



TOWN OF BERTHOUD JULY 2017 MONTHLY REPORT

AUGUST 1ST, 2017

Contact VDCI:

Northern
Colorado

Operations
Manager

Broox Boze, Ph.D.

Phone
(970)962-2582

Fax
(970)962-2584

E-Mail: bboze@vdc.net

Website:
www.vdci.net

Main Office:
General E-Mail:
info@vdc.net
Toll Free:
(877) 276-4306

7000 North
Broadway Suite
108 Denver, CO
80221
303-428-5908

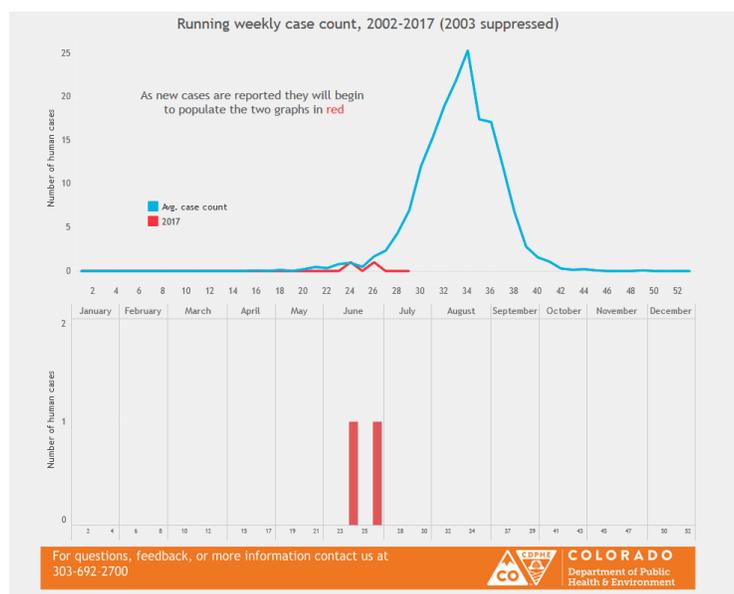
West Nile Virus Risk

As of July 25, 2017, a total of 33 states have reported West Nile virus infections in people, birds, or mosquitoes. Overall, 67 cases of West Nile virus disease in people have been reported to CDC. Of these, 40 (60%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 27 (40%) were classified as non-neuroinvasive disease.

West Nile virus was detected in mosquitoes collected from Weld County during the first week of July and while virus activity is on the rise and spreading to new areas the overall Vector Index for all sentinel zones within Weld County remain relatively low. To date no human cases of West Nile virus within Weld County have been reported. There have been only two reported case of a person contracting the disease within Colorado this year. Last year, the state had 149 reported human cases, which included eight deaths, according to the Colorado Department of Public Health and Environment.

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 July Colorado State University tested 571 sample pools of mosquitoes collected from traps set in Larimer County. 23 of these samples tested positive for West Nile virus relative to only 8 this time last year and 19 in 2015. 13 of these positive mosquito pools were collected from Fort Collins, 3 were collected in Loveland and 7 were collected from Berthoud. This is the first year that Berthoud is participating in West Nile virus monitoring of mosquitoes collected within Town Limits.



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

Wear Your Repellent!

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

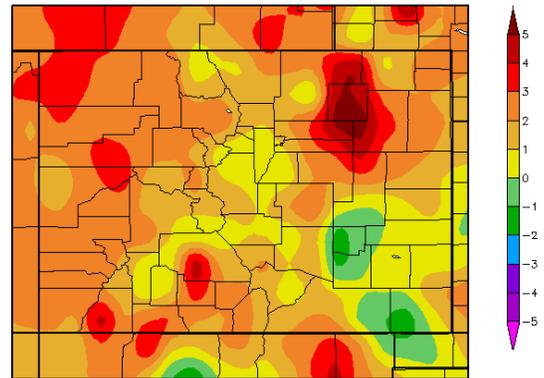
DEET products generally provide the longest protection. The other repellents work but must be applied more frequently.

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

Weather

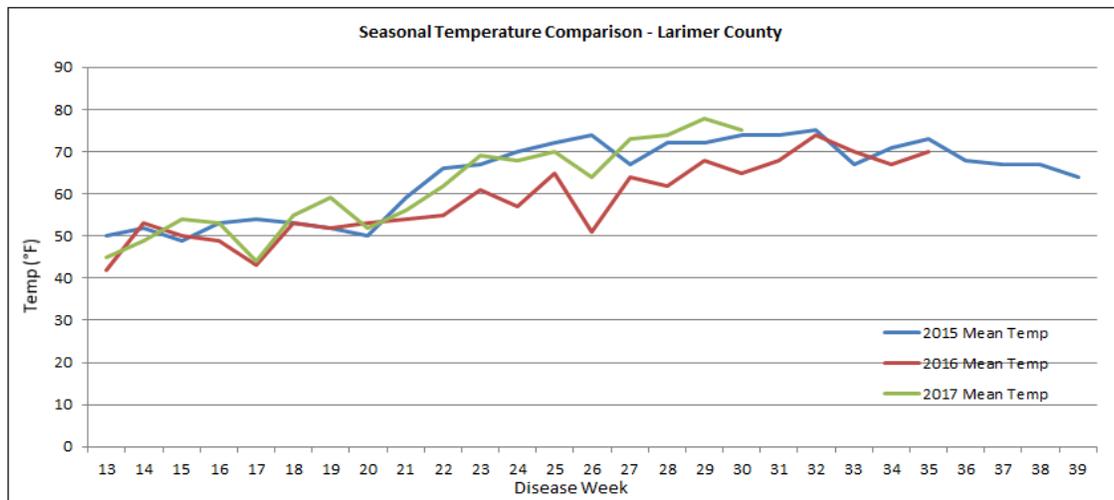
July 2017 was hotter than average with a 3 to 5 degree departure from normal. These warm temperatures kept larval production at a fast pace during the month of July. Overall larval counts and product application totals remain comparable to average seasons. The species composition of *Culex tarsalis* larvae spiked during July largely as a result of warm temperatures and a lack of rainfall. Subsequent increases in adult *Cx. tarsalis* abundance data were observed from mosquito trapping at the end of the month.

Departure from Normal Temperature (F)
7/1/2017 - 7/30/2017



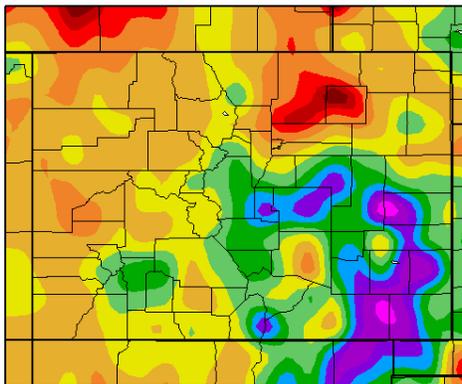
Generated 7/31/2017 at HPRCC using provisional data.

Regional Climate Centers

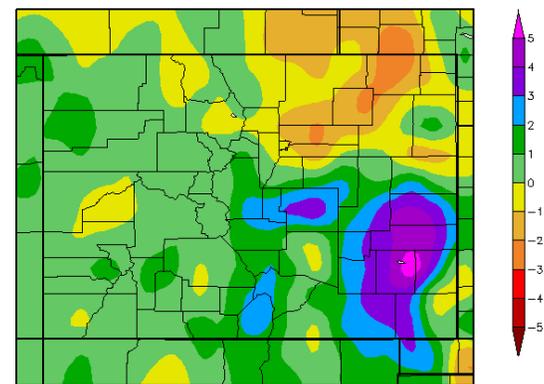


The average temperature for Larimer County in the month of July 2017 was 75°F which is much higher than last year. Rainfall in the month of July 2017 was lower than average with only 0.2 inches of precipitation on record. Drought conditions and minimal rainfall during the month of July led to increased flood irrigation, over watering of lawns, stagnant ditches and artificial habitat which all provide optimal larval growth habitat.

Precipitation (in)
7/1/2017 - 7/30/2017



Departure from Normal Precipitation (in)
7/1/2017 - 7/30/2017



Larval Control Operations

VDCI field technicians performed 113 site inspections in the month of July 2017 as part of the Town of Berthoud's expanded inspection and larviciding program. Of those 113 site inspections, 104 sites (92%) were wet and 78 sites were producing mosquito larvae (75% of the wet sites). A total of 41.4 acres were treated with 391.5 lbs. of Vectobac (*Bti*) and 0.6 gallons of BVA Mineral Oil to prevent mosquito larvae from emerging as adults.

CMC field technicians performed 59 site inspections in the month of July 2016 as part of the Town of Berthoud inspection and larviciding program. Of those 59 site inspections, 43 sites (72.9%) were wet and 25 sites were producing mosquito larvae (58.1% of the wet sites). A total of 17.2 acres were treated with 151.8 lbs. of Vectobac (*Bti*) to prevent mosquito larvae from emerging as adults.

CMC field technicians performed 64 site inspections in the month of July 2015 as part of the Town of Berthoud inspection and larviciding program. Of those 64 site inspections, 56 sites (87.5%) were wet and 33 sites were producing mosquito larvae (53.6% of the wet sites). A total of 21 acres were treated with 156 lbs of Vectobac (*Bti*), 62 lbs Vectolex and .3 gallons of BVA Larviciding oil to reduce an estimated 58 million mosquito larvae before emerging.

Mosquito Population Surveillance

VDCI set weekly traps in Berthoud Park (LC-001), Berthoud North on Bunyan Ave (LC-049), Berthoud West (LC-053) and Berthoud Pointe (LC-054) to monitor mosquito abundance within Berthoud during July 2016. There were a total of 16 traps set, which collected a total of 4,504 mosquitoes. The species composition of mosquito collected included 3,334 (74.0%) *Aedes* spp., 27 (<1%) *Culiseta* spp., 1,143 (25.4%) *Culex* spp.

CMC set weekly traps in Berthoud Park (LC-001), Berthoud North on Bunyan Ave (LC-049) and Berthoud West (LC-053) to monitor mosquito abundance within Berthoud during July 2016. There were a total of 12 traps set, which collected a total of 1,007 mosquitoes. The species composition of mosquito collected included 498 (49.0%) *Aedes* spp., 5 (<1%) *Culiseta* spp., 504 (50%) *Culex* spp.

There were an average of 282 mosquitoes per trap night and 17 *Culex* spp. mosquitoes per trap night collected in Berthoud during July 2017.

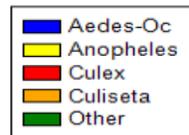
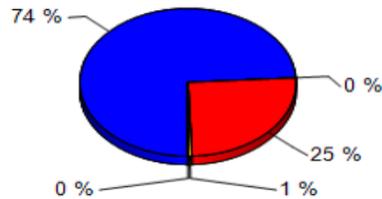
Berthoud Vector Index

Week	BE
24	0.00
25	0.25
26	0.00
27	0.23
28	0.85
29	0.47
30	0.00
31	
32	
33	

Vector Disease Control International

Adult Trap Data - Genus Summary

Trap #	Type	County	Date		Ae/Oc	An	Cx	Cs	Other	TOTAL
LC-001	LIGHT	Larimer	07/04/2017	Berthoud	19	0	27	0	0	46
LC-001	LIGHT	Larimer	07/12/2017	Berthoud	11	0	5	0	0	16
LC-001	LIGHT	Larimer	07/19/2017	Berthoud	87	0	181	0	0	268
LC-001	LIGHT	Larimer	07/27/2017	Berthoud	9	0	8	0	0	17
LC-049	LIGHT	Larimer	07/04/2017	Berthoud North of Bunyan	1	0	5	0	0	6
LC-049	LIGHT	Larimer	07/12/2017	Berthoud North of Bunyan	2	0	2	0	0	4
LC-049	LIGHT	Larimer	07/19/2017	Berthoud North of Bunyan	1	0	5	0	0	6
LC-049	LIGHT	Larimer	07/27/2017	Berthoud North of Bunyan	4	0	7	0	0	11
LC-053	LIGHT	Larimer	07/04/2017	Berthoud West	1805	0	175	2	0	1,982
LC-053	LIGHT	Larimer	07/12/2017	Berthoud West	1044	0	460	24	0	1,528
LC-053	LIGHT	Larimer	07/19/2017	Berthoud West	286	0	111	0	0	397
LC-053	LIGHT	Larimer	07/27/2017	Berthoud West	8	0	8	1	0	17
LC-054	LIGHT	Larimer	07/04/2017	Berthoud Point	9	0	31	0	0	40
LC-054	LIGHT	Larimer	07/12/2017	Berthoud Point	1	0	4	0	0	5
LC-054	LIGHT	Larimer	07/19/2017	Berthoud Point	47	0	110	0	0	157
LC-054	LIGHT	Larimer	07/27/2017	Berthoud Point	0	0	4	0	0	4
					3,334	0	1,143	27	0	4,504



TOTAL	%
3,334	74%
0	0%
1,143	25%
27	1%
0	0%

Adult Mosquito Control Operations

VDCI performed truck-based ULV applications for the Town of Berthoud on consecutive evenings (July 24th and 25th) in response to elevated Vector Index Values throughout the town. The applications were performed included a total of 96 miles of streets and roads within the Town of Berthoud.

Vector Disease Control International

Adulticide Data

Customer	Subdiv/Area	Material	Start Time	End Time	Miles	
Berthoud						
Truck						
07/24/2017	5	Aqua Kontrol 30 30	21:54:00	22:38:00	9.0	
07/24/2017	3	Aqua Kontrol 30 30	22:51:00	23:31:00	9.0	
07/24/2017	2	Aqua Kontrol 30 30	23:28:00	00:10:00	9.0	
07/24/2017	1	Aqua Kontrol 30 30	22:06:00	23:21:00	16.0	
07/25/2017	5	Aqua Kontrol 30 30	22:09:00	22:51:00	10.0	
07/25/2017	3	Aqua Kontrol 30 30	21:29:00	22:03:00	8.0	
07/25/2017	2	Aqua Kontrol 30 30	21:34:00	22:34:00	11.0	
07/25/2017	1	Aqua Kontrol 30 30	22:00:00	23:18:00	17.0	
07/25/2017	4	Aqua Kontrol 30 30	23:23:00	23:40:00	3.0	
07/25/2017	4	Aqua Kontrol 30 30	00:19:00	00:37:00	4.0	
Truck					Sum	96.0
					Avg	9.6
					Min	3.0
					Max	17.0
Grand Total						96.0

Public Relations

VDCI received three phone calls from residents of Berthoud during the month of July 2017. All three calls were requests for information about the products we were using and timing of the application with respect to their specific neighborhood.