



# CITY OF FORT COLLINS

## AUGUST 2017 MONTHLY REPORT

SEPTEMBER 6TH , 2017

### West Nile Virus Risk

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As of August 29, 2017, a total of 45 states and the District of Columbia have reported West Nile virus infections in people, birds, or mosquitoes in 2017. Overall, 450 cases of West Nile virus disease in people have been reported to CDC. Of these, 269 (60%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 181 (40%) were classified as non-neuroinvasive disease. Last month, CDC showed that 33 states had reported West Nile virus infections in people, birds, or mosquitoes.

Larimer County Department of Health and Environment is among counties in the nation with the largest number of human West Nile cases. Four confirmed cases of West Nile virus in humans have been documented thus far by LCDHE. On Sept 6<sup>th</sup>, 2017 Larimer County Department of Health and Environment reported that a Fort Collins resident died after contracting a neuroinvasive form of West Nile virus. This is the first fatal West Nile virus case in Colorado in 2017. Two of the four reported West Nile virus cases in Larimer County this year have been neuroinvasive cases.

Human cases of West Nile virus infection have also been reported from individuals in Boulder, Weld, Jefferson, Adams, Morgan and Phillips Counties. These number 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 446 sample pools of mosquitoes collected from traps set in Larimer County. 29 of these samples tested positive for West Nile virus with 25 of those samples being collected from Fort Collins, 3 from Berthoud and 1 from Loveland. Please note that this is the first year that Berthoud is participating in West Nile virus monitoring of mosquitoes collected within Town Limits.

### Vector Index Values

Week	FC – Zone NW		FC – Zone NE		FC – Zone SE		FC – Zone SW		FC – Citywide	
	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
25	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.07
26	0.00	0.00	0.00	0.11	0.00	0.43	0.00	0.44	0.00	0.27
27	0.00	0.00	0.00	0.24	0.00	0.44	0.00	0.00	0.00	0.31
28	0.00	0.00	1.57	0.50	0.79	0.87	0.00	0.40	0.85	0.56
29	3.30	1.67	0.81	1.25	1.05	2.81	0.00	0.96	1.09	1.83
30	2.19	2.53	2.39	1.89	1.59	4.47	0.00	2.94	1.93	2.99
31	2.53	4.03	4.53	2.18	8.17	4.64	3.83	3.33	6.16	3.42
32	0.00	4.21	3.46	6.09	4.36	8.15	16.84	10.17	4.03	6.26
33	0.00	7.56	8.32	7.12	12.84	10.13	0.00	5.50	6.80	8.29
34	6.09	7.51	0.00	4.25	4.06	11.55	0.00	10.43	3.25	7.94
35	0.00	9.70	0.00	5.99	4.70	15.63	0.00	45.89	1.47	11.12
36		10.96		2.43		0.00		0.00		1.68

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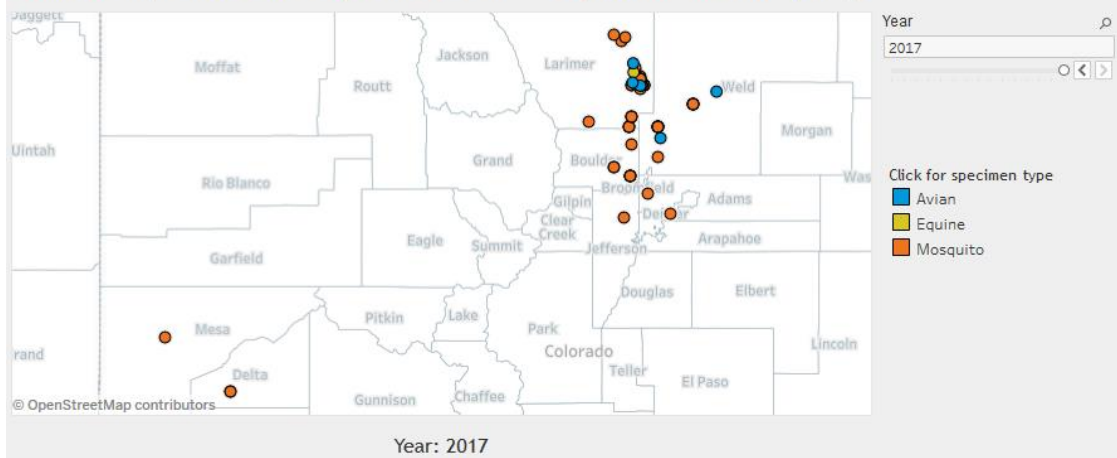
## Wear Your Repellent!

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

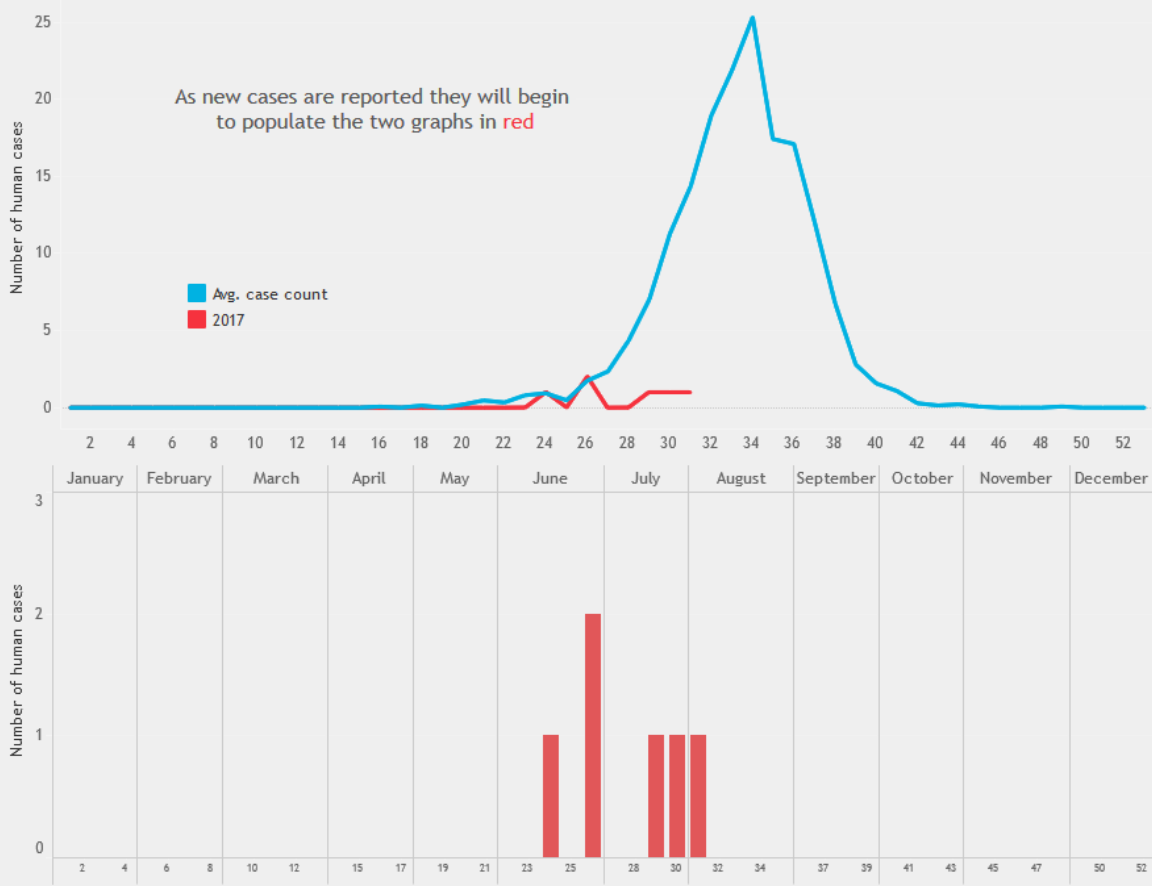
DEET products generally provide the longest protection. The other repellents work but must be applied more frequently.

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

Number of positive WNV specimens collected (animal and mosquito)



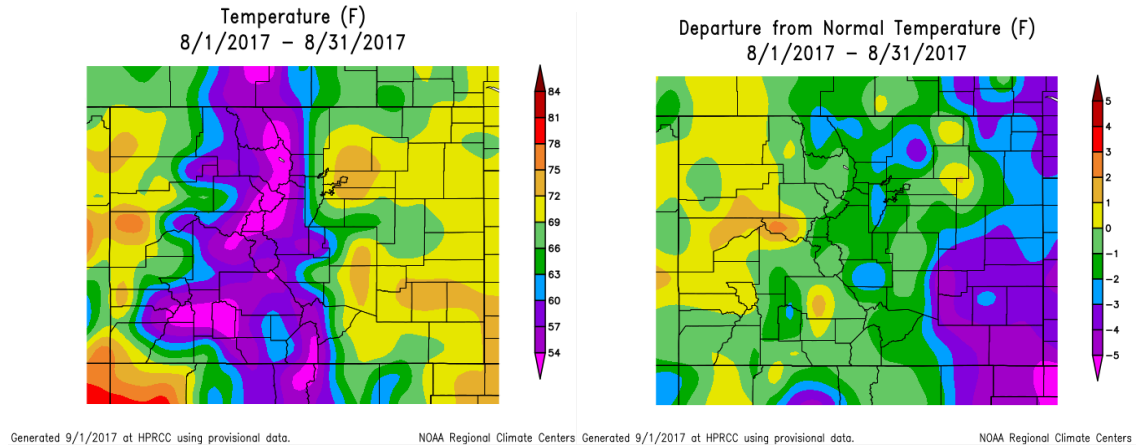
Running weekly case count, 2002-2017 (2003 suppressed)



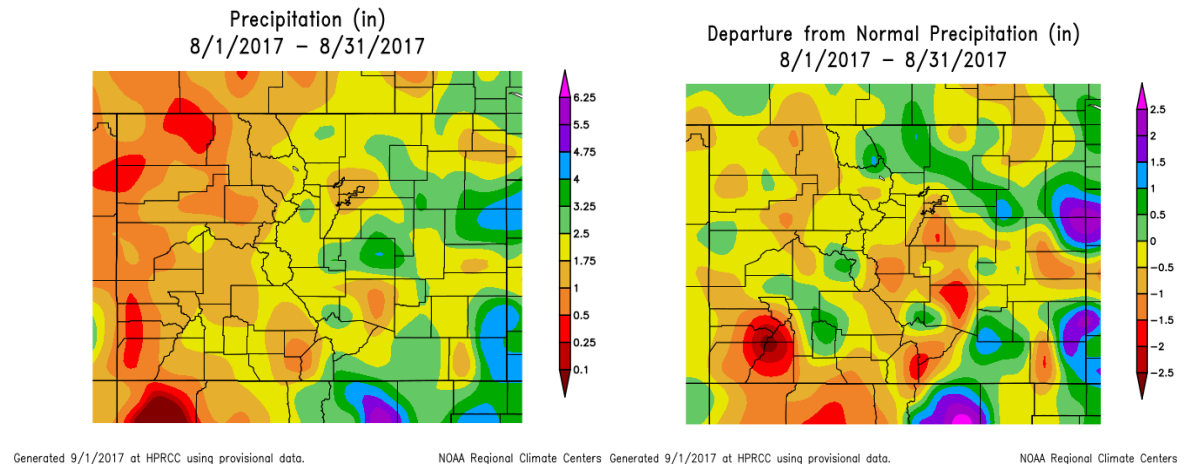
(CDPHE image taken from <https://www.colorado.gov/pacific/cdphe/west-nile-virus-data>)

## Weather

August 2017 was slightly cooler than average with a 1 to 3 degree departure from normal in Larimer County. Average temperature during the month of August for both Loveland and the City of Fort Collins was 70F. 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 higher 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 1,161 site inspections as part of the inspection and larviciding program for Fort Collins in August 2017. Of the 1,161 inspections, 1,075 sites were wet (92.6%) and 712 sites were producing mosquito larvae (64.4% of the wet sites). Of the 369.2 acres treated in August 2017, 2,420.4 lbs. of VectoBac (*Bti*), 128.8 lbs of Vectolex (*Bsph*), 256 Fourstar Briquettes (*Bti*) lbs. and 35 gallons of BVA mineral oil were applied in August 2017.

CMC field technicians performed 1,516 site inspections as part of the inspection and larviciding program in August 2016. Of the 1,516 inspections, 1,293 sites were wet (85.3%) and 743 sites were producing mosquito larvae (54.3% of the wet sites). Of the 264.6 acres treated in August 2016, 1,635.9 lbs. of VectoBac (*Bti*), 85.3 lbs of Vectolex (*Bsph*), 1.8 lbs. of Altosid (methoprene) and 6 gallons of BVA mineral oil were applied in August 2016.

CMC field technicians performed 1,318 site inspections as part of the inspection and larviciding program in August 2015. Of the 1,318 inspections, 1,163 sites were wet (88.2%) and 740 sites were producing mosquito larvae (63.5% of the wet sites). Of the 378.5 acres treated in August 2015, 1,833 lbs. of VectoBac (*Bti*), 0.1 lbs. of Altosid (methoprene) and 14.2 gallons of BVA mineral oil were applied in August 2015.

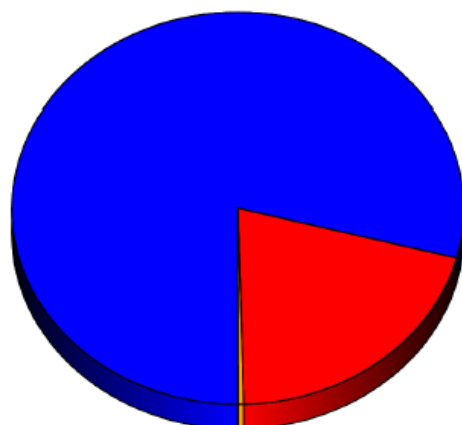
VDCI's backyard and storm drain technician performed 29 site inspections as a part of the Fort Collins backyard program in August 2017. Of the 29 inspections, 28 sites were wet and 20 were producing or had the potential to produce mosquito larvae.

## Mosquito Population Surveillance

There were 252 light traps set in Fort Collins the month of August 2017. From the 252 light traps set; a total of 26,537 mosquitoes were collected. There were 20,986 (79.1%) *Aedes spp.*, 103 (<1%) *Culiseta spp.*, and 5,443 (20.5%) *Culex spp* mosquitoes collected. There was an average of 105 mosquitoes per trap night and 22 *Culex spp.* mosquitoes per trap night in Fort Collins during August 2017.

There were 215 light traps set in Fort Collins the month of August 2016. From the 215 light traps set; a total of 11, 136 mosquitoes were collected. There were 3,570 (32%) *Aedes spp.*, 116 (1%) *Culiseta spp.*, and 7,404 (66%) *Culex spp* mosquitoes collected. There was an average of 51 mosquitoes per trap night and 34 *Culex spp.* mosquitoes per trap night in Fort Collins during August 2016.

There were 46 gravid traps set in Fort Collins during the month of August 2017. Gravid traps set in the City of Fort Collins collected 1,617 total mosquitoes. There were 30 (1.9%) *Aedes spp.*, 2 (<1.0%) and 1,578 (97.6%) *Culex spp.* mosquitoes collected.



	TOTAL	%
<span style="color: blue;">■</span> Aedes-OC	20,986	79 %
<span style="color: yellow;">■</span> Anopheles	1	0 %
<span style="color: red;">■</span> Culex	5,443	21 %
<span style="color: orange;">■</span> Culiseta	103	0 %
<span style="color: green;">■</span> Other	4	0 %

There were 188 light traps set in the City of Loveland during August 2017. Mosquito surveillance traps set during August 2017 in Loveland collected a total of 15,915 mosquitoes. Of these there were 11,765 (73.9%) *Aedes spp.*, 182 (1.1%) *Culiseta inornata*, 6 (<1.0%) *Anopheles spp.*, 3,961 (24.9%) *Culex spp.* mosquitoes collected. There was an average of 85 mosquitoes collected per trap night and 21 *Culex spp.* mosquitoes per trap night during August 2017 in the City of Loveland.

There were 14 gravid traps set during the month of August 2017 in the City of Loveland. Gravid traps set in the City of Loveland collected 163 total mosquitoes. There were 159 (97.5%) *Culex spp.* mosquitoes collected from gravid traps in Loveland.

## Adult Mosquito Control Operations

The City of Fort Collins has not budgeted money for adult mosquito control operations for 2017. VDCI is currently contracted to perform ULV Truck fogging for adult mosquitoes by Lindenwood HOA, Greenstone HOA, Paragon Point HOA, and Willow Springs HOA during the 2017 season when mosquito counts surpass 100 mosquitoes in a single trapping night.

ULV Truck-based applications of AquaKontrol3030 covered a total of 15 road miles within and adjacent to the City of Fort Collins during the month of July 2017.

Customer	Subdiv/Area	Material	Start Time	End Time	Miles	
<b>Greenstone HOA</b>						
Truck						
08/09/2017	Greenstone HOA	Aqua Kontrol 30 30	20:19:00	20:38:00	4	
08/22/2017	GREENSTONE	Aqua Kontrol 30 30	20:00:00	20:16:00	4	
Truck					Sum	8.0
					Avg	4.0
					Min	4.0
					Max	4.0
					Grand Total	8.0
Customer	Subdiv/Area	Material	Start Time	End Time	Miles	
<b>Misc. Customer</b>						
Truck						
08/28/2017	PARAGON ESTATES	Aqua Kontrol 30 30	19:50:00	19:57:00	2	
Truck					Sum	2.0
					Avg	2.0
					Min	2.0
					Max	2.0
					Grand Total	2.0
Customer	Subdiv/Area	Material	Start Time	End Time	Miles	
<b>Willow Springs HOA</b>						
Truck						
08/16/2017	WILLOW SPRINGS	Aqua Kontrol 30 30	22:32:00	22:52:00	5	
Truck					Sum	5.0
					Avg	5.0
					Min	5.0
					Max	5.0
					Grand Total	5.0

## Public Relations

VDCI received a total of three calls from residents of Fort Collins in August of 2017. There were 2 requests for information regarding adulticide operations and one call from a resident reporting standing water and requesting larval site inspections.