarsh mosquitoes can proliferate. The chart below spans nine years and is data gathered by helicopter surveillance flights of the major breeding sites. In between helicopter surveillance and the very specific monitoring done by remote monitoring devices, including cameras, are on-site inspections conducted by field technicians. This is how we evaluate mosquito breeding in our own saltmarsh. However, since this species of mosquito can fly twenty miles, we often see migration from other areas into Flagler County.



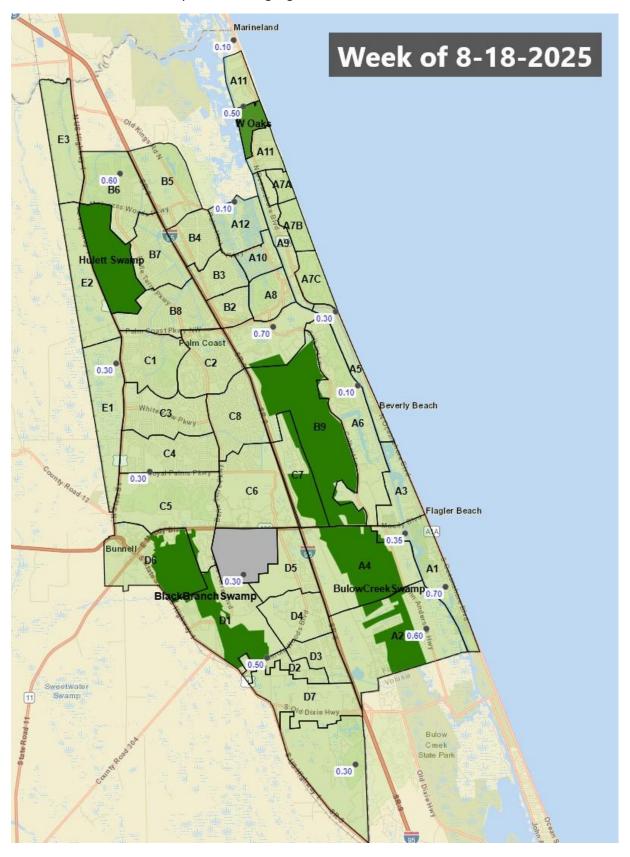
Rainfall in the District ranged from 0.1" to 0.7". The percentage of Flagler County that is abnormally dry (D0) remained at zero.

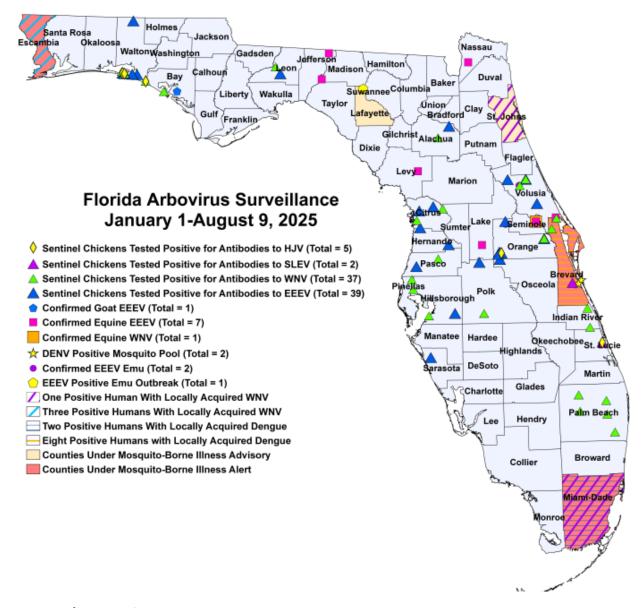


No spraying this week (34).



Rainfall totals for the week by manual rain gauge location in blue.





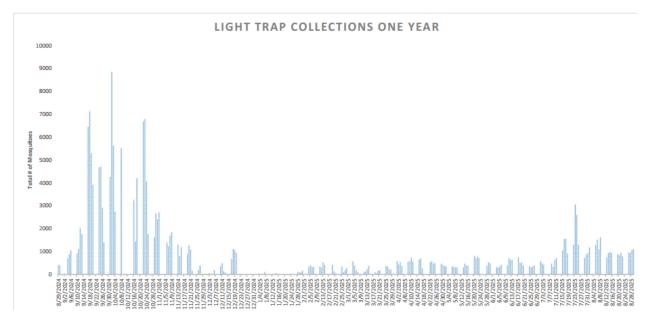
Advisories/Alerts: Lafayette and St. Johns counties are currently under a mosquito-borne illness advisory. Brevard, Escambia, and Miami-Dade counties are currently under a mosquito-borne illness alert. No other counties are currently under a mosquito-borne illness advisory or alert. See the full DOH Report

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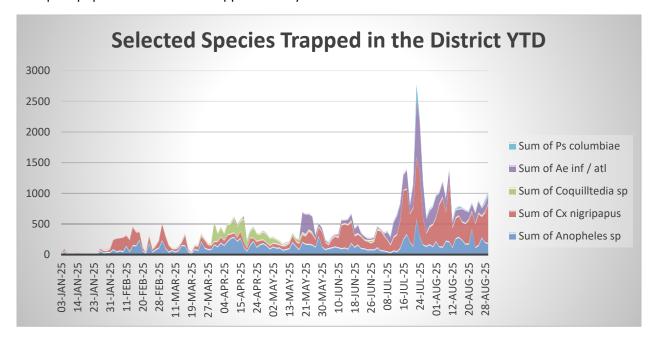


Week of 8/25/2025 Operations Update (35)

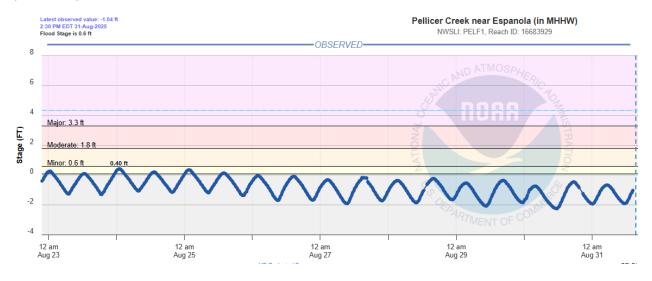
The mosquito population remained at low levels this week with no spraying for adult mosquitoes for a second week. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



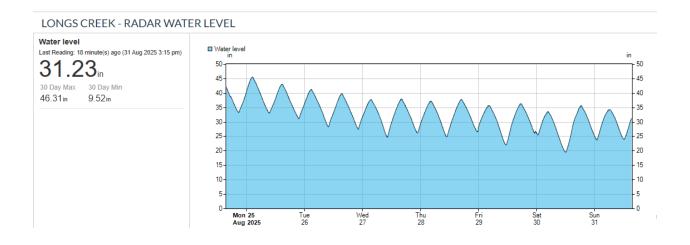
For most of 2025 the mosquito population has been at low levels. If you look at the graph above, we had about the same level of mosquitoes as we did in December. It has been three weeks of roughly flat mosquito population numbers at approximately baseline values.



As Hurricane Erin passed by last week, well out in the Atlantic, it pushed up the tidal elevation, particularly on the back side of the storm. NOAA tide data from Pellicer Creek below.

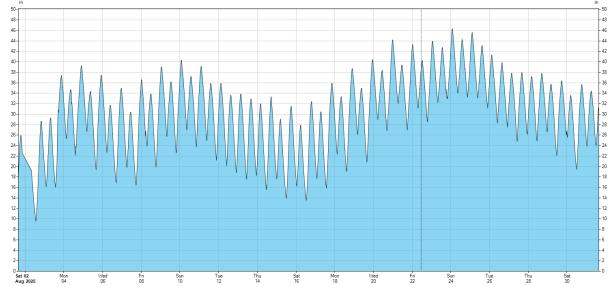


The District measures water level in the high saltmarsh areas where saltmarsh mosquitoes breed. A reading above 38" will flood some of these mosquito breeding areas. Tidal elevation receded to normal levels by the end of the week

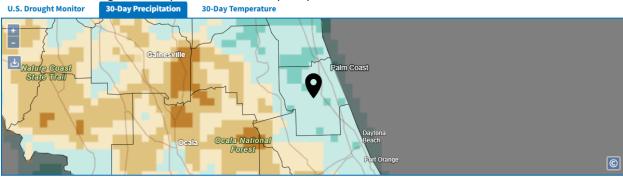


August saw extereme flutuations in tidal elevation from 9.5" to over 46". Such a dramaitic swing creates egg laying oportunities for saltmarsh mosquitoes when tides are low and areas are dried down. Once eggs are laid in dry soil, they wait for flood waters to hatch and emerge.



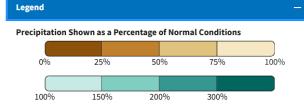


Rainfall in the District ranged from 1.9" to 7.0". The percentage of Flagler County that is abnormally dry (D0) remained at zero. The map below from NWS https://www.drought.gov/states/florida/county/flagler Indicates all of Flagler County is above normal precipitation as of 8/28/2025.



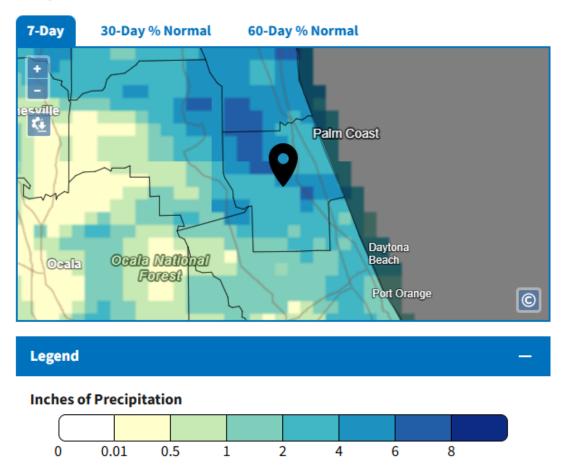
This map shows precipitation for the past 30 days as a percentage of the historical average (1991–2020) for the same time period. Green/blue shades indicate above-normal precipitation, while brown shades indicate below-normal precipitation.

Source(s): UC Merced

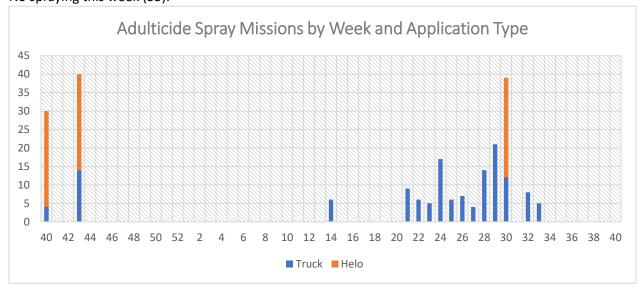


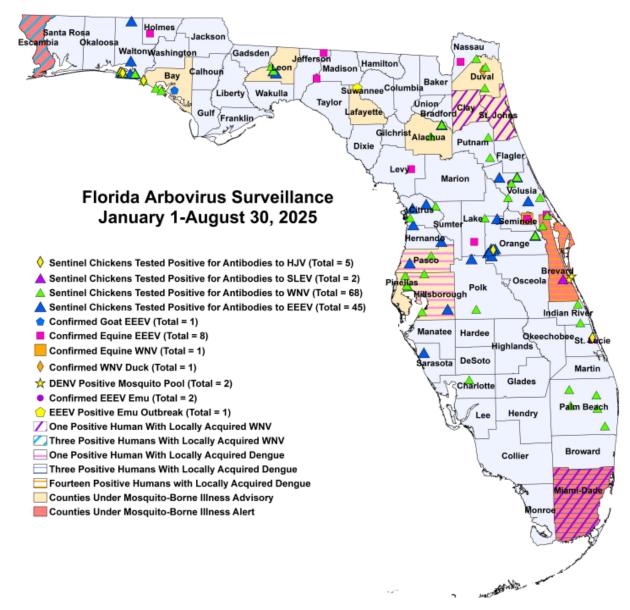
Considerable rainfall has fallen in the past seven days, and it is anticipated there will be resulting mosquito floodwater activity in the coming days. This time of year, a seven to ten day window until emergence is likely.

Precipitation Conditions



No spraying this week (35).

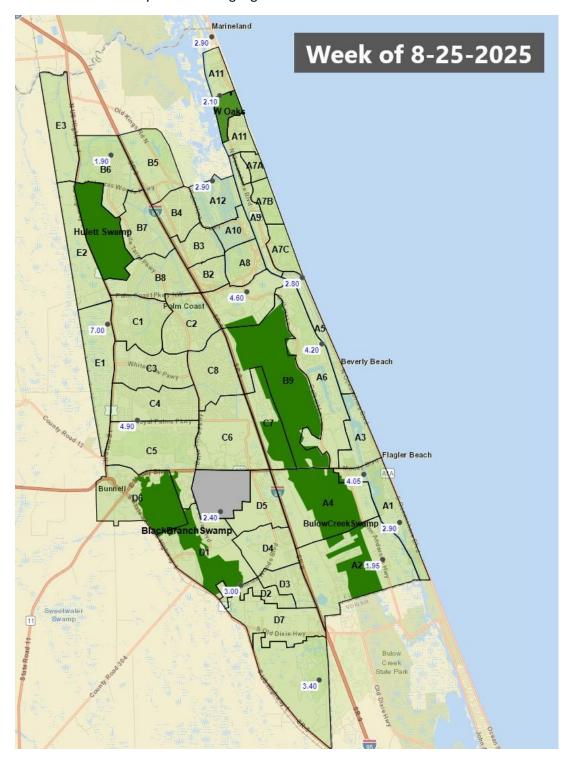




Advisories/Alerts: Alachua, Bay, Clay, Duval, Hillsborough, Lafayette, Leon, Pasco, Pinellas, and St. Johns counties are currently under a mosquito-borne illness advisory. Brevard, Escambia, and Miami-Dade counties are currently under a mosquito-borne illness alert. See the full DOH Report

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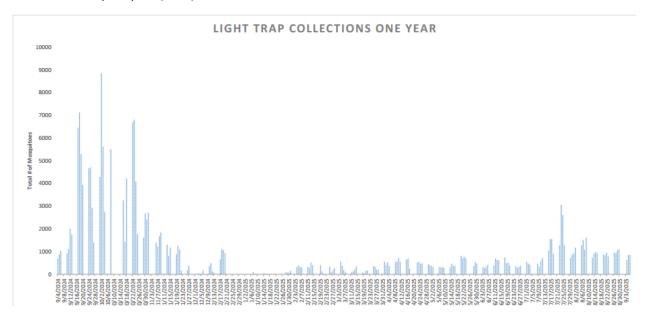
Rainfall totals for the week by manual rain gauge location in blue.



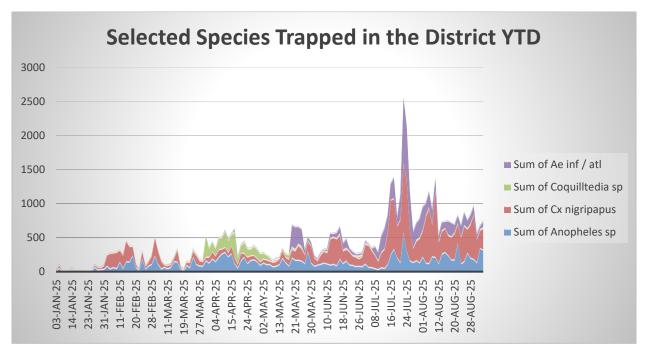


Week of 9/1/2025 Operations Update (36)

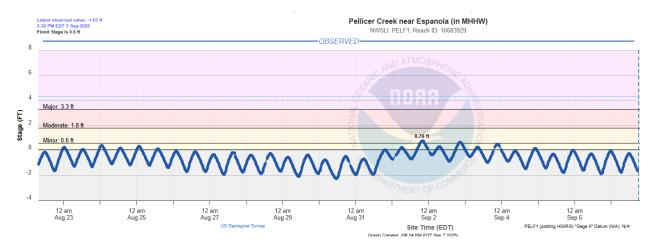
The mosquito population remained at low levels this week with no spraying for adult mosquitoes for a third week. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



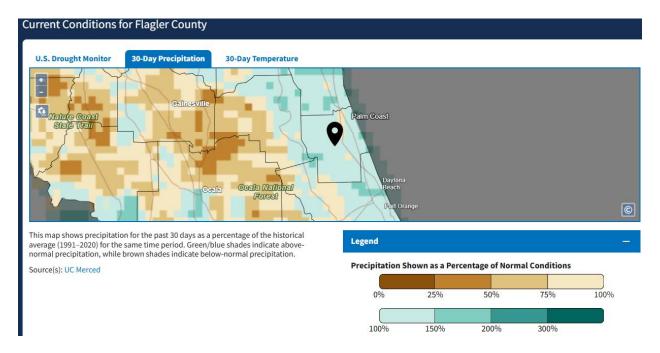
For most of 2025 the mosquito population has been at low levels. If you look at the graph above, we had about the same level of mosquitoes as we did in December. It has been five weeks of roughly flat mosquito population numbers at approximately baseline values following aerial adulticide treatments.



As Hurricane Erin passed by, well out in the Atlantic, it pushed up the tidal elevation, particularly on the back side of the storm with highest tides on August 24. Tides receded to normal levels, but then increased to even higher levels this week. The persistent northeast and east winds essentially acted like a dam, preventing the normal outflow of water from coastal rivers and bays, while simultaneously pushing additional ocean water onshore - a double effect that significantly worsened the tidal flooding. The flooding could have been enhanced by low pressure systems off the east coast of the U.S. that can work to 'back up' the Gulf Stream, which is the strong ocean current that moves warm water from the Gulf into the Atlantic, creating temporary water level increases. NOAA tide data from Pellicer Creek below.

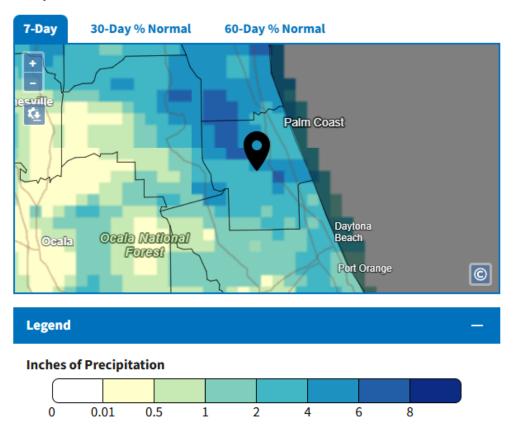


Rainfall in the District ranged from 1.0" to 3.1". The percentage of Flagler County that is abnormally dry (D0) remained at zero. The map below from NWS https://www.drought.gov/states/florida/county/flagler Indicates all of Flagler County is above normal precipitation as of 9/3/2025.

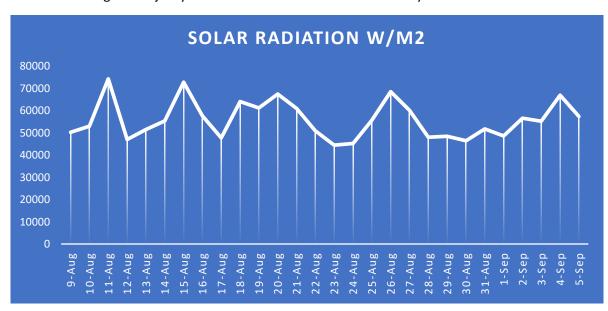


Considerable rainfall had fallen last week (graphic below), and it is still anticipated there will be resulting mosquito floodwater activity in the coming days. This time of year, a seven-to-ten-day window until emergence is typical. However, environmental factors can delay the emergence and arrival of adult mosquitoes.

Precipitation Conditions

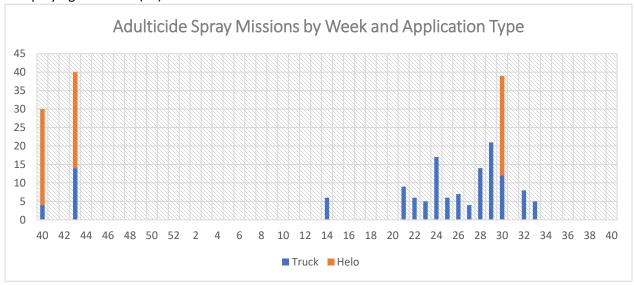


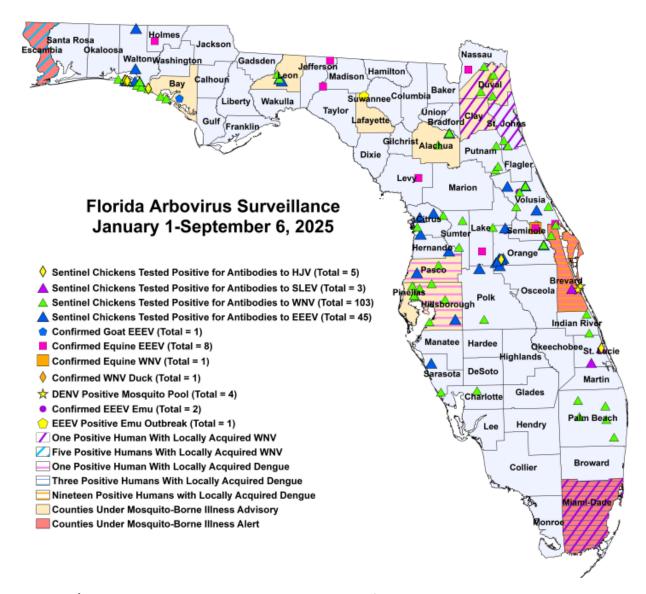
The week following the majority of the rain had low solar radiation daily totals.



Mosquito larvae in the water feed on microorganisms, some of which are photosynthetic. Reducing light availability therefore limits the food supply. As long as the areas remain flooded, the larvae can continue to grow at a slower rate than is typical and eventually emerge as flying, biting adults ready to migrate many miles in search of a blood meal.

No spraying this week (36).

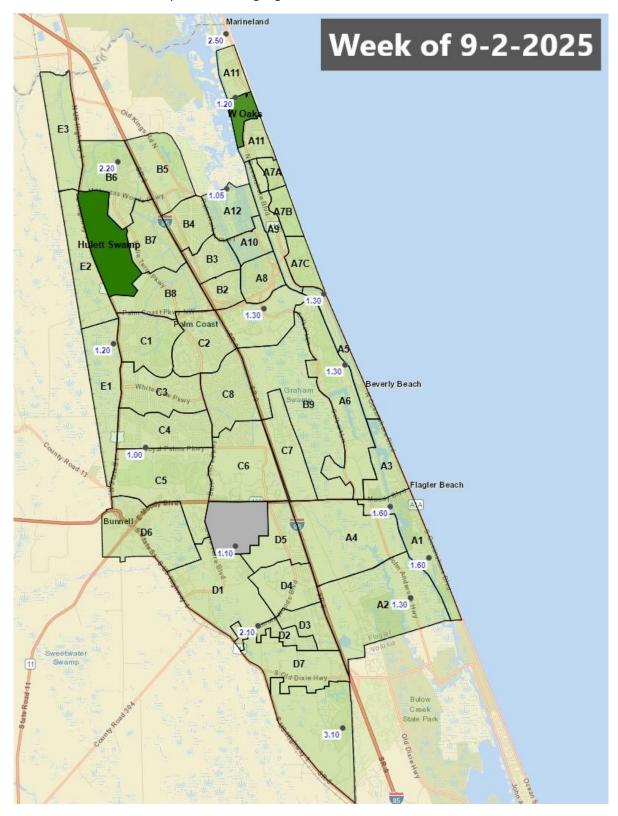




Advisories/Alerts: Alachua, Bay, Clay, Duval, Hillsborough, Lafayette, Leon, Pasco, and Pinellas counties are currently under a mosquito-borne illness advisory. Brevard, Escambia, and Miami-Dade counties are currently under a mosquito-borne illness alert. See the full DOH Report

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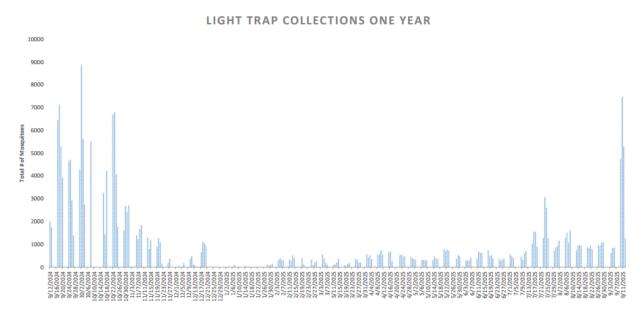
Rainfall totals for the week by manual rain gauge location in blue.



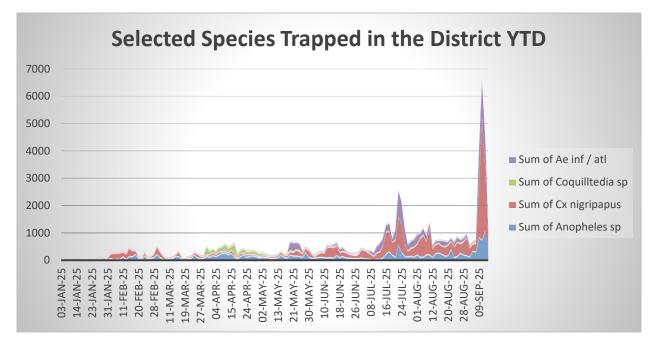


Week of 9/8/2025 Operations Update (37)

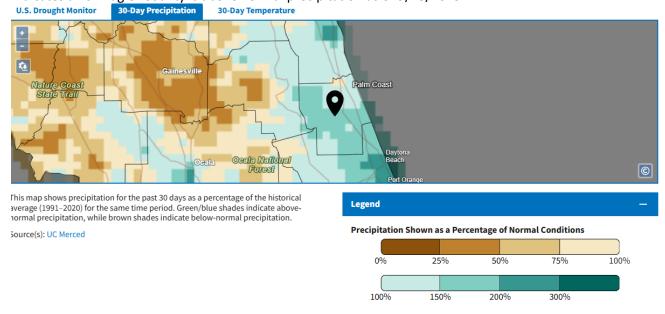
A hurricane's worth of mosquitoes showed up this week. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



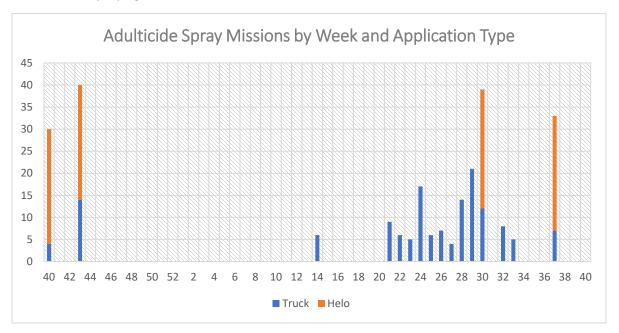
For most of 2025 the mosquito population has been at low levels. Outside of hurricane, we don't usually see the mosquito population this high. More heavy rain this week will produce further mosquito broods.

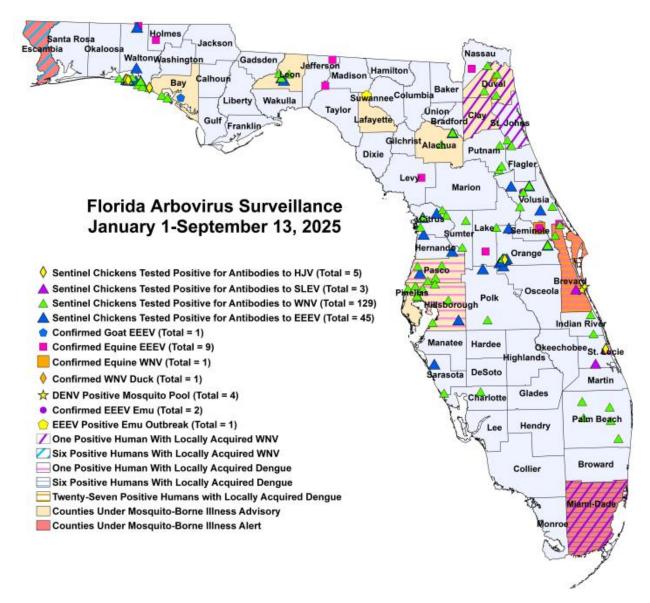


Rainfall in the District ranged from 0.75" to 8.3". The percentage of Flagler County that is abnormally dry (D0) remained at zero. The map below from NWS https://www.drought.gov/states/florida/county/flagler Indicates all of Flagler County is above normal precipitation as of 9/13/2025.



District-wide spraying this week (37).

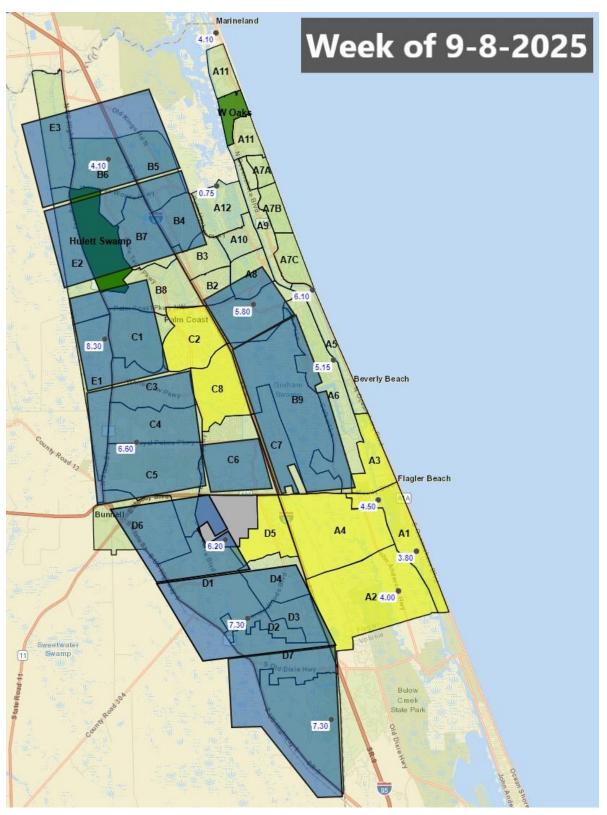




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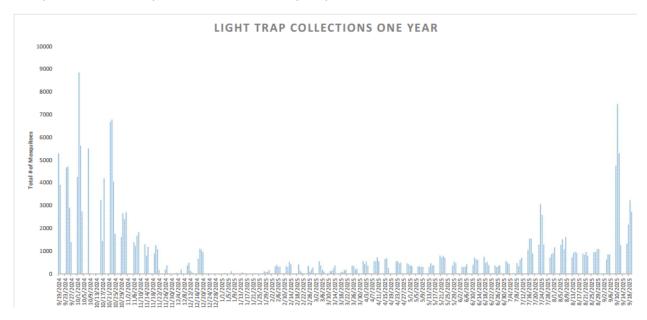
Rainfall totals for the week by manual rain gauge location in blue. Zones highlighted in yellow were sprayed by truck, blocks in blue were treated by helicopter.



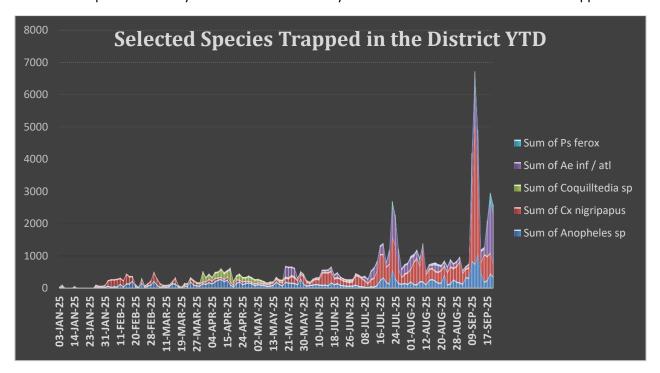


Week of 9/15/2025 Operations Update (38)

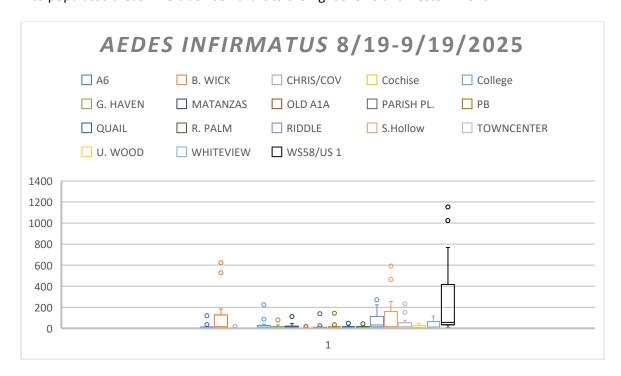
Little rainfall this week but plenty of mosquitoes. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



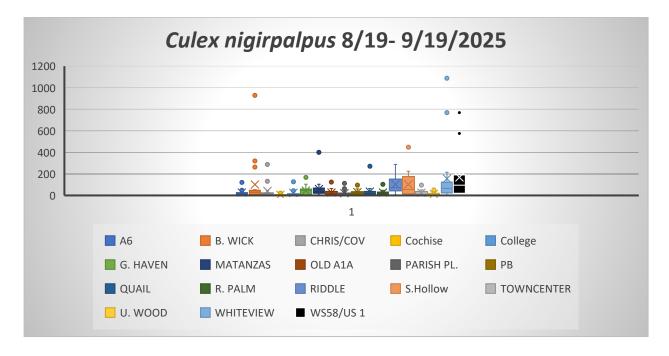
Last week we said, "For most of 2025 the mosquito population has been at low levels. Outside of hurricane, we don't usually see the mosquito population this high. More heavy rain this week will produce further mosquito broods." This week a second brood of floodwater mosquitoes arrived. There was a brief reprieve on Friday of last week and Monday of this week before the second brood appeared.



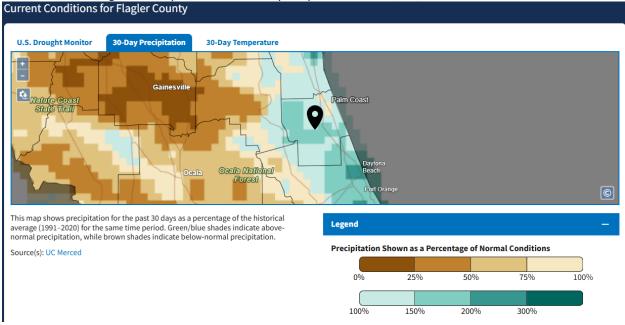
The District keeps a sentinel trap West of US1 to monitor mosquito production in the undeveloped area outside the District. *Aedes infirmatus* has a flight range of up to ten miles and can easily make its way into populated areas. The black box-chart to the right shows this western front.



Since *Culex nigripalpus* has a limited flight range of only a mile, the contribution from outside the District is not as consequential.

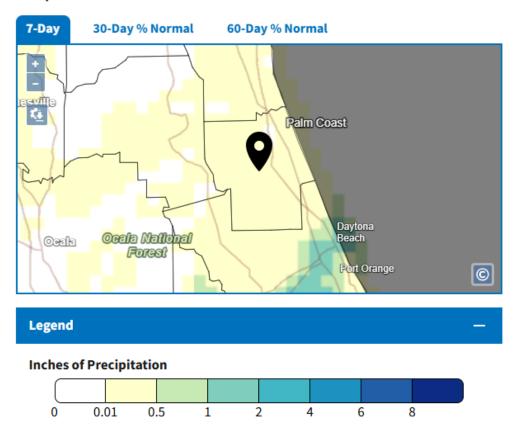


Rainfall in the District ranged from 0.0" to 0.8". The percentage of Flagler County that is abnormally dry (D0) remained at zero. The map below from NWS https://www.drought.gov/states/florida/county/flagler Indicates all of Flagler County is above normal precipitation as of 9/19/2025.

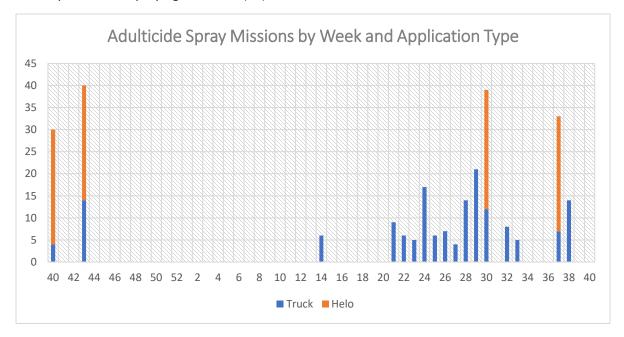


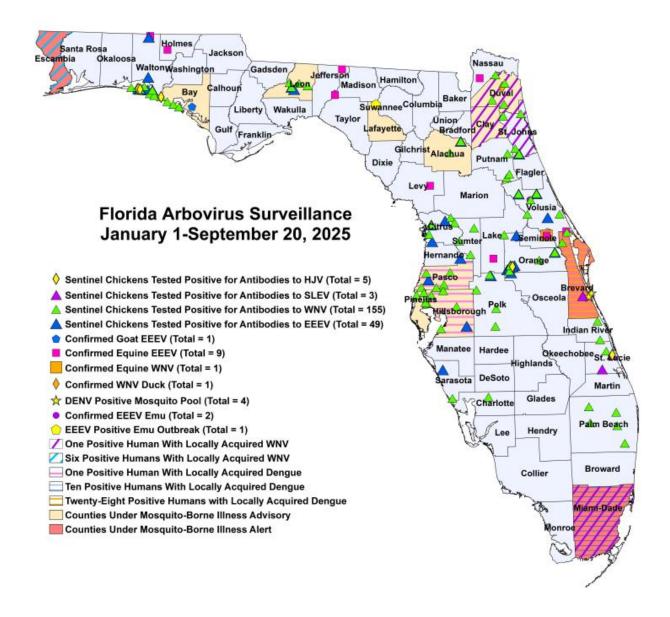
Little rainfall this week. The previous significant rainfall and now dryer conditions will allow permanent water species to proliferate absent any flushing rains.

Precipitation Conditions



Wide-spread truck spraying this week (38).

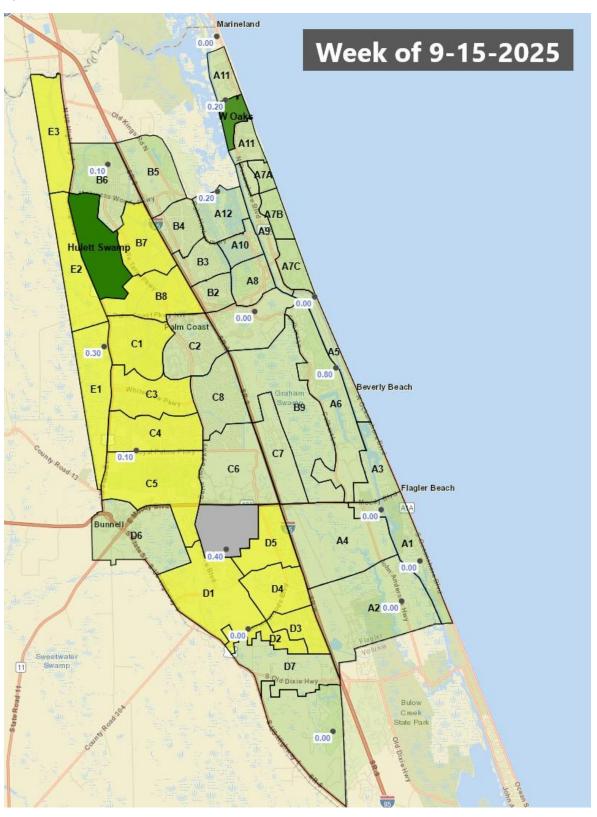




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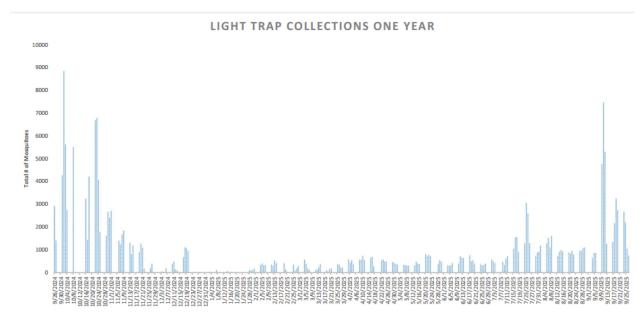
Rainfall totals for the week by manual rain gauge location in blue. Zones highlighted yellow were sprayed by truck.



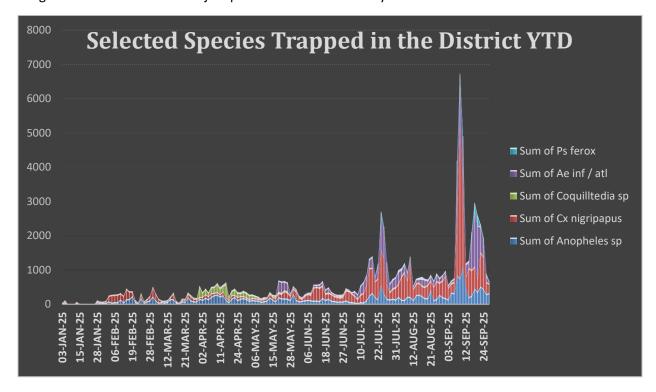


Week of 9/22/2025 Operations Update (39)

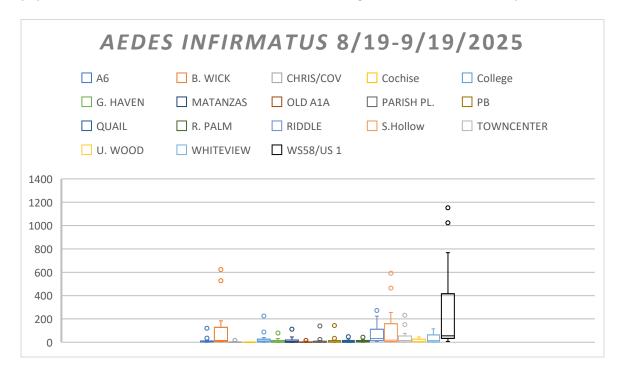
Little rainfall this week but plenty of mosquitoes. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



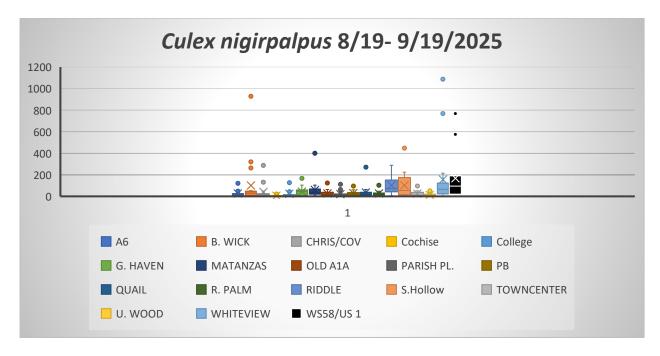
A significant reduction in all major species after treatments by the end of the week.



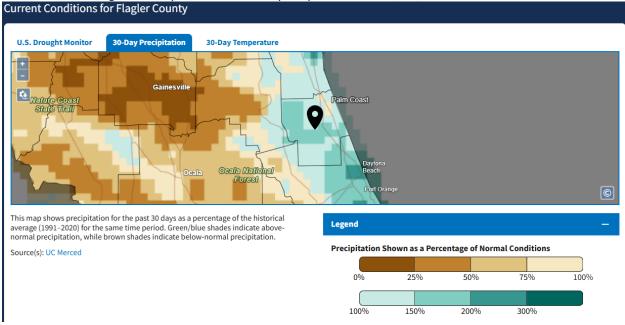
The District keeps a sentinel trap West of US1 to monitor mosquito production in the undeveloped area outside the District. Most of the floodwater species of mosquitoes originate outside of the District boundaries. *Aedes infirmatus* has a flight range of up to ten miles and can easily make its way into populated areas in the East. The black box-chart to the right is from the sentinel trap.



Since *Culex nigripalpus* has a limited flight range of only a mile, the contribution from outside the District is not as consequential.

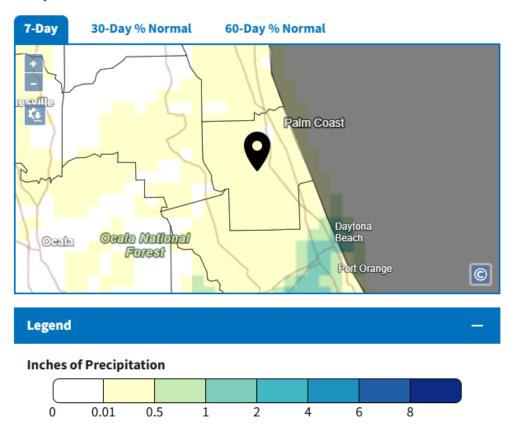


Rainfall in the District ranged from 0.0" to 0.8". The percentage of Flagler County that is abnormally dry (D0) remained at zero. The map below from NWS https://www.drought.gov/states/florida/county/flagler Indicates all of Flagler County is above normal precipitation as of 9/19/2025.

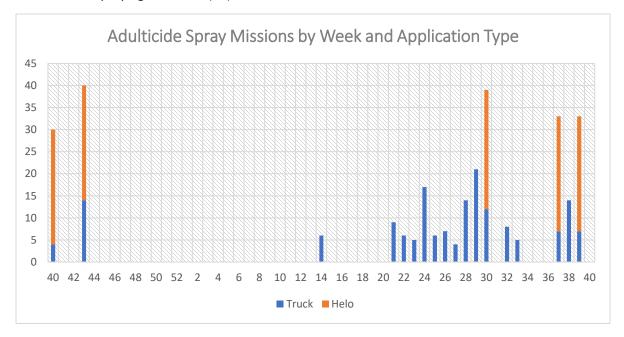


Little rainfall this week. The previous significant rainfall and now dryer conditions will allow permanent water species to proliferate absent any flushing rains.

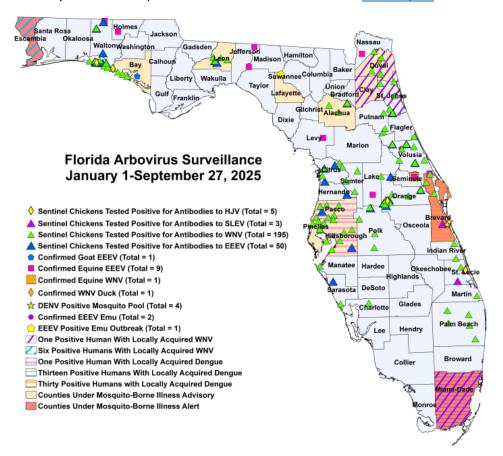
Precipitation Conditions



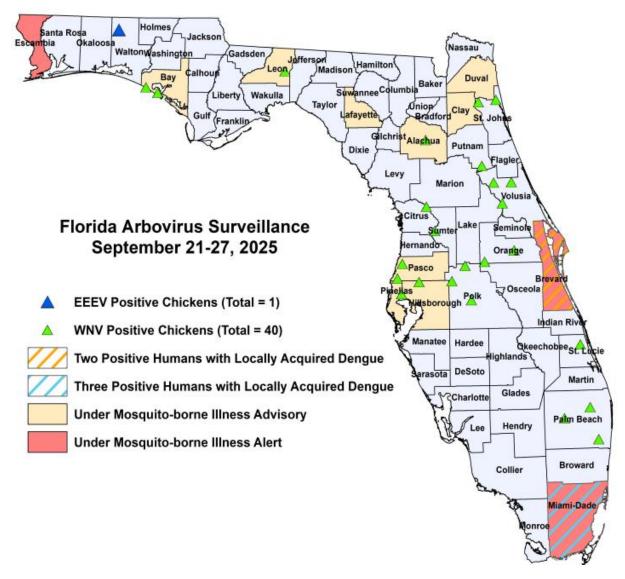
District-wide spraying this week (39).



Advisories/Alerts: Alachua, Bay, Clay, Duval, Hillsborough, Lafayette, Leon, Pasco, and Pinellas counties are currently under a mosquito-borne illness advisory. Brevard, Escambia, and Miami-Dade counties are currently under a mosquito-borne illness alert. See the full <u>DOH Report</u>



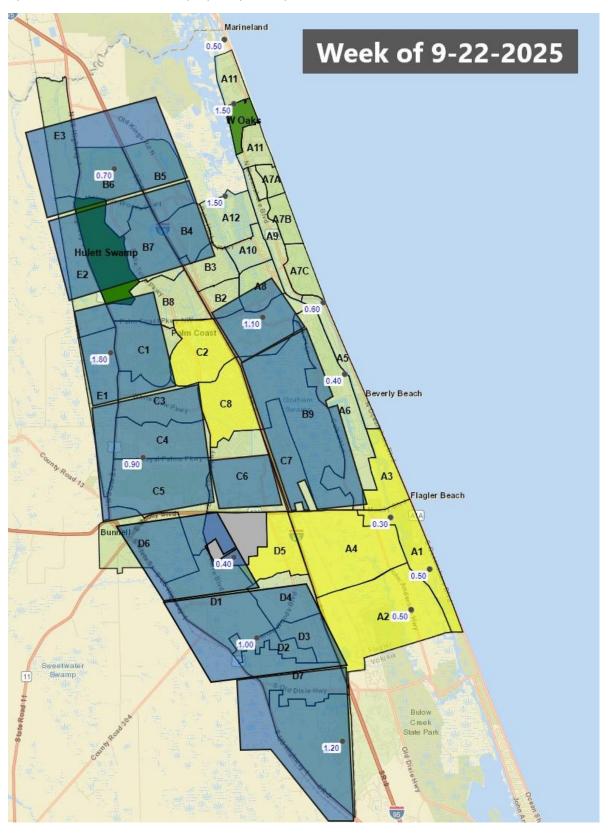
Just this week.



2025 Dengue Cases Acquired in Florida: In 2025, 45 cases of locally acquired dengue have been reported in Brevard (30), Hillsborough, Miami-Dade (13), and Pasco counties with onset in February, May, June, July, August, and September.

*Explainer- Mosquito-borne diseases are routinely spread by many species of mosquitoes in Florida. Mosquito control programs work to keep the population of mosquitoes at low numbers to minimize disease spread. A higher likelihood of disease transmission exists when mosquito populations are allowed to persist for a long enough time to become infected and spread diseases. The more mosquitoes there are, the greater the chances of encountering an infected mosquito. The strategy is simple: monitor the mosquito population for increases and knock them down quickly, either before they become adults or before they have a chance to spread diseases.

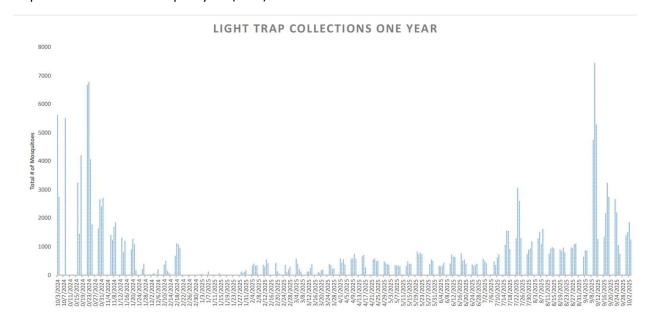
Rainfall totals for the week by manual rain gauge location in blue. Zones highlighted yellow were sprayed by truck, blocks in blue were sprayed by helicopter.



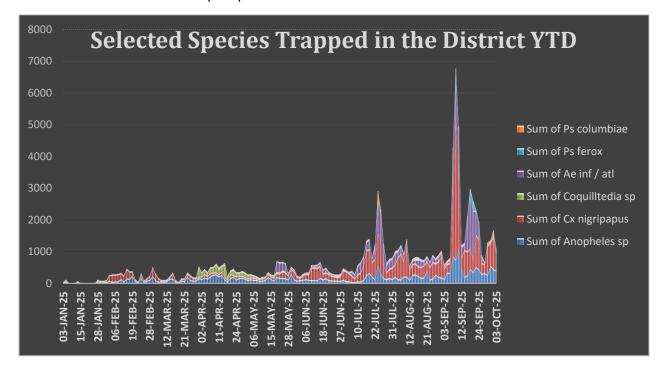


Week of 9/29/2025 Operations Update (40)

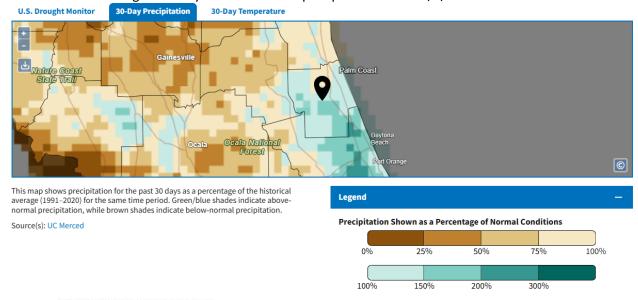
There was no resurgence of floodwater species this week after aerial spraying last week, while *Anopheles spp*. dominated the traps. The bar graph below shows the total number of adult mosquitoes from all traps in the District for the past year (TTM).



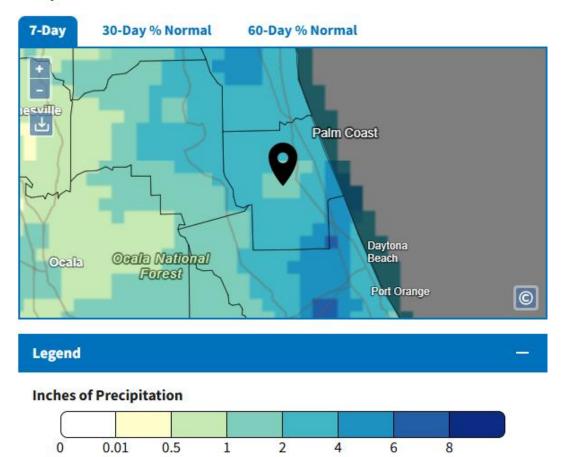
Significant standing water remained with additional 4 -5" on average received this week. This will likely lead to further floodwater mosquito production.



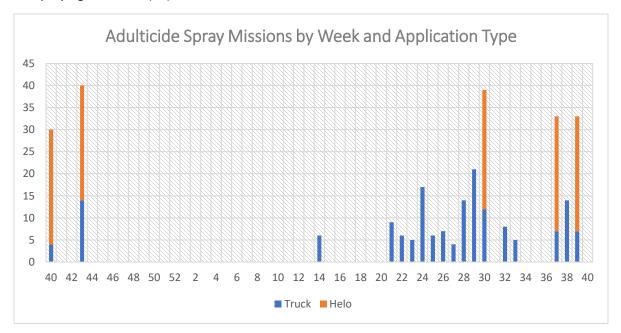
Rainfall in the District ranged from 2.15" to 5.7". The percentage of Flagler County that is abnormally dry (D0) remained at zero. The map below from NWS https://www.drought.gov/states/florida/county/flagler Indicates most of Flagler County is above normal precipitation as of 10/4/2025.



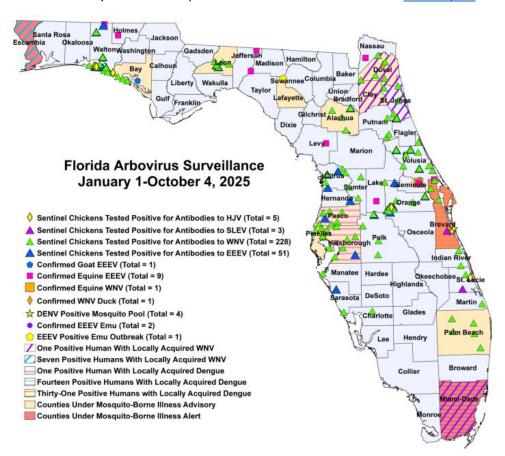
Precipitation Conditions



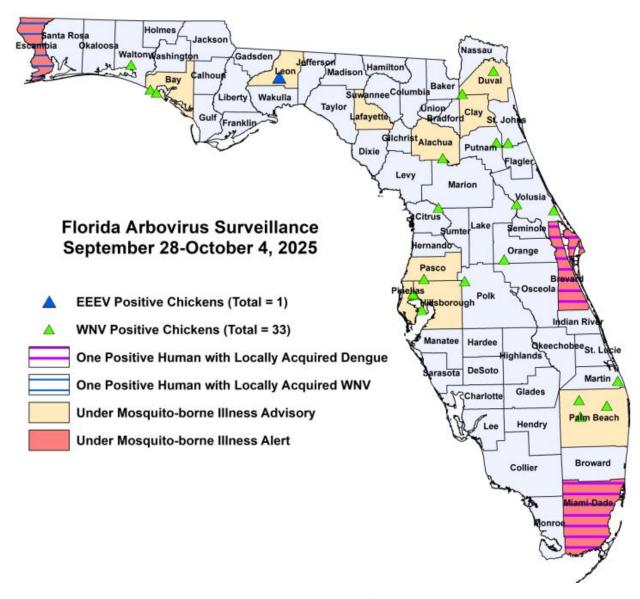
No spraying this week (40).



Advisories/Alerts: Alachua, Bay, Clay, Duval, Hillsborough, Lafayette, Leon, Palm Beach, Pasco, and Pinellas counties are currently under a mosquito-borne illness advisory. Brevard, Escambia, and Miami-Dade counties are currently under a mosquito-borne illness alert. See the full DOH Report



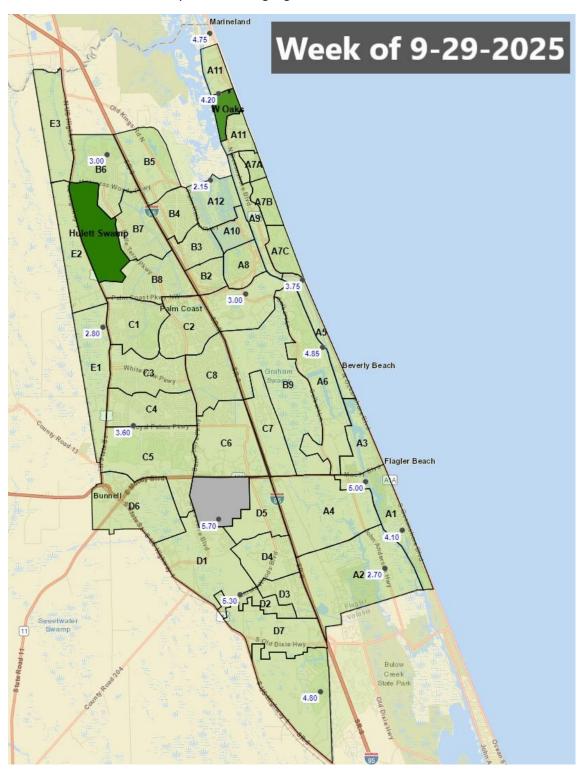
Just this week.



2025 Dengue Cases Acquired in Florida: In 2025, 47 cases of locally acquired dengue have been reported in Brevard (31), Hillsborough, Miami-Dade (14), and Pasco counties with onset in February, May, June, July, August, and September.

*Explainer- Mosquito-borne diseases are routinely spread by many species of mosquitoes in Florida. Mosquito control programs work to keep the population of mosquitoes at low numbers to minimize disease spread. A higher likelihood of disease transmission exists when mosquito populations are allowed to persist for a long enough time to become infected and spread diseases. The more mosquitoes there are, the greater the chances of encountering an infected mosquito. The strategy is simple: monitor the mosquito population for increases and knock them down quickly, either before they become adults or before they have a chance to spread diseases.

Rainfall totals for the week by manual rain gauge location in blue.



This is the last Opertions Update for the Fiscal Year. We produce operations updates April through the end of October and as needed the rest of the year.