Appendix 14

Sampling Sites

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Inspiration to reality.

The approved Quality Assurance Project Plan (QAPP) included seven (7) sampling sites that would be tested for the full suite of parameters a total of two times. One sample was to be taken during high flow and one during low flow. Along with the seven sampling sites an additional 42 sampling locations were identified to be tested a total of four times for *E.coli* bacteria. Two of these samples were taken during high flow and two during low flow.

The seven sampling site locations are listed in Table 1 with the latitude and longitude given as well as the sample stream. The geographical locations are shown in Figure 1 along with the sampling locations. Table 2 lists the latitude and longitude locations of the 42 sampling locations with a general description of what is being tested listed.

The sampling results for the sampling sites and locations are shown in Tables 3 to 5 for both dry and wet weather.

Sampling Sites	Stream Name	Location	Latitude	Longitude
Site 1	Little Calumet	Indianapolis Blvd.	41.34.06	87.28.28
Site 2	Little Calumet	Grant Street	41.33.56	87.21.20
Site 3	Deep River	Upstream	41.32.14	87.15.18
Site 4	Deep River	Downstream	41.33.47	87.17.27
Site 5	Burns Ditch	Clay Street	41.34.37	87.16.45
Site 6	Willow Creek	Hwy 20	41.35.33	87.12.36
Site 7	Burns Ditch	Downstream	41.36.10	87.11.35

Table 1: Seven sampling site descriptions.

Location	Latitude	Longitude	Stream Name
1	41.32.47	87.10.55	Willow Cr.
2	41.33.54	87.11.18	Willow Cr.
3	41.34.29	87.11.45	tributary
4	41.34.34	87.12.18	Willow Cr.
5	41.35.27	87.12.30	Willow Cr.
6	41.35.40	87.13.11	Burns Ditch
7	41.36.10	87.11.35	Burns Ditch
8	41.35.13	87.14.28	Burns Ditch
9	41.35.14	87.16.05	tributary
10	41.34.39	87.16.30	Burns Ditch
11	41.34.30	87.17.19	tributary
12	41.34.30	87.17.21	tributary
13	41.34.06	87.17.49	tributary
14	41.34.16	87.17.48	Little Calumet
15	41.34.21	87.19.09	Little Calumet
16	41.34.23	87.19.09	CSO 013
17	41.34.00	87.21.19	Little Calumet
18	41.33.56	87.21.19	Storm Sewer
19	41.33.30	87.19.03	tributary
20	41.33.49	87.17.25	Deep River
21	41.33.43	87.16.29	Deep River
22	41.33.18	87.16.59	tributary
23	41.32.11	87.15.24	Deep River
24	41.33.04	87.15.40	Deep River
25	41.33.04	87.15.40	tributary
26	41.33.51	87.15.40	Deep River
27	41.33.32	87.14.29	Deep River
28	41.34.23	87.14.25	Deep River
29	41.33.35	87.14.04	tributary
30	41.33.38	87.20.11	Little Calumet
31	41.33.35	87.23.37	Little Calumet
32	41.33.33	87.23.38	tributary
33	41.33.58	87.22.31	tributary
34	41.33.41	87.22.32	tributary
35	41.33.34	87.22.32	Little Calumet
36	41.33.18	87.22.30	tributary
37	41.33.50	87.24.47	Little Calumet
38	41.34.10	87.27.42	Little Calumet
39	41.34.01	87.26.01	Little Calumet
40	41.34.00	87.26.00	tributary
41	41.33.33	87.25.40	tributary
42	41.34.06	87.28.22	Little Calumet

Table 2: Sampling locations descriptions.

Sampling Site	Base Flow Pollutant Concentrations								
	FLOW (cfs)	E.coli (cfu/100mL)	pH SU	DO (mg/L)	NH_3 (mg/L)	NO_3 (mg/L)	TP (mg/L)	Ortho-P (mg/L)	TSS (mg/L)
1*	2.0	3,150	7.4	6.7	0.5	8.5	4.8	2.7	11.0
2	2.7	255	7.6	3.4	0.9	2.8	0.13	0.12	93.0
3**	17.0	501	7.9	5.1	0.5	1.2	0.24	0.15	22.0
4	20.6	61	7.5	3.3	0.5	0.9	0.26	0.13	26.0
5	23.3	118	7.5	3.1	0.3	1.2	0.13	0.09	13.0
6	1.2	927	7.7	7.6	0.9	1.4	0.18	0.15	6.0
7	24.5	125	7.5	6.2	0.5	3.0	0.24	0.22	9.0

* Water quality data entering into watershed on Little Calumet River

** Water quality data entering into watershed on Deep River

Table 3: Sampling site base flow pollutant concentrations.

Sampling Site	Storm Flow Pollutant Concentrations								
	FLOW (cfs)	E.coli (cfu/100mL)	pH SU	DO (mg/L)	NH_3 (mg/L)	NO_3 (mg/L)	TP (mg/L)	Ortho-P (mg/L)	TSS (mg/L)
1*	52	1,820	7.1	0.3	1.0	1.5	0.2	0.2	23.5
2	70	1,320	7.3	2.9	0.9	1.4	0.10	0.09	16.0
3**	435	2,380	7.3	6.1	0.8	1.1	0.14	0.13	29.0
4	526	1,240	7.4	4.8	2.0	1.1	0.19	0.15	19.5
5	597	1,760	7.4	6.0	1.3	0.9	0.06	0.05	28.0
6	30	2,900	7.4	7.1	1.9	1.2	0.12	0.11	23.5
7	626	2,600	7.3	6.0	1.3	1.0	0.22	0.18	36.0

* Water quality data entering into watershed on Little Calumet River

** Water quality data entering into watershed on Deep River

Table 4: Sampling site storm flow pollutant concentrations.

Sampling Location	Wet Weather Event		Dry Weather Event	
	21-Aug-07	26-Sep-07	24-Jul-07	30-Oct-07
1	695	2		225
2	3890	0	1804	341
3	465	4	448	190
4	1620	0	25	218
5	2570	6	396	174
6	220	2	94	52
7	200	0	2	3
8	1385	2	3	5
9	2775	0	1	32
10	910	6	228	15
11	11130	0	207	144
12	340	2	108	15
13	215	6	56	1
14	415	14	353	20
15	3760	0	270	46
16	2765	0	692	75
17	1010	982	119	78
18	695	0	345	58
19	345	0	1	428
20	310	0	88	113
21	720	0	51	79
22	130	6400	111	7
23	945	8	374	40
24	685	2	505	77
25	565	2540	275	48
26	2285	114	68	16
27	2145	182	937	445
28	1220	56	375	260
29	4120	170	158	5
30	735	6	168	18
31	2310	1030	5	72
32	1610	792	72	102
33	405	882	50	8
34	1065	110	71	19
35	1100	358	129	27
36	755	4	51	2
37	1600	654	4	92
38	4580	2700	3	79
39	4515	62	36	67
40	2375	292	9	2
41	105	2440	86	44
42	2040	3100	913	586

Table 5: Sampling location *E.coli* concentrations.