

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 (July 2008 edition)”.

Level III

- Vector index > 0.5 and increasing
- *Culex* mosquito populations increasing and at or above historical average for that time period
- Mosquito infection rates of > 3.0 per thousand (0.3%) and increasing

Level IV

- Vector index > 0.75.
- *Culex* mosquito population above historical average for that time period
- 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: 32	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	11.00	30.78	0.000	0.004	0.000	0.114	0.114
FC – Zone NE	11.40	56.90	0.009	0.002	0.101	0.100	0.201
FC – Zone SE	10.67	23.67	0.015	0.000	0.158	0.000	0.158
FC – Zone SW	4.11	11.56	0.015	0.000	0.061	0.000	0.061
FC – Citywide	9.53	30.35	0.009	0.002	0.091	0.048	0.138
LV	4.8	24.9	0.0000	0.0000	0.000	0.000	0.000

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	N/A	0.01	N/A	0.02	N/A	0.02	N/A	0.01	N/A	0.02	N/A
24	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.10	0.00	0.01	0.02	0.00	0.01	0.03	0.01	0.00
27	0.00	0.00	0.10	0.03	0.00	0.01	0.00	0.00	0.02	0.01	0.00
28	0.00	0.00	0.10	0.03	0.21	0.11	0.00	0.01	0.10	0.05	0.00
29	0.09	0.12	0.00	0.17	0.00	0.40	0.00	0.04	0.01	0.2	0.08
30	0.11	0.13	0.10	0.18	0.28	0.31	0.00	0.10	0.15	0.19	0.29
31	0.18	0.2	0.66	0.13	0.18	0.21	0.08	0.06	0.25	0.18	0.27
32	0.11	0.16	0.20	0.33	0.16	0.41	0.06	0.09	0.14	0.27	0.00
33		0.20		0.38		0.28		0.06		0.24	
34		0.15		0.16		0.34		0.06		0.19	
35		0.03		0.11		0.18		0.16		0.13	

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: 31	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	99	277	376	9	11.00	30.78	41.78
FC – Zone NE	114	569	683	10	11.40	56.90	68.30
FC – Zone SE	160	355	515	15	10.67	23.67	34.33
FC – Zone SW	37	104	141	9	4.11	11.56	15.67
FC – Citywide	410	1305	1715	43	9.53	30.35	39.88
LV	179	921	1100	37	4.84	24.89	29.73

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	NA	2.19	NA	5.32	NA	7.79	NA	0.35	NA	4.77	NA
24	3.11	2.2	13.1	7.84	5.53	11.49	5.44	0.64	6.77	6.37	7.19
25	22.22	6.39	61.3	16.88	70.33	21.12	18	1.92	47.21	13.09	107.14
26	34.44	11.54	79.6	35.48	70.53	33.09	11.33	5.81	52.7	23.19	60.00
27	18.00	30.65	57.40	68.92	52.33	43.03	7.44	12.58	36.93	42.47	51.16
28	34.11	48.06	122.10	84.97	133.27	67.44	11.33	13.15	84.40	55.87	95.30
29	56.44	55.24	101.3	83.97	118.13	69.09	44.56	20.03	85.91	59.75	92.49
30	87.56	48.71	191.00	120.93	148.13	79.38	40.22	17.11	122.84	70.39	90.81
31	54.33	48.48	155.1	96.73	58.8	58.83	40.56	12.95	76.44	57.79	45.81
32	41.75	41.25	68.3	68.12	34.33	57.75	15.67	14.77	39.88	48.11	29.73
33		27.04		52.01		36.50		9.36		32.44	
34		20.04		46.60		27.58		6.54		26.43	
35		8.45		20.21		13.06		4.12		11.98	

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: 31	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	235	277	512	13	12	25	0	1	1	0.00	3.71	1.98
FC – Zone NE	241	572	813	15	16	31	2	1	3	8.88	1.76	3.85
FC – Zone SE	409	355	764	21	17	38	5	0	5	14.77	0.00	7.18
FC – Zone SW	77	104	181	8	9	17	1	0	1	14.95	0.00	5.85
FC – Citywide	962	1308	2270	57	54	111	8	2	10	9.50	1.57	4.75
LV	22	234	256	6	8	14	0	0	0	0.00	0.00	0.00

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	N/A	0	N/A	0	N/A	1.99	N/A	0	N/A	0.58	N/A
24	0.00	0.00	0.00	0.00	0.00	1.52	0.00	0.00	0.00	0.58	0.00
25	0.00	0.00	0.00	0.69	0.00	0.00	0.00	0.00	0.00	0.09	0.00
26	0.00	0.00	1.08	0.00	0.75	0.44	0.00	0.54	0.75	0.24	0.00
27	0.00	0.00	1.59	0.09	0.00	0.25	0.00	0.00	0.53	0.17	0.00
28	0.00	0.00	0.65	0.41	1.43	0.90	0.00	0.49	0.97	0.53	0.00
29	1.87	1.58	0.00	1.4	0.00	3.22	0.00	1.17	0.23	2.07	0.89
30	1.16	2.97	0.47	2.1	2.42	4.01	0.00	3.60	1.38	3.05	3.18
31	5.25	4.29	3.24	1.42	3.16	4.27	2.45	3.4	3.49	3.27	6.26
32	1.98	4.37	3.85	6.30	7.18	7.68	5.85	9.92	4.75	6.11	0.00
33		8.34		7.54		10.85		4.80		8.96	
34		6.89		3.03		12.02		12.99		7.66	
35		8.13		4.78		15.60		61.30		10.80	

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