



# CITY OF FORT COLLINS

## AUGUST 2018 MONTHLY REPORT

### West Nile Virus Risk

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As of September 4th, 2018, a total of 45 states and the District of Columbia have reported West Nile virus infections in people, birds, or mosquitoes in 2018. Overall, 559 cases of West Nile virus disease in people have been reported to CDC. Of these, 312 (56%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 247 (44%) were classified as non-neuroinvasive disease.

The Colorado Department of Health and Environment (CDPHE) reports a total of 24 human cases of West Nile virus infection from the state of Colorado. Many of these human cases are concentrated in Northern Colorado with 9 human cases reported from Larimer County, 4 from Weld County and 2 from Boulder County. While we have passed the historical peak of WNV risk these numbers are expected to rise as there is often a delay in onset of symptoms, diagnosis and reporting. Please note that the additional cases reported by CDPHE will also be reported to the Centers for Disease Control.

Nine Counties across the state of Colorado have reported human West Nile virus infection. These include Larimer, Boulder, Weld, Clear Creek, Delta, Logan, Mesa, Montrose and Washington. These numbers are guaranteed to increase according to the CDPHE, as the majority of West Nile virus cases in humans are identified in August and September, during the season's peak.

During the month of August Colorado State University tested 513 sample pools of mosquitoes collected from traps set in Larimer County. 69 of these samples tested positive for West Nile virus with 64 of those samples being collected from Fort Collins, 2 from Berthoud and 3 from Loveland.

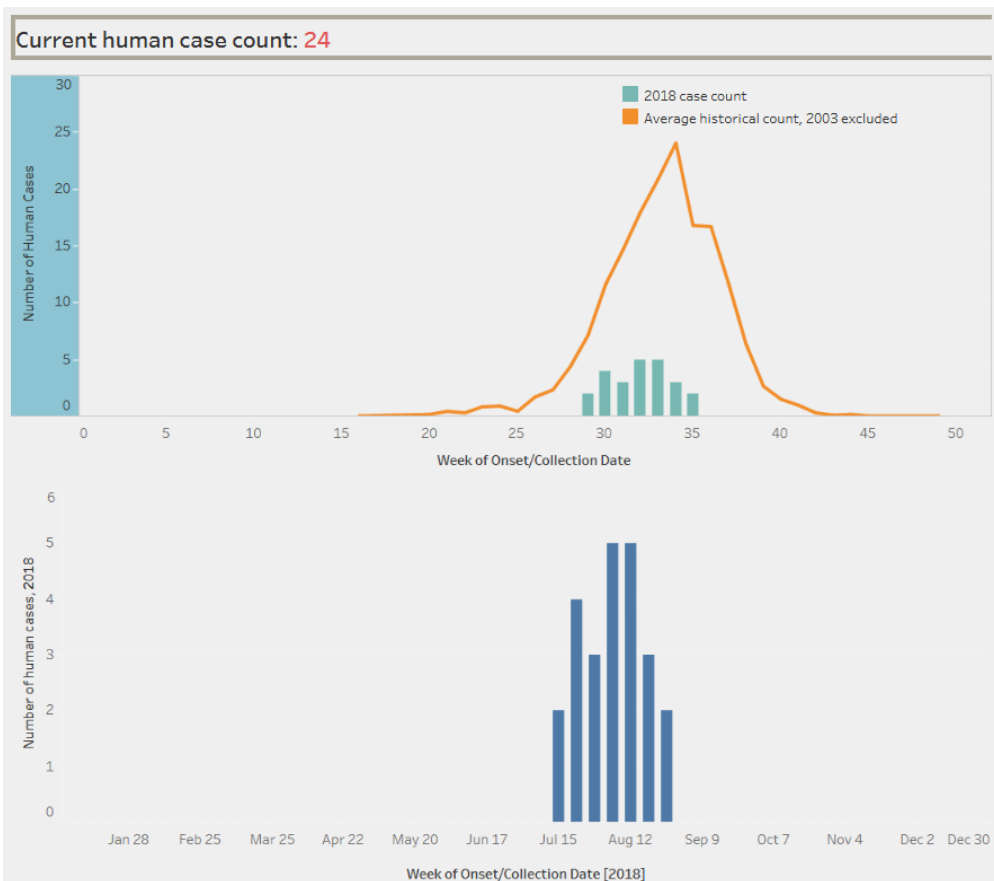
Week	FC - Zone NW		FC - Zone NE		FC - Zone SE		FC - Zone SW		FC - Citywide		LV	BE
	Current year	Historical average <sup>1</sup>	Current year	Historical average <sup>1</sup>	Current year	Historical average <sup>1</sup>	Current year	Historical average <sup>1</sup>	Current year	Historical average <sup>1</sup>		
24	0.00	0.00	0.00	0.00	0.00	1.25	0.00	0.00	0.00	0.48	0.00	0.00
25	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
26	0.00	0.00	0.00	0.11	0.00	0.43	0.00	0.44	0.00	0.27	0.00	0.00
27	0.00	0.00	0.00	0.24	0.00	0.44	0.00	0.00	0.00	0.31	0.00	0.00
28	0.00	0.00	0.00	0.50	0.00	0.87	3.83	0.40	0.28	0.56	0.00	0.99
29	0.00	1.67	0.00	1.25	0.76	2.81	3.73	0.96	0.89	1.83	4.38	0.00
30	3.52	2.53	0.00	1.89	1.75	4.47	0.00	2.94	1.65	2.99	4.98	3.02
31	3.14	4.03	0.00	2.18	7.86	4.64	3.66	3.33	4.23	3.42	0.00	3.01
32	3.15	4.21	1.05	6.09	6.72	8.15	4.08	10.17	3.74	6.26	7.57	6.45
33	6.17	7.56	3.35	7.12	10.87	10.13	21.50	5.50	7.17	8.23	9.95	0.00
34	10.15	7.51	7.11	4.25	10.54	11.55	7.53	10.43	9.37	7.94	0.00	0.00
35	6.62	9.70	9.09	5.99	35.78	15.63	25.86	45.89	15.87	11.12	0.00	0.00
36	4.58	10.96	3.21	2.43	0.00	0.00	28.17	0.00	4.07	1.68	N/A	N/A
37	13.24	2.21	7.07	2.52	8.81	1.85	0.00	0.00	9.37	3.01	N/A	N/A

## Wear Your Repellent!

Use approved mosquito repellents containing DEET, picaridin or oil of lemon eucalyptus.

DEET products generally provide the longest protection. The other repellents work but must be applied more frequently.

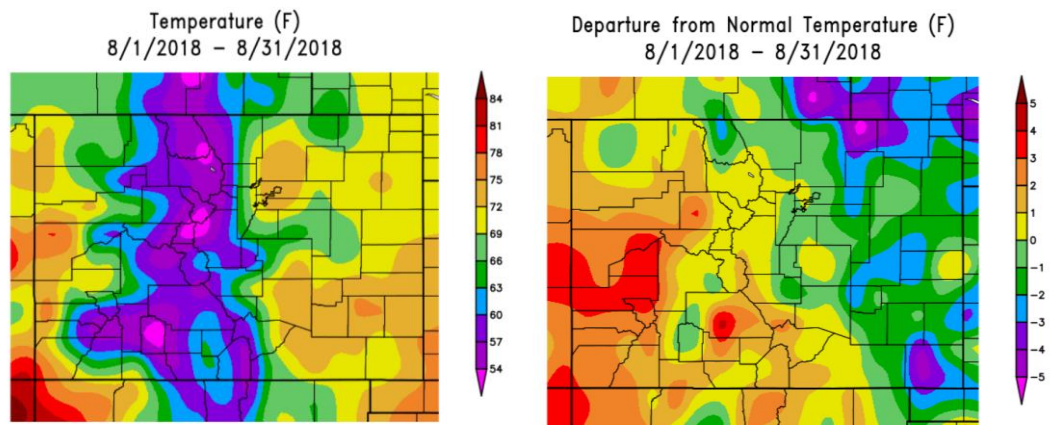
Follow the product label for correct use. Products with 10 percent or less DEET are recommended for children.



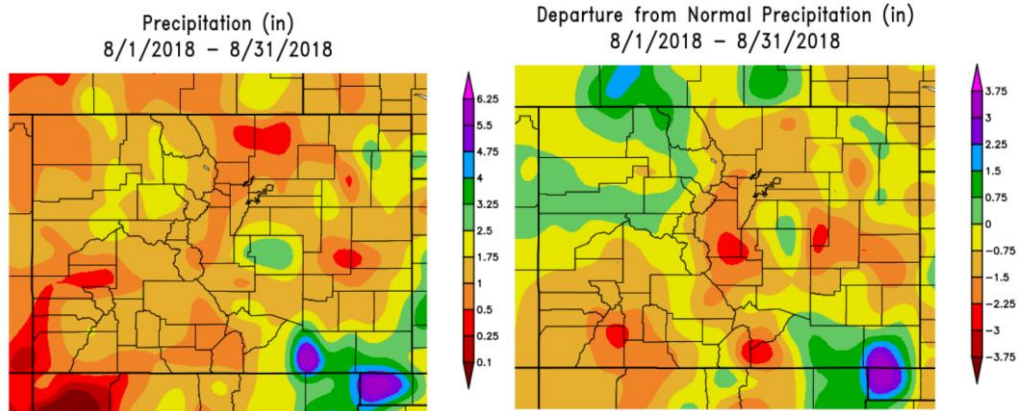
(CDPHE image taken from <https://www.colorado.gov/pacific/cdphe/west-nile-virus-data>)

## Weather

August 2018 was just slightly cooler than average with a 1 degree departure from normal in Larimer County. Average temperature during the month of August for both Loveland and the City of Fort Collins was 72F. Overall larval counts and product application totals remain comparable to average seasons. The species composition of *Culex tarsalis* larvae were high at the beginning of the month but decreased steadily as the month progressed.



Larimer County experienced slightly lower than average precipitation during the month of August as seen in the graphics depicted below and documented by the High Plains Regional Climate Center (<https://hprcc.unl.edu/maps.php?map=ACISClimateMaps>).



## Larval Control Operations

VDCI field technicians performed 1,280 site inspections as part of the inspection and larviciding program for Fort Collins in August 2018. Of the 1,280 inspections, 1,069 sites were wet (83.5%) and 746 sites were producing mosquito larvae (67.5% of the wet sites). Of the 311.7 acres treated in August 2018, 1,612.2 lbs. of VectoBac (*Bti*), 86 Vectolex Water Soluble Packets (*Bsph*), 2.3 lbs of Altosid (methoprene) and 15.9 gallons of BVA mineral oil were applied in August 2018.

VDCI's backyard and storm drain technician performed 75 site inspections as a part of the Fort Collins backyard program in August 2018. Of the 75 inspections, 61 sites were wet and 51 were producing or had the potential to produce mosquito larvae.

By comparison, VDCI field technicians performed 2,009 site inspections as part of the inspection and larviciding program for the City of Fort Collins in July 2018. Of the 2,009 inspections, 1,603 sites were wet (79.8%) and 1,108 sites were producing mosquito larvae (66.4% of the wet sites). Of the 679.2 acres treated in July 2018, 3,462.6 lbs. of VectoBac (*Bti*), 3.4 lbs Altosid (Methoprene), 150 Fourstar Briquettes (*Bti*) and 30.7 gallons of BVA mosquito larviciding oil were applied.



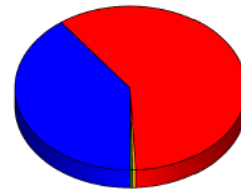
## Mosquito Population Surveillance

There were 237 light traps set in Fort Collins the month of August 2018. From the 237 light traps set; a total of 16,979 mosquitoes were collected. There were 6,755 (39.8%) *Aedes spp.*, 77 (<1%) *Culiseta spp.*, and 10,079 (59.4%) *Culex spp.* mosquitoes collected. There was an average of 72 mosquitoes per trap night and 43 *Culex spp.* mosquitoes per trap night in Fort Collins during August 2018.

There were 44 gravid traps set in Fort Collins during the month of August 2018. Gravid traps set in the City of Fort Collins collected 3,009 total mosquitoes. There were 2 (<1%) *Aedes spp.*, 2 (<1%) *Culiseta spp.*, and 3,005 (97.6%) *Culex spp.* mosquitoes collected.

### Genus proportions:

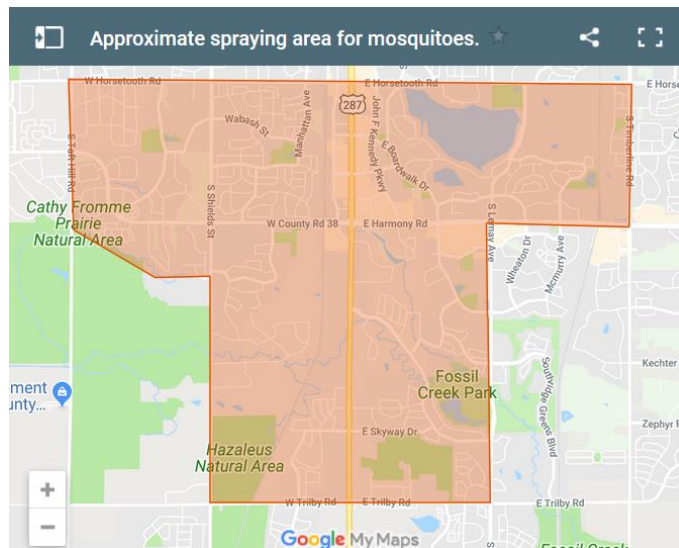
Genus	Number	Percent of Total
<i>Aedes/Ochlerotatus</i>	6,755	39.8 %
<i>Anopheles</i>	6	0.0 %
<i>Culex</i>	10,079	59.4 %
<i>Culiseta</i>	77	0.5 %
Other	62	0.4 %



## Adult Mosquito Control Operations

VDCI is currently contracted to perform ULV Truck fogging for adult mosquitoes by Lindenwood HOA, Greenstone HOA, Paragon Point HOA, Ridgewood Hills HOA and Willow Springs HOA during the 2018 season when mosquito counts surpass 100 mosquitoes in a single trapping night.

During the nights of August 26<sup>th</sup> and 29<sup>th</sup>, VDCI conducted emergency adult mosquito control operations in response to elevated presence of West Nile virus infection within the southern portion of the City of Fort Collins. This application was co-funded by the City of Fort Collins and Larimer County Department of Health.



ULV Truck-based applications of AquaKontrol3030 covered a total of 331.7 road miles within and adjacent to the City of Fort Collins during the month of August 2018 as indicated in the graphics below.

**Paragon Pointe HOA**

Truck		Aqua Kontrol 30 30	22:30:00	22:48:00	4.0	
08/07/2018	Paragon Pointe					
<b>Truck</b>					<b>Sum</b>	<b>4.0</b>
					<b>Avg</b>	<b>4.0</b>
					<b>Min</b>	<b>4.0</b>
					<b>Max</b>	<b>4.0</b>

**Willow Springs HOA**

Truck		Aqua Kontrol 30 30	20:32:00	20:53:00	4.0	
08/01/2018	WILLOW SPRINGS					
<b>Truck</b>					<b>Sum</b>	<b>4.0</b>
					<b>Avg</b>	<b>4.0</b>
					<b>Min</b>	<b>4.0</b>
					<b>Max</b>	<b>4.0</b>

**Fort Collins, City of**

Truck		Aqua Kontrol 30 30	22:53:00	00:45:00	23.4	
08/26/2018	6	Aqua Kontrol 30 30	22:07:00	00:46:00	31.6	
08/26/2018	5	Aqua Kontrol 30 30	19:50:00	22:41:00	30.8	
08/26/2018	4	Aqua Kontrol 30 30	22:24:00	00:14:00	27.1	
08/26/2018	3	Aqua Kontrol 30 30	20:00:00	22:00:00	26.3	
08/26/2018	2	Aqua Kontrol 30 30	20:36:00	22:21:00	24.4	
08/29/2018	4A	Aqua Kontrol 30 30	20:28:00	21:33:00	13.7	
08/29/2018	2	Aqua Kontrol 30 30	12:45:00	12:53:00	25.5	
08/29/2018	6	Aqua Kontrol 30 30	19:48:00	21:39:00	21.8	
08/29/2018	5	Aqua Kontrol 30 30	21:56:00	12:45:00	32.1	
08/29/2018	4B	Aqua Kontrol 30 30	21:57:00	23:28:00	16.4	
08/29/2018	3B	Aqua Kontrol 30 30	19:43:00	21:22:00	21.0	
08/29/2018	3A	Aqua Kontrol 30 30	21:51:00	22:48:00	6.0	
08/29/2018	1	Aqua Kontrol 30 30	21:35:00	23:23:00	23.6	
<b>Truck</b>					<b>Sum</b>	<b>323.7</b>
					<b>Avg</b>	<b>23.1</b>
					<b>Min</b>	<b>6.0</b>
					<b>Max</b>	<b>32.1</b>

**Public Relations**

VDCI received a total of 8 calls from residents of Fort Collins in August of 2018. There were 6 requests for information regarding adulticide operations and two calls from a resident reporting standing water and requesting larval site inspections.