

Rainfall (inches) Recorded prior to Sampling

2004	January	February	March	April	May	June	July	August	September	October	November	December
24 Hours	0.00	0.00	0.00	0.00	0.00	1.60	0.00	0.00	0.00	0.90	0.10	0.15
48 Hours	0.00	0.00	0.00	0.02	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
72 Hours	0.00	0.08	0.00	0.00	0.00	0.00	0.04	0.02	0.02	0.00	0.00	0.42
96 Hours	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	1.50	0.00	0.50	0.00
Totals	0.00	0.08	0.00	0.02	0.03	1.60	0.04	2.02	1.52	0.90	0.60	0.57

Comments:

Rainfall data is reported because it may help explain pesticide and nutrient levels in Town Creek. High levels can increase run-off and the amount of nitrogen, phosphorus and pesticides entering the stream.

Total Rainfall

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Average
January	3.82	1.81	1.89	2.75	1.98	2.97	2.70	2.29	1.71	3.82	1.65	0.65	1.63	1.45	2.54	2.24
February	6.40	0.94	1.20	1.60	0.70	0.75	0.36	3.70	1.53	1.94	1.45	2.18	2.51	2.42	0.41	1.87
March	1.87	2.38	2.24	1.34	0.72	1.86	1.97	2.50	3.15	1.26	1.53	0.61	3.42	1.76	1.95	1.90
April	1.89	3.87	4.09	5.21	4.43	4.70	4.37	0.78	5.03	5.11	1.51	3.43	3.71	2.07	0.64	3.39
May	5.28	3.94	2.53	3.04	1.77	4.24	5.21	4.58	3.23	2.13	4.98	5.78	5.56	8.18	5.69	4.41
June	3.47	0.12	2.09	8.68	5.27	4.95	4.65	3.79	7.56	3.64	9.23	2.61	2.4	4.55	5.54	4.57
July	8.95	2.87	6.79	5.65	4.39	2.19	8.30	8.33	4.28	3.19	1.86	3.65	3.03	8.81	9.45	5.45
August	5.21	3.89	2.22	1.25	2.31	3.50	1.77	3.01	4.31	2.71	3.04	1.71	2.23	6.51	5.85	3.30
September	3.28	1.66	1.66	4.11	0.62	0.43	2.42	5.53	0.80	1.59	5.32	6.29	2.77	4.79	2.31	2.91
October	3.37	2.21	2.61	1.82	0.80	4.08	2.40	1.61	2.70	2.08	2.3	7.79	1.45	1.73	3.25	2.68
November	2.31	1.05	5.51	4.13	3.56	2.63	5.56	2.74	1.89	1.25	1.9	7.76	2.91	2.99	3.66	3.32
December	7.10	1.10	1.33	1.56	2.59	1.10	0.00	1.73	0.93	2.51	3.2	0.37	2.198	2.86	2.16	2.05
total for year	52.95	25.84	34.16	41.14	29.14	33.40	39.71	40.59	37.12	31.23	37.97	42.83	33.82	48.12	43.45	36.53

Township wells E.coli and Coliform Bacteria

Location	Coliform 01	E.Coli 01	Coliform 02	Ecoli 02	Coliform03	Ecoli 03	Coliform04	Ecoli 04	Year Dug	Depth	Casing
Harrison	Present	Absent	Absent	Absent	Absent	Absent	Absent	Absent	N/A	N/A	N/A
Hoaglin	Present	Absent	Absent	Absent	Absent	Absent	Absent	Absent	1970's	40'	Metal
Jackson	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	1987	52'	PVC
Jennings	Present	Absent	Present	Absent	Absent	Absent	Absent	Absent	1979	38'	Metal
Lieberty	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	1974	108'	Metal
Pleasant	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	1975	140'	Metal
Ridge	Present	Absent	Present	Absent	Absent	Absent	Present	Absent	1939	85'	Galvanized
Tully	Absent	Absent	Present	Absent	Absent	Absent	Absent	Absent	1978	105'	Iron
Union	Present	Absent	Present	Absent	Absent	Absent	Absent	Absent	N/A	N/A	N/A
Washington	Present	Absent	Present	Absent	Absent	Absent	Preasent	Absent	1952	35'	Steel
Willshire	Present	Absent	Absent	Absent	Absent	Absent	Absent	Absent	1979	88'	Steel
York	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	N/A	N/A	Steel

It appears that all wells that are less than one hundred and five feet and have a metal casing have a good chance of having coliform bacteria in them. Lab personal indicated that this is normal and that the bacteria that was found are a natural occurring bacterium that feeds on the metal casing of the well. However, lab personal did recommend shocking the wells with bleach if the household has very young children.

Town Creek E. coli Test

	1-Jun-01	1-Nov	1-Jun-02	3-Nov-02	3-Jun-03	3-Nov-03	1-Jun-04	1-Nov-04
Location	E.Coli/col/100ml							
TC1	160	740	390	630	*	300	2000	1920
TC2	600	920	290	0	400	140	2000	1760
TC3	260	300	660	2390	1000	308	6000	2840
TC4	680	190	230	20	200	90	4000	3000

E. coli levels are hard to predict. The only factor that appears is that the E.coli levels are higher when the ditches are bank full. Another pattern that is starting to develop is that the E. coli levels downstream of Van Wert appear to be higher than those taken upstream of Van Wert.

Streams Leaving Van Wert County (E. Coli Test)

E. Coli tests for seven creeks at county line - 2004												
* values given in colonies/100ml												
	sample date											
	1-Mar-02	3-Jun-02	3-Sep-02	1-Dec-02	3-Mar-03	3-Jun-03	3-Sep-03	1-Dec-03	1-Mar-04	1-Jun-04	1-Sept-04	1-Dec-04
Town Creek	140	230	200	470	110	200	17600	9400	500	4000	420	2400
Maddox Creek	40	160	20	2010	280	*	5000	1800	300	6000	170	2000
Hoaglin Creek	260	160	200	310	200	*	5400	2000	1300	4000	190	1000
Hagerman Creek	110	530	3580	1240	300	1600	4400	600	500	1000	120	700
Upper Prairie Creek	50	190	260	750	200	*	2600	400	1300	2000	100	700
Middle Creek	40	160	200	130	200	*	2200	800	300	1000	300	700
Blue Creek	660	400	800	120	200	400	3200	2200	800	3000	1000	300

The levels of E. Coli are sporadic and somewhat inconsistent. The only consistency observed so far is during high ditch flow events the study will experience high E. Coli levels.