

D. Reporting templates

Based on the need to now report data not only for FC citywide but also separately for each of the four zones (NW, NE, SE, SW; broken down using College and Drake) the city has been divided into for the purpose of WNV surveillance and mosquito control, CSU had to generate a new reporting template. This new reporting template is tailored to provide data relevant to the Level III and IV entomological triggers (see below) for control measures in the “City of Fort Collins Program Response Guidelines to Mosquito Borne Arboviral Activity (March 2013 edition)”.

Level III

- Vector index > 0.75 and increasing
- Mosquito infection rates of > 3.0 per thousand (0.3%) and increasing

Level IV

- Vector index > 0.75.
- Sustained mosquito infection rates of > 5.0 per thousand (0.5%)

The new reporting format comprises a set of 6 tables to address the current week (1a, 2a, 3a) and to provide seasonal and historical context (1b, 2b, 3b) (see full table formats on following pages)

- Table 1a. Vector Index for current week
- Table 1b. Vector Index for All *Culex* by week from June-August
- Table 2a. Vector abundance for current week
- Table 2b. Vector abundance for All *Culex* by week from June-August
- Table 3a. WNV infection rate per 1,000 females for current week
- Table 3b. WNV infection rate per 1,000 females for All *Culex* by week from June-August

Table 1a. Vector Index for current week

Week: 33	Mean abundance of females per trap night ¹		Estimate for proportion of females infected with WNV ²		Vector Index		
	<i>Cx. pipiens</i>	<i>Cx. tarsalis</i>	<i>Cx. pipiens</i>	<i>Cx. tarsalis</i>	<i>Cx. pipiens</i> ³	<i>Cx. tarsalis</i> ⁴	All <i>Culex</i> ⁵
FC – Zone NW	5.78	32.56	0.00316	0	0.018	0	0.018
FC – Zone NE	15.70	53.70	0.00390	0.00183	0.061	0.098	0.159
FC – Zone SE	20.47	69.80	0.00308	0.00296	0.063	0.207	0.270
FC – Zone SW	2.56	24.00	0	0.00484	0	0.116	0.116
FC – Citywide	12.53	48.67	0.00287	0.00247	0.036	0.120	0.156
LV	12.89	24.97	0.00777	0.00112	0.100	0.028	0.128

¹From Table 2a (CDC light trap catches only).

²Derived from the data presented in Table 3a for estimated infection rate per 1,000 females (CDC light trap and gravid trap catches combined).

³Vector Index for *Cx. pipiens* = (Mean abundance of *Cx. pipiens* females per trap night) x (Estimate for proportion of all *Cx. pipiens* females infected with WNV).

⁴Vector Index for *Cx. tarsalis* = (Mean abundance of *Cx. tarsalis* females per trap night) x (Estimate for proportion of all *Cx. tarsalis* females infected with WNV).

⁵Vector Index for All *Culex* = (Vector Index for *Cx. pipiens*) + (Vector Index for *Cx. tarsalis*).

Table 1b. Vector Index for All *Culex* by week from June-August

Week	FC – Zone NW		FC – Zone NE		FC – Zone SE		FC – Zone SW		FC – Citywide		LV
	Current year	Historical average ¹	Current year	Historical average ¹	Current year	Historical average ¹	Current year	Historical average ¹	Current year	Historical average ¹	
23	0	0.018	0	0.020	0	0.017	0	0.014	0	0.021	0
24	0	0	0	0	0	0.014	0	0	0	0.004	0
25	0	0	0	0.013	0	0	0	0	0	0.003	0
26	0	0	0	0	0	0.022	0	0.014	0	0.010	0
27	0	0	0	0.034	0	0.011	0	0	0	0.012	0
28	0	0	0	0.037	0	0.127	0	0.012	0	0.051	0
29	0	0.126	0	0.164	0	0.355	0	0.041	0	0.193	0
30	0	0.123	0	0.168	0.203	0.304	0	0.102	0.070	0.191	0.118
31	NA	0.224	0.412	0.074	0.570	0.152	NA	0.072	NA	0.131	0.095
32	0.222	0.162	0.302	0.311	0.634	0.365	0.020	0.107	0.352	0.259	0.208
33	0.018	0.218	0.159	0.428	0.270	0.272	0.116	0.051	0.156	0.255	0.128
34		0.174		0.163		0.313		0.074		0.192	
35		0.062		0.126		0.192		0.198		0.149	

¹2006-2013 (2003-2005 were excluded due to changes in trap locations from 2006 onwards).

Table 2a. Vector abundance for current week (CDC light trap catches only)

Week: 33	Total number females collected			Number CDC light trap nights	Mean abundance of females per CDC light trap night		
	Cx. <i>pipiens</i>	Cx. <i>tarsalis</i>	All <i>Culex</i>		Cx. <i>pipiens</i> ¹	Cx. <i>tarsalis</i> ²	All <i>Culex</i> ³
FC – Zone NW	52	293	345	9	5.78	32.56	38.33
FC – Zone NE	157	537	694	10	15.70	53.70	69.40
FC – Zone SE	307	1047	1354	15	20.47	69.80	90.27
FC – Zone SW	23	216	239	9	2.56	24.00	26.56
FC – Citywide	539	2093	2632	43	12.53	48.67	61.21
LV	464	899	1363	36	12.89	24.97	37.86

¹Mean abundance of *Cx. pipiens* females per CDC light trap night = (Total number *Cx. pipiens* females collected) / (Number CDC light trap nights).

²Mean abundance of *Cx. tarsalis* females per CDC light trap night = (Total number *Cx. tarsalis* females collected) / (Number CDC light trap nights).

³Mean abundance of All *Culex* females per CDC light trap night = (Total number All *Culex* females collected) / (Number CDC light trap nights).

Table 2b. Vector abundance for All *Culex* by week from June-August

Week	FC – Zone NW		FC – Zone NE		FC – Zone SE		FC – Zone SW		FC – Citywide		LV
	Current year	Historical average ¹	Current year	Historical average ¹	Current year	Historical average ¹	Current year	Historical average ¹	Current year	Historical average ¹	
23	3.22	2.02	1.10	5.86	2.27	8.59	1.00	0.22	1.93	5.21	3.11
24	1.33	2.31	0.90	8.73	1.20	12.88	0.67	0.63	1.05	7.07	2.00
25	3.44	6.77	6.90	18.15	6.60	23.08	0.44	2.13	4.72	14.20	6.03
26	2.44	12.68	11.50	38.60	16.07	35.39	2.22	6.27	9.26	25.01	9.84
27	22.56	31.85	61.90	69.76	58.27	40.90	12.89	12.48	42.14	42.47	54.69
28	39.22	49.17	116.20	80.96	74.33	66.50	14.56	12.97	64.21	54.78	42.05
29	27.00	58.82	57.20	87.35	36.33	73.48	6.44	21.88	32.98	63.27	30.59
30	94.11	42.96	236.40	106.32	213.67	61.07	52.89	12.08	160.28	58.46	75.94
31	NA	45.53	263.90	74.63	191.23	43.18	NA	12.95	NA	45.38	83.86
32	27.56	43.06	165.90	55.75	198.20	38.77	26.67	13.12	119.07	38.66	51.59
33	38.33	25.43	69.40	49.56	90.27	28.43	26.56	6.90	61.21	28.28	37.86
34		18.62		38.14		23.15		6.11		22.45	
35		8.27		18.56		9.84		3.65		10.36	

¹2006-2013 (2003-2005 were excluded due to changes in trap locations from 2006 onwards).

Table 3a. WNV infection rate per 1,000 females for current week (CDC light trap and gravid trap catches combined)

Week: 33	Total number individuals examined			Total number pools examined			Total number WNV-infected pools			Estimate for WNV infection rate per 1,000 females ¹		
	Cx. <i>pipiens</i>	Cx. <i>tarsalis</i>	All <i>Culex</i>	Cx. <i>pipiens</i>	Cx. <i>tarsalis</i>	All <i>Culex</i>	Cx. <i>pipiens</i>	Cx. <i>tarsalis</i>	All <i>Culex</i>	Cx. <i>pipiens</i>	Cx. <i>tarsalis</i>	All <i>Culex</i>
FC – Zone NW	323	293	616	14	11	25	1	0	1	3.16	0	1.64
FC – Zone NE	253	537	790	16	17	33	1	1	2	3.90	1.83	2.54
FC – Zone SE	676	1048	1724	24	30	54	2	3	5	3.08	2.96	3.05
FC – Zone SW	206	217	423	10	12	22	0	1	1	0	4.84	2.41
FC – Citywide	1458	2095	3553	64	70	134	4	5	9	2.87	2.47	2.65
LV	712	899	1611	40	38	78	5	1	6	7.77	1.12	3.95

¹Maximum likelihood estimate (MLE) for WNV infection rate per 1,000 females calculated using the CDC PooledInfRate 4.0 plug-in for Excel.

Table 3b. WNV infection rate per 1,000 females for All *Culex* by week from June-August

Week	FC – Zone NW		FC – Zone NE		FC – Zone SE		FC – Zone SW		FC – Citywide		LV
	Current year	Historical average ¹	Current year	Historical average ¹	Current year	Historical average ¹	Current year	Historical average ¹	Current year	Historical average ¹	
23	0	9.00	0	4.62	0	2.25	0	53.30	0	4.19	0
24	0	0	0	0	0	1.09	0	0	0	0.60	0
25	0	0	0	0.74	0	0	0	0	0	0.25	0
26	0	0	0	0	0	0.61	0	2.30	0	0.41	0
27	0	0	0	0.48	0	0.25	0	0	0	0.28	0
28	0	0	0	0.56	0	1.92	0	0.90	0	0.98	0
29	0	2.02	0	1.77	0	4.59	0	1.84	0	2.91	0
30	0	3.03	0	1.58	0.88	5.22	0	8.74	0.41	3.37	1.56
31	NA	5.06	1.52	1.08	2.88	3.69	NA	5.46	NA	2.95	1.14
32	7.87	4.07	2.18	5.74	3.32	9.70	3.20	8.23	3.18	6.83	4.72
33	1.64	8.85	2.54	8.26	3.05	11.00	2.41	7.68	2.65	9.24	3.95
34		9.82		4.49		12.13		12.41		8.68	
35		7.66		6.80		20.00		53.69		14.33	

¹2006-2013 (2003-2005 were excluded due to changes in trap locations from 2006 onwards).