



# CITY OF FORT COLLINS

## JULY 2018 MONTHLY REPORT

AUGUST 8TH, 2018

### West Nile Virus Risk

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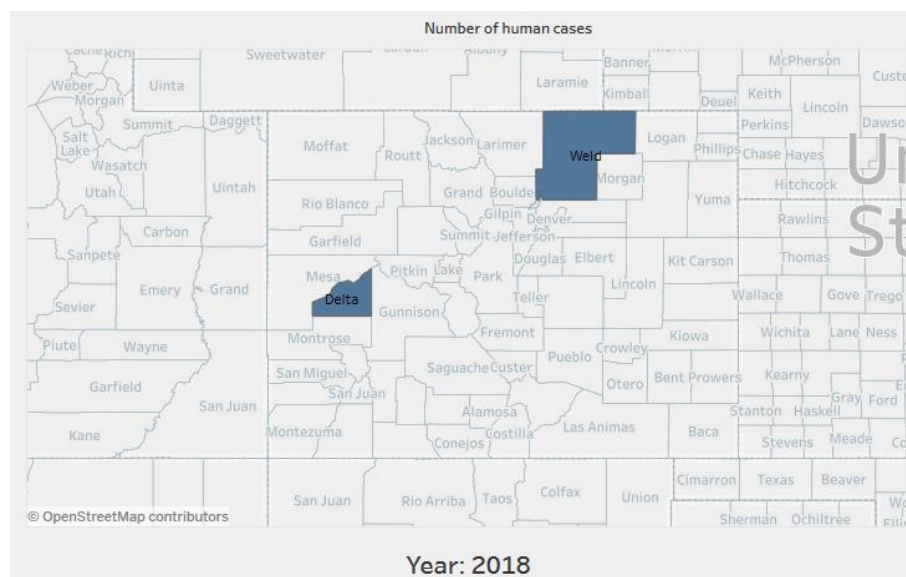
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As of July 24, 2018, a total of 36 states have reported West Nile virus infections in people, birds, or mosquitoes in 2018. Overall, 39 cases of West Nile virus disease in people have been reported to CDC. Of these, 23 (59%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 16 (41%) were classified as non-neuroinvasive disease.

West Nile virus was detected in both birds and mosquitoes collected from Larimer County during the second week of July and while viral activity is on the rise, and spreading to new areas, the overall Vector Index for all zones within Fort Collins and Loveland remains relatively low when compared to historical averages. To date no human cases of West Nile virus have been reported from Larimer County. There have been two reported cases of people contracting the disease within the state of Colorado this year (Delta County and Weld County). In 2017 the Centers for Disease Control (CDC) reported 68 reported human cases of West Nile virus in Colorado which included four deaths. In 2016 Colorado reported 149 reported human cases of which eight were fatal. These number are guaranteed to increase according to the Colorado Department of Public Health and Environment, as the majority of West Nile virus cases in humans are identified in August and September, during the season's peak.



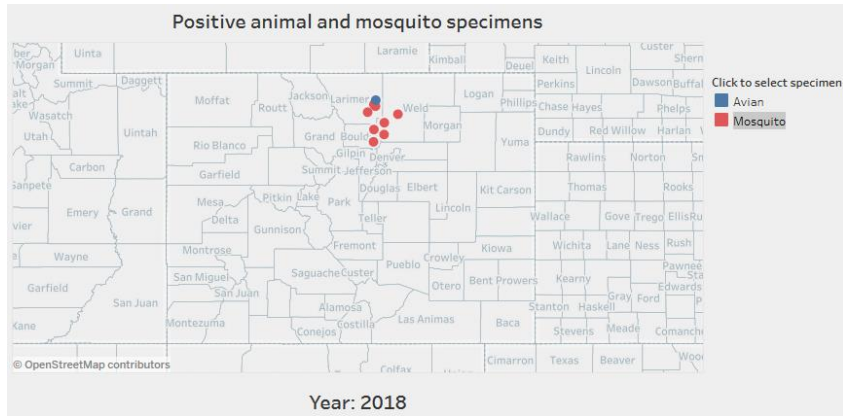
During the month of July 2018 Colorado State University tested 512 sample pools of mosquitoes collected from traps set in Larimer County. Sixteen (16) of these samples have tested positive for West Nile virus relative to 15 this time last year. Twelve (12) of positive mosquito pools were collected in Fort Collins, 2 were collected in Loveland and 2 were collected in Berthoud. Of the positive mosquito pool samples, 7 samples contained *Culex tarsalis* collected in light traps, 7 contained *Culex pipiens* collected in gravid traps, and 2 contained *Culex pipiens* collected in light traps.

## 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.

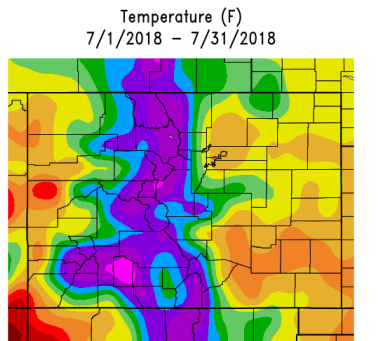
Follow the product label for correct use. Products with 10 percent or less DEET are recommended for children.



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

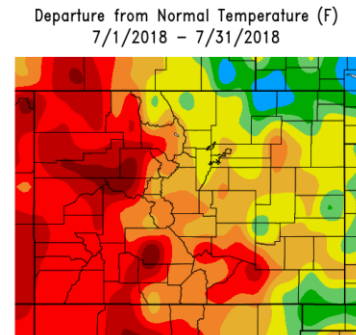
## Weather

Temperatures throughout Larimer County were only slightly above average during the month of July 2018. Warm temperatures kept larval production at a steady pace during the month of July and overall larval counts and product application totals were comparable but slightly below average.



Generated 8/2/2018 at HPRCC using provisional data.

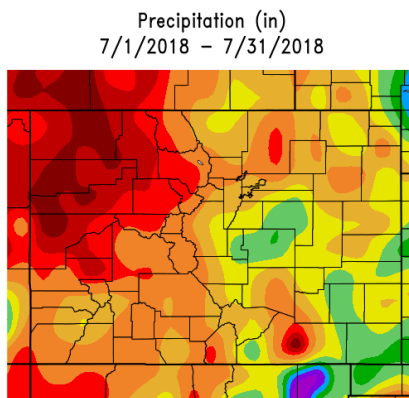
NOAA Regional Climate Centers



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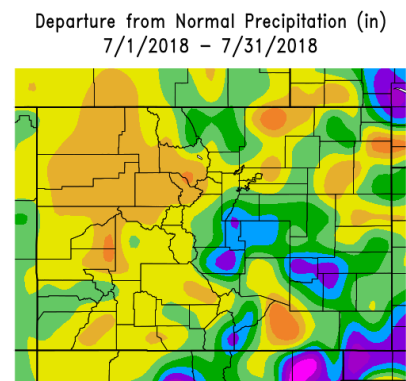
NOAA Regional Climate Centers

The average temperature within the City of Fort Collins during the month of July 2018 was 75°F with a high of 90°F and low of 59°F. Monsoon rains and hail storms were common during the month of July 2018 and lead to higher than average precipitation with 0.39 inches on record. By comparison there was 0.2 inches of precipitation on record in July of 2017. Heavy rains in conjunction with high winds and stormy weather lead to clogged drain, stagnant ditches and increased larval habitats.



Generated 8/2/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers



Generated 8/2/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

## Larval Control Operations

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.

VDCI field technicians performed 1,839 site inspections as part of the inspection and larviciding program for the City of Fort Collins in July 2017. Of the 1,839 inspections, 1,583 sites were wet (86.1%) and 924 sites were producing mosquito larvae (58.2% of the wet sites). Of the 418.9 acres treated in July 2017, 2,623.6 lbs. of VectoBac (*Bti*), 66 Altosid Briquettes (Methoprene) and 43.1 gallons of BVA mosquito larviciding oil were applied.

VDCI field technicians performed 2,120 site inspections as part of the inspection and larviciding program for the City of Fort Collins in July 2016. Of the 2,120 inspections, 1,762 sites were wet (83.1%) and 910 sites were producing mosquito larvae (58.8% of the wet sites). Of the 339 acres treated in July 2016, 2,054 lbs. of VectoBac (*Bti*), 98.5 lbs. of VectoLex (*Bsph*), and 28.5 gallons of BVA mosquito larviciding oil were applied.

VDCI's backyard technician performed 112 site inspections as a part of the Fort Collins backyard program in July 2018. Of the 112 inspections, 94 sites were wet and 50 were producing or had the potential to produce mosquito larvae and treated long term residual larvicide as necessary. By comparison, 65 backyard site inspections were completed in July 2017. Of those 65 inspections, 52 sites were wet and 19 were producing or had the potential to produce mosquito larvae.

## Mosquito Population Surveillance

LIGHT TRAPS - There were 240 light traps set in the City of Fort Collins during July 2018. Mosquito surveillance traps set during July 2018 in Fort Collins collected a total of 31,162 mosquitoes. Of these there were 17,458 (56%) *Aedes spp.*, 167 (<1%) *Culiseta inornata*, 12,929 (41.5%) *Culex spp.*, and 608 *Coquillettidia spp.* mosquitoes collected. There was an average of 141 mosquitoes collected per trap night and 60 *Culex spp.* mosquitoes per trap night during July 2017 in the City of Fort Collins.

There were 227 light traps set in the City of Fort Collins during July 2017. Mosquito surveillance traps set during July 2017 in Fort Collins collected a total of 31,929 mosquitoes. Of these there were 17,573 (55%) *Aedes spp.*, 246 (1%) *Culiseta inornata*, 8 (<1.0%) *Anopheles spp.*, 13,564 (42%) *Culex spp.* mosquitoes collected. There was an average of 141 mosquitoes collected per trap night and 60 *Culex spp.* mosquitoes per trap night during July 2017 in the City of Fort Collins.



There were 201 light traps set in the City of Fort Collins during July 2016. Mosquito surveillance traps set during July 2016 in Fort Collins collected a total of 18,319 mosquitoes. Of these there were 8,033 (44%) *Aedes spp.*, 113 (1.4%) *Culiseta inornata*, 3 (<1.0%) *Anopheles spp.*, 8,928 (49%) *Culex spp.* mosquitoes collected. There was an average of 91 mosquitoes collected per trap night and 44 *Culex spp.* mosquitoes per trap night during July 2016 in the Fort Collins.

There were 202 light traps set in the City of Fort Collins during July 2015. Mosquito surveillance traps set during July 2015 in Fort Collins collected a total of 38,388 mosquitoes. Of these there were 22,621 (59%) *Aedes spp.*, 627 (2%) *Culiseta inornata*, 14,380 (37%) *Culex spp.* mosquitoes collected. There was an average of 190 mosquitoes collected per trap night and 71 *Culex spp.* mosquitoes per trap night during July 2015 in the City of Fort Collins.

GRAVID TRAPS - There were 46 gravid traps set during the month of July 2018 in the City of Fort Collins. Gravid traps set in the City of Fort Collins collected 3,471 total mosquitoes. There were 3,429 *Culex pipiens*, 210 *Culex tarsalis*, 11 *Aedes spp.* and 1 *Culiseta spp.* mosquitoes collected from gravid traps.

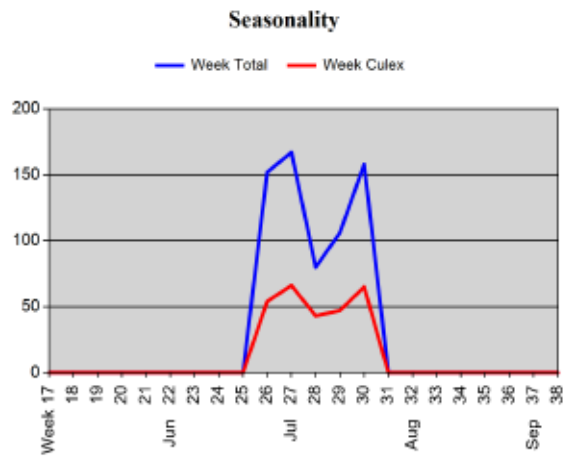
By comparison, there were 43 gravid traps set during the month of July 2017 in the City of Fort Collins. Gravid traps set in the City of Fort Collins collected 2,993 total mosquitoes with 2,926 *Culex spp.* and 62 *Aedes spp.* mosquitoes.

### 2018 Fort Collins CDC Trap Composite Data

Total number of trap/nights set:	240
Total number of mosquitoes collected:	31,162
Average mosquitoes per trap/night:	130
Average Culex per trap/night:	54

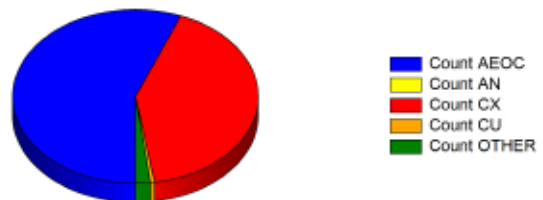
#### Species collected and abundance:

<i>Aedes (Oc.) dorsalis</i>	683	2.2 %
<i>Aedes (Oc.) inaequalis</i>	621	2.0 %
<i>Aedes (Oc.) melanimon</i>	107	0.3 %
<i>Aedes (Oc.) trivittatus</i>	6	0.0 %
<i>Aedes vexans</i>	16030	51.4 %
<i>Aedes/Ochlerotatus spp</i>	11	0.0 %
<i>Coquillettidia perturbans</i>	608	2.0 %
<i>Culex pipiens</i>	4595	14.7 %
<i>Culex tarsalis</i>	8334	26.7 %
<i>Culiseta inornata</i>	167	0.5 %



#### Genus proportions:

Genus	Number	Percent of Total
<i>Aedes/Ochlerotatus</i>	17,458	56.0 %
<i>Anopheles</i>	0	0.0 %
<i>Culex</i>	12,929	41.5 %
<i>Culiseta</i>	167	0.5 %
Other	608	2.0 %



## Adult Mosquito Control Operations

VDCI is privately contracted to perform ULV Truck fogging for adult mosquitoes by Lindenwood HOA, Greenstone HOA, Paragon Point HOA, Ridgewood Hills and Willow Springs HOA during the 2018 season. The City of Fort Collins has not budgeted money for adult mosquito control operations for 2018.

ULV Truck-based applications of AquaKontrol3030 covered a total of 36 road miles within and adjacent to the City of Fort Collins during the month of July 2018.

Vector Disease Control International			Adulticide Data		
Customer	Subdiv/Area	Material	Start Time	End Time	Miles
<b>Greenstone HOA</b>					
Truck					
07/03/2018	GREENSTONE	Aqua Kontrol 30	20:54:00	21:16:00	4.0
07/11/2018	GREENSTONE	Aqua Kontrol 30	23:13:00	23:30:00	4.0
Truck				Sum	8.0
				Avg	4.0
				Min	4.0
				Max	4.0
<b>Paragon Pointe HOA</b>					
Truck					
07/24/2018	Paragon Pointe	Aqua Kontrol 30	20:20:00	20:40:00	4.0
Truck				Sum	4.0
				Avg	4.0
				Min	4.0
				Max	4.0
<b>Willow Springs HOA</b>					
Truck					
07/11/2018	WILLOW SPRINGS	Aqua Kontrol 30	22:29:00	23:00:00	9.0
07/25/2018	WILLOW SPRINGS	Aqua Kontrol 30	20:21:00	20:56:00	7.0
Truck				Sum	16.0
				Avg	8.0
				Min	7.0
				Max	9.0
<b>Ridgewood Hills HOA</b>			<b>Ridgewood Hills HOA</b>		
Truck					
07/18/2018	RIDGEWOOD	Aqua Kontrol 30	20:38:00	21:14:00	8.0
Truck				Sum	8.0
				Avg	8.0
				Min	8.0
				Max	8.0

## Public Relations

VDCI received 12 phone calls from residents of Fort Collins during the month of July 2018. VDCI received 3 new larval site reports. These sites were already a part of our weekly inspection routine and found not to be producing larvae. VDCI received 4 mosquito annoyance calls from residents requesting information about adult mosquito control operations and when we are likely to begin. Residents were directed to the City of Fort Collins website which has information about the program in place. VDCI received 5 requests for call notification when spraying occurs and residents were directed to sign up for the LETA 911 program via [www.fcgov.com/westnile](http://www.fcgov.com/westnile)