Section XI. Appendices

11.01 Appendix A – BCWP Sample Data

Table XI-1 – BCWP Load Summary

	Turbidity		Temperature		D.O.		pH		TDS			E. coli				TSS		NH3		
Site No	Average NTU Apr - Oct	Suggested Improvement	Average °F June-Sept	Suggested Improvement	mg / L (Annual Average)	Suggested Improvement	Annual Average	Suggested Improvement	Average Sample	Average lb / Ac / Year	Suggested Improvement	% Exeed Standards	MPN / Day (Ave Apr-Oct)	MPN / Ac / Day (Ave Apr-Oct)	Suggested Improvement	Average T / Ac / Year	Suggested Improvement	% Exeed Standards	Average lb / Ac / Year (when out of range)	Suggested Improvement
1	15.83		60.32	1%	8.65	11.8%	7.60	1%	0.354	1.18		35.7%	368,298.43	772.44	30.5%	5.33		0%		
2	41.13	12%	66.72	10%	9.03	7.9%	7.56	1%	0.314	0.24		57.1%	964,290.67	600.38	99.0%	0.00		0%		
3	28.61		64.06	6%	8.33	15.0%	7.52		0.274	194.77		57.1%	786,614.11	336.74	44.1%	2.12		0%		
4	52.76	32%	68.42	12%	9.06	7.5%	7.62	2%	0.486	687.20		28.6%	6,243,773.61	1,337.39	79.3%	36.61	56%	0%		
5	51.90	31%	66.13	9%	4.13	57.9%	7.25		0.254	237.62		53.8%	132,094.38	679.59	99.0%	5.08		25%	2,424.64	98%
6	28.61		64.06	6%	8.33	0.0%	7.52		0.274	194.77		57.1%	786,614.11	336.74	99.0%	2.12		8%	14.77	78%
7	43.21	17%	71.15	16%	7.89	19.5%	7.36		0.234	845.87		28.6%	2,442,287.14	872.93		60.04	15%	14%	596.73	98%
8	57.61	38%	74.05	19%	8.24	16.0%	7.50		0.218	726.83		69.2%	27,970,014.94	7,529.18	99.0%	14.98		14%	1,422.99	56%
9	49.89	28%	70.95	15%	6.02	38.6%	7.21		0.290	38.62		21.4%	62,102.83	41.97	20.8%	0.66		0%		
10	37.53	4%	68.53	12%	7.11	27.4%	7.45		0.169	490.47		0.0%	801,389.23	181.00		13.28		7%	56.03	99%
11	30.13		68.53	12%	9.77	0.0%	7.47		0.364	637.00		11.1%	330,469.97	59.25		11.20		0%		
12	19.88		70.50	15%	6.90	29.6%	7.17		0.174	338.31		21.4%	350,185.11	155.61		5.69		0%		
13	26.45		68.06	12%	5.14	47.6%	7.24		0.281	77.61		35.7%	126,863.68	178.20	99.0%	0.86		7%	242.80	99%
14	30.51		74.87	20%	10.62	0.0%	7.84	4%	0.420	787.86		21.4%	6,309,514.21	778.74	59.3%	16.96		0%		
15	22.25		75.94	21%	11.29	0.0%	8.15	8%	0.407	2,059.40		0.0%	1,277,500.86	359.88		6.98		7%	2,584.97	85%
16	30.70		73.72	19%	10.61	0.0%	7.79	4%	0.216	410.13		0.0%	1,196,422.12	172.89		6.78		0%		
17	28.52		71.11	16%	7.88	19.6%	7.65	2%	0.184	135.98		42.9%	5,097,856.56	477.97	99.0%	7.56		0%		
18	43.04	16%	71.82	16%	8.29	43.7%	7.47		0.236	305.80		35.7%	3,024,812.94	414.11		4.76		0%		
19	46.26	22%	72.73	18%	8.62	12.0%	7.58	1%	0.205	383.12		21.4%	2,509,408.38	398.20		9.92		0%		
20	15.25		72.69	17%	10.09	0.0%	7.60	1%	0.139	586.26		21.4%	1,743,091.55	453.33		6.63		7%	2,127.42	95%
21	15.00		69.08	13%	8.87	0.0%	7.55		0.350	25,230.93		37.5%	14,007,938.63	13,156.82		38.02		0%		
22	18.89		71.33		9.20	0.0%	7.70	3%	0.318	5,343.01		12.5%	18,643,095.27	1,600.64		32.67		0%		

	Total P			Al								Fe								Mn			
Site No	% Exeed Standards	Average lb / Ac / Year (when out of range)	Improvement Req'd	% Exeed Standards	Average lb / Ac / Year (Total)	Allowed lb / Ac / Year (Total)	Average lb / Ac / Year (Dissolved)	Allowed lb / Ac / Year (Dissolved)	Average Load	Average Allowed	Suggested Improvement	% Exeed Standards	Average lb / Ac / Year (Total)	Allowed lb / Ac / Year (Total)	Average lb / Ac / Year (Dissolved)	Allowed lb / Ac / Year (Dissolved)	Average Load	Average Allowed	Suggested Improvement	% Exeed Standards	Average lb / Ac / Year (Total - when site out of range)	Average lb / Ac / Year (Dissolved - when site out of range)	Suggested Improvement
1	8.3%	0.26		42.9%	0.48	0.50	0.23	0.64	0.36	0.57	-	0.0%	1.02	7.13	0.55	9.16	0.78	8.15		0.0%			
2	8.3%	0.26		71.4%	0.53	0.07	0.60	0.08	0.57	0.07	87%	0.0%	0.40	0.96	0.51	1.17	0.46	1.07		0.0%			
3	0.0%			42.9%	0.16	0.05	0.19	0.06	0.17	0.05	69%	0.0%	0.15	0.69	0.15	0.85	0.15	0.77		0.0%			
4	0.0%			71.4%	5.37	0.20	3.05	0.22	4.21	0.21	95%	28.6%	3.34	2.81	1.65	3.21	2.49	3.01	16%	0.0%			
5	33.3%	0.45		66.7%	10.60	0.16	0.47	0.16	5.54	0.16	82%	20.0%	13.15	2.34	0.34	2.34	6.75	2.34	41%	66.7%	0.272	0.027	-
6	16.7%	0.18		71.4%	0.16	0.04	0.19	0.05	0.17	0.05	8%	0.0%	0.11	0.59	0.08	0.74	0.09	0.66		71.4%	0.016	0.009	-
7	8.3%	0.81		57.1%	2.34	0.45	1.56	0.59	1.95	0.52	72%	0.0%	3.05	6.41	1.82	8.48	2.43	7.45		0.0%			
8	18.2%	0.73		100.0%	8.14	0.64	11.30	0.95	9.72	0.80	94%	20.0%	8.75	9.18	10.42	13.70	9.59	11.44		0.0%			
9	25.0%	0.03		85.7%	0.18	0.02	0.19	0.02	0.19	0.02	88%	28.6%	0.21	0.33	0.18	0.33	0.19	0.33		0.0%			
10	25.0%	1.13		42.9%	12.36	1.26	8.98	1.67	10.67	1.47	-	0.0%	12.78	18.07	7.36	24.06	10.07	21.06		0.0%			
11	0.0%			33.3%	0.35	0.22	0.24	0.10	0.30	0.16	48%	0.0%	1.08	-	0.17	1.38	0.62	0.69		0.0%			
12	0.0%			42.9%	10.75	0.62	13.72	0.82	12.24	0.72	94%	28.6%	10.28	8.89	11.06	11.78	10.67	10.33	7%	42.9%	0.445	0.564	-
13	33.3%	0.09		71.4%	0.24	0.05	0.25	0.05	0.24	0.05	88%	28.6%	0.35	0.69	0.29	0.69	0.32	0.69		0.0%			
14	0.0%			85.7%	1.75	0.23	4.23	0.29	2.99	0.26	90%	0.0%	1.66	3.29	2.47	4.16	2.07	3.72		0.0%			
15	0.0%			71.4%	1.87	0.74	3.67	0.81	2.77	0.78	69%	0.0%	2.00	10.69	2.74	11.63	2.37	11.16		0.0%			
16	0.0%			57.1%	5.58	0.62	8.88	0.83	7.23	0.73	90%	0.0%	5.78	8.95	6.47	11.90	6.13	10.43		0.0%			
17	0.0%			66.7%	0.01	0.00	0.01	0.00	0.01	0.00	71%	0.0%	0.02	0.05	0.02	0.05	0.02	0.05		66.7%	0.004	0.001	-
18	0.0%			71.4%	5.36	1.00	9.27	1.50	7.31	1.25	83%	0.0%	7.20	14.38	5.92	14.36	6.56	14.37		0.0%			
19	0.0%			57.1%	7.13	1.03	14.83	1.37	10.98	1.20	88%	0.0%	8.03	14.75	11.83	19.64	9.93	17.19		57.1%	0.467	0.542	-
20	0.0%			28.6%	0.94	1.29	1.43	1.67	1.19	1.48	-	0.0%	2.11	18.47	1.48	23.99	1.79	21.23		0.0%			
21	16.7%	33.71		25.0%	38.85	41.60	37.66	41.60	38.25	41.60	-	0.0%	64.63	597.72	55.25	597.72	59.94	597.72		0.0%			
22	0.0%			50.0%	17.31	3.80	23.20	5.07	20.26	4.44	-	0.0%	36.33	109.28	29.38	109.28	32.86	109.28		0.0%			

SITE #1

Drainage Area: 476.80 Acres

Date	Site No	Time	Notes / Conditions
21-Jul-08	01	0816	Raw sewage odor
18-Aug-08	01	1122	VERY slight flow… below recordable level
15-Sep-08	01	0840	8' wide at bridge… 24" wide approximately 50' downstream
16-Oct-08	01	0830	Very slight flow… can see, but below measureable levels.
11-Nov-08	01	0821	Very slight flow… can see, but below measureable levels. Lots of leaf "gook" in samples.
22-Dec-08	01	0942	Flow meter frozen - flow estimated
22-Jan-09	01	1230	South of Shane Cole. Duplicate samples taken. Partly frozen. Running channel approx 3' wide. Bottom of stream covered with slime-coated leaves. "Yuck"
24-Feb-09	01	1010	Very Clear. No discernable odor. ATV tracks in stream
25-Mar-09	01	1210	No discernable odor. Very heavily silted. County road just graded.
23-Apr-09	01	1045	Slightly sweet odor. Very soft, mucky bottom in most places.
18-May-09	01	1035	No discernable odor. Very soft bottom with dark brown ripples.
22-Jun-09	01	0945	Sand Ripples. Very soft bottom. Lots of erosion over the 12-month time frame
20-Aug-09	01	1150	No discernable odor. Greyish colour to water. Very low flow. Heavily sedimented.
11-Nov-09	01	1015	No discernable odor. Very Clear. Easily disturbed brown algae on bottom. No surface tannin (sheen).

							Daily Load		Area Load		Needed
Date	**Site No**	**Time**	**Flow**	**Load Std**	**Meas**	**Units**	**Measured**	**Allowed**	**Measured**	**Allowed**	**Improvement**
Turbidity							Apr - Oct Average NTU				
21-Jul-08	01	0816	0.10	n/a	16.0	NTU	15.83	36.0			36.0 NTU Allowed
18-Aug-08	01	1122	0.10	< 36 NTU	15.7						
15-Sep-08	01	0840	0.48		15.5						
16-Oct-08	01	0830	0.10		15.0						
11-Nov-08	01	0821	0.10		15.0						
22-Dec-08	01	0942	2.57		15.0						
22-Jan-09	01	1230	0.54		15.0						
24-Feb-09	01	1010	0.73		15.0						
25-Mar-09	01	1210	0.68		16.5						
23-Apr-09	01	1045	1.10		15.0						
18-May-09	01	1035	1.83		17.2						
22-Jun-09	01	0945	1.77		16.5						
20-Aug-09	01	1150	0.10		15.7						
11-Nov-09	01	1015	0.60		37.0						
Turbidity			**0.77**		**17.2**						-
Temperature							**Average May - Sept**				
21-Jul-08	01	0816	0.10	90° Max	70.88	°F	60.3				
18-Aug-08	01	1122	0.10	90° Max	63.90						
15-Sep-08	01	0840	0.48	90° Max	64.12						
16-Oct-08	01	0830	0.10	78° Max	61.81						
11-Nov-08	01	0821	0.10	70° Max	42.60						
22-Dec-08	01	0942	2.57	57° Max	32.60						
22-Jan-09	01	1230	0.54	50° Max	33.34						
24-Feb-09	01	1010	0.73	50° Max	32.84						
25-Mar-09	01	1210	0.68	60° Max	54.95						
23-Apr-09	01	1045	1.10	70° Max	51.34						
18-May-09	01	1035	1.83	80° Max	53.23						
22-Jun-09	01	0945	1.77	90° Max	68.95						
20-Aug-09	01	1150	0.10	90° Max	71.05						
11-Nov-09	01	1015	0.60	70° Max	49.48						
Temperature			**0.77**								
Dissolved Oxygen							Apr - Oct Average mg/L				
21-Jul-08	01	0816	0.10	Never < 4.0	6.10	mg/L	6.50				
18-Aug-08	01	1122	0.10	Ave. >5.0	6.81						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
15-Sep-08	01	0840	0.48		5.42		Annual Average mg/L				Indiana average = 9.8 mg/L
16-Oct-08	01	0830	0.10		**0.98**		8.65				
11-Nov-08	01	0821	0.10		5.23						
22-Dec-08	01	0942	2.57		12.30		Annual Average %				Good defined as 80-120%
22-Jan-09	01	1230	0.54		15.16		75.80				
24-Feb-09	01	1010	0.73		14.97						
25-Mar-09	01	1210	0.68		11.20						
23-Apr-09	01	1045	1.10		11.80						
18-May-09	01	1035	1.83		10.69						
22-Jun-09	01	0945	1.77		7.60						
20-Aug-09	01	1150	0.10		2.58						
11-Nov-09	01	1015	0.60		10.23						
Dissolved Oxygen			**0.77**		**8.65**				**to reach Indiana Average (annual)**		**12%**
pH											
21-Jul-08	01	0816	0.10	6.0 - 9.0	7.73						
18-Aug-08	01	1122	0.10		7.61						
15-Sep-08	01	0840	0.48		7.44						
16-Oct-08	01	0830	0.10		7.40						
11-Nov-08	01	0821	0.10		6.90						
22-Dec-08	01	0942	2.57		7.29						
22-Jan-09	01	1230	0.54		7.55						
24-Feb-09	01	1010	0.73		7.84						
25-Mar-09	01	1210	0.68		7.98						
23-Apr-09	01	1045	1.10		7.93						
18-May-09	01	1035	1.83		7.78						
22-Jun-09	01	0945	1.77		7.78						
20-Aug-09	01	1150	0.10		7.64						
11-Nov-09	01	1015	0.60		7.53						
pH			**0.77**		**7.60**						
Specific Conductance											
21-Jul-08	01	0816	0.10	< 1.20 mS/cm	0.515	mS/cm					refer to TDS
18-Aug-08	01	1122	0.10		0.489						
15-Sep-08	01	0840	0.48		0.474						
16-Oct-08	01	0830	0.10		0.517						
11-Nov-08	01	0821	0.10		0.546						
22-Dec-08	01	0942	2.57		0.340						
22-Jan-09	01	1230	0.54		0.572						
24-Feb-09	01	1010	0.73		0.546						
25-Mar-09	01	1210	0.68		0.567						
23-Apr-09	01	1045	1.10		0.571						
18-May-09	01	1035	1.83		0.506						
22-Jun-09	01	0945	1.77		0.551						
20-Aug-09	01	1150	0.10		0.476						
11-Nov-09	01	1015	0.60		0.647						
Specific Conductance			**0.77**		**0.523**						
Total Dissolved Solids								kg / day		lbs / Ac / Year	**Allowed**
21-Jul-08	01	0816	0.10	< 750 mg/L	0.335	g/L	0.08	2.45	0.14	4.13	**18.87 Ave kg/day**
18-Aug-08	01	1122	0.10		0.318	YSI	0.08	2.45	0.13	4.13	**0.02 Ave T / Ac / Year**
15-Sep-08	01	0840	0.48		0.308		0.36	11.71	0.61	19.76	
16-Oct-08	01	0830	0.10		0.336		0.08	2.45	0.14	4.13	
11-Nov-08	01	0821	0.10		0.355		0.09	2.45	0.15	4.13	
22-Dec-08	01	0942	2.57		0.418		2.63	62.91	4.44	106.18	
22-Jan-09	01	1230	0.54		0.372		0.49	13.21	0.83	22.30	
24-Feb-09	01	1010	0.73		0.355		0.64	17.91	1.07	30.22	

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
25-Mar-09	01	1210	0.68		0.368		0.61	16.64	1.03	28.08		
23-Apr-09	01	1045	1.10		0.371		1.00	27.01	1.69	45.58		
18-May-09	01	1035	1.83		0.329		1.47	44.81	2.49	75.62		
22-Jun-09	01	0945	1.77		0.358		1.55	43.24	2.61	72.98		
20-Aug-09	01	1150	0.10		0.309		0.08	2.45	0.13	4.13		
11-Nov-09	01	1015	0.60		0.420		0.61	14.56	1.03	24.57		
Total Dissolved Solids			**0.77**		**0.35**		**0.70**	**Ave kg/day**	**1.18**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
21-Jul-08	01	0816	0.10	< 235 MPN	**547.5**	MPN	133,950.01	57,494.53	280.94	120.58	367,054.63	allowed 1000 mpn/day
18-Aug-08	01	1122	0.10		118.7		29,040.85	57,494.53	60.91	120.58	769.83	allowed 1000 mpn/ac
15-Sep-08	01	0840	0.48		*>2400*						478,867.46	ave 1000 mpn/day
16-Oct-08	01	0830	0.10		148.3		36,282.72	57,494.53	76.10	120.58	1,004.34	ave 1000 mpn/ac
11-Nov-08	01	0821	0.10		16.1		3,938.99	57,494.53	8.26	120.58		
22-Dec-08	01	0942	2.57		36.9		232,145.07	1,478,430.65	486.88	3,100.74	Annual	
22-Jan-09	01	1230	0.54		41.5		54,827.76	310,470.44	114.99	651.15	456,481.26	allowed 1000 mpn/day
24-Feb-09	01	1010	0.73		**218.7**		391,668.36	420,859.93	821.45	882.68	957.39	allowed 1000 mpn/ac
25-Mar-09	01	1210	0.68		**290.0**		482,464.70	390,962.77	1,011.88	819.97	368,298.43	ave 1000 mpn/day
23-Apr-09	01	1045	1.10		118.3		319,530.60	634,739.56	670.16	1,331.25	772.44	ave 1000 mpn/ac
18-May-09	01	1035	1.83		**265.4**		1,189,231.69	1,053,012.23	2,494.19	2,208.50		
22-Jun-09	01	0945	1.77		**365.4**		1,580,107.36	1,016,215.74	3,313.98	2,131.32		
20-Aug-09	01	1150	0.10		261.3		63,929.02	57,494.53	134.08	120.58		
11-Nov-09	01	1015	0.60		186.0		270,762.52	342,092.43	567.87	717.48		
E. Coli			**0.77**		**201.1**		**368,298.4**	Ave 1000MPN/day	**772.4**	Ave 1000 MPN/Ac		**30%**
Total Suspended Solids								kg/day		lbs / Ac / Year	Apr - Oct	
21-Jul-08	01	0816	0.10	< 30.0 mg/L	11	mg/L	2.69	2.45	4.54	4.13	17.07	allowed kg/day
18-Aug-08	01	1122	0.10		-		-	2.45	-	4.13	28.81	allowed T / Ac / Year
15-Sep-08	01	0840	0.48		17		19.90	11.71	33.59	19.76	6.98	ave kg/day
16-Oct-08	01	0830	0.10		2		0.49	2.45	0.83	4.13	11.78	Ave T / Ac / Year
11-Nov-08	01	0821	0.10		3		0.73	2.45	1.24	4.13		
22-Dec-08	01	0942	2.57		3		18.87	62.91	31.85	106.18	Annual	
22-Jan-09	01	1230	0.54		7		9.25	13.21	15.61	22.30	19.21	allowed kg/day
24-Feb-09	01	1010	0.73		5		8.95	17.91	15.11	30.22	32.41	allowed T / Ac / Year
25-Mar-09	01	1210	0.68		5		8.32	16.64	14.04	28.08	7.84	ave kg/day
23-Apr-09	01	1045	1.10		-		-	27.01	-	45.58	13.24	Ave T / Ac / Year
18-May-09	01	1035	1.83		6		26.89	44.81	45.37	75.62		
22-Jun-09	01	0945	1.77		-		-	43.24	-	72.98		
20-Aug-09	01	1150	0.10		24.0		5.87	2.45	9.91	4.13		
11-Nov-09	01	1015	0.60		<4.0							
Total Suspended Solids			**0.77**		**6.3846154**		**7.84**	**Ave kg/day**	**5.33**	**T/Ac/Year**		-
Ammonia												
21-Jul-08	01	0816	0.10		<0.200	mg/L						
18-Aug-08	01	1122	0.10		<0.200							
15-Sep-08	01	0840	0.48		<0.200							
16-Oct-08	01	0830	0.10		<0.200							
11-Nov-08	01	0821	0.10		<0.200							
22-Dec-08	01	0942	2.57		<0.200							
22-Jan-09	01	1230	0.54		<0.200							
24-Feb-09	01	1010	0.73		<0.200							
25-Mar-09	01	1210	0.68		<0.200							
23-Apr-09	01	1045	1.10		<0.200							
18-May-09	01	1035	1.83		<0.200							
22-Jun-09	01	0945	1.77		<0.200							
20-Aug-09	01	1150	0.10		<0.200							
11-Nov-09	01	1015	0.60		<0.200							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Ammonia			**0.77**									
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
21-Jul-08	01	0816	0.10	< 0.04 mg/L	<0.10	mg/L					**5.53**	**Ave kg/day**
18-Aug-08	01	1122	0.10		<0.10						**9.34**	**Ave lb / Ac / Year**
15-Sep-08	01	0840	0.48		**0.29**		0.34	11.71	0.57	19.76		
16-Oct-08	01	0830	0.10		**0.37**		0.09	2.45	0.15	4.13		
11-Nov-08	01	0821	0.10		**0.10**		0.02	2.45	0.04	4.13		
22-Dec-08	01	0942	2.57		<0.10							
22-Jan-09	01	1230	0.54		<0.10							
24-Feb-09	01	1010	0.73		<0.10							
25-Mar-09	01	1210	0.68		<0.10							
23-Apr-09	01	1045	1.10		<0.10							
18-May-09	01	1035	1.83		<0.10							
22-Jun-09	01	0945	1.77		<0.10							
20-Aug-09	01	1150	0.10		<0.10							
11-Nov-09	01	1015	0.60		<0.10							
Total Phosphorus			**0.77**				**0.15**	**Ave kg/day**	**0.26**	**lb / Ac / Year**		-
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
21-Jul-08	01	0816	0.10	< 10 mg / L	0.90	mg/L	0.22	2.45	0.37	4.13	**18.54**	**Ave kg/day**
18-Aug-08	01	1122	0.10		0.59		0.14	2.45	0.24	4.13	**0.02**	**Ave T / Ac / Year**
15-Sep-08	01	0840	0.48		0.46		0.54	11.71	0.91	19.76		
16-Oct-08	01	0830	0.10		0.21		0.05	2.45	0.09	4.13		
11-Nov-08	01	0821	0.10		0.323		0.08	2.45	0.13	4.13		
22-Dec-08	01	0942	2.57		0.777		4.89	62.91	8.25	106.18		
22-Jan-09	01	1230	0.54		1.200		1.59	13.21	2.68	22.30		
24-Feb-09	01	1010	0.73		1.840		3.30	17.91	5.56	30.22		
25-Mar-09	01	1210	0.68		3.870		6.44	16.64	10.87	28.08		
23-Apr-09	01	1045	1.10		0.088		0.24	27.01	0.40	45.58		
18-May-09	01	1035	1.83		1.710		7.66	44.81	12.93	75.62		
22-Jun-09	01	0945	1.77		0.414		1.79	43.24	3.02	72.98		
20-Aug-09	01	1150	0.10		0.566		0.14	2.45	0.23	4.13		
11-Nov-09	01	1015	0.60		0.135		0.20	14.56	0.33	24.57		
Nitrate - Nitrite			**0.77**				**1.95**	**Ave kg/day**	**0.00**	**T / Ac / Year**		
Hardness (CaCO3)												
18-Aug-08	01	1122	0.10		290	mg/L						
11-Nov-08	01	0821	0.10		330							
24-Feb-09	01	1010	0.73		140							
18-May-09	01	1035	1.83		380							
Hardness (CaCO3)			**0.69**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	01	1122	0.10	< 174µg/L	**0.187**	mg/L	0.05	2.45	0.08	4.13	**16.90**	**Ave kg/day**
11-Nov-08	01	0821	0.10		0.076		0.02	2.45	0.03	4.13	**28.53**	**Ave lb / Ac / Year**
24-Feb-09	01	1010	0.73		**0.412**		0.74	17.91	1.25	30.22		
18-May-09	01	1035	1.83		0.076		0.34	44.81	0.57	75.62		
Total Aluminum			**0.69**				**0.29**	**Ave kg/day**	**0.48**	**lb / Ac / Year**		-
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	01	0821	0.10	< 174µg/L	0.014	mg/L	0.00	2.45	0.01	4.13	**21.72**	**Ave kg/day**
24-Feb-09	01	1010	0.73		**0.216**		0.39	17.91	0.65	30.22	**36.66**	**Ave lb / Ac / Year**
18-May-09	01	1035	1.83		0.005		0.02	44.81	0.04	75.62		
Dissolved Aluminum			**0.89**				**0.14**	**Ave kg/day**	**0.23**	**lb / Ac / Year**		-
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	01	1122	0.10	< 2.5 mg/L	0.331	mg/L	0.08	2.45	0.14	4.13	**16.90**	**Ave kg/day**
11-Nov-08	01	0821	0.10		0.418		0.10	2.45	0.17	4.13	**28.53**	**Ave lb / Ac / Year**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
24-Feb-09	01	1010	0.73		0.597		1.07	17.91	1.80	30.22		
18-May-09	01	1035	1.83		0.259		1.16	44.81	1.96	75.62		
Total Iron			**0.69**				**0.60**	**Ave kg/day**	**1.02**	**lb / Ac / Year**		-
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	01	0821	0.10	< 2.5 mg/L	0.219	mg/L	0.05	2.45	0.09	4.13	**21.72**	**Ave kg/day**
24-Feb-09	01	1010	0.73		0.287		0.51	17.91	0.87	30.22	**36.66**	**Ave lb / Ac / Year**
18-May-09	01	1035	1.83		0.09		0.40	44.81	0.68	75.62		
Dissolved Iron			**0.89**				**0.32**	**Ave kg/day**	**0.55**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	01	1122	0.10	0.028	<0.001	mg/L	0.00	6.90	0.00	11.64	**19.33**	**Ave kg/day**
11-Nov-08	01	0821	0.10	0.031	<0.001		0.00	7.70	0.00	13.00	**32.62**	**Ave lb / Ac / Year**
24-Feb-09	01	1010	0.73	0.015	0.001		0.00	17.91	0.00	30.22		
18-May-09	01	1035	1.83	0.036	0.002		0.01	44.81	0.02	75.62		
Total Copper			**0.69**				**0.00**	**Ave kg/day**	**0.00**	**T/Ac/Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	01	0821	0.10	0.031	<0.001	mg/L	0.00	7.70	0.00	13.00	**23.47**	**Ave kg/day**
24-Feb-09	01	1010	0.73	0.015	0.001		0.00	17.91	0.00	30.22	**39.62**	**Ave lb / Ac / Year**
18-May-09	01	1035	1.83	0.036	0.002		0.01	44.81	0.02	75.62		
Dissolved Copper			**0.89**				**0.00**	**Ave kg/day**	**0.00**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	01	1122	0.10	1.348	0.331	mg/L	0.08	2.45	0.14	4.13	**16.90**	**Ave kg/day**
11-Nov-08	01	0821	0.10	1.510	0.381		0.09	2.45	0.16	4.13	**28.53**	**Ave lb / Ac / Year**
24-Feb-09	01	1010	0.73	0.711	0.100		0.18	17.91	0.30	30.22		
18-May-09	01	1035	1.83	1.709	0.142		0.64	44.81	1.07	75.62		
Total Manganese			**0.69**				**0.25**	**Ave kg/day**	**0.17**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	01	0821	0.10	1.510	0.020	mg/L	0.00	2.45	0.01	4.13	**21.72**	**Ave kg/day**
24-Feb-09	01	1010	0.73	0.711	0.072		0.13	17.91	0.22	30.22	**36.66**	**Ave lb / Ac / Year**
18-May-09	01	1035	1.83	1.709	0.109		0.49	44.81	0.82	75.62		
Dissolved Manganese			**0.89**				**0.21**	**Ave kg/day**	**0.14**	**T/Ac/Year**		-
Cl												
11-Nov-08	01	0821	0.00		6.8							
Chlorine												
SO4												
11-Nov-08	01	0821	0.00		23.6							
Sulfate												

SITE #2

Drainage Area: 1,606.13 Acres

Date	Site No	Time	Notes / Conditions
21-Jul-08	02	0850	
18-Aug-08	02	0802	Stagnant
15-Sep-08	02	1107	No water movement. Rained 3" over weekend (Monday Sampling). When macroinvertabrate sampling… VERY few live specimens.
16-Oct-08	02	0910	No flow. Disconnected pools. Sample taken from west side of bridge.
11-Nov-08	02	0906	No flow. Disconnected pools. Sample again taken from west side of bridge.

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
22-Dec-08	02	1018	Ice covered. Flow not measured.								
22-Jan-09	02	0810	Mostly frozen, except in road culvert. Sulphur or sewage smell - Hard to smell with cold temps.								
24-Feb-09	02	1045	Cream-ish bottom color - Al?? Bridge work since last sample. Brick used for stabilizing "rip rap"								
25-Mar-09	02	0828	Bottom very slimy. Good flow. 5" crawdad								
23-Apr-09	02	1115	Fresh gravel on road. Stream pretty deep (still less than 3' at pool below sample site.) No discernable odor								
18-May-09	02	1110	Very, very slight tan color to water. Slightly sweet smell								
22-Jun-09	02	1015	Septic-like odor. Grey to Grey-brown color to water. Looks milky in stream. Obvious sediment deposition and erosion.								
20-Aug-09	02	1115	No flow. Disconnected pools. Sample taken from pool east of culvert. Slight urine-like odor. Light tan in color								
11-Nov-09	02	0935	No odor. Very clear. Slight oily residue catching pollen and dust on east side of culvert. 10" tile on Southwest connects to riser behind berm.								

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Turbidity							Apr - Oct Average NTU				
21-Jul-08	02	0850	0.10	n/a	19.9	NTU	41.13	36.0			36.0 Indiana average NTU
18-Aug-08	02	0802	0.10	< 36 NTU	**42.0**						
15-Sep-08	02	1107	0.10		34.0						
16-Oct-08	02	0910	0.00		**70.0**						
11-Nov-08	02	0906	0.00		15.0						
22-Dec-08	02	1018	0.10		15.0						
22-Jan-09	02	0810	0.76		15.0						
24-Feb-09	02	1045	0.25		15.0						
25-Mar-09	02	0828	0.76		15.0						
23-Apr-09	02	1115	1.16		15.9						
18-May-09	02	1110	0.80		**42.0**						
22-Jun-09	02	1015	4.18		**62.0**						
20-Aug-09	02	1115	0.10		**43.2**						
11-Nov-09	02	0935	0.39		15.0						
Turbidity			**0.69**		**29.9**						**12%**
Temperature							**Average May - Sept**				
21-Jul-08	02	0850	0.10	90° Max	72.92	°F	66.7				
18-Aug-08	02	0802	0.10	90° Max	68.39						
15-Sep-08	02	1107	0.10	90° Max	65.90						
16-Oct-08	02	0910	0.00	78° Max	62.24						
11-Nov-08	02	0906	0.00	70° Max	40.57						
22-Dec-08	02	1018	0.10	57° Max	33.12						
22-Jan-09	02	0810	0.76	50° Max	32.78						
24-Feb-09	02	1045	0.25	50° Max	34.48						
25-Mar-09	02	0828	0.76	60° Max	54.37						
23-Apr-09	02	1115	1.16	70° Max	51.34						
18-May-09	02	1110	0.80	80° Max	55.59						
22-Jun-09	02	1015	4.18	90° Max	70.78						
20-Aug-09	02	1115	0.10	90° Max	73.33						
11-Nov-09	02	0935	0.39	70° Max	49.76						
Temperature			**0.69**								-
Dissolved Oxygen							Apr - Oct Average mg/L				
21-Jul-08	02	0850	0.10	Never < 4.0	5.54	mg/L	6.28				
18-Aug-08	02	0802	0.10	Ave. >5.0	5.23						
15-Sep-08	02	1107	0.10		**3.63**		Annual Average mg/L				Indiana average = 9.8 mg/L
16-Oct-08	02	0910	0.00		**3.68**		9.03				
11-Nov-08	02	0906	0.00		13.44						
22-Dec-08	02	1018	0.10		14.29		Annual Average %				Good defined as 80-120%
22-Jan-09	02	0810	0.76		14.62		78.22				
24-Feb-09	02	1045	0.25		15.50						
25-Mar-09	02	0828	0.76		8.52						
23-Apr-09	02	1115	1.16		11.77						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed		Needed Improvement
18-May-09	02	1110	0.80		10.27							
22-Jun-09	02	1015	4.18		**7.90**							
20-Aug-09	02	1115	0.10		**2.19**							
11-Nov-09	02	0935	0.39		9.78							
Dissolved Oxygen			**0.69**		**9.03**					**to reach Indiana Average (annual)**		**8%**
pH												
21-Jul-08	02	0850	0.10	6.0 - 9.0	7.73							
18-Aug-08	02	0802	0.10		7.61							
15-Sep-08	02	1107	0.10		7.44							
16-Oct-08	02	0910	0.00		7.40							
11-Nov-08	02	0906	0.00		8.32							
22-Dec-08	02	1018	0.10		7.35							
22-Jan-09	02	0810	0.76		7.02							
24-Feb-09	02	1045	0.25		7.44							
25-Mar-09	02	0828	0.76		7.49							
23-Apr-09	02	1115	1.16		7.80							
18-May-09	02	1110	0.80		7.49							
22-Jun-09	02	1015	4.18		7.57							
20-Aug-09	02	1115	0.10		7.79							
11-Nov-09	02	0935	0.39		7.41							
pH			**0.69**		**7.56**							
Specific Conductance												
21-Jul-08	02	0850	0.10	< 1.20 mS/cm	0.606	mS/cm						refer to TDS
18-Aug-08	02	0802	0.10		0.579							
15-Sep-08	02	1107	0.10		0.220							
16-Oct-08	02	0910	0.00		0.364							
11-Nov-08	02	0906	0.00		0.310							
22-Dec-08	02	1018	0.10		0.466							
22-Jan-09	02	0810	0.76		0.611							
24-Feb-09	02	1045	0.25		0.498							
25-Mar-09	02	0828	0.76		0.535							
23-Apr-09	02	1115	1.16		0.485							
18-May-09	02	1110	0.80		0.386							
22-Jun-09	02	1015	4.18		0.432							
20-Aug-09	02	1115	0.10		0.687							
11-Nov-09	02	0935	0.39		0.572							
Specific Conductance			**0.69**		**0.482**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		
21-Jul-08	02	0850	0.10	< 750 mg/L	0.394	g/L	0.10	2.45	0.05	1.23	**16.93**	**Ave kg/day allowed**
18-Aug-08	02	0802	0.10		0.376	YSI	0.09	2.45	0.05	1.23	**8.48**	**Ave lb/Ac/Yr allowed**
15-Sep-08	02	1107	0.10		0.143		0.03	2.45	0.02	1.23		
16-Oct-08	02	0910	0.00		0.237		0.00	0.02	0.00	0.01		
11-Nov-08	02	0906	0.00		0.202		0.00	0.02	0.00	0.01		
22-Dec-08	02	1018	0.10		0.303		0.07	2.45	0.04	1.23		
22-Jan-09	02	0810	0.76		0.397		0.74	18.54	0.37	9.29		
24-Feb-09	02	1045	0.25		0.324		0.20	6.12	0.10	3.06		
25-Mar-09	02	0828	0.76		0.348		0.65	18.59	0.32	9.32		
23-Apr-09	02	1115	1.16		0.315		0.89	28.38	0.45	14.22		
18-May-09	02	1110	0.80		0.251		0.49	19.57	0.25	9.81		
22-Jun-09	02	1015	4.18		0.281		2.87	102.17	1.44	51.19		
20-Aug-09	02	1115	0.10		0.447		0.11	2.45	0.05	1.23		
11-Nov-09	02	0935	0.39		0.372		0.35	9.54	0.18	4.78		
Total Dissolved Solids			**0.75**		**0.314**		**0.47**	**Ave kg/day**	**0.24**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac		Apr - Oct

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
21-Jul-08	02	0850	0.10	< 235 MPN	518.1	MPN	126,744.85	57,494.53	78.91	35.80	607,238.01	allowed 1000 mpn/day
18-Aug-08	02	0802	0.10		107.6		26,325.15	57,494.53	16.39	35.80	378.08	allowed 1000 mpn/ac
15-Sep-08	02	1107	0.10		>2400						1,584,150.20	ave 1000 mpn/day
16-Oct-08	02	0910	0.00		82.3		201.35	574.95	0.13	0.36	986.32	ave 1000 mpn/ac
11-Nov-08	02	0906	0.00		2.0		4.89	574.95	0.00	0.36		
22-Dec-08	02	1018	0.10		629.4		153,987.46	57,494.53	95.87	35.80		Annual
22-Jan-09	02	0810	0.76		913.9		1,694,384.26	435,693.51	1,054.95	271.27	428,898.71	allowed 1000 mpn/day
24-Feb-09	02	1045	0.25		272.3		166,550.63	143,736.31	103.70	89.49	267.04	allowed 1000 mpn/ac
25-Mar-09	02	0828	0.76		218.0		405,348.64	436,958.39	252.38	272.06	1,084,107.01	ave 1000 mpn/day
23-Apr-09	02	1115	1.16		191.8		544,333.70	666,936.49	338.91	415.24	674.98	ave 1000 mpn/ac
18-May-09	02	1110	0.80		238.2		466,219.44	459,956.20	290.28	286.38		
22-Jun-09	02	1015	4.18		816.4		8,341,076.74	2,400,971.38	5,193.28	1,494.88	**reduction based on annual levels*	
20-Aug-09	02	1115	0.10		1,732.9		423,967.08	57,494.53	263.97	35.80		
11-Nov-09	02	0935	0.39		195.6		186,634.57	224,228.65	116.20	139.61		
E. Coli			**0.75**		**455.3**		**964,290.7**	Ave 1000MPN/day	**600.4**	Ave 1000 MPN/Ac		**161%**
Total Suspended Solids								kg/day		lbs / Ac / Year		Apr - Oct
21-Jul-08	02	0850	0.10	< 30.0 mg/L	14.00	mg/L	3.43	2.45	1.72	1.23	22.50	allowed kg/day
18-Aug-08	02	0802	0.10		10		2.45	2.45	1.23	1.23	11.27	allowed T / Ac / Year
15-Sep-08	02	1107	0.10		15		3.67	2.45	1.84	1.23	29.40	ave kg/day
16-Oct-08	02	0910	0.00		46		0.11	0.02	0.06	0.01	14.73	Ave T / Ac / Year
11-Nov-08	02	0906	0.00		5		0.01	0.02	0.01	0.01		
22-Dec-08	02	1018	0.10		6		1.47	2.45	0.74	1.23		Annual
22-Jan-09	02	0810	0.76		7		12.98	18.54	6.50	9.29	16.93	allowed kg/day
24-Feb-09	02	1045	0.25		9		5.50	6.12	2.76	3.06	8.48	allowed T / Ac / Year
25-Mar-09	02	0828	0.76		2		3.72	18.59	1.86	9.32	19.12	ave kg/day
23-Apr-09	02	1115	1.16		2		5.68	28.38	2.84	14.22	9.58	Ave T / Ac / Year
18-May-09	02	1110	0.80		19		37.19	19.57	18.63	9.81		
22-Jun-09	02	1015	4.18		15		153.25	102.17	76.78	51.19		
20-Aug-09	02	1115	0.10		26.0		6.36	2.45	3.19	1.23		
11-Nov-09	02	0935	0.39		5.0		4.77	9.54	2.39	4.78		
Total Suspended Solids			**0.75**		**12.9**		**18.24**	**Ave kg/day**	**0.00**	**T/Ac/Year**		-
Ammonia												
21-Jul-08	02	0850	0.10		<0.200	mg/L						
18-Aug-08	02	0802	0.10		<0.200							
15-Sep-08	02	1107	0.10		<0.200							
16-Oct-08	02	0910	0.00		<0.200							
11-Nov-08	02	0906	0.00		<0.200							
22-Dec-08	02	1018	0.10		<0.200							
22-Jan-09	02	0810	0.76		<0.200							
24-Feb-09	02	1045	0.25		<0.200							
25-Mar-09	02	0828	0.76		<0.200							
23-Apr-09	02	1115	1.16		<0.200							
18-May-09	02	1110	0.80		<0.200							
22-Jun-09	02	1015	4.18		<0.200							
20-Aug-09	02	1115	0.10		<0.200							
11-Nov-09	02	0935	0.39		<0.200							
Ammonia			**0.38**									-
Total Phosphorus					**mg / L**		**kg / day**		**lb / Ac / Year**			**Allowed**
21-Jul-08	02	0850	0.10	< 0.04 mg/L	**0.11**		0.03	2.45	0.01	1.23	**21.52**	**Ave kg/day**
18-Aug-08	02	0802	0.10		<0.10						**10.78**	**Ave lb / Ac / Year**
15-Sep-08	02	1107	0.10		**0.41**		0.10	2.45	0.05	1.23		
16-Oct-08	02	0910	0.00		**0.21**		0.00	0.02	0.00	0.01		
11-Nov-08	02	0906	0.00		<0.10							
22-Dec-08	02	1018	0.10		**0.15**		0.04	2.45	0.02	1.23		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
22-Jan-09	02	0810	0.76		<0.10							
24-Feb-09	02	1045	0.25		<0.10							
25-Mar-09	02	0828	0.76		<0.10							
23-Apr-09	02	1115	1.16		<0.10							
18-May-09	02	1110	0.80		**0.20**		0.39	19.57	0.20	9.81		
22-Jun-09	02	1015	4.18		**0.17**		1.74	102.17	0.87	51.19		
20-Aug-09	02	1115	0.10		<0.10							
11-Nov-09	02	0935	0.39		**0.24**		0.23	9.54	0.11	4.78		
Total Phosphorus			**0.75**				**0.42**	**Ave kg/day**	**0.21**	**lb / Ac / Year**		-
Nitrate - Nitrite					**mg/L**			**kg / day**		**lb / Ac / Year**		**Allowed**
21-Jul-08	02	0850	0.10	< 10 mg / L	6.32	mg/L	1.55	2.45	0.77	1.23	**16.93**	**Ave kg/day**
18-Aug-08	02	0802	0.10		>0.050		0.00	2.45	0.00	1.23	**0.00**	**Ave T / Ac / Year**
15-Sep-08	02	1107	0.10		0.28		0.07	2.45	0.03	1.23		
16-Oct-08	02	0910	0.00		0.24		0.00	0.02	0.00	0.01		
11-Nov-08	02	0906	0.00		0.263		0.00	0.02	0.00	0.01		
22-Dec-08	02	1018	0.10		7.240		1.77	2.45	0.89	1.23		
22-Jan-09	02	0810	0.76		8.190		15.18	18.54	7.61	9.29		
24-Feb-09	02	1045	0.25		4.440		2.72	6.12	1.36	3.06		
25-Mar-09	02	0828	0.76		1.560		2.90	18.59	1.45	9.32		
23-Apr-09	02	1115	1.16		0.384		1.09	28.38	0.55	14.22		
18-May-09	02	1110	0.80		9.370		18.34	19.57	9.19	9.81		
22-Jun-09	02	1015	4.18		1.170		11.95	102.17	5.99	51.19		
20-Aug-09	02	1115	0.10		0.501		0.12	2.45	0.06	1.23		
11-Nov-09	02	0935	0.39		0.120		0.11	9.54	0.06	4.78		
Nitrate - Nitrite			**0.75**		**3.1**		**4.0**	**Ave kg/day**	**0.00**	**T / Ac / Year**		-
Hardness (CaCO3)												
18-Aug-08	02	0802	0.10		220							
11-Nov-08	02	0906	0.00		280							
24-Feb-09	02	1045	0.25		270							
18-May-09	02	1110	0.80		280							
Hardness (CaCO3)			**0.29**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	02	0802	0.10	< 174µg/L	**0.473**	mg/L	0.12	2.45	0.06	1.23	**7.04**	**Ave kg/day**
11-Nov-08	02	0906	0.00		**0.684**		0.00	0.02	0.00	0.01	**3.53**	**Ave lb / Ac / Year**
24-Feb-09	02	1045	0.25		0.108		0.07	6.12	0.03	3.06		
18-May-09	02	1110	0.80		**1.980**		3.88	19.57	1.94	9.81		
Total Aluminum			**0.29**				**1.01**	**Ave kg/day**	**0.51**	**lb / Ac / Year**		**-594%**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	02	0906	0.00	< 174µg/L	**0.669**		0.00	0.02	0.00	0.01	**8.57**	**Ave kg/day**
24-Feb-09	02	1045	0.25		0.037		0.02	6.12	0.01	3.06	**4.29**	**Ave lb / Ac / Year**
18-May-09	02	1110	0.80		**1.750**		3.43	19.57	1.72	9.81		
Dissolved Aluminum			**0.35**				**1.15**	**Ave kg/day**	**0.58**	**lb / Ac / Year**		**-645%**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	02	0802	0.10	< 2.5 mg/L	0.554	mg/L	0.14	2.45	0.07	1.23	**7.04**	**Ave kg/day**
11-Nov-08	02	0906	0.00		0.592		0.00	0.02	0.00	0.01	**3.53**	**Ave lb / Ac / Year**
24-Feb-09	02	1045	0.25		0.185		0.11	6.12	0.06	3.06		
18-May-09	02	1110	0.80		1.450		2.84	19.57	1.42	9.81		
Total Iron			**0.29**				**0.77**	**Ave kg/day**	**0.39**	**lb / Ac / Year**		-
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	02	0906	0.00	< 2.5 mg/L	0.462	mg/L	0.00	0.02	0.00	0.01	**8.57**	**Ave kg/day**
24-Feb-09	02	1045	0.25		0.185		0.11	6.12	0.06	3.06	**4.29**	**Ave lb / Ac / Year**
18-May-09	02	1110	0.80		1.450		2.84	19.57	1.42	9.81		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Dissolved Iron			**0.35**				**0.98**	**Ave kg/day**	**0.49**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	02	0802	0.10	0.028	0.022	mg/L	0.01	2.45	0.00	1.23	**7.04**	**Ave kg/day**
11-Nov-08	02	0906	0.00	0.027	0.005		0.00	0.02	0.00	0.01	**3.53**	**Ave lb / Ac / Year**
24-Feb-09	02	1045	0.25	0.027	<0.001		0.00	6.12	0.00	3.06		
18-May-09	02	1110	0.80	0.027	<0.001		0.00	19.57	0.00	9.81		
Total Copper			**0.29**				**0.00**	**Ave kg/day**	**0.00**	**lb / Ac / Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	02	0906	0.00	0.027	0.004	mg/L	0.00	0.02	0.00	0.01	**8.57**	**Ave kg/day**
24-Feb-09	02	1045	0.25	0.027	<0.001		0.00	6.12	0.00	3.06	**4.29**	**Ave lb / Ac / Year**
18-May-09	02	1110	0.80	0.027	0.002		0.00	19.57	0.00	9.81		
Dissolved Copper			**0.35**				**0.00**	**Ave kg/day**	**0.00**	**lb / Ac / Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	02	0802	0.10	1.348	1.058	mg/L	0.00	2.45	0.00	1.23	**7.04**	**Ave kg/day**
11-Nov-08	02	0906	0.00	1.307	0.183		0.00	0.02	0.00	0.01	**3.53**	**Ave lb / Ac / Year**
24-Feb-09	02	1045	0.25	1.266	0.034		0.00	6.12	0.00	3.06		
18-May-09	02	1110	0.80	1.307	0.057		0.00	19.57	0.00	9.81		
Total Manganese			**0.29**				**0.00**	**Ave kg/day**	**0.00**	**lb / Ac / Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	02	0906	0.00	1.307	0.076	mg/L	0.00	0.02	0.00	0.01	**8.57**	**Ave kg/day**
24-Feb-09	02	1045	0.25	1.266	0.027		0.00	6.12	0.00	3.06	**4.29**	**Ave lb / Ac / Year**
18-May-09	02	1110	0.80	1.307	0.046		0.00	19.57	0.00	9.81		
Dissolved Mn			**0.35**				**0.00**	**Ave kg/day**	**0.00**	**lb / Ac / Year**		-
Cl												
11-Nov-08	02	0906	0.00		< 1							
Chlorine			**0.00**									
SO4												
11-Nov-08	02	0906	0.00		8.6							
Sulfate			**0.00**									

SITE #3

Drainage Area: 2,335.98 Acres

Date	Site No	Time	Notes / Conditions
21-Jul-08	03	0947	Stream bed sedimented / smothered on E side of bridge. Some small fish present
18-Aug-08	03	0832	Minimal to no flow
15-Sep-08	03	1036	Rained 3" over weekend (Monday sampling) Flow below measureable levels. Bottom gravel-y
16-Oct-08	03	0945	
11-Nov-08	03	0928	
22-Dec-08	03	1046	Flow meter frozen. Flow estimated
22-Jan-09	03	0853	Mostly frozen. Flowing channel approx 5' wide.
24-Feb-09	03	1110	Truck tires dumped under bridge. Car tire and seat upstream. Creek frozen upstream
25-Mar-09	03	0905	Bottom heavily silted. No discernable odor
23-Apr-09	03	1140	Slightly sweet odor to water. Creek had slight sulphur smell. S side of stream has shale bottom
18-May-09	03	1140	Very tan color. No discernable odor. Bed gravel-y, more sediment desposited since previous sample.

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
22-Jun-09	03	1045	No odor or colour. High sediment deposition since previous sampling								
20-Aug-09	03	1050	Slight musty odor. Grey color. Some sediment or brownish algae covering bed. Some minnows								
11-Nov-09	03	0915	No odor. Slight tan tinge. Surprisingly low flow - especially volume of water in stream								
Date	**Site No**	**Time**	**Flow**	**Load Std**	**Meas**	**Units**	**Daily Load Measured**	**Daily Load Allowed**	**Area Load Measured**	**Area Load Allowed**	**Needed Improvement**
Turbidity							Apr - Oct Average NTU				
21-Jul-08	03	0947	2.18	n/a	16.7	NTU	28.61	36.0			
18-Aug-08	03	0832	0.10	< 36 NTU	19.4						
15-Sep-08	03	1036	0.10		30.0						
16-Oct-08	03	0945	0.10		26.0						
11-Nov-08	03	0928	0.10		17.5						
22-Dec-08	03	1046	1.35		44.0						
22-Jan-09	03	0853	0.74		15.0						
24-Feb-09	03	1110	0.55		15.0						
25-Mar-09	03	0915	0.35		15.8						
23-Apr-09	03	1140	0.90		17.2						
18-May-09	03	1140	0.56		58.0						
22-Jun-09	03	1045	5.25		39.4						
20-Aug-09	03	1050	0.59		36.0						
11-Nov-09	03	0915	0.10		17.2						
Turbidity			**0.93**		**26.2**						-
Temperature							**Average May - Sept**				
21-Jul-08	03	0947	2.18	90° Max	78.55	°F	64.1				
18-Aug-08	03	0832	0.10	90° Max	68.59						
15-Sep-08	03	1036	0.10	90° Max	66.33						
16-Oct-08	03	0945	0.10	78° Max	62.35						
11-Nov-08	03	0928	0.10	70° Max	41.64						
22-Dec-08	03	1046	1.35	57° Max	33.13						
22-Jan-09	03	0853	0.74	50° Max	32.35						
24-Feb-09	03	1110	0.55	50° Max	35.63						
25-Mar-09	03	0915	0.35	60° Max	56.69						
23-Apr-09	03	1140	0.90	70° Max	53.30						
18-May-09	03	1140	0.56	80° Max	56.50						
22-Jun-09	03	1045	5.25	90° Max	72.74						
20-Aug-09	03	1050	0.59	90° Max	76.33						
11-Nov-09	03	0915	0.10	70° Max	50.31						
Temperature			**0.93**								
Dissolved Oxygen							Apr - Oct Average mg/L				
21-Jul-08	03	0947	2.18	Never < 4.0	**3.93**	mg/L	6.15				
18-Aug-08	03	0832	0.10	Ave. >5.0	4.49						
15-Sep-08	03	1036	0.10		**3.40**		Annual Average mg/L				Indiana average = 9.8 mg/L
16-Oct-08	03	0945	0.10		5.29		8.33				
11-Nov-08	03	0928	0.10		8.67						
22-Dec-08	03	1046	1.35		14.32		Annual Average %				Good defined as 80-120%
22-Jan-09	03	0853	0.74		14.25		74.32				
24-Feb-09	03	1110	0.55		13.90						
25-Mar-09	03	0915	0.35		7.43						
23-Apr-09	03	1140	0.90		11.60						
18-May-09	03	1140	0.56		10.37						
22-Jun-09	03	1045	5.25		6.90						
20-Aug-09	03	1050	0.59		3.20						
11-Nov-09	03	0915	0.10		8.85						
Dissolved Oxygen			**0.93**		**8.33**					**to reach Indiana Average (annual)**	**15%**
pH											

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed		Needed Improvement
21-Jul-08	03	0947	2.18	6.0 - 9.0	7.47							
18-Aug-08	03	0832	0.10		7.44							
15-Sep-08	03	1036	0.10		7.40							
16-Oct-08	03	0945	0.10		7.66							
11-Nov-08	03	0928	0.10		7.77							
22-Dec-08	03	1046	1.35		7.39							
22-Jan-09	03	0853	0.74		7.31							
24-Feb-09	03	1110	0.55		7.46							
25-Mar-09	03	0915	0.35		7.55							
23-Apr-09	03	1140	0.90		7.60							
18-May-09	03	1140	0.56		7.44							
22-Jun-09	03	1045	5.25		7.46							
20-Aug-09	03	1050	0.59		7.75							
11-Nov-09	03	0915	0.10		7.58							
pH			**0.93**		**7.52**							-
Specific Conductance												
21-Jul-08	03	0947	2.18	< 1.20 mS/cm	0.438	mS/cm						refer to TDS
18-Aug-08	03	0832	0.10		0.468							
15-Sep-08	03	1036	0.10		0.379							
16-Oct-08	03	0945	0.10		0.462							
11-Nov-08	03	0928	0.10		0.494							
22-Dec-08	03	1046	1.35		0.466							
22-Jan-09	03	0853	0.74		0.490							
24-Feb-09	03	1110	0.55		0.398							
25-Mar-09	03	0915	0.35		0.450							
23-Apr-09	03	1140	0.90		0.342							
18-May-09	03	1140	0.56		0.300							
22-Jun-09	03	1045	5.25		0.339							
20-Aug-09	03	1050	0.59		0.491							
11-Nov-09	03	0915	0.10		0.476							
Specific Conductance			**0.93**		**0.428**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
21-Jul-08	03	0947	2.18	< 750 mg/L	0.284	g/L	1,511.94	3,992.81	520.83	1,375.42	**1,699.67**	**Ave kg/day**
18-Aug-08	03	0832	0.10		0.304		74.38	183.49	25.62	63.21	**0.29**	**Ave T / Ac / Year**
15-Sep-08	03	1036	0.10		0.247	YSI	60.43	183.49	20.82	63.21		
16-Oct-08	03	0945	0.10		0.300		73.40	183.49	25.28	63.21		
11-Nov-08	03	0928	0.10		0.321		78.54	183.49	27.05	63.21		
22-Dec-08	03	1046	1.35		0.249		822.42	2,477.16	283.30	853.32		
22-Jan-09	03	0853	0.74		0.318		575.73	1,357.85	198.32	467.75		
24-Feb-09	03	1110	0.55		0.259		348.51	1,009.21	120.05	347.65		
25-Mar-09	03	0915	0.35		0.293		250.90	642.23	86.43	221.23		
23-Apr-09	03	1140	0.90		0.222		488.83	1,651.44	168.39	568.88		
18-May-09	03	1140	0.56		0.195		267.17	1,027.56	92.03	353.97		
22-Jun-09	03	1045	5.25		0.220		2,825.79	9,633.39	973.42	3,318.46		
20-Aug-09	03	1050	0.59		0.319		462.03	1,086.28	159.16	374.20		
11-Nov-09	03	0915	0.10		0.309		75.60	183.49	26.04	63.21		
Total Dissolved Solids			**0.93**		**0.274**		**565.40**	**Ave kg/day**	**194.77**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac		Apr - Oct
21-Jul-08	03	0947	2.18	< 235 MPN	317.2	MPN	1,688,692.99	1,251,080.87	722.91	535.57	702,726.84	allowed 1000 mpn/day
18-Aug-08	03	0832	0.10		313.0		76,577.81	57,494.53	32.78	24.61	300.83	allowed 1000 mpn/ac
15-Sep-08	03	1036	0.10		>2400						1,012,754.87	ave 1000 mpn/day
16-Oct-08	03	0945	0.10		*285.5*		69,849.73	57,494.53	29.90	24.61	433.55	ave 1000 mpn/ac
11-Nov-08	03	0928	0.10		42.2		10,324.55	57,494.53	4.42	24.61		
22-Dec-08	03	1046	1.35		470.4		1,553,508.19	776,176.09	665.03	332.27		Annual

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
22-Jan-09	03	0853	0.74		177.3		320,995.60	425,459.49	137.41	182.13	569,107.35	allowed 1000 mpn/day
24-Feb-09	03	1110	0.55		65.7		88,407.01	316,219.89	37.85	135.37	243.63	allowed 1000 mpn/ac
25-Mar-09	03	0915	0.35		176.0		150,709.05	201,230.84	64.52	86.14	786,614.11	ave 1000 mpn/day
23-Apr-09	03	1140	0.90		218.7		481,559.46	517,450.73	206.15	221.51	336.74	ave 1000 mpn/ac
18-May-09	03	1140	0.56		93.5		128,102.70	321,969.34	54.84	137.83		
22-Jun-09	03	1045	5.25		275.5		3,538,665.71	3,018,462.58	1,514.85	1,292.16		
20-Aug-09	03	1050	0.59		1,413.6		2,047,419.68	340,367.59	876.47	145.71		
11-Nov-09	03	0915	0.10		290.9		71,170.88	57,494.53	30.47	24.61		
E. Coli			**0.64**		**318.4**		**786,614.1**	Ave 1000MPN/day	**336.7**	Ave 1000 MPN/Ac		**44%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
21-Jul-08	03	0947	2.18	< 30.0 mg/L	28	mg/L	149,064.95	159,712.45	25.67	27.51	80,557.58	allowed kg/day
18-Aug-08	03	0832	0.10		6		1,467.95	7,339.73	0.25	1.26	13.88	allowed T / Ac / Year
15-Sep-08	03	1036	0.10		12		2,935.89	7,339.73	0.51	1.26	40,560.96	ave kg/day
16-Oct-08	03	0945	0.10		23		5,627.12	7,339.73	0.97	1.26	6.99	Ave T / Ac / Year
11-Nov-08	03	0928	0.10		8		1,957.26	7,339.73	0.34	1.26		
22-Dec-08	03	1046	1.35		10		33,028.77	99,086.31	5.69	17.07	Annual	
22-Jan-09	03	0853	0.74		9		16,294.19	54,313.98	2.81	9.35	67,986.84	allowed kg/day
24-Feb-09	03	1110	0.55		7		9,419.32	40,368.50	1.62	6.95	11.71	allowed T / Ac / Year
25-Mar-09	03	0915	0.35		3		2,568.90	25,689.04	0.44	4.42	30,594.08	ave kg/day
23-Apr-09	03	1140	0.90		1		2,201.92	66,057.54	0.38	11.38	5.27	Ave T / Ac / Year
18-May-09	03	1140	0.56		8		10,960.66	41,102.47	1.89	7.08		
22-Jun-09	03	1045	5.25		12		154,134.26	385,335.65	26.55	66.37		
20-Aug-09	03	1050	0.59		25.0		36,209.32	43,451.18	6.24	7.48		
11-Nov-09	03	0915	0.10		10.0		2,446.58	7,339.73	0.42	1.26		
Total Suspended Solids			**0.93**		**11.57**		**30,594.08**	**Ave kg/day**	**2.12**	**T/Ac/Year**		-
Ammonia												
21-Jul-08	03	0947	2.18		<0.200	mg/L						
18-Aug-08	03	0832	0.10		<0.200							
15-Sep-08	03	1036	0.10		<0.200							
16-Oct-08	03	0945	0.10		<0.200							
11-Nov-08	03	0928	0.10		<0.200							
22-Dec-08	03	1046	1.35		<0.200							
22-Jan-09	03	0853	0.74		<0.200							
24-Feb-09	03	1110	0.55		<0.200							
25-Mar-09	03	0915	0.35		<0.200							
23-Apr-09	03	1140	0.90		<0.200							
18-May-09	03	1140	0.56		<0.200							
22-Jun-09	03	1045	5.25		<0.200							
20-Aug-09	03	1050	0.59		<0.200							
11-Nov-09	03	0915	0.10		<0.200							
Ammonia			**0.93**									
Total Phosphorus												**Allowed**
21-Jul-08	03	0947	2.18	< 0.04 mg/L	<0.10	mg/L					**166.37**	**Ave kg/day**
18-Aug-08	03	0832	0.10		<0.10						**57.31**	**Ave lb / Ac / Year**
15-Sep-08	03	1036	0.10		0.11		26.91	9.79	9.27	3.37		
16-Oct-08	03	0945	0.10		0.10		24.47	9.79	8.43	3.37		
11-Nov-08	03	0928	0.10		<0.10							
22-Dec-08	03	1046	1.35		0.22		726.63	132.12	250.31	45.51		
22-Jan-09	03	0853	0.74		<0.10							
24-Feb-09	03	1110	0.55		<0.10							
25-Mar-09	03	0915	0.35		<0.10							
23-Apr-09	03	1140	0.90		<0.10							
18-May-09	03	1140	0.56		<0.10							
22-Jun-09	03	1045	5.25		0.10		1,284.45	513.78	442.46	176.98		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
20-Aug-09	03	1050	0.59		<0.10							
11-Nov-09	03	0915	0.10		<0.10							
Total Phosphorus			**0.93**				**515.62**	**Ave kg/day**	**177.62**	**lb / Ac / Year**		**68%**
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
21-Jul-08	03	0947	2.18	< 10 mg / L	3.83	mg/L	20,389.96	53,237.48	7,023.83	18,338.99	**22,662.28**	**Ave kg/day**
18-Aug-08	03	0832	0.10		3.14		768.22	2,446.58	264.63	842.78	**3.90**	**Ave T / Ac / Year**
15-Sep-08	03	1036	0.10		1.24		303.38	2,446.58	104.51	842.78		
16-Oct-08	03	0945	0.10		3.13		765.78	2,446.58	263.79	842.78		
11-Nov-08	03	0928	0.10		2.270		555.37	2,446.58	191.31	842.78		
22-Dec-08	03	1046	1.35		4.510		14,895.98	33,028.77	5,131.29	11,377.59		
22-Jan-09	03	0853	0.74		3.430		6,209.90	18,104.66	2,139.16	6,236.61		
24-Feb-09	03	1110	0.55		3.430		4,615.46	13,456.17	1,589.91	4,635.32		
25-Mar-09	03	0915	0.35		0.994		850.74	8,563.01	293.06	2,949.75		
23-Apr-09	03	1140	0.90		0.326		717.83	22,019.18	247.27	7,585.06		
18-May-09	03	1140	0.56		4.430		6,069.46	13,700.82	2,090.78	4,719.59		
22-Jun-09	03	1045	5.25		1.860		23,890.81	128,445.22	8,229.79	44,246.20		
20-Aug-09	03	1050	0.59		2.200		3,186.42	14,483.73	1,097.64	4,989.29		
11-Nov-09	03	0915	0.10		0.126		30.83	2,446.58	10.62	842.78		
Nitrate - Nitrite			**0.93**				**5,946.44**	**Ave kg/day**	**1.02**	**T / Ac / Year**		
Hardness (CaCO3)												
18-Aug-08	02	0802	0.10		220							
11-Nov-08	03	0928	0.10		260							
24-Feb-09	03	1110	0.55		200							
18-May-09	03	1140	0.56		140							
Hardness (CaCO3)			**0.33**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	02	0802	0.10	< 174µg/L	**0.396**	mg/L	96.88	42.57	33.37	14.66	**139.42**	**Ave kg/day**
11-Nov-08	03	0928	0.10		**0.476**		116.46	42.57	40.12	14.66	**48.03**	**Ave lb / Ac / Year**
24-Feb-09	03	1110	0.55		0.195		262.40	234.14	90.39	80.65		
18-May-09	03	1140	0.56		0.976		1,337.20	238.39	460.63	82.12		
Total Aluminum			**0.328**				**453.23**	**Ave kg/day**	**156.13**	**lb / Ac / Year**		**69%**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
111108	03	0928	0.10	< 174µg/L	**0.466**	mg/L	114.01	42.57	39.27	14.66	**128.78**	**Ave kg/day**
022409	03	1110	0.55		<0.004		0.00	234.14	0.00	80.65	**44.36**	**Ave lb / Ac / Year**
051809	03	1140	0.56		1.110		1,520.79	238.39	523.87	82.12		
							-	-	-	-		
Dissolved Aluminum			**0.403**				**408.70**	**Ave kg/day**	**140.79**	**lb / Ac / Year**		**68%**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	02	0802	0.10	< 2.5 mg/L	0.573	mg/L	140.19	611.64	48.29	210.70	**2,003.13**	**Ave kg/day**
11-Nov-08	03	0928	0.10		0.467		114.26	611.64	39.36	210.70	**690.03**	**Ave lb / Ac / Year**
24-Feb-09	03	1110	0.55		0.278		374.08	3,364.04	128.86	1,158.83		
18-May-09	03	1140	0.56		0.835		1,144.02	3,425.21	394.09	1,179.90		
Total Iron			**0.328**				**443.14**	**Ave kg/day**	**152.65**	**lb / Ac / Year**		-
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	03	0928	0.10	< 2.5 mg/L	0.462	mg/L	113.03	611.64	38.94	210.70	**1,850.22**	**Ave kg/day**
24-Feb-09	03	1110	0.55		<0.060		0.00	3,364.04	0.00	1,158.83	**637.36**	**Ave lb / Ac / Year**
18-May-09	03	1140	0.56		0.864		1,183.75	3,425.21	407.77	1,179.90		
							-	-	-	-		
Dissolved Iron			**0.403**				**324.20**	**Ave kg/day**	**111.68**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	02	0802	0.10	0.027	<0.001	mg/L	0.00	6.49	0.00	2.24	**15.28**	**Ave kg/day**
11-Nov-08	03	0928	0.10	0.026	<0.001		0.00	6.28	0.00	2.16	**5.26**	**Ave lb / Ac / Year**
24-Feb-09	03	1110	0.55	0.021	<0.001		0.00	27.62	0.00	9.51		
18-May-09	03	1140	0.56	0.015	<0.001		0.00	20.73	0.00	7.14		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Total Copper			**0.328**				**0.00**	**Ave kg/day**	**0.00**	**T/Ac/Year**	-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**	**Allowed**
11-Nov-08	03	0928	0.10	0.026	<0.001	mg/L	0.00	6.28	0.00	2.16	**18.21 Ave kg/day**
24-Feb-09	03	1110	0.55	0.021	<0.001		0.00	27.62	0.00	9.51	**6.27 Ave lb / Ac / Year**
18-May-09	03	1140	0.56	0.015	0.001		1.37	20.73	0.47	7.14	
Dissolved Copper			**0.403**				**0.46**	**Ave kg/day**	**0.06**	**T/Ac/Year**	
Mn, Total								**kg / day**		**lb / Ac / Year**	**Allowed**
18-Aug-08	02	0802	0.10	1.266	0.204	mg/L	49.91	309.75	17.19	106.70	**723.11 Ave kg/day**
11-Nov-08	03	0928	0.10	1.225	0.102		24.96	299.65	8.60	103.22	**249.09 Ave lb / Ac / Year**
24-Feb-09	03	1110	0.55	0.973	0.159		213.95	1,308.84	73.70	450.86	
18-May-09	03	1140	0.56	0.711	0.117		160.30	974.19	55.22	335.59	
Total Manganese			**0.328**				**112.28**	**Ave kg/day**	**15.56**	**T/Ac/Year**	
Mn, Dissolved								**kg / day**		**lb / Ac / Year**	**Allowed**
11-Nov-08	03	0928	0.10	1.225	0.085	mg/L	20.80	299.65	7.16	103.22	**645.67 Ave kg/day**
24-Feb-09	03	1110	0.55	0.973	0.002		2.69	1,308.84	0.93	450.86	**222.42 Ave lb / Ac / Year**
18-May-09	03	1140	0.56	0.711	0.125		171.26	974.19	58.99	335.59	
							-	-	-	-	
Dissolved Manganese			**0.403**				**64.92**	**Ave kg/day**	**9.00**	**T/Ac/Year**	
Cl											
11-Nov-08	03	0928	0.00		22.6						
Chlorine			**0.001**								
SO4											
11-Nov-08	03	0928	0.00		11.5						
Sulfate			**0.001**								

SITE #4

Drainage Area: 4,668.62 Acres

Date	Site No	Time	Notes / Conditions
21-Jul-08	04	1018	High sulphur smell, perhaps some raw sewage odor. A few fish present. Heavy erosion around bridge and banks
18-Aug-08	04	0900	
15-Sep-08	04	1008	
16-Oct-08	04	1005	
11-Nov-08	04	1000	Slight flow, but not measureable
22-Dec-08	04	1113	Flow meter frozen, flow estimated. Water very cloudy
22-Jan-09	04	0920	Mostly frozen. Flowing channel approx 4'. More erosion at bridge abutment. Water colour of pale urine.
24-Feb-09	04	1135	
25-Mar-09	04	0940	
23-Apr-09	04	1215	
18-May-09	04	1155	
22-Jun-09	04	1100	"Downright d**n disgusting brown" color to water. No odor to water. Bank scouring very apparent.
20-Aug-09	04	0835	No odor to water. Tan color. Sulfur / sewage type odor in air. Glass jug, clay tile presen
11-Nov-09	04	0850	Slight metallic odor. Light tan color. Good flow. Canary reed grass?? Continued erosion NW bridge abutment

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Turbidity								Apr - Oct Average NTU			

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
21-Jul-08	04	1018	4.90	n/a	43.0	NTU	52.8	36.0			36.0	Indiana average NTU
18-Aug-08	04	0900	1.54	< 36 NTU	62.0							
15-Sep-08	04	1008	1.53		52.0							
16-Oct-08	04	1005	0.26		15.7							
11-Nov-08	04	1000	0.10		15.0							
22-Dec-08	04	1113	0.93		44.0							
22-Jan-09	04	0920	2.83		17.0							
24-Feb-09	04	1135	5.57		70.0							
25-Mar-09	04	0940	3.60		50.4							
23-Apr-09	04	1215	25.70		46.0							
18-May-09	04	1155	3.47		48.0							
22-Jun-09	04	1100	34.16		90.0							
20-Aug-09	04	0835	1.22		65.4							
11-Nov-09	04	0850	3.38		35.8							
Turbidity			**6.37**		**46.7**							**32%**
Temperature							**Average May - Sept**					
21-Jul-08	04	1018	4.90	90° Max	80.39	°F	68.4					
18-Aug-08	04	0900	1.54	90° Max	66.77							
15-Sep-08	04	1008	1.53	90° Max	68.50							
16-Oct-08	04	1005	0.26	78° Max	60.53							
11-Nov-08	04	1000	0.10	70° Max	41.21							
22-Dec-08	04	1113	0.93	57° Max	32.01							
22-Jan-09	04	0920	2.83	50° Max	32.08							
24-Feb-09	04	1135	5.57	50° Max	37.12							
25-Mar-09	04	0940	3.60	60° Max	56.44							
23-Apr-09	04	1215	25.70	70° Max	57.80							
18-May-09	04	1155	3.47	80° Max	63.07							
22-Jun-09	04	1100	34.16	90° Max	75.22							
20-Aug-09	04	0835	1.22	90° Max	73.99							
11-Nov-09	04	0850	3.38	70° Max	51.02							
Temperature			**6.37**									
Dissolved Oxygen							Apr - Oct Average mg/L					
21-Jul-08	04	1018	4.90	Never < 4.0	5.81	mg/L	7.0					
18-Aug-08	04	0900	1.54	Ave. >5.0	7.01							
15-Sep-08	04	1008	1.53		7.55		Annual Average mg/L					Indiana average = 9.8 mg/L
16-Oct-08	04	1005	0.26		4.35		9.06					
11-Nov-08	04	1000	0.10		5.72							
22-Dec-08	04	1113	0.93		15.89		Annual Average %					Good defined as 80-120%
22-Jan-09	04	0920	2.83		16.80		82.67					
24-Feb-09	04	1135	5.57		14.51							
25-Mar-09	04	0940	3.60		8.89							
23-Apr-09	04	1215	25.70		11.29							
18-May-09	04	1155	3.47		9.02							
22-Jun-09	04	1100	34.16		7.10							
20-Aug-09	04	0835	1.22		3.90							
11-Nov-09	04	0850	3.38		9.02							
Dissolved Oxygen			**6.37**		**9.06**						**to reach Indiana Average (annual)**	**8%**
pH												
21-Jul-08	04	1018	4.90	6.0 - 9.0	7.56							
18-Aug-08	04	0900	1.54		7.51							
15-Sep-08	04	1008	1.53		7.82							
16-Oct-08	04	1005	0.26		7.70							
11-Nov-08	04	1000	0.10		7.57							
22-Dec-08	04	1113	0.93		7.69							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed		Needed Improvement
22-Jan-09	04	0920	2.83		7.75							
24-Feb-09	04	1135	5.57		7.59							
25-Mar-09	04	0940	3.60		7.70							
23-Apr-09	04	1215	25.70		7.90							
18-May-09	04	1155	3.47		7.31							
22-Jun-09	04	1100	34.16		7.36							
20-Aug-09	04	0835	1.22		7.64							
11-Nov-09	04	0850	3.38		7.52							
pH			**6.37**		**7.62**							
Specific Conductance												
21-Jul-08	04	1018	4.90	< 1.20 mS/cm	0.476	mS/cm						refer to TDS
18-Aug-08	04	0900	1.54		0.832							
15-Sep-08	04	1008	1.53		0.902							
16-Oct-08	04	1005	0.26		1.171							
11-Nov-08	04	1000	0.10		1.197							
22-Dec-08	04	1113	0.93		0.704							
22-Jan-09	04	0920	2.83		0.916							
24-Feb-09	04	1135	5.57		0.495							
25-Mar-09	04	0940	3.60		0.661							
23-Apr-09	04	1215	25.70		0.269							
18-May-09	04	1155	3.47		0.228							
22-Jun-09	04	1100	34.16		0.255							
20-Aug-09	04	0835	1.22		1.447							
11-Nov-09	04	0850	3.38		0.921							
Specific Conductance			**6.37**		**0.748**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
21-Jul-08	04	1018	4.90	< 750 mg/L	0.309	g/L	3,701.34	8,983.83	637.97	1,548.46	**11,689.53**	**Ave kg/day**
18-Aug-08	04	0900	1.54		0.541		2,038.34	2,825.79	351.33	487.06	**1.01**	**Ave T / Ac / Year**
15-Sep-08	04	1008	1.53		0.586	YSI	2,193.55	2,807.45	378.08	483.89		
16-Oct-08	04	1005	0.26		0.761		477.10	470.20	82.23	81.04		
11-Nov-08	04	1000	0.10		0.778		190.34	183.49	32.81	31.63		
22-Dec-08	04	1113	0.93		0.458		1,045.83	1,712.60	180.26	295.19		
22-Jan-09	04	0920	2.83		0.595		4,122.58	5,196.53	710.57	895.68		
24-Feb-09	04	1135	5.57		0.321		4,372.83	10,216.90	753.71	1,760.99		
25-Mar-09	04	0940	3.60		0.430		3,787.30	6,605.75	652.78	1,138.57		
23-Apr-09	04	1215	25.70		0.175		11,005.19	47,165.08	1,896.86	8,129.41		
18-May-09	04	1155	3.47		0.148		1,256.17	6,365.74	216.52	1,097.21		
22-Jun-09	04	1100	34.16		0.166		13,875.08	62,688.61	2,391.52	10,805.06		
20-Aug-09	04	0835	1.22		0.940		2,805.73	2,238.62	483.60	385.85		
11-Nov-09	04	0850	3.38		0.599		4,946.06	6,192.89	852.51	1,067.41		
Total Dissolved Solids			**6.37**		**0.49**		**3,986.96**	**Ave kg/day**	**687.20**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac		Apr - Oct
21-Jul-08	04	1018	4.90	< 235 MPN	137.2	MPN	1,643,441.13	2,814,931.96	352.02	602.95	5,363,121.66	allowed 1000 mpn/day
18-Aug-08	04	0900	1.54		141.4		532,756.50	885,415.69	114.11	189.65	1,148.76	allowed 1000 mpn/ac
15-Sep-08	04	1008	1.53		*>2400*						9,615,701.28	ave 1000 mpn/day
16-Oct-08	04	1005	0.26		313.0		196,230.65	147,329.72	42.03	31.56	2,059.65	ave 1000 mpn/ac
11-Nov-08	04	1000	0.10		33.1		8,098.17	57,494.53	1.73	12.32		
22-Dec-08	04	1113	0.93		34.6		79,008.08	536,615.57	16.92	114.94		Annual
22-Jan-09	04	0920	2.83		17.5		121,252.28	1,628,244.96	25.97	348.76	3,876,802.03	allowed 1000 mpn/day
24-Feb-09	04	1135	5.57		185.0		2,520,168.54	3,201,295.17	539.81	685.70	830.40	allowed 1000 mpn/ac
25-Mar-09	04	0940	3.60		172.0		1,514,919.58	2,069,802.91	324.49	443.34	6,243,773.61	ave 1000 mpn/day
23-Apr-09	04	1215	25.70		24.6		1,543,870.40	14,778,392.79	330.69	3,165.47	1,337.39	ave 1000 mpn/ac
18-May-09	04	1155	3.47		58.8		499,074.40	1,994,600.07	106.90	427.24		
22-Jun-09	04	1100	34.16		727.0		60,766,154.66	19,642,429.64	13,015.87	4,207.33		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement		
20-Aug-09	04	0835	1.22		>2419.6		7,223,269.64	701,433.21	1,547.20	150.24			
11-Nov-09	04	0850	3.38		547.5		4,520,812.88	1,940,440.23	968.34	415.63			
E. Coli			**6.37**				**6,243,773.6**	Ave 1000MPN/day	**1,337.4**	Ave 1000 MPN/Ac			**79%**
Total Suspended Solids								kg/day		T / Ac / Year		Apr - Oct	
21-Jul-08	04	1018	4.90	< 30.0 mg/L	46	mg/L	551,007.96	359,353.02	47.49	30.97	621,058.72	allowed kg/day	
18-Aug-08	04	0900	1.54		35		131,870.42	113,031.79	11.36	9.74	53.52	allowed T / Ac / Year	
15-Sep-08	04	1008	1.53		28		104,811.30	112,297.82	9.03	9.68	1,582,813.98	ave kg/day	
16-Oct-08	04	1005	0.26		18		11,284.83	18,808.05	0.97	1.62	136.41	Ave T / Ac / Year	
11-Nov-08	04	1000	0.10		9		2,201.92	7,339.73	0.19	0.63			
22-Dec-08	04	1113	0.93		19		43,385.94	68,504.12	3.74	5.90		Annual	
22-Jan-09	04	0920	2.83		14		97,001.83	207,861.06	8.36	17.91	467,581.39	allowed kg/day	
24-Feb-09	04	1135	5.57		25		340,563.32	408,675.98	29.35	35.22	40.30	allowed T / Ac / Year	
25-Mar-09	04	0940	3.60		6		52,846.03	264,230.16	4.55	22.77	1,055,808.92	ave kg/day	
23-Apr-09	04	1215	25.70		10		597,424.39	1,886,603.34	51.49	162.59	90.99	Ave T / Ac / Year	
18-May-09	04	1155	3.47		33		280,092.78	254,629.80	24.14	21.94			
22-Jun-09	04	1100	34.16		148		12,370,551.43	2,507,544.21	1,066.10	216.10			
20-Aug-09	04	0835	1.22		36.0		107,453.60	89,544.66	9.26	7.72			
11-Nov-09	04	0850	3.38		11.0		90,829.12	247,715.77	7.83	21.35			
Total Suspended Solids			**6.37**		**31.3**		**1,055,808.92**	**Ave kg/day**	**36.61**	**T/Ac/Year**			**56%**
Ammonia													
21-Jul-08	04	1018	4.90		<0.200	mg/L							
18-Aug-08	04	0900	1.54		<0.200								
15-Sep-08	04	1008	1.53		<0.200								
16-Oct-08	04	1005	0.26		<0.200								
11-Nov-08	04	1000	0.10		<0.200								
22-Dec-08	04	1113	0.93		<0.200								
22-Jan-09	04	0920	2.83		<0.200								
24-Feb-09	04	1135	5.57		<0.200								
25-Mar-09	04	0940	3.60		<0.200								
23-Apr-09	04	1215	25.70		<0.200								
18-May-09	04	1155	3.47		<0.200								
22-Jun-09	04	1100	34.16		<0.200								
20-Aug-09	04	0835	1.22		<0.200								
11-Nov-09	04	0850	3.38		<0.200								
Ammonia			**6.37**										
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**	
21-Jul-08	04	1018	4.90	< 0.04 mg/L	0.14	mg/L	1,676.98	479.14	289.05	82.58	**697.73**	**Ave kg/day**	
18-Aug-08	04	0900	1.54		0.12		452.13	150.71	77.93	25.98	**120.26**	**Ave lb / Ac / Year**	
15-Sep-08	04	1008	1.53		0.18		673.79	149.73	116.13	25.81			
16-Oct-08	04	1005	0.26		<0.10								
11-Nov-08	04	1000	0.10		<0.10								
22-Dec-08	04	1113	0.93		0.15		342.52	91.34	59.04	15.74			
22-Jan-09	04	0920	2.83		<0.10								
24-Feb-09	04	1135	5.57		<0.10								
25-Mar-09	04	0940	3.60		<0.10								
23-Apr-09	04	1215	25.70		<0.10								
18-May-09	04	1155	3.47		0.13		1,103.40	339.51	190.18	58.52			
22-Jun-09	04	1100	34.16		0.21		17,552.81	3,343.39	3,025.42	576.27			
20-Aug-09	04	0835	1.22		<0.10								
11-Nov-09	04	0850	3.38		0.11		908.29	330.29	156.55	56.93			
Total Phosphorus			**6.37**				**3,244.27**	**Ave kg/day**	**559.19**	**lb / Ac / Year**			**78%**
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**	
21-Jul-08	04	1018	4.90	< 10 mg / L	0.578	mg/L	6,923.53	119,784.34	1,193.35	20,646.13	**155,860.46**	**Ave kg/day**	
18-Aug-08	04	0900	1.54		0.513		1,932.84	37,677.26	333.15	6,494.08	**13.43**	**Ave T / Ac / Year**	

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
15-Sep-08	04	1008	1.53		0.353		1,321.37	37,432.61	227.75	6,451.92		
16-Oct-08	04	1005	0.26		0.224		140.43	6,269.35	24.21	1,080.59		
11-Nov-08	04	1000	0.10		0.478		116.95	2,446.58	20.16	421.69		
22-Dec-08	04	1113	0.93		0.514		1,173.70	22,834.71	202.30	3,935.81		
22-Jan-09	04	0920	2.83		0.824		5,709.25	69,287.02	984.05	11,942.37		
24-Feb-09	04	1135	5.57		1.020		13,894.98	136,225.33	2,394.95	23,479.91		
25-Mar-09	04	0940	3.60		0.312		2,747.99	88,076.72	473.65	15,180.98		
23-Apr-09	04	1215	25.70		0.179		11,225.29	628,867.78	1,934.80	108,392.18		
18-May-09	04	1155	3.47		0.510		4,328.71	84,876.60	746.10	14,629.40		
22-Jun-09	04	1100	34.16		0.852		71,214.26	835,848.07	12,274.55	144,067.47		
20-Aug-09	04	0835	1.22		0.476		1,420.78	29,848.22	244.89	5,144.66		
11-Nov-09	04	0850	3.38		0.108		891.78	82,571.92	153.71	14,232.17		
Nitrate - Nitrite			**6.37**				**8,788.70**	**Ave kg/day**	**0.76**	**T / Ac / Year**		-
Hardness (CaCO3)												
18-Aug-08	04	0900	1.54		280							
11-Nov-08	04	1000	0.10		450							
24-Feb-09	04	1135	5.57		240							
18-May-09	04	1155	3.47		110							
Hardness (CaCO3)												
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	04	0900	1.54	< 174µg/L	1.56	mg/L	5,877.65	655.58	1,013.08	113.00	**1,136.33**	**Ave kg/day**
11-Nov-08	04	1000	0.10		0.038		9.30	42.57	1.60	7.34	**195.86**	**Ave lb / Ac / Year**
24-Feb-09	04	1135	5.57		6.450		87,865.34	2,370.32	15,144.54	408.55		
18-May-09	04	1155	3.47		3.650		30,979.96	1,476.85	5,339.73	254.55		
Total Aluminum			**2.67**				**31,183.06**	**Ave kg/day**	**5,374.74**	**lb / Ac / Year**		96%
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	04	1000	0.10	< 174µg/L	0.037	mg/L	9.05	42.57	1.56	7.34	**1,296.58**	**Ave kg/day**
24-Feb-09	04	1135	5.57		1.970		26,836.39	2,370.32	4,625.54	408.55	**223.48**	**Ave lb / Ac / Year**
18-May-09	04	1155	3.47		3.100		26,311.75	1,476.85	4,535.11	254.55		
Dissolved Aluminum			**3.05**				**17,719.06**	**Ave kg/day**	**3,054.07**	**lb / Ac / Year**		93%
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	04	0900	1.54	< 2.5 mg/L	2.03	mg/L	7,648.48	9,419.32	1,318.30	1,623.52	**16,326.61**	**Ave kg/day**
11-Nov-08	04	1000	0.10		0.449		109.85	611.64	18.93	105.42	**2,814.07**	**Ave lb / Ac / Year**
24-Feb-09	04	1135	5.57		3.300		44,954.36	34,056.33	7,748.37	5,869.98		
18-May-09	04	1155	3.47		2.920		24,783.97	21,219.15	4,271.79	3,657.35		
Total Iron			**2.67**				**19,374.17**	**Ave kg/day**	**3,339.35**	**lb / Ac / Year**		16%
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	04	1000	0.10	< 2.5 mg/L	0.443	mg/L	108.38	611.64	18.68	105.42	**18,629.04**	**Ave kg/day**
24-Feb-09	04	1135	5.57		0.884		12,042.32	34,056.33	2,075.62	5,869.98	**3,210.92**	**Ave lb / Ac / Year**
18-May-09	04	1155	3.47		1.950		16,550.94	21,219.15	2,852.73	3,657.35		
Dissolved Iron			**3.05**				**9,567.21**	**Ave kg/day**	**1,649.01**	**lb / Ac / Year**		
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	04	0900	1.54	0.027	0.002	mg/L	7.54	99.93	1.30	17.22	**134.36**	**Ave kg/day**
11-Nov-08	04	1000	0.10	0.026	<0.001		0.00	6.28	0.00	1.08	**23.16**	**Ave lb / Ac / Year**
24-Feb-09	04	1135	5.57	0.024	0.009		122.60	326.72	21.13	56.31		
18-May-09	04	1155	3.47	0.012	0.001		8.49	104.52	1.46	18.01		
Total Copper			**2.67**				**34.66**	**Ave kg/day**	**2.40**	**T/Ac/Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	04	1000	0.10	0.026	<0.001	mg/L	0.00	6.28	0.00	1.08	**145.84**	**Ave kg/day**
24-Feb-09	04	1135	5.57	0.024	0.002		27.25	326.72	4.70	56.31	**25.14**	**Ave lb / Ac / Year**
18-May-09	04	1155	3.47	0.012	0.002		16.98	104.52	2.93	18.01		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Dissolved Copper			**3.05**				**14.74**	**Ave kg/day**	**1.02**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	04	0900	1.54	1.307	0.777	mg/L	2,927.52	4,924.96	504.59	848.87	**6,461.18**	**Ave kg/day**
11-Nov-08	04	1000	0.10	1.983	1.300		318.05	485.15	54.82	83.62	**1,113.65**	**Ave lb / Ac / Year**
24-Feb-09	04	1135	5.57	1.142	0.278		3,787.06	15,551.59	652.74	2,680.49		
18-May-09	04	1155	3.47	0.575	0.264		2,240.74	4,883.00	386.22	841.64		
Total Manganese			**2.67**				**2,318.35**	**Ave kg/day**	**160.77**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	04	1000	0.10	1.983	1.240	mg/L	303.38	485.15	52.29	83.62	**6,973.25**	**Ave kg/day**
24-Feb-09	04	1135	5.57	1.142	0.182		2,479.30	15,551.59	427.33	2,680.49	**1,201.92**	**Ave lb / Ac / Year**
18-May-09	04	1155	3.47	0.575	0.185		1,570.22	4,883.00	270.64	841.64		
Dissolved Manganese			**3.05**				**1,450.96**	**Ave kg/day**	**100.62**	**T/Ac/Year**		-
Cl												
11-Nov-08	04	1000	0.00		7.2							
Chlorine												
SO4												
11-Nov-08	04	1000	0.00		445.6							
Sulfate												

SITE #5

Drainage Area: 210.57 Acres

Date	Site No	Time	Notes / Conditions
21-Jul-08	05	1055	Banks eroded by cattle on downstream (S) side. Pooled water. Water blocked by carpet and other refuse on S side of road.
18-Aug-08	05	0944	Stagnant. Ditches uphill from sampling point very recently excavated
15-Sep-08	05	0935	Still / Stagnant. Rained 3" over weekend (Sampled on Monday)
16-Oct-08	05	1042	No flow. Pooled at fence from carpet, accumulation of leaves, etc.
11-Nov-08	05	not sampled - dry	
22-Dec-08	05	1139	No flow. Broke ice (1-1/2 - 2") for sample
22-Jan-09	05	0950	No flow. Frozen over. Ice approx 4" thick. Heron tracks on ice and snow.
24-Feb-09	05	1235	No flow. Frozen over. Clearest water sample to date
25-Mar-09	05	1010	No flow. Pond scum (cow pond) smell in the air.
23-Apr-09	05	1240	Very faint sweet odor to water. Tremendous amt of destructive logging about 3/4 mi east. 0.30 cfs from east ditch
18-May-09	05	1235	No flow. Sharp smell to water… almost like Mr. Clean
22-Jun-09	05	1200	Greenish brown cast to water. Pond smell to water. Odor of cow pond in air… and an almost swine-waste/ammoniated odor. Obvious signs of flooding. Leaves covered wi
20-Aug-09	05	0805	Anoxic mud w/ a hint of raw sewage smell to water. Olive drab color. 2 crawdads on concrete knee wall.
11-Nov-09	05	0830	NASTY anoxic w/ composted feces smell to water. Olive brown color. A lot of oily, tannic film on surface. Multiflora rose in woods.

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Turbidity							Apr - Oct Average NTU					
21-Jul-08	05	1055	0.10	n/a	**70.0**	NTU	51.90	36.0			36.0	NTU Allowed
18-Aug-08	05	0944	0.10	< 36 NTU	82.0							
15-Sep-08	05	0935	0.10		58.0							
16-Oct-08	05	1042	0.10		49.0							
11-Nov-08	05	not sampled - dry										
22-Dec-08	05	1139	0.10		16.4							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
22-Jan-09	05	0950	0.10		15.0						
24-Feb-09	05	1235	0.10		15.0						
25-Mar-09	05	1010	0.10		16.8						
23-Apr-09	05	1240	0.10		18.5						
18-May-09	05	1235	0.10		19.9						
22-Jun-09	05	1200	0.10		44.0						** reduction taken from Apr-Oct results
20-Aug-09	05	0805	0.10		93.5						
11-Nov-09	05	0830	0.10		32.2						
Turbidity			**0.10**		**40.8**						**31%**
Temperature							**Average May - Sept**				
21-Jul-08	05	1055	0.10	90° Max	75.58	°F	66.1				
18-Aug-08	05	0944	0.10	90° Max	66.16						
15-Sep-08	05	0935	0.10	90° Max	66.37						
16-Oct-08	05	1042	0.10	78° Max	61.95						
11-Nov-08	05	not sampled - dry		70° Max							
22-Dec-08	05	1139	0.10	57° Max	36.01						
22-Jan-09	05	0950	0.10	50° Max	35.95						
24-Feb-09	05	1235	0.10	50° Max	35.23						
25-Mar-09	05	1010	0.10	60° Max	54.89						
23-Apr-09	05	1240	0.10	70° Max	58.53						
18-May-09	05	1235	0.10	80° Max	53.79						
22-Jun-09	05	1200	0.10	90° Max	71.05						
20-Aug-09	05	0805	0.10	90° Max	75.60						
11-Nov-09	05	0830	0.10	70° Max	50.79						
Temperature			**0.10**								
Dissolved Oxygen							Apr - Oct Average mg/L				
21-Jul-08	05	1055	0.10	Never < 4.0	0.71	mg/L	3.33		5.0		
18-Aug-08	05	0944	0.10	Ave. >5.0	0.75						
15-Sep-08	05	0935	0.10		0.20		Annual Average mg/L				Indiana average = 9.8 mg/L
16-Oct-08	05	1042	0.10		1.15		4.13				
11-Nov-08	05	not sampled - dry									
22-Dec-08	05	1139	0.10		6.86		Annual Average %				Good defined as 80-120%
22-Jan-09	05	0950	0.10		1.31		36.58				
24-Feb-09	05	1235	0.10		11.80						
25-Mar-09	05	1010	0.10		6.85						
23-Apr-09	05	1240	0.10		11.18						
18-May-09	05	1235	0.10		9.19						
22-Jun-09	05	1200	0.10		3.20						
20-Aug-09	05	0805	0.10		0.29						
11-Nov-09	05	0830	0.10		0.20						
Dissolved Oxygen			**0.10**		**4.13**					**to reach Indiana Average (annual)**	**58%**
pH											
21-Jul-08	05	1055	0.10	6.0 - 9.0	7.24						
18-Aug-08	05	0944	0.10		7.17						
15-Sep-08	05	0935	0.10		6.88						
16-Oct-08	05	1042	0.10		7.53						
11-Nov-08	05	not sampled - dry									
22-Dec-08	05	1139	0.10		7.07						
22-Jan-09	05	0950	0.10		6.50						
24-Feb-09	05	1235	0.10		7.40						
25-Mar-09	05	1010	0.10		7.33						
23-Apr-09	05	1240	0.10		7.65						
18-May-09	05	1235	0.10		7.41						
22-Jun-09	05	1200	0.10		7.10						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
20-Aug-09	05	0805	0.10		7.49							
11-Nov-09	05	0830	0.10		7.52							
pH			**0.10**		**7.25**							
Specific Conductance							Apr - Oct Average					
21-Jul-08	05	1055	0.10	< 1.20 mS/cm	7.24	mS/cm	3.77					refer to TDS
18-Aug-08	05	0944	0.10		7.17							
15-Sep-08	05	0935	0.10		6.88		Annual Average					
16-Oct-08	05	1042	0.10		7.53		2.51					
11-Nov-08	05	not sampled - dry										
22-Dec-08	05	1139	0.10		0.433							
22-Jan-09	05	0950	0.10		0.532							
24-Feb-09	05	1235	0.10		0.438							
25-Mar-09	05	1010	0.10		0.477							
23-Apr-09	05	1240	0.10		0.321							
18-May-09	05	1235	0.10		0.285							
22-Jun-09	05	1200	0.10		0.423							Reduction based upon Apr - Oct average
20-Aug-09	05	0805	0.10		0.338							
11-Nov-09	05	0830	0.10		0.521							
Specific Conductance			**0.10**		**2.51**							**68%**
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
21-Jul-08	05	1055	0.10	< 750 mg/L	0.237	g/L	57.98	183.49	221.58	701.21	**183.49**	**Ave kg/day**
18-Aug-08	05	0944	0.10		0.237		57.98	183.49	221.58	701.21	**0.35**	**Ave T / Ac / Year**
15-Sep-08	05	0935	0.10		0.149	YSI	36.45	183.49	139.31	701.21		
16-Oct-08	05	1042	0.10		0.278		68.01	183.49	259.92	701.21		
11-Nov-08	05	not sampled - dry										
22-Dec-08	05	1139	0.10		0.281		68.75	183.49	262.72	701.21		
22-Jan-09	05	0950	0.10		0.300		73.40	183.49	280.49	701.21		
24-Feb-09	05	1235	0.10		0.285		69.73	183.49	266.46	701.21		
25-Mar-09	05	1010	0.10		0.310		75.84	183.49	289.84	701.21		
23-Apr-09	05	1240	0.10		0.209		51.13	183.49	195.40	701.21		
18-May-09	05	1235	0.10		0.185		45.26	183.49	172.97	701.21		
22-Jun-09	05	1200	0.10		0.275		67.28	183.49	257.11	701.21		
20-Aug-09	05	0805	0.10		0.220		53.82	183.49	205.69	701.21		
11-Nov-09	05	0830	0.10		0.338		82.69	183.49	316.01	701.21		
Total Dissolved Solids			**0.10**		**0.254**		**62.18**	**Ave kg/day**	**237.62**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac		Apr - Oct
21-Jul-08	05	1055	0.10	< 235 MPN	261.3	MPN	63,929.02	57,494.53	303.60	273.04	57,494.53	allowed 1000 mpn/day
18-Aug-08	05	0944	0.10		32.8		8,024.77	57,494.53	38.11	273.04	273.04	allowed 1000 mpn/ac
15-Sep-08	05	0935	0.10		*>2400*						173,116.63	ave 1000 mpn/day
16-Oct-08	05	1042	0.10		23.9		5,847.32	57,494.53	27.77	273.04	822.13	ave 1000 mpn/ac
11-Nov-08	05	not sampled - dry					-	-				
22-Dec-08	05	1139	0.10		791.5		193,646.45	57,494.53	919.63	273.04		Annual
22-Jan-09	05	0950	0.10		7.5		1,834.93	57,494.53	8.71	273.04	53,071.87	allowed 1000 mpn/day
24-Feb-09	05	1235	0.10		12.2		2,984.82	57,494.53	14.17	273.04	273.04	allowed 1000 mpn/ac
25-Mar-09	05	1010	0.10		547.0		133,827.68	57,494.53	635.55	273.04	132,094.38	ave 1000 mpn/day
23-Apr-09	05	1240	0.10		116.9		28,600.47	57,494.53	135.82	273.04	679.59	ave 1000 mpn/ac
18-May-09	05	1235	0.10		206.4		50,497.32	57,494.53	239.81	273.04		
22-Jun-09	05	1200	0.10		1,986.3		485,963.30	57,494.53	2,307.85	273.04		
20-Aug-09	05	0805	0.10		>2419.6		592,071.28	57,494.53	2,811.76	273.04		
11-Nov-09	05	0830	0.10		613.1		149,999.55	57,494.53	712.35	273.04		
E. Coli			**0.10**		**418.082**		**132,094.4**	Ave 1000MPN/day	**679.6**	Ave 1000 MPN/Ac		**201%**
Total Suspended Solids								kg/day		T / Ac / Year		Apr - Oct
21-Jul-08	05	1055	0.10	< 30.0 mg/L	14	mg/L	3,425.21	7,339.73	6.54	14.02	7,339.73	allowed kg/day
18-Aug-08	05	0944	0.10		62		15,168.77	7,339.73	28.98	14.02	14.02	allowed T / Ac / Year

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
15-Sep-08	05	0935	0.10		31		7,584.38	7,339.73	14.49	14.02	8,726.12	ave kg/day
16-Oct-08	05	1042	0.10		73		17,860.00	7,339.73	34.13	14.02	16.67	Ave T / Ac / Year
11-Nov-08	05	not sampled - dry										
22-Dec-08	05	1139	0.10		8		1,957.26	7,339.73	3.74	14.02		Annual
22-Jan-09	05	0950	0.10		9		2,201.92	7,339.73	4.21	14.02	7,339.73	allowed kg/day
24-Feb-09	05	1235	0.10		5		1,223.29	7,339.73	2.34	14.02	14.02	allowed T / Ac / Year
25-Mar-09	05	1010	0.10		8		1,957.26	7,339.73	3.74	14.02	6,605.75	ave kg/day
23-Apr-09	05	1240	0.10		4		978.63	7,339.73	1.87	14.02	12.62	Ave T / Ac / Year
18-May-09	05	1235	0.10		6		1,467.95	7,339.73	2.80	14.02		
22-Jun-09	05	1200	0.10		15		3,669.86	7,339.73	7.01	14.02		
20-Aug-09	05	0805	0.10		106.0		25,933.70	7,339.73	49.55	14.02		
11-Nov-09	05	0830	0.10		10.0		2,446.58	7,339.73	4.67	14.02		
Total Suspended Solids			**0.10**		**27.000**		**6,605.75**	**Ave kg/day**	**5.08**	**T/Ac/Year**		-
Ammonia								kg/day		lb / Ac / Year		
21-Jul-08	05	1055	0.10	<.0892 mg/L	2.130	mg/L	521.12	21.82	1,991.45	83.40		
18-Aug-08	05	0944	0.10	<.0631mg/L	4.360		1,066.71	15.44	4,076.39	59.00		
15-Sep-08	05	0935	0.10		<0.200							
16-Oct-08	05	1042	0.10		<0.200							
11-Nov-08	05	not sampled - dry										
22-Dec-08	05	1139	0.10		<0.200							
22-Jan-09	05	0950	0.10		<0.200							
24-Feb-09	05	1235	0.10		<0.200							
25-Mar-09	05	1010	0.10		<0.200							
23-Apr-09	05	1240	0.10		<0.200							
18-May-09	05	1235	0.10		<0.200							
22-Jun-09	05	1200	0.10		<0.200							**reduction based upon July,Aug samples
20-Aug-09	05	0805	0.10	<.0153 mg/L	1.290		315.61	3.74	1,206.09	14.30		
11-Nov-09	05	0830	0.10		<0.200							
Ammonia			**0.10**				**634.48**	**13.67**	**2,424.64**	**52.23**		**98%**
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
21-Jul-08	05	1055	0.10	< 0.04 mg/L	0.32	mg/L	78.29	9.79	299.18	37.40	**9.79**	**Ave kg/day**
18-Aug-08	05	0944	0.10		0.56		137.01	9.79	523.57	37.40	**37.40**	**Ave lb / Ac / Year**
15-Sep-08	05	0935	0.10		0.42		102.76	9.79	392.68	37.40		
16-Oct-08	05	1042	0.10		0.95		232.42	9.79	888.20	37.40		**April - October**
11-Nov-08	05	not sampled - dry									116.04	**kg/day allowed**
22-Dec-08	05	1139	0.10		<0.10						443.43	**kg/day average**
22-Jan-09	05	0950	0.10		<0.10							
24-Feb-09	05	1235	0.10		<0.10							
25-Mar-09	05	1010	0.10		<0.10							
23-Apr-09	05	1240	0.10		<0.10							
18-May-09	05	1235	0.10		<0.10							
22-Jun-09	05	1200	0.10		0.16		39.15	9.79	149.59	37.40		
20-Aug-09	05	0805	0.10		0.73		178.60	9.79	682.51	37.40		
11-Nov-09	05	0830	0.10		0.18		44.04	9.79	168.29	37.40		
Total Phosphorus			**0.10**				**116.04**	**Ave kg/day**	**443.43**	**lb / Ac / Year**		**44317%**
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
21-Jul-08	05	1055	0.10	< 10 mg / L	0.215	mg/L	52.60	2,446.58	201.01	9,349.52	**2,446.58**	**Ave kg/day**
18-Aug-08	05	0944	0.10		>0.050		0.00	2,446.58	0.00	9,349.52	**4.67**	**Ave T / Ac / Year**
15-Sep-08	05	0935	0.10		0.326		79.76	2,446.58	304.79	9,349.52		
16-Oct-08	05	1042	0.10		0.213		52.11	2,446.58	199.14	9,349.52		
11-Nov-08	05	not sampled - dry										
22-Dec-08	05	1139	0.10		1.190		291.14	2,446.58	1,112.59	9,349.52		
22-Jan-09	05	0950	0.10		0.315		77.07	2,446.58	294.51	9,349.52		
24-Feb-09	05	1235	0.10		1.400		342.52	2,446.58	1,308.93	9,349.52		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
25-Mar-09	05	1010	0.10		0.213		52.11	2,446.58	199.14	9,349.52		
23-Apr-09	05	1240	0.10		0.713		174.44	2,446.58	666.62	9,349.52		
18-May-09	05	1235	0.10		2.225		544.36	2,446.58	2,080.27	9,349.52		
22-Jun-09	05	1200	0.10		0.612		149.73	2,446.58	572.19	9,349.52		
20-Aug-09	05	0805	0.10		0.373		91.26	2,446.58	348.74	9,349.52		
11-Nov-09	05	0830	0.10		0.121		29.60	2,446.58	113.13	9,349.52		
Nitrate - Nitrite			**0.10**		**0.660**		**148.98**	**Ave kg/day**	**0.28**	**T / Ac / Year**		
Hardness (CaCO3)												
18-Aug-08	05	0944	0.10		120							
11-Nov-08	05	not sampled - dry										
24-Feb-09	05	1235	0.10		230							
18-May-09	05	1235	0.10		185							
Hardness (CaCO3)			**0.10**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	05	0944	0.10	< 174µg/L	32.7	mg/L	8,000.30	42.57	30,572.93	162.68	**31.93**	**Ave kg/day**
11-Nov-08	05	not sampled - dry					-	-	-	-	**122.01**	**Ave lb / Ac / Year**
24-Feb-09	05	1235	0.10		0.357		87.34	42.57	333.78	162.68		
18-May-09	05	1235	0.10		0.960		234.75	42.57	897.09	162.68		
Total Aluminum			**0.10**		**11.3**		**2,080.60**	**Ave kg/day**	**7,950.95**	**lb / Ac / Year**		**98%**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	05	not sampled - dry		< 174µg/L		mg/L	-	-	-	-	**28.38**	**Ave kg/day**
24-Feb-09	05	1235	0.10		0.022		5.38	42.57	20.57	162.68	**108.45**	**Ave lb / Ac / Year**
18-May-09	05	1235	0.10		0.985		240.99	42.57	920.93	162.68		
Dissolved Aluminum			**0.10**				**82.12**	**Ave kg/day**	**313.83**	**lb / Ac / Year**		**65%**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	05	0944	0.10	< 2.5 mg/L	40.8	mg/L	9,982.03	611.64	38,146.04	2,337.38	**458.73**	**Ave kg/day**
11-Nov-08	05	not sampled - dry					-	-	-	-	**1,753.03**	**Ave lb / Ac / Year**
24-Feb-09	05	1235	0.10		0.613		149.98	611.64	573.13	2,337.38		
18-May-09	05	1235	0.10		0.772		188.75	611.64	721.32	2,337.38		
Total Iron			**0.10**				**2,580.19**	**Ave kg/day**	**9,860.12**	**lb / Ac / Year**		**82%**
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	05	not sampled - dry		< 2.5 mg/L		mg/L					**611.64**	**Ave kg/day**
24-Feb-09	05	1235	0.10		0.069		-	611.64	-	2,337.38	**2,337.38**	**Ave lb / Ac / Year**
18-May-09	05	1235	0.10		0.669		16.88	611.64	64.51	2,337.38		
Dissolved Iron			**0.10**				**8.44**	**Ave kg/day**	**32.26**	**lb / Ac / Year**		**-**
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	05	0944	0.10	0.013	0.017	mg/L	-	3.25	-	12.40	**4.53**	**Ave kg/day**
11-Nov-08	05	not sampled - dry									**17.32**	**Ave lb / Ac / Year**
24-Feb-09	05	1235	0.10	0.023	0.010		-	5.66	-	21.62		
18-May-09	05	1235	0.10	0.019	0.001		2.45	4.70	9.35	17.94		
Total Copper			**0.10**				**0.82**	**Ave kg/day**	**1.25**	**T/Ac/Year**		**-**
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	05	not sampled - dry				mg/L	-	-	-	-	**1.57**	**Ave kg/day**
24-Feb-09	05	1235	0.10	0.023	0.008		1.96	4.70	7.48	17.94	**5.98**	**Ave lb / Ac / Year**
18-May-09	05	1235	0.10	0.019	0.001		-	-	-	-		
Dissolved Copper			**0.10**				**0.65**					**-**
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
18-Aug-08	05	0944	0.10	0.621	1.930	mg/L	472.19	151.93	1,804.46	580.61	**160.78**	**Ave kg/day**
11-Nov-08	05	not sampled - dry					-	-	-	-	**614.42**	**Ave lb / Ac / Year**
24-Feb-09	05	1235	0.10	1.100	0.161		39.39	269.05	150.53	1,028.18		
18-May-09	05	1235	0.10	0.908	0.081		19.69	222.14	75.26	848.91		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Total Manganese			**0.10**				**132.82**	**Ave kg/day**	**204.21**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	05	not sampled - dry				mg/L	-	-	-	-	**163.73**	**Ave kg/day**
24-Feb-09	05	1235	0.10	1.100	0.056		13.70	269.05	52.36	1,028.18	**625.70**	**Ave lb / Ac / Year**
18-May-09	05	1235	0.10	0.908	0.090		21.90	222.14	83.68	848.91		
Total Manganese			**0.10**				**11.87**	**Ave kg/day**	**18.24**	**T/Ac/Year**		-
Cl												
11-Nov-08	05	not sampled - dry										
Chlorine			**#DIV/0!**									
SO4												
11-Nov-08	05	not sampled - dry										
Sulfate			**#DIV/0!**									

SITE #6

Drainage Area: 3,757.94 Acres

Date	Site No	Time	Notes / Conditions
22-Jul-08	06	1133	
18-Aug-08	06	1022	Stagnant
15-Sep-08	06	1136	Rained 3" over weekend (Sampled on Monday)
16-Oct-08	06	1142	No flow. Samples from bridge pool
11-Nov-08	06	1105	No flow. Disconnected pools
22-Dec-08	06	1207	Very slow subsurface flow. Ice covered - flow not measured. Water much clearer than other samples (12/22)
22-Jan-09	06	1035	Mostly frozen. Open channel heavily sedimented. New trash and cornstalks.
24-Feb-09	06	0840	
25-Mar-09	06	1040	Bottom soft in spots. Some sand (sedimentation)
23-Apr-09	06	0910	Extremely clear. Sand "riffles" formed on stream bed. No apparent odor to water.
18-May-09	06	0830	Slight sweet odor to water. Light tea colord. Film on surface. VERY high - level above bottom of bridge.
22-Jun-09	06	0800	Not much smell to water. Grey brown in color. Very muddy, cannot see bottom. Field flooded on W side of road. Bank scour - ? From previous week's rain?
20-Aug-09	06	1330	No odor. Tan color. No flow. Disconnected pools
11-Nov-09	06	1145	No odor. Little tan color. Relatively low flow. First time smelled cow manure in air.

							Daily Load		Area Load		Needed
Date	**Site No**	**Time**	**Flow**	**Load Std**	**Meas**	**Units**	**Measured**	**Allowed**	**Measured**	**Allowed**	**Improvement**
Turbidity							Apr - Oct Average NTU				
22-Jul-08	06	1133	0.10	n/a	52.0	NTU	39.76	36.0			36.0 NTU Allowed
18-Aug-08	06	1022	0.10	< 36 NTU	24.0						
15-Sep-08	06	1136	1.08		42.0						
16-Oct-08	06	1142	0.10		34.0						
11-Nov-08	06	1105	0.00		62.0						
22-Dec-08	06	1207	0.10		20.0						
22-Jan-09	06	1035	0.92		15.0						
24-Feb-09	06	0840	1.5		16.0						
25-Mar-09	06	1040	1.3		15.0						
23-Apr-09	06	0910	6.7		15.5						
18-May-09	06	0830	0.10		19.9						
22-Jun-09	06	0800	0.10		80.0						
20-Aug-09	06	1330	0.10		50.7						
11-Nov-09	06	1145	1.55		32.4						
Turbidity			**0.94**		**34.2**						-
Temperature							**Average May - Sept**				
22-Jul-08	06	1133	0.10	90° Max	72.37	°F	68.3				
18-Aug-08	06	1022	0.10	90° Max	67.66						
15-Sep-08	06	1136	1.08	90° Max	65.34						
16-Oct-08	06	1142	0.10	78° Max	61.78						
11-Nov-08	06	1105	0.00	70° Max	41.67						
22-Dec-08	06	1207	0.10	57° Max	32.69						
22-Jan-09	06	1035	0.92	50° Max	32.54						
24-Feb-09	06	0840	1.5	50° Max	32.36						
25-Mar-09	06	1040	1.3	60° Max	55.68						
23-Apr-09	06	0910	6.7	70° Max	50.39						
18-May-09	06	0830	0.10	80° Max	56.67						
22-Jun-09	06	0800	0.10	90° Max	73.60						
20-Aug-09	06	1330	0.10	90° Max	74.15						
11-Nov-09	06	1145	1.55	70° Max	55.08						
Temperature			**0.94**								

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Dissolved Oxygen											
22-Jul-08	06	1133	0.10	Never < 4.0	4.46	mg/L	Apr - Oct Average mg/L				
18-Aug-08	06	1022	0.10	Ave. >5.0	1.36		4.75				
15-Sep-08	06	1136	1.08		5.95						
16-Oct-08	06	1142	0.10		2.04		Annual Average mg/L				Indiana average = 9.8 mg/L
11-Nov-08	06	1105	0.00		5.74		7.58				
22-Dec-08	06	1207	0.10		13.57						
22-Jan-09	06	1035	0.92		14.51		Annual Average %				Good defined as 80-120%
24-Feb-09	06	0840	1.5		14.93		68.14				
25-Mar-09	06	1040	1.3		8.59						
23-Apr-09	06	0910	6.7		10.84						
18-May-09	06	0830	0.10		6.87						
22-Jun-09	06	0800	0.10		5.30						
20-Aug-09	06	1330	0.10		1.20						
11-Nov-09	06	1145	1.55		7.42						
Dissolved Oxygen			**0.94**		**7.34**				**to reach Indiana Average (annual)**		**23%**
pH											
22-Jul-08	06	1133	0.10	6.0 - 9.0	7.54						
18-Aug-08	06	1022	0.10		7.16						
15-Sep-08	06	1136	1.08		7.13						
16-Oct-08	06	1142	0.10		7.54						
11-Nov-08	06	1105	0.00		7.59						
22-Dec-08	06	1207	0.10		7.30						
22-Jan-09	06	1035	0.92		7.37						
24-Feb-09	06	0840	1.5		7.50						
25-Mar-09	06	1040	1.3		7.74						
23-Apr-09	06	0910	6.7		7.53						
18-May-09	06	0830	0.10		7.38						
22-Jun-09	06	0800	0.10		7.34						
20-Aug-09	06	1330	0.10		7.64						
11-Nov-09	06	1145	1.55		7.54						
pH			**0.98**		**7.45**						
Specific Conductance											
22-Jul-08	06	1133	0.10	< 1.20 mS/cm	0.487	mS/cm					refer to TDS
18-Aug-08	06	1022	0.10		0.510						
15-Sep-08	06	1136	1.08		0.212						
16-Oct-08	06	1142	0.10		0.397						
11-Nov-08	06	1105	0.00		0.431						
22-Dec-08	06	1207	0.10		0.542						
22-Jan-09	06	1035	0.92		0.600						
24-Feb-09	06	0840	1.5		0.565						
25-Mar-09	06	1040	1.3		0.589						
23-Apr-09	06	0910	6.7		0.538						
18-May-09	06	0830	0.10		0.415						
22-Jun-09	06	0800	0.10		0.461						
20-Aug-09	06	1330	0.10		0.432						
11-Nov-09	06	1145	1.55		0.606						
Specific Conductance			**0.94**		**0.485**						
Total Dissolved Solids								kg / day		lbs / Ac / Year	**Allowed**
22-Jul-08	06	1133	0.10	< 750 mg/L	0.317	g/L	77.56	183.49	16.61	39.29	**1,720.18** **Ave kg/day**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
18-Aug-08	06	1022	0.10		0.331		80.98	183.49	17.34	39.29	**0.18**	**Ave T / Ac / Year**
15-Sep-08	06	1136	1.08		0.138	YSI	364.64	1,981.73	78.08	424.35		
16-Oct-08	06	1142	0.10		0.258		63.12	183.49	13.52	39.29		
11-Nov-08	06	1105	0.00		0.280		0.69	1.83	0.15	0.39		
22-Dec-08	06	1207	0.10		0.352		86.12	183.49	18.44	39.29		
22-Jan-09	06	1035	0.92		0.390		881.65	1,695.48	188.79	363.05		
24-Feb-09	06	0840	1.5		0.367		1,336.07	2,730.38	286.09	584.66		
25-Mar-09	06	1040	1.3		0.383		1,193.79	2,337.70	255.63	500.57		
23-Apr-09	06	0910	6.7		0.349		5,737.90	12,330.74	1,228.66	2,640.38		
18-May-09	06	0830	0.10		0.270		66.06	183.49	14.14	39.29		
22-Jun-09	06	0800	0.10		0.300		73.40	183.49	15.72	39.29		
20-Aug-09	06	1330	0.10		0.281		68.75	183.49	14.72	39.29		
11-Nov-09	06	1145	1.55		0.394		1,489.30	2,834.97	318.90	607.05		
Total Dissolved Solids			**0.94**		**0.315**		**771.59**	**Ave kg/day**	**165.22**	**Ave lb/Ac/Year**		**-**
E. Coli						MPN		1000 MPN / day		1000 MPN / Ac	Apr - Oct	
22-Jul-08	06	1133	0.10	< 235 MPN	2,419.0	**results gre	591,826.62	57,494.53	157.49	15.30	601,228.46	allowed 1000 mpn/day
18-Aug-08	06	1022	0.10		313.0		76,577.81	57,494.53	20.38	15.30	452.68	allowed 1000 mpn/ac
15-Sep-08	06	1136	1.08		*>2400*	*results not included in averages					1,701,125.65	ave 1000 mpn/day
16-Oct-08	06	1142	0.10		148.3		36,282.72	57,494.53	9.65	15.30	452.68	ave 1000 mpn/ac
11-Nov-08	06	1105	0.00		2.0		4.89	574.95	0.00	0.15		
22-Dec-08	06	1207	0.10		27.5		6,728.08	57,494.53	1.79	15.30	Annual	
22-Jan-09	06	1035	0.92		629.4	Probable so	1,422,844.18	531,249.41	378.62	141.37	559,554.41	allowed 1000 mpn/day
24-Feb-09	06	0840	1.5		158.5		577,019.95	855,518.54	153.55	227.66	148.90	allowed 1000 mpn/ac
25-Mar-09	06	1040	1.3		1,553.0		4,840,603.54	732,480.25	1,288.10	194.92	1,469,826.95	ave 1000 mpn/day
23-Apr-09	06	0910	6.7		658.6		10,828,034.48	3,863,632.10	2,881.38	1,028.13	391.13	ave 1000 mpn/ac
18-May-09	06	0830	0.10		365.4		89,397.87	57,494.53	23.79	15.30		
22-Jun-09	06	0800	0.10		706.9		172,948.43	57,494.53	46.02	15.30		
20-Aug-09	06	1330	0.10		461.1		112,811.60	57,494.53	30.02	15.30		
11-Nov-09	06	1145	1.55		93.3		352,670.20	888,290.42	93.85	236.38		
E. Coli			**0.94**		**620.2**		**1,469,827.0**	Ave 1000MPN/day	**391.1**	Ave 1000 MPN/Ac		**183%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
22-Jul-08	06	1133	0.10	< 30.0 mg/L	33	mg/L	8,073.70	7,339.73	0.86	0.79	77,067.13	allowed kg/day
18-Aug-08	06	1022	0.10		10		2,446.58	7,339.73	0.26	0.79	8.25	allowed T / Ac / Year
15-Sep-08	06	1136	1.08		3		7,926.90	79,269.05	0.85	8.49	9,933.10	ave kg/day
16-Oct-08	06	1142	0.10		26		6,361.10	7,339.73	0.68	0.79	1.06	Ave T / Ac / Year
11-Nov-08	06	1105	0.00		21		51.38	73.40	0.01	0.01		
22-Dec-08	06	1207	0.10		3		733.97	7,339.73	0.08	0.79	Annual	
22-Jan-09	06	1035	0.92		6		13,563.81	67,819.07	1.45	7.26	71,992.23	allowed kg/day
24-Feb-09	06	0840	1.5		6		21,843.03	109,215.13	2.34	11.69	7.71	allowed T / Ac / Year
25-Mar-09	06	1040	1.3		3		9,350.81	93,508.12	1.00	10.01	14,059.07	ave kg/day
23-Apr-09	06	0910	6.7		2		32,881.98	493,229.63	3.52	52.81	1.51	Ave T / Ac / Year
18-May-09	06	0830	0.10		14		3,425.21	7,339.73	0.37	0.79		
22-Jun-09	06	0800	0.10		38		9,296.99	7,339.73	1.00	0.79		
20-Aug-09	06	1330	0.10		37.0		9,052.33	7,339.73	0.97	0.79		
11-Nov-09	06	1145	1.55		19.0		71,819.23	113,398.78	7.69	12.14		
Total Suspended Solids			**0.94**		**15.54**		**14,059.07**	**Ave kg/day**	**0.61**	**T/Ac/Year**		**-**
Ammonia								kg/day		lb / Ac / Year		
22-Jul-08	06	1133	0.10		<0.200	mg/L						
18-Aug-08	06	1022	0.10	< 0.0761 mg/L	0.282		68.99	15.44	14.77	3.31		
15-Sep-08	06	1136	1.08		<0.200							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
16-Oct-08	06	1142	0.10		<0.200							
11-Nov-08	06	1105	0.00		<0.200							
22-Dec-08	06	1207	0.10		<0.200							
22-Jan-09	06	1035	0.92		<0.200							
24-Feb-09	06	0840	1.5		<0.200							
25-Mar-09	06	1040	1.3		<0.200							
23-Apr-09	06	0910	6.7		<0.200							
18-May-09	06	0830	0.10		<0.200							
22-Jun-09	06	0800	0.10		<0.200							**reduction based upon Aug samples
20-Aug-09	06	1330	0.10		<0.200							
11-Nov-09	06	1145	1.55		<0.200							
Ammonia			**0.94**				**68.99**	**15.44**	**14.77**	**3.31**		**78%**
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
22-Jul-08	06	1133	0.10	< 0.04 mg/L	0.11	mg/L	26.91	9.79	5.76	2.10	**38.24**	**Ave kg/day**
18-Aug-08	06	1022	0.10		0.15		36.70	9.79	7.86	2.10	**8.19**	**Ave lb / Ac / Year**
15-Sep-08	06	1136	1.08		0.11		290.65	105.69	62.24	22.63		
16-Oct-08	06	1142	0.10		0.32		78.29	9.79	16.76	2.10		
11-Nov-08	06	1105	0.00		0.16		0.39	0.10	0.08	0.02		
22-Dec-08	06	1207	0.10		<0.10							
22-Jan-09	06	1035	0.92		<0.10							
24-Feb-09	06	0840	1.5		<0.10							
25-Mar-09	06	1040	1.3		<0.10							
23-Apr-09	06	0910	6.7		<0.10							
18-May-09	06	0830	0.10		0.14		34.25	9.79	7.33	2.10		
22-Jun-09	06	0800	0.10		0.31		75.84	9.79	16.24	2.10		***reduction based on Apr-Oct loads*
20-Aug-09	06	1330	0.10		<0.10							
11-Nov-09	06	1145	1.55		0.15		566.99	151.20	121.41	32.38		
Total Phosphorus			**0.94**		**0.19**		**138.75**	**Ave kg/day**	**29.71**	**lb / Ac / Year**		**69%**
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
22-Jul-08	06	1133	0.10	< 10 mg / L	2.940	mg/L	719.29	2,446.58	154.02	523.88	**23,997.41**	**Ave kg/day**
18-Aug-08	06	1022	0.10		0.289		70.71	2,446.58	15.14	523.88	**2.57**	**Ave T / Ac / Year**
15-Sep-08	06	1136	1.08		0.210		554.88	26,423.02	118.82	5,657.96		
16-Oct-08	06	1142	0.10		<0.050		0.00	2,446.58	0.00	523.88		
11-Nov-08	06	1105	0.00		0.281		0.69	24.47	0.15	5.24		
22-Dec-08	06	1207	0.10		2.940		719.29	2,446.58	154.02	523.88		
22-Jan-09	06	1035	0.92		3.790		8,567.81	22,606.36	1,834.62	4,840.70		
24-Feb-09	06	0840	1.5		3.030		11,030.73	36,405.04	2,362.01	7,795.41		
25-Mar-09	06	1040	1.3		0.744		2,319.00	31,169.37	496.57	6,674.29		
23-Apr-09	06	0910	6.7		0.105		1,726.30	164,409.88	369.65	35,205.07		
18-May-09	06	0830	0.10		3.030		741.31	2,446.58	158.74	523.88		
22-Jun-09	06	0800	0.10		0.732		179.09	2,446.58	38.35	523.88		
20-Aug-09	06	1330	0.10		0.233		57.01	2,446.58	12.21	523.88		
11-Nov-09	06	1145	1.55		0.123		464.93	37,799.59	99.56	8,094.02		
Nitrate - Nitrite			**0.94**		**1.419**		**1,939.36**	**Ave kg/day**	**0.21**	**T / Ac / Year**		
Hardness (CaCO3)												
18-Aug-08	06	1022	0.10		300							
11-Nov-08	06	1105	0.00		300							
24-Feb-09	06	0840	1.5		300							
18-May-09	06	0830	0.10		190							
Hardness (CaCO3)			**0.42**									

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Al, Total								kg / day		lb / Ac / Year		Allowed
18-Aug-08	06	1022	0.10	< 174µg/L	0.610	mg/L	149.24	42.57	31.96	9.12	**190.29**	**Ave kg/day**
11-Nov-08	06	1105	0.10		1.730		423.26	42.57	90.63	9.12	**40.75**	**Ave lb / Ac / Year**
24-Feb-09	06	0840	1.5		0.147		535.15	633.45	114.59	135.64		
18-May-09	06	0830	0.10		1.400		342.52	42.57	73.34	9.12		
Total Aluminum			**0.45**				**362.54**	**Ave kg/day**	**77.63**	**lb / Ac / Year**		-
Al, Dissolved								kg / day		lb / Ac / Year		Allowed
11-Nov-08	06	1022	0.10	< 174µg/L	1.620	mg/L	396.34523849	42.57	84.87	9.12	**436.49**	**Ave kg/day**
24-Feb-09	06	1105	1.5		0.039		141.97967210	633.45	30.40	135.64	**93.47**	**Ave lb / Ac / Year**
18-May-09	06	0840	0.10		1.280		4,659.85	633.45	997.81	135.64		
Dissolved Aluminum			**0.56**				**1,732.72**	**Ave kg/day**	**371.03**	**lb / Ac / Year**		75%
Fe, Total								kg / day		lb / Ac / Year		Allowed
18-Aug-08	06	1022	0.10	< 2.5 mg/L	1.830	mg/L	447.72	611.64	95.87	130.97	**2,734.05**	**Ave kg/day**
11-Nov-08	06	1105	0.10		1.760		430.60	611.64	92.20	130.97	**585.44**	**Ave lb / Ac / Year**
24-Feb-09	06	0840	1.5		0.247		899.20	9,101.26	192.55	1,948.85		
18-May-09	06	0830	0.10		1.310		320.50	611.64	68.63	130.97		
Total Iron			**0.45**				**524.51**	**Ave kg/day**	**112.31**	**lb / Ac / Year**		-
Fe, Dissolved								kg / day		lb / Ac / Year		Allowed
11-Nov-08	06	1022	0.10	< 2.5 mg/L	1.520	mg/L	371.88	611.64	79.63	130.97	**3,441.52**	**Ave kg/day**
24-Feb-09	06	1105	1.5		0.117		425.94	9,101.26	91.21	1,948.85	**736.93**	**Ave lb / Ac / Year**
18-May-09	06	0840	0.10		1.040		254.44	611.64	54.48	130.97		
Dissolved Iron			**0.56**				**350.75**	**Ave kg/day**	**75.11**	**lb / Ac / Year**		-
Cu, Total								kg / day		lb / Ac / Year		Allowed
18-Aug-08	06	1022	0.10	0.029	0.002	mg/L	0.49	7.10	0.10	1.52	**31.17**	**Ave kg/day**
11-Nov-08	06	1105	0.10	0.029	<0.001		0.00	7.10	0.00	1.52	**6.67**	**Ave lb / Ac / Year**
24-Feb-09	06	0840	1.5	0.029	0.002		7.28	105.66	1.56	22.62		
18-May-09	06	0830	0.10	0.020	0.002		0.49	4.81	0.10	1.03		
Total Copper			**0.45**				**2.07**	**Ave kg/day**	**0.18**	**T/Ac/Year**		-
Cu, Dissolved								kg / day		lb / Ac / Year		Allowed
11-Nov-08	06	1022	0.10	0.029	<0.001	mg/L	0.00	7.10	0.00	1.52	**39.19**	**Ave kg/day**
24-Feb-09	06	1105	1.5	0.029	0.009		32.76	105.66	7.02	22.62	**8.39**	**Ave lb / Ac / Year**
18-May-09	06	0840	0.10	0.020	0.002		0.49	4.81	0.10	1.03		
Dissolved Copper			**0.56**				**11.08**	**Ave kg/day**	**0.96**	**T/Ac/Year**		-
Mn, Total								kg / day		lb / Ac / Year		Allowed
18-Aug-08	06	1022	0.10	1.389	1.830	mg/L	447.72	339.78	95.87	72.76	**1,490.76**	**Ave kg/day**
11-Nov-08	06	1105	0.10	1.389	1.860		455.06	339.78	97.44	72.76	**319.22**	**Ave lb / Ac / Year**
24-Feb-09	06	0840	1.5	1.389	0.240		873.72	5,055.97	187.09	1,082.63		
18-May-09	06	0830	0.10	0.930	0.149		36.45	227.49	7.81	48.71		
Total Manganese			**0.45**				**453.24**	**Ave kg/day**	**39.05**	**T/Ac/Year**		-
Mn, Dissolved								kg / day		lb / Ac / Year		Allowed
11-Nov-08	06	1105	0.10	1.389	1.830	mg/L	447.72	339.78	95.87	72.76	**1,874.41**	**Ave kg/day**
24-Feb-09	06	0840	1.5	1.389	0.214		779.07	5,055.97	166.82	1,082.63	**401.37**	**Ave lb / Ac / Year**
18-May-09	06	0830	0.10	0.930	0.093		22.75	227.49	4.87	48.71		
Dissolved Manganese			**0.56**				**416.51**	**Ave kg/day**	**35.88**	**T/Ac/Year**		-
Cl												
11-Nov-08	06	1105	-		< 1							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Chlorine			**-**								
SO4											
11-Nov-08	06	1105	-		7.8						
Sulfate			**-**								

SITE #7

Drainage Area: 2,797.79 Acres

Date	Site No	Time	Notes / Conditions
15-Jul-08	07	1346	
20-Aug-08	07	0854	Stagnant
18-Sep-08	07	1015	
16-Oct-08	07	1115	SLIGHT flow evident, but not measureable. Bluegill with fungus.
11-Nov-08	07	1136	SLIGHT flow evident, but not measureable. Raw sewage odor.
18-Dec-08	07	1220	
21-Jan-09	07	1220	Mostly frozen, except under bridge. Slimy coating on rocks
25-Feb-09	07	1227	
24-Mar-09	07	1120	Sharp alcohol smell to water. Oil & film on pool behind debris. Brownish-red in channel. Red edges of streem. When bottom disturbed, remains of an algal mat? 'c
22-Apr-09	07	1205	No apparent odor to water. Glide to ripple under bridge. Water color like weak tea with a green tinge.
21-May-09	07	1050	Slight sewage smell. Color light yellow-green.
23-Jun-09	07	0840	"Somewhat muddy odor" to water. In stream milkyness. In container milky-tan color. Banks in relatively good / stable condition
18-Aug-09	07	1205	No odor. Sandy colour. Very slimy bottom. Mass of leaves pooled above sampling spot.
9-Nov-09	07	1055	"Salty" odor. Tan color. Japanese honeysuckle getting worse. New "old" log at bridge. Slight foaming.

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Turbidity							Apr - Oct Average NTU				36.0 NTU Allowed
15-Jul-08	07	1346	0.10	n/a	**54.0**	NTU	43.21	36.0			
20-Aug-08	07	0854	0.10	< 36 NTU	**48.0**						
18-Sep-08	07	1015	6.93		**49.0**						
16-Oct-08	07	1115	0.10		16.4						
11-Nov-08	07	1136	0.10		18.4						
18-Dec-08	07	1220	4.82		20.0						
21-Jan-09	07	1220	0.85		16.2						
25-Feb-09	07	1227	4.61		**38.8**						
24-Mar-09	07	1120	0.94		**34.0**						
22-Apr-09	07	1205	15.60		**41.0**						
21-May-09	07	1050	9.76		**39.6**						
23-Jun-09	07	0840	15.23		78.0						***improvement based upon Apr-Oct average*
18-Aug-09	07	1205	1.40		19.7						
9-Nov-09	07	1055	7.18		30.8						
Turbidity			**4.84**		**36.0**						**13%**
Temperature							**Average May - Sept**				
15-Jul-08	07	1346	0.10	90° Max	76.06	°F	71.1				

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
20-Aug-08	07	0854	0.10	90° Max	70.24						
18-Sep-08	07	1015	6.93	90° Max	68.04						
16-Oct-08	07	1115	0.10	78° Max	62.04						
11-Nov-08	07	1136	0.10	70° Max	41.16						
18-Dec-08	07	1220	4.82	57° Max	33.17						
21-Jan-09	07	1220	0.85	50° Max	32.49						
25-Feb-09	07	1227	4.61	50° Max	38.6						
24-Mar-09	07	1120	0.94	60° Max	52.17						
22-Apr-09	07	1205	15.60	70° Max	37.45						
21-May-09	07	1050	9.76	80° Max	64.08						
23-Jun-09	07	0840	15.23	90° Max	73.59						
18-Aug-09	07	1205	1.40	90° Max	74.88						
9-Nov-09	07	1055	7.18	70° Max	53.25						
Temperature			**4.84**								
Dissolved Oxygen							Apr - Oct Average mg/L				
15-Jul-08	07	1346	0.10	Never < 4.0	7.73	mg/L	5.99				
20-Aug-08	07	0854	0.10	Ave. >5.0	3.25						
18-Sep-08	07	1015	6.93		6.38		Annual Average mg/L				Indiana average = 9.8 mg/L
16-Oct-08	07	1115	0.10		0.46		7.89				
11-Nov-08	07	1136	0.10		2.39						
18-Dec-08	07	1220	4.82		15.49		Annual Average %				Good defined as 80-120%
21-Jan-09	07	1220	0.85		12.31		70.30				
25-Feb-09	07	1227	4.61		14.07						
24-Mar-09	07	1120	0.94		9.80						
22-Apr-09	07	1205	15.60		11.71						
21-May-09	07	1050	9.76		8.05						
23-Jun-09	07	0840	15.23		6.30						
18-Aug-09	07	1205	1.40		4.06						
9-Nov-09	07	1055	7.18		8.45						
Dissolved Oxygen			**4.84**		**7.89**					**to reach Indiana Average (annual)**	**19%**
pH											
15-Jul-08	07	1346	0.10	6.0 - 9.0	7.36						
20-Aug-08	07	0854	0.10		7.40						
18-Sep-08	07	1015	6.93		7.20						
16-Oct-08	07	1115	0.10		7.45						
11-Nov-08	07	1136	0.10		7.45						
18-Dec-08	07	1220	4.82		7.43						
21-Jan-09	07	1220	0.85		7.14						
25-Feb-09	07	1227	4.61		7.36						
24-Mar-09	07	1120	0.94		7.61						
22-Apr-09	07	1205	15.60		7.09						
21-May-09	07	1050	9.76		7.43						
23-Jun-09	07	0840	15.23		7.17						
18-Aug-09	07	1205	1.40		7.38						
9-Nov-09	07	1055	7.18		7.60						
pH			**4.84**		**7.36**						
Specific Conductance											
15-Jul-08	07	1346	0.10	< 1.20 mS/cm	0.229	mS/cm					refer to TDS
20-Aug-08	07	0854	0.10		0.400						
18-Sep-08	07	1015	6.93		0.144						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
16-Oct-08	07	1115	0.10		0.505							
11-Nov-08	07	1136	0.10		0.662							
18-Dec-08	07	1220	4.82		0.379							
21-Jan-09	07	1220	0.85		0.455							
25-Feb-09	07	1227	4.61		0.363							
24-Mar-09	07	1120	0.94		0.467							
22-Apr-09	07	1205	15.60		0.591							
21-May-09	07	1050	9.76		0.268							
23-Jun-09	07	0840	15.23		0.220							
18-Aug-09	07	1205	1.40		0.188							
9-Nov-09	07	1055	7.18		0.302							
Specific Conductance			**4.84**		**0.370**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
15-Jul-08	07	1346	0.10	< 750 mg/L	0.149	g/L	36.45	183.49	10.48	52.78	**8,873.47**	**Ave kg/day**
20-Aug-08	07	0854	0.10		0.260		63.61	183.49	18.30	52.78	**1.28**	**Ave T / Ac / Year**
18-Sep-08	07	1015	6.93		0.094	YSI	1,593.75	12,716.08	458.39	3,657.34		
16-Oct-08	07	1115	0.10		0.094		23.00	183.49	6.61	52.78		
11-Nov-08	07	1136	0.10		0.328		80.25	183.49	23.08	52.78		
18-Dec-08	07	1220	4.82		0.430		5,066.56	8,837.03	1,457.22	2,541.67		
21-Jan-09	07	1220	0.85		0.246		511.58	1,559.69	147.14	448.59		
25-Feb-09	07	1227	4.61		0.296		3,337.05	8,455.37	959.79	2,431.89		
24-Mar-09	07	1120	0.94		0.236		540.44	1,717.50	155.44	493.98		
22-Apr-09	07	1205	15.60		0.303		11,564.47	28,624.93	3,326.12	8,232.97		
21-May-09	07	1050	9.76		0.384		9,169.37	17,908.93	2,637.25	5,150.88		
23-Jun-09	07	0840	15.23		0.143		5,326.62	27,936.83	1,532.02	8,035.06		
18-Aug-09	07	1205	1.40		0.122		416.38	2,559.73	119.76	736.22		
9-Nov-09	07	1055	7.18		0.196		3,443.98	13,178.48	990.54	3,790.33		
Total Dissolved Solids			**4.84**		**0.234**		**2,940.97**	**Ave kg/day**	**845.87**	**Ave lb/Ac/Year**		-
E. Coli						MPN		1000 MPN / day		1000 MPN / Ac	Apr - Oct	
15-Jul-08	07	1346	0.10	< 235 MPN	488.4		119,490.75	57,494.53	42.71	20.55	3,536,631.99	allowed 1000 mpn/day
20-Aug-08	07	0854	0.10		15.8		3,865.59	57,494.53	1.38	20.55	1,264.08	allowed 1000 mpn/ac
18-Sep-08	07	1015	6.93		226.2		3,835,168.64	3,984,370.61	1,370.79	1,424.11	3,105,158.97	ave 1000 mpn/day
16-Oct-08	07	1115	0.10		290.9		71,170.88	57,494.53	25.44	20.55	1,109.86	ave 1000 mpn/ac
11-Nov-08	07	1136	0.10		58.1		14,214.60	57,494.53	5.08	20.55		
18-Dec-08	07	1220	4.82		549.3		6,472,241.41	2,768,936.34	2,313.34	989.69	Annual	
21-Jan-09	07	1220	0.85		11.0		22,875.48	488,703.47	8.18	174.67	2,780,353.11	allowed 1000 mpn/day
25-Feb-09	07	1227	4.61		67.0		755,345.95	2,649,347.73	269.98	946.94	993.77	allowed 1000 mpn/ac
24-Mar-09	07	1120	0.94		93.0		212,969.51	538,148.76	76.12	192.35	2,442,287.14	ave 1000 mpn/day
22-Apr-09	07	1205	15.60		43.5		1,660,246.17	8,969,145.95	593.41	3,205.80	872.93	ave 1000 mpn/ac
21-May-09	07	1050	9.76		56.3		1,344,363.90	5,611,465.67	480.51	2,005.68		
23-Jun-09	07	0840	15.23		461.1		17,175,565.86	8,753,541.48	6,138.98	3,128.73	*improvement based on Apr-Oct samples*	
18-Aug-09	07	1205	1.40		185.0		631,399.98	802,048.63	225.68	286.67		
9-Nov-09	07	1055	7.18		106.6		1,873,101.17	4,129,256.81	669.49	1,475.90		
E. Coli			**4.84**		**189.4**		**2,442,287.1**	Ave 1000MPN/day	**872.9**	Ave 1000 MPN/Ac		**-12%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
15-Jul-08	07	1346	0.10	< 30.0 mg/L	14	mg/L	3,425.21	7,339.73	0.49	1.06	451,484.93	allowed kg/day
20-Aug-08	07	0854	0.10		25		6,116.44	7,339.73	0.88	1.06	64.93	allowed T / Ac / Year
18-Sep-08	07	1015	6.93		47		796,874.12	508,643.06	114.60	73.15	677,334.44	ave kg/day
16-Oct-08	07	1115	0.10		3		733.97	7,339.73	0.11	1.06	97.41	Ave T / Ac / Year
11-Nov-08	07	1136	0.10		9		2,201.92	7,339.73	0.32	1.06		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
18-Dec-08	07	1220	4.82		6		70,696.25	353,481.23	10.17	50.83	Annual	
21-Jan-09	07	1220	0.85		5		10,397.95	62,387.68	1.50	8.97	354,938.69	allowed kg/day
25-Feb-09	07	1227	4.61		11		124,012.02	338,214.60	17.83	48.64	51.04	allowed T / Ac / Year
24-Mar-09	07	1120	0.94		15		34,349.92	68,699.84	4.94	9.88	417,488.02	ave kg/day
22-Apr-09	07	1205	15.60		85		3,244,159.17	1,144,997.36	466.53	164.66	60.04	Ave T / Ac / Year
21-May-09	07	1050	9.76		11		262,664.35	716,357.32	37.77	103.02		
23-Jun-09	07	0840	15.23		27		1,005,726.04	1,117,473.38	144.63	160.70		
18-Aug-09	07	1205	1.40		29.0		98,976.21	102,389.19	14.23	14.72		
9-Nov-09	07	1055	7.18		10.5		184,498.71	527,139.17	26.53	75.81		
Total Suspended Solids			**4.84**		**21**		**417,488.02**	**Ave kg/day**	**60.04**	**T/Ac/Year**		**15%**
Ammonia								kg/day		lb / Ac / Year		
15-Jul-08	07	1346	0.10	<0.1183	0.360	mg/L	88.08	46.07	25.33	13.25		
20-Aug-08	07	0854	0.10		<0.200							
18-Sep-08	07	1015	6.93		<0.200							
16-Oct-08	07	1115	0.10		<0.200							
11-Nov-08	07	1136	0.10		<0.200							
18-Dec-08	07	1220	4.82		<0.200							
21-Jan-09	07	1220	0.85		<0.200							
25-Feb-09	07	1227	4.61		<0.200							
24-Mar-09	07	1120	0.94		<0.200							
22-Apr-09	07	1205	15.60		<0.200							
21-May-09	07	1050	9.76		<0.200							
23-Jun-09	07	0840	15.23		<0.200						**reduction based upon July, aug samples	
18-Aug-09	07	1205	1.40	<.0122 mg/L	1.190		4,061.44	41.64	1,168.13	11.98		
9-Nov-09	07	1055	7.18		<0.200							
Ammonia			**4.84**				**2,074.76**	**43.85**	**596.73**	**12.61**		**98%**
Total Phosphorus							**kg / day**		**lb / Ac / Year**			**Allowed**
15-Jul-08	07	1346	0.10	< 0.04 mg/L	0.25	mg/L	**61.16**	9.79	**17.59**	2.81	**503.26**	**Ave kg/day**
20-Aug-08	07	0854	0.10		0.24		**58.72**	9.79	**16.89**	2.81	**144.74**	**Ave lb / Ac / Year**
18-Sep-08	07	1015	6.93		0.25		**4,238.69**	678.19	**1,219.11**	195.06		
16-Oct-08	07	1115	0.10		0.40		**97.86**	9.79	**28.15**	2.81		
11-Nov-08	07	1136	0.10		0.21		**51.38**	9.79	**14.78**	2.81		
18-Dec-08	07	1220	4.82		0.26		**3,063.50**	471.31	**881.11**	135.56		
21-Jan-09	07	1220	0.85		<0.10							
25-Feb-09	07	1227	4.61		0.10		**1,127.38**	450.95	**324.25**	129.70		
24-Mar-09	07	1120	0.94		0.10		**229.00**	91.60	**65.86**	26.35		
22-Apr-09	07	1205	15.60		0.21		**8,014.98**	1,526.66	**2,305.23**	439.09		
21-May-09	07	1050	9.76		0.15		**3,581.79**	955.14	**1,030.18**	274.71		
23-Jun-09	07	0840	15.23		0.28		**10,429.75**	1,489.96	**2,999.76**	428.54		
18-Aug-09	07	1205	1.40		0.25		**853.24**	136.52	**245.41**	39.26		
9-Nov-09	07	1055	7.18		0.26		**4,568.54**	702.85	**1,313.98**	202.15		
Total Phosphorus			**4.84**				**2,798.15**	**Ave kg/day**	**804.79**	**lb / Ac / Year**		**82%**
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
15-Jul-08	07	1346	0.10	< 10 mg / L	1.230	mg/L	300.93	2,446.58	86.55	703.67	**118,312.90**	**Ave kg/day**
20-Aug-08	07	0854	0.10		>0.050		0.00	2,446.58	0.00	703.67	**17.01**	**Ave T / Ac / Year**
18-Sep-08	07	1015	6.93		1.200		20,345.72	169,547.69	5,851.74	48,764.51		
16-Oct-08	07	1115	0.10		1.650		403.68	2,446.58	116.11	703.67		
11-Nov-08	07	1136	0.10		0.244		59.70	2,446.58	17.17	703.67		
18-Dec-08	07	1220	4.82		0.210		2,474.37	117,827.08	711.67	33,888.87		
21-Jan-09	07	1220	0.85		0.555		1,154.17	20,795.89	331.96	5,981.22		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
25-Feb-09	07	1227	4.61		0.383		4,317.87	112,738.20	1,241.89	32,425.23		
24-Mar-09	07	1120	0.94		0.456		1,044.24	22,899.95	300.34	6,586.38		
22-Apr-09	07	1205	15.60		1.386		52,898.88	381,665.79	15,214.53	109,772.93		
21-May-09	07	1050	9.76		<0.020		0.00	238,785.77	0.00	68,678.45		
23-Jun-09	07	0840	15.23		1.490		55,501.18	372,491.13	15,962.99	107,134.15		
18-Aug-09	07	1205	1.40		0.254		866.90	34,129.73	249.33	9,816.23		
9-Nov-09	07	1055	7.18		0.218		3,830.54	175,713.06	1,101.72	50,537.77		
Nitrate - Nitrite			**4.84**				**10,228.44**	**Ave kg/day**	**1.47**	**T / Ac / Year**		
Hardness (CaCO3)												
20-Aug-08	07	0854	0.10		210							
11-Nov-08	07	1136	0.10		480							
25-Feb-09	07	1227	4.61		270							
21-May-09	07	1050	9.76		190							
Hardness (CaCO3)			**3.64**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
20-Aug-08	07	0854	0.10	< 174µg/L	0.858	mg/L	209.92	42.57	60.38	12.24	**1,550.41**	**Ave kg/day**
11-Nov-08	07	1136	0.10		0.015		3.67	42.57	1.06	12.24	**445.92**	**Ave lb / Ac / Year**
25-Feb-09	07	1227	4.61		0.822		9,267.08	1,961.64	2,665.35	564.20		
21-May-09	07	1050	9.76		0.965		23,042.83	4,154.87	6,627.47	1,195.00		
Total Aluminum			**3.64**				**8,130.87**	**Ave kg/day**	**2,338.56**	**lb / Ac / Year**		**81%**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	07	1136	0.10	< 174µg/L	0.013	mg/L	3.18	42.57	0.91	12.24	**2,053.03**	**Ave kg/day**
25-Feb-09	07	1227	4.61		0.020		225.48	1,961.64	64.85	564.20	**590.48**	**Ave lb / Ac / Year**
21-May-09	07	1050	9.76		0.674		16,094.16	4,154.87	4,628.93	1,195.00		
Dissolved Aluminum			**4.82**				**5,440.94**	**Ave kg/day**	**1,564.90**	**lb / Ac / Year**		**62%**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
20-Aug-08	07	0854	0.10	< 2.5 mg/L	2.440	mg/L	596.96	611.64	171.70	175.92	**22,276.07**	**Ave kg/day**
11-Nov-08	07	1136	0.10		2.330		570.05	611.64	163.96	175.92	**6,406.94**	**Ave lb / Ac / Year**
25-Feb-09	07	1227	4.61		0.816		9,199.44	28,184.55	2,645.90	8,106.31		
21-May-09	07	1050	9.76		1.340		31,997.29	59,696.44	9,202.91	17,169.61		
Total Iron			**3.64**				**10,590.94**	**Ave kg/day**	**3,046.12**	**lb / Ac / Year**		**-**
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	07	1136	0.10	< 2.5 mg/L	1.760	mg/L	430.60	611.64	123.85	175.92	**29,497.55**	**Ave kg/day**
25-Feb-09	07	1227	4.61		0.091		1,025.92	28,184.55	295.07	8,106.31	**8,483.95**	**Ave lb / Ac / Year**
21-May-09	07	1050	9.76		0.734		17,526.88	59,696.44	5,041.00	17,169.61		
Dissolved Iron			**4.82**				**6,327.80**	**Ave kg/day**	**1,819.97**	**lb / Ac / Year**		**-**
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
20-Aug-08	07	0854	0.10	0.021	0.002	mg/L	0.49	5.24	0.14	1.51	**195.98**	**Ave kg/day**
11-Nov-08	07	1136	0.10	0.043	<0.001		0.00	10.61	0.00	3.05	**56.37**	**Ave lb / Ac / Year**
25-Feb-09	07	1227	4.61	0.027	<0.001		0.00	299.02	0.00	86.00		
21-May-09	07	1050	9.76	0.020	0.002		47.76	469.07	13.74	134.91		
Total Copper			**3.64**				**12.06**	**Ave kg/day**	**1.40**	**T/Ac/Year**		**-**
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Nov-08	07	1136	0.10	0.043	<0.001	mg/L	0.00	10.61	0.00	3.05	**259.57**	**Ave kg/day**
25-Feb-09	07	1227	4.61	0.027	0.001		11.27	299.02	3.24	86.00	**74.65**	**Ave lb / Ac / Year**
21-May-09	07	1050	9.76	0.020	0.002		47.76	469.07	13.74	134.91		
Dissolved Copper			**4.82**				**19.68**	**Ave kg/day**	**2.28**	**T/Ac/Year**		**-**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Mn, Total								kg / day		lb / Ac / Year		Allowed
20-Aug-08	07	0854	0.10	1.015	0.762	mg/L	186.43	248.39	53.62	71.44	**9,309.42**	**Ave kg/day**
11-Nov-08	07	1136	0.10	2.099	0.020		4.89	513.45	1.41	147.68	**2,677.53**	**Ave lb / Ac / Year**
25-Feb-09	07	1227	4.61	1.266	0.244		2,750.81	14,273.17	791.18	4,105.18		
21-May-09	07	1050	9.76	0.930	0.153		3,653.42	22,202.67	1,050.78	6,385.83		
Total Manganese			**3.64**				**1,648.89**	**Ave kg/day**	**190.81**	**T/Ac/Year**		-
Mn, Dissolved								kg / day		lb / Ac / Year		Allowed
11-Nov-08	07	1136	0.10	2.099	0.290	mg/L	70.95	513.45	20.41	147.68	**12,329.76**	**Ave kg/day**
25-Feb-09	07	1227	4.61	1.266	0.204		2,299.86	14,273.17	661.47	4,105.18	**3,546.23**	**Ave lb / Ac / Year**
21-May-09	07	1050	9.76	0.930	0.049		1,170.05	22,202.67	336.52	6,385.83		
Total Manganese			**4.82**				**1,180.29**	**Ave kg/day**	**136.58**	**T/Ac/Year**		-
Cl												
11-Nov-08	07	1136	-		23.1							
Chlorine			**-**									
SO4												
11-Nov-08	07	1136	-		43.1							
Sulfate			**-**									

SITE #8

Drainage Area: 3,714.88 Acres ** Part of Point 8 drainage area

Date	Site No	Time	Notes / Conditions
15-Jul-08	08	1434	Cattle pastured North side of stream. Urine-like odor to water
20-Aug-08	08	0822	Rip-rap under bridge 1-2' higher than stream level - severely impeding flow
18-Sep-08	08	1040	
16-Oct-08	08	1142	
13-Nov-08	08	1336	Good flow under bridge. Happy llamas south pasture.
18-Dec-08	08	1212	Partially frozen. Obvious raw sewage influx into stream (paper, tampons) No photos - camera frozen
21-Jan-09	08	1150	
25-Feb-09	08	No samples -	Bridge Work
24-Mar-09	08	1055	Urine-like odor to water. Water clear with green tinge. Heavy slime on bed, algae mat on surface. Good crop of mosquitos hatching
22-Apr-09	08	1225	No apparent odor to water. Vibrant colored, teal-blue algae. Water kind of greenish in color.
21-May-09	08	1115	No apparent odor to water. Color light tan. No cattle on site. Very slimy bottom. 4" softshell turtle.
23-Jun-09	08	0905	Salty, sharpish odor to water. Khaki color. On 6/18, waters had topped the streambanks - 6-9ft higher than level on 6/23
18-Aug-09	08	1220	No odor. Olive color. Looks like cows may have been in pasture, but couldn't see any. 1 dead crawdad, 1 molting crawdad.
9-Nov-09	08	1130	Somewhat sharp odor. Tan color.

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Turbidity							Apr - Oct Average NTU					
15-Jul-08	08	1434	14.40	n/a	40.0	NTU	57.6	36.0			36.0	NTU Allowed
20-Aug-08	08	0822	0.10	< 36 NTU	42.0							
18-Sep-08	08	1040	4.44		70.0							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
16-Oct-08	08	1142	1.73		58.0						
13-Nov-08	08	1336	4.51		38.0						
18-Dec-08	08	1212	8.30		18.5						
21-Jan-09	08	1150	1.67		19.5						
25-Feb-09	08	No samples - Bridge Work									
24-Mar-09	08	1055	1.78		19.1						
22-Apr-09	08	1225	26.30		62.4						
21-May-09	08	1115	16.17		57.2						
23-Jun-09	08	0905	25.30		68.0						***improvement based on Apr-Oct samples*
18-Aug-09	08	1220	0.10		63.3						
9-Nov-09	08	1130	6.00		30.4						
Turbidity			**8.52**		**45.1**						**38%**
Temperature							**Average May - Sept**				
15-Jul-08	08	1434	14.40	90° Max	81.13	°F	74.1				
20-Aug-08	08	0822	0.10	90° Max	70.93						
18-Sep-08	08	1040	4.44	90° Max	65.52						
16-Oct-08	08	1142	1.73	78° Max	65.64						
13-Nov-08	08	1336	4.51	70° Max	51.79						
18-Dec-08	08	1212	8.30	57° Max	32.52						
21-Jan-09	08	1150	1.67	50° Max	33.34						
25-Feb-09	08	No samples - Bridge Work									
24-Mar-09	08	1055	1.78	60° Max	51.51						
22-Apr-09	08	1225	26.30	70° Max	55.37						
21-May-09	08	1115	16.17	80° Max	66.17						
23-Jun-09	08	0905	25.30	90° Max	76.11						
18-Aug-09	08	1220	0.10	90° Max	84.45						
9-Nov-09	08	1130	6.00	70° Max	54.75						
Temperature			**8.52**								
Dissolved Oxygen							Apr - Oct Average mg/L				
15-Jul-08	08	1434	14.40	Never < 4.0	9.27	mg/L	6.97				
20-Aug-08	08	0822	0.10	Ave. >5.0	0.81						
18-Sep-08	08	1040	4.44		7.35		Annual Average mg/L				Indiana average = 9.8 mg/L
16-Oct-08	08	1142	1.73		2.67		8.24				
13-Nov-08	08	1336	4.51		6.75						
18-Dec-08	08	1212	8.30		13.94		Annual Average %				Good defined as 80-120%
21-Jan-09	08	1150	1.67		12.98		79.55				
25-Feb-09	08	No samples - Bridge Work									
24-Mar-09	08	1055	1.78		8.43						
22-Apr-09	08	1225	26.30		11.95						
21-May-09	08	1115	16.17		8.23						
23-Jun-09	08	0905	25.30		7.20						
18-Aug-09	08	1220	0.10		8.26						
9-Nov-09	08	1130	6.00		9.22						
Dissolved Oxygen			**8.52**		**8.24**					**to reach Indiana Average (annual)**	**16%**
pH											
15-Jul-08	08	1434	14.40	6.0 - 9.0	7.60						
20-Aug-08	08	0822	0.10		7.45						
18-Sep-08	08	1040	4.44		7.11						
16-Oct-08	08	1142	1.73		7.39						
13-Nov-08	08	1336	4.51		7.45						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
18-Dec-08	08	1212	8.30		7.51							
21-Jan-09	08	1150	1.67		7.27							
25-Feb-09	08	No samples - Bridge Work										
24-Mar-09	08	1055	1.78		7.43							
22-Apr-09	08	1225	26.30		7.65							
21-May-09	08	1115	16.17		7.38							
23-Jun-09	08	0905	25.30		7.25							
18-Aug-09	08	1220	0.10		8.47							
9-Nov-09	08	1130	6.00		7.57							
pH			**8.52**		**7.50**							
Specific Conductance												
15-Jul-08	08	1434	14.40	< 1.20 mS/cm	0.264	mS/cm						refer to TDS
20-Aug-08	08	0822	0.10		0.844							
18-Sep-08	08	1040	4.44		0.131							
16-Oct-08	08	1142	1.73		0.258							
13-Nov-08	08	1336	4.51		0.316							
18-Dec-08	08	1212	8.30		0.348							
21-Jan-09	08	1150	1.67		0.444							
25-Feb-09	08	No samples - Bridge Work										
24-Mar-09	08	1055	1.78		0.456							
22-Apr-09	08	1225	26.30		0.297							
21-May-09	08	1115	16.17		0.238							
23-Jun-09	08	0905	25.30		0.214							
18-Aug-09	08	1220	0.10		0.268							
9-Nov-09	08	1130	6.00		0.278							
Specific Conductance			**8.52**		**0.335**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
15-Jul-08	08	1434	14.40	< 750 mg/L	0.172	g/L	6,059.68	26,423.02	1,312.60	5,723.54	**14,522.44**	**Ave kg/day**
20-Aug-08	08	0822	0.10		0.549		134.32	183.49	29.09	39.75	**1.57**	**Ave T / Ac / Year**
18-Sep-08	08	1040	4.44		0.085	YSI	923.34	8,147.10	200.01	1,764.76		
16-Oct-08	08	1142	1.73		0.168		710.25	3,170.76	153.85	686.82		
13-Nov-08	08	1336	4.51		0.206		2,273.02	8,275.54	492.36	1,792.58		
18-Dec-08	08	1212	8.30		0.226		4,589.29	15,229.93	994.09	3,298.98		
21-Jan-09	08	1150	1.67		0.289		1,183.62	3,071.68	256.39	665.36		
25-Feb-09	08	No samples - Bridge Work					-	-	-	-		
24-Mar-09	08	1055	1.78		0.296		1,286.15	3,258.84	278.60	705.90		
22-Apr-09	08	1225	26.30		0.193		12,420.46	48,266.04	2,690.42	10,455.00		
21-May-09	08	1115	16.17		0.154		6,092.41	29,670.84	1,319.69	6,427.06		
23-Jun-09	08	0905	25.30		0.139		8,603.87	46,423.77	1,863.70	10,055.94		
18-Aug-09	08	1220	0.10		0.174		42.57	183.49	9.22	39.75		
9-Nov-09	08	1130	6.00		0.181		2,656.98	11,009.59	575.53	2,384.81		
Total Dissolved Solids			**8.52**		**0.218**		**3,355.43**	**Ave kg/day**	**726.83**	**Ave lb/Ac/Year**		-
E. Coli						MPN		1000 MPN / day		1000 MPN / Ac	Apr - Oct	
15-Jul-08	08	1434	14.40	< 235 MPN	2,419.0	**results gre	85,223,033.95	8,279,211.65	22,940.99	2,228.66	6,363,350.33	allowed 1000 mpn/day
20-Aug-08	08	0822	0.10		456.9		111,784.04	57,494.53	30.09	15.48	1,712.94	allowed 1000 mpn/ac
18-Sep-08	08	1040	4.44		866.4		9,411,525.96	2,552,756.92	2,533.47	687.17	39,463,288.58	ave 1000 mpn/day
16-Oct-08	08	1142	1.73		960.6		4,061,111.85	993,505.40	1,093.20	267.44	10,623.03	ave 1000 mpn/ac
13-Nov-08	08	1336	4.51		1,011.2		11,157,637.14	2,593,003.09	3,003.50	698.00		
18-Dec-08	08	1212	8.30		43.7		887,397.42	4,772,045.60	238.88	1,284.58	Annual	
21-Jan-09	08	1150	1.67		<.1		0.00	962,458.35	0.00	259.08	4,900,391.07	allowed 1000 mpn/day

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
25-Feb-09	08	No samples - Bridge Work									1,319.12	allowed 1000 mpn/ac
24-Mar-09	08	1055	1.78		77.0		334,574.10	1,021,102.77	90.06	274.87	27,970,014.94	ave 1000 mpn/day
22-Apr-09	08	1225	26.30		85.5		5,502,328.83	15,123,359.94	1,481.16	4,071.02	7,529.18	ave 1000 mpn/ac
21-May-09	08	1115	16.17		1,553.1		61,442,385.70	9,296,864.75	16,539.53	2,502.60		
23-Jun-09	08	0905	25.30		2,419.6		149,769,275.05	14,546,114.91	40,316.05	3,915.64		
18-Aug-09	08	1220	0.10		755.6		184,863.25	57,494.53	49.76	15.48		
9-Nov-09	08	1130	6.00		>2419.2		35,524,276.93	3,449,671.52	9,562.70	928.61		
E. Coli			**8.52**				**27,970,014.9**	Ave 1000MPN/day	**7,529.2**	Ave 1000 MPN/Ac		**520%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
15-Jul-08	08	1434	14.40	< 30.0 mg/L	16	mg/L	563,691.01	1,056,920.64	61.05	114.47	812,342.60	allowed kg/day
20-Aug-08	08	0822	0.10		2		489.32	7,339.73	0.05	0.79	87.98	allowed T / Ac / Year
18-Sep-08	08	1040	4.44		35		380,197.84	325,883.86	41.18	35.30	477,887.15	ave kg/day
16-Oct-08	08	1142	1.73		49		207,156.44	126,830.48	22.44	13.74	51.76	Ave T / Ac / Year
13-Nov-08	08	1336	4.51		15		165,510.84	331,021.67	17.93	35.85		
18-Dec-08	08	1212	8.30		10		203,065.77	609,197.31	21.99	65.98	Annual	
21-Jan-09	08	1150	1.67		6		24,573.40	122,867.02	2.66	13.31	625,581.84	allowed kg/day
25-Feb-09	08	No samples - Bridge Work									67.75	allowed T / Ac / Year
24-Mar-09	08	1055	1.78		21		91,247.48	130,353.55	9.88	14.12	343,766.82	ave kg/day
22-Apr-09	08	1225	26.30		15		965,320.85	1,930,641.70	104.55	209.10	37.23	Ave T / Ac / Year
21-May-09	08	1115	16.17		10		395,611.27	1,186,833.80	42.85	128.54		
23-Jun-09	08	0905	25.30		21		1,299,865.59	1,856,950.84	140.78	201.12		
18-Aug-09	08	1220	0.10		44.0		10,764.93	7,339.73	1.17	0.79		
9-Nov-09	08	1130	6.00		11.0		161,473.99	440,383.60	17.49	47.70		
Total Suspended Solids			**8.52**		**20**		**343,766.82**	**Ave kg/day**	**14.98**	**T/Ac/Year**		-
Ammonia								kg/day		lb / Ac / Year		
15-Jul-08	08	1434	14.40	< 0.1638 mg/L	0.353	mg/L	12,436.43	5,770.79	2,693.88	1,250.02		
20-Aug-08	08	0822	0.10	< 0.1489 mg/L	2.870		702.17	36.43	152.10	7.89		
18-Sep-08	08	1040	4.44		<0.200							
16-Oct-08	08	1142	1.73		<0.200							
13-Nov-08	08	1336	4.51		<0.200							
18-Dec-08	08	1212	8.30		<0.200							
21-Jan-09	08	1150	1.67		<0.200							
25-Feb-09	08	No samples - Bridge Work										
24-Mar-09	08	1055	1.78		<0.200							
22-Apr-09	08	1225	26.30		<0.200							
21-May-09	08	1115	16.17		<0.200							
23-Jun-09	08	0905	25.30		<0.200							**reduction based upon July,Aug samples
18-Aug-09	08	1220	0.10		<0.200							
9-Nov-09	08	1130	6.00		<0.200							
Ammonia			**8.52**				**6,569.30**	**2,903.61**	**1,422.99**	**628.96**		**56%**
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
15-Jul-08	08	1434	14.40	< 0.04 mg/L	0.29	mg/L	10,216.90	1,409.23	2,213.10	305.26	**504.41**	**Ave kg/day**
20-Aug-08	08	0822	0.10		0.35		85.63	9.79	18.55	2.12	**109.26**	**Ave lb / Ac / Year**
18-Sep-08	08	1040	4.44		0.27		2,932.95	434.51	635.31	94.12		
16-Oct-08	08	1142	1.73		0.36		1,521.97	169.11	329.68	36.63		
13-Nov-08	08	1336	4.51		<0.10							
18-Dec-08	08	1212	8.30		<0.10							
21-Jan-09	08	1150	1.67		0.16		655.29	163.82	141.94	35.49		
25-Feb-09	08	No samples - Bridge Work										
24-Mar-09	08	1055	1.78		0.13		564.87	173.80	122.36	37.65		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
22-Apr-09	08	1225	26.30		<0.10							
21-May-09	08	1115	16.17		0.19		7,516.61	1,582.45	1,628.19	342.78		
23-Jun-09	08	0905	25.30		<0.10							
18-Aug-09	08	1220	0.10		0.10		24.47	9.79	5.30	2.12		
9-Nov-09	08	1130	6.00		0.18		2,642.30	587.18	572.35	127.19		
Total Phosphorus			**8.52**				**2,906.78**	**Ave kg/day**	**629.64**	**lb / Ac / Year**		**83%**
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
15-Jul-08	08	1434	14.40	< 10 mg / L	0.411	mg/L	14,479.81	352,306.88	3,136.50	76,313.87	**208,527.28**	**Ave kg/day**
20-Aug-08	08	0822	0.10		0.231		56.52	2,446.58	12.24	529.96	**22.58**	**Ave T / Ac / Year**
18-Sep-08	08	1040	4.44		0.639		6,941.33	108,627.95	1,503.57	23,530.11		
16-Oct-08	08	1142	1.73		0.335		1,416.27	42,276.83	306.78	9,157.66		
13-Nov-08	08	1336	4.51		0.320		3,530.90	110,340.56	764.83	23,901.08		
18-Dec-08	08	1212	8.30		0.833		16,915.38	203,065.77	3,664.07	43,986.46		
21-Jan-09	08	1150	1.67		0.216		884.64	40,955.67	191.62	8,871.49		
25-Feb-09	08	No samples - Bridge Work										
24-Mar-09	08	1055	1.78		0.156		677.84	43,451.18	146.83	9,412.04		
22-Apr-09	08	1225	26.30		0.747		48,072.98	643,547.23	10,413.18	139,400.00		
21-May-09	08	1115	16.17		0.172		6,804.51	395,611.27	1,473.94	85,694.11		
23-Jun-09	08	0905	25.30		0.293		18,136.22	618,983.61	3,928.52	134,079.22		
18-Aug-09	08	1220	0.10		0.547		133.83	2,446.58	28.99	529.96		
9-Nov-09	08	1130	6.00		0.320		4,697.43	146,794.53	1,017.52	31,797.44		
Nitrate - Nitrite			**8.52**		**0.402**		**9,442.13**	**Ave kg/day**	**1.02**	**T / Ac / Year**		
Hardness (CaCO3)												
20-Aug-08	08	0822	0.10		280							
13-Nov-08	08	1336	4.51		190							
25-Feb-09	08	No samples - Bridge Work										
21-May-09	08	1115	16.17		120							
Hardness (CaCO3)			**6.93**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
20-Aug-08	08	0822	0.10	< 174µg/L	0.555	mg/L	135.78	42.57	29.41	9.22	**2,948.71**	**Ave kg/day**
13-Nov-08	08	1336	4.51		0.775		8,551.39	1,919.93	1,852.33	415.88	**638.73**	**Ave lb / Ac / Year**
25-Feb-09	08	No samples - Bridge Work										
21-May-09	08	1115	16.17		2.630		104,045.76	6,883.64	22,537.55	1,491.08		
Total Aluminum			**6.93**				**37,577.65**	**Ave kg/day**	**8,139.77**	**lb / Ac / Year**		**92%**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	08	1336	4.51	< 174µg/L	0.632	mg/L	6,973.52	1,919.93	1,510.55	415.88	**4,401.78**	**Ave kg/day**
25-Feb-09	08	No samples - Bridge Work									**953.48**	**Ave lb / Ac / Year**
21-May-09	08	1115	16.17		2.460		97,320.37	6,883.64	21,080.75	1,491.08		
Dissolved Aluminum			**10.34**				**52,146.95**	**Ave kg/day**	**11,295.65**	**lb / Ac / Year**		**95%**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
20-Aug-08	08	0822	0.10	< 2.5 mg/L	1.450	mg/L	354.75	611.64	76.84	132.49	**31,774.90**	**Ave kg/day**
13-Nov-08	08	1336	4.51		1.410		15,558.02	27,585.14	3,370.05	5,975.27	**6,882.82**	**Ave lb / Ac / Year**
25-Feb-09	08	No samples - Bridge Work					-	-	-	-		
21-May-09	08	1115	16.17		2.660		105,232.60	98,902.82	22,794.63	21,423.53		
Total Iron			**6.93**				**30,286.34**	**Ave kg/day**	**6,560.38**	**lb / Ac / Year**		**-**
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	08	1336	4.51	< 2.5 mg/L	1.050	mg/L	11,585.76	27,585.14	2,509.61	5,975.27	**63,243.98**	**Ave kg/day**
25-Feb-09	08	No samples - Bridge Work									**13,699.40**	**Ave lb / Ac / Year**
21-May-09	08	1115	16.17		2.140		84,660.81	98,902.82	18,338.54	21,423.53		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Dissolved Iron			**10.34**				**48,123.28**	**Ave kg/day**	**10,424.08**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
20-Aug-08	08	0822	0.10	0.027	0.001	mg/L	0.00	6.69	0.00	1.45	**249.40**	**Ave kg/day**
13-Nov-08	08	1336	4.51	0.020	0.004		0.00	216.75	0.00	46.95	**54.02**	**Ave lb / Ac / Year**
25-Feb-09	08	No samples - Bridge Work										
21-May-09	08	1115	16.17	0.013	0.004		158.24	524.76	34.28	113.67		
Total Copper			**6.93**				**52.75**	**Ave kg/day**	**4.60**	**T/Ac/Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	08	1336	4.51	0.020	0.003	mg/L	0.00	216.75	0.00	46.95	**370.75**	**Ave kg/day**
25-Feb-09	08	No samples - Bridge Work									**80.31**	**Ave lb / Ac / Year**
21-May-09	08	1115	16.17	0.013	0.004		158.24	524.76	34.28	113.67		
Dissolved Copper			**10.34**				**79.12**	**Ave kg/day**	**6.90**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
20-Aug-08	08	0822	0.10	1.307	1.030	mg/L	252.00	319.80	54.59	69.27	**11,715.65**	**Ave kg/day**
13-Nov-08	08	1336	4.51	0.930	0.630		6,951.46	10,259.63	1,505.77	2,222.36	**2,537.75**	**Ave lb / Ac / Year**
25-Feb-09	08	No samples - Bridge Work										
21-May-09	08	1115	16.17	0.621	0.241		9,534.23	24,567.50	2,065.23	5,321.61		
Total Manganese			**6.93**				**5,579.23**	**Ave kg/day**	**486.24**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	08	1336	4.51	0.930	0.563	mg/L	6,212.17	10,259.63	1,345.63	2,222.36	**11,609.04**	**Ave kg/day**
25-Feb-09	08	No samples - Bridge Work					-	-	-	-	**2,514.66**	**Ave lb / Ac / Year**
21-May-09	08	1115	16.17	0.621	0.233		9,217.74	24,567.50	1,996.67	5,321.61		
Total Manganese			**10.34**				**5,143.31**	**Ave kg/day**	**448.25**	**T/Ac/Year**		-
Cl												
13-Nov-08	08	1336	4.51		24							
Chlorine			**4.51**									
SO4												
13-Nov-08	08	1336	4.51		17.1							
Sulfate			**4.51**									
042209	09	1140	0.10		7.35							
052109	09	1030	0.10		7.19							
062309	09	0815	0.10		7.01							
pH			**2.62**		**12.53**							
Specific Conductance												
072208	09	1253	0.10	< 1.20 mS/cm	0.278	mS/cm						refer to TDS
081908	09	0801	0.10		0.374							
091808	09	0945	0.10		0.172							
101608	09	1241	0.10		0.229							
111308	09	1305	0.10		0.310							
121808	09	1142	0.10		0.005							
012109	09	1250	0.10		0.682							
022509	09	1213	0.10		0.591							
032409	09	1030	0.10		0.595							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
042209	09	1140	0.10		0.415							
052109	09	1030	0.10		0.340							
062309	09	0815	0.10		0.225							
Specific Conductance			**0.10**									
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
072208	09	1253	0.10	< 750 mg/L	0.181	g/L	44.28	183.49	31.96	132.43	**183.49**	**Ave kg/day**
081908	09	0801	0.10		0.243		59.45	183.49	42.91	132.43	**0.07**	**Ave T / Ac / Year**
091808	09	0945	0.10		0.112	YSI	27.40	183.49	19.78	132.43		
101608	09	1241	0.10		0.149		36.45	183.49	26.31	132.43		
111308	09	1305	0.10		0.202		49.42	183.49	35.67	132.43		
121808	09	1142	0.10		0.003		0.73	183.49	0.53	132.43		
012109	09	1250	0.10		0.682		166.86	183.49	120.42	132.43		
022509	09	1213	0.10		0.591		144.59	183.49	104.35	132.43		
032409	09	1030	0.10		0.595		145.57	183.49	105.06	132.43		
042209	09	1140	0.10		0.415		101.53	183.49	73.28	132.43		
052109	09	1030	0.10		0.340		83.18	183.49	60.03	132.43		
062309	09	0815	0.10		0.146		35.72	183.49	25.78	132.43		
Total Dissolved Solids			**0.10**		**0.30**		**74.60**	**Ave kg/day**	**53.84**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
072208	09	1253	0.10	< 235 MPN	68.9	MPN	16,856.91	57,494.53	15.12	51.56	57,494.53	allowed 1000 mpn/day
081908	09	0801	0.10		145.0		35,475.35	57,494.53	31.82	51.56	51.56	allowed 1000 mpn/ac
091808	09	0945	0.10		191.8		46,925.32	57,494.53	42.09	51.56	78,674.88	ave 1000 mpn/day
101608	09	1241	0.10		960.6		235,018.05	57,494.53	210.78	51.56	70.56	ave 1000 mpn/ac
111308	09	1305	0.10		1,011.2		247,397.72	57,494.53	221.88	51.56		
121808	09	1142	0.10		37.3		9,125.73	57,494.53	8.18	51.56	Annual	
012109	09	1250	0.10		18.7		4,575.10	57,494.53	4.10	51.56	57,494.53	allowed 1000 mpn/day
022509	09	1213	0.10		17.1		4,183.64	57,494.53	3.75	51.56	51.56	allowed 1000 mpn/ac
032409	09	1030	0.10		178.0		43,549.04	57,494.53	39.06	51.56	71,629.62	ave 1000 mpn/day
042209	09	1140	0.10		721.5		176,520.43	57,494.53	158.31	51.56	64.24	ave 1000 mpn/ac
052109	09	1030	0.10		72.7		17,786.60	57,494.53	15.95	51.56		
062309	09	0815	0.10		90.5		22,141.51	57,494.53	19.86	51.56		
E. Coli			**0.10**				**71,629.6**	Ave 1000MPN/day	**64.2**	Ave 1000 MPN/Ac		
Total Suspended Solids								kg/day		lbs / Ac / Year		**Allowed**
072208	09	1253	0.10	< 30.0 mg/L	6	mg/L	1.47	7.34	1.06	5.30	**7.34**	**Ave kg/day**
081908	09	0801	0.10		11		2.69	7.34	1.94	5.30	**5.30**	**Ave lbs / Ac / Year**
091808	09	0945	0.10		7		1.71	7.34	1.24	5.30		
101608	09	1241	0.10		89		21.77	7.34	15.71	5.30		
111308	09	1305	0.10		7		1.71	7.34	1.24	5.30		
121808	09	1142	0.10		-		-	7.34	-	5.30		
012109	09	1250	0.10		-		-	7.34	-	5.30		
022509	09	1213	0.10		2		0.49	7.34	0.35	5.30		
032409	09	1030	0.10		88		21.53	7.34	15.54	5.30		
042209	09	1140	0.10		1		0.24	7.34	0.18	5.30		
052109	09	1030	0.10		35		8.56	7.34	6.18	5.30		
062309	09	0815	0.10		10		2.45	7.34	1.77	5.30		
Total Suspended Solids			**0.10**		**21.33**		**5.22**	**Ave kg/day**	**1.52**	**lbs/Ac/Year**		-
Ammonia												
072208	09	1253	0.10		<0.200	mg/L						
081908	09	0801	0.10		<0.200							
091808	09	0945	0.10		<0.200							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
101608	09	1241	0.10		<0.200							
111308	09	1305	0.10		<0.200							
121808	09	1142	0.10		<0.200							
012109	09	1250	0.10		<0.200							
022509	09	1213	0.10		<0.200							
032409	09	1030	0.10		<0.200							
042209	09	1140	0.10		<0.200							
052109	09	1030	0.10		<0.200							
062309	09	0815	0.10		<0.200							
Ammonia			**0.10**									
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
072208	09	1253	0.10	< 0.3 mg/L	<0.10	mg/L					**0.07**	**Ave kg/day**
081908	09	0801	0.10		0.10		0.02	0.07	0.02	0.05	**0.05**	**Ave lb / Ac / Year**
091808	09	0945	0.10		0.18		0.04	0.07	0.03	0.05		
101608	09	1241	0.10		0.60		0.15	0.07	0.11	0.05		
111308	09	1305	0.10		0.34		0.08	0.07	0.06	0.05		
121808	09	1142	0.10		<0.10							
012109	09	1250	0.10		<0.10							
022509	09	1213	0.10		0.17		0.04	0.07	0.03	0.05		
032409	09	1030	0.10		0.23		0.06	0.07	0.04	0.05		
042209	09	1140	0.10		0.15		0.04	0.07	0.03	0.05		
052109	09	1030	0.10		0.32		0.08	0.07	0.06	0.05		
062309	09	0815	0.10		<0.10							
Total Phosphorus			**0.10**				**0.06**	**Ave kg/day**	**0.05**	**lb / Ac / Year**		**-15%**
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
072208	09	1253	0.10	< 10 mg / L	<0.050	mg/L	-	2.45	-	1.77	**2.45**	**Ave kg/day**
081908	09	0801	0.10		0.350		0.09	2.45	0.06	1.77	**1.77**	**Ave lb / Ac / Year**
091808	09	0945	0.10		1.160		0.28	2.45	0.20	1.77		
101608	09	1241	0.10		0.294		0.07	2.45	0.05	1.77		
111308	09	1305	0.10		0.262		0.06	2.45	0.05	1.77		
121808	09	1142	0.10		0.300		0.07	2.45	0.05	1.77		
012109	09	1250	0.10		1.110		0.27	2.45	0.20	1.77		
022509	09	1213	0.10		0.981		0.24	2.45	0.17	1.77		
032409	09	1030	0.10		1.300		0.32	2.45	0.23	1.77		
042209	09	1140	0.10		0.944		0.23	2.45	0.17	1.77		
052109	09	1030	0.10		<0.020		-	2.45	-	1.77		
062309	09	0815	0.10		1.690		0.41	2.45	0.30	1.77		
Nitrate - Nitrite			**0.10**				**0.17**	**Ave kg/day**	**0.12**	**lb / Ac / Year**		
Hardness (CaCO3)												
081908	09	0801	0.10		210							
111308	09	1305	0.10		160							
022509	09	1213	0.10		260							
052109	09	1030	0.10		100							
Hardness (CaCO3)			**0.10**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
081908	09	0801	0.10	< 174µg/L	0.110	mg/L	0.03	0.04	0.02	0.03	**0.04**	**Ave kg/day**
111308	09	1305	0.10		0.253		0.06	0.04	0.04	0.03	**0.03**	**Ave lb / Ac / Year**
022509	09	1213	0.10		1.110		0.27	0.04	0.20	0.03		
052109	09	1030	0.10		4.070		1.00	0.04	0.72	0.03		
Total Aluminum			**0.10**				**0.34**	**Ave kg/day**	**0.24**	**lb / Ac / Year**		**87%**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Al, Dissolved								kg / day		lb / Ac / Year		Allowed
111308	09	1305	0.10	< 174µg/L	0.193	mg/L	0.05	0.04	0.03	0.03	**0.04**	**Ave kg/day**
022509	09	1213	0.10		0.065		0.02	0.04	0.01	0.03	**0.03**	**Ave lb / Ac / Year**
052109	09	1030	0.10		4.030		0.99	0.04	0.71	0.03		
Dissolved Aluminum			**0.10**				**0.35**	**Ave kg/day**	**0.25**	**lb / Ac / Year**		**88%**
Fe, Total								kg / day		lb / Ac / Year		Allowed
081908	09	0801	0.10	< 2.5 mg/L	0.493	mg/L	0.12	0.61	0.09	0.44	**0.61**	**Ave kg/day**
111308	09	1305	0.10		0.499		0.12	0.61	0.09	0.44	**0.44**	**Ave lb / Ac / Year**
022509	09	1213	0.10		0.905		0.22	0.61	0.16	0.44		
052109	09	1030	0.10		4.360		1.07	0.61	0.77	0.44		
Total Iron			**0.10**				**0.38**	**Ave kg/day**	**0.28**	**lb / Ac / Year**		-
Fe, Dissolved								kg / day		lb / Ac / Year		Allowed
111308	09	1305	0.10	< 2.5 mg/L	0.498	mg/L	0.12	0.61	0.09	0.44	**0.61**	**Ave kg/day**
022509	09	1213	0.10		0.084		0.02	0.61	0.01	0.44	**0.44**	**Ave lb / Ac / Year**
052109	09	1030	0.10		3.440		0.84	0.61	0.61	0.44		
Dissolved Iron			**0.10**				**0.33**	**Ave kg/day**	**0.24**	**lb / Ac / Year**		-
Cu, Total								kg / day		lb / Ac / Year		Allowed
081908	09	0801	0.10	0.021	<0.001	mg/L	-	0.01	-	0.00	**0.00**	**Ave kg/day**
111308	09	1305	0.10	0.017	0.004		0.00	0.00	0.00	0.00	**0.00**	**Ave lb / Ac / Year**
022509	09	1213	0.10	0.026	0.001		0.00	0.01	0.00	0.00		
052109	09	1030	0.10	0.011	0.004		0.00	0.00	0.00	0.00		
Total Copper			**0.10**				**0.00**	**Ave kg/day**	**0.00**	**T/Ac/Year**		-
Cu, Dissolved								kg / day		lb / Ac / Year		Allowed
111308	09	1305	0.10	0.017	0.003	mg/L	0.00	0.00	0.00	0.00	**0.00**	**Ave kg/day**
022509	09	1213	0.10	0.026	0.001		0.00	0.01	0.00	0.00	**0.00**	**Ave lb / Ac / Year**
052109	09	1030	0.10	0.011	0.003		0.00	0.00	0.00	0.00		
Dissolved Copper			**0.10**				**0.00**	**Ave kg/day**	**0.00**	**T/Ac/Year**		-
Mn, Total								kg / day		lb / Ac / Year		Allowed
081908	09	0801	0.10	1.015	0.333	mg/L	0.08	0.25	0.06	0.18	**0.22**	**Ave kg/day**
111308	09	1305	0.10	0.800	0.281		0.07	0.20	0.05	0.14	**0.16**	**Ave lb / Ac / Year**
022509	09	1213	0.10	1.225	0.255		0.06	0.30	0.05	0.22		
052109	09	1030	0.10	0.529	0.392		0.10	0.13	0.07	0.09		
Total Manganese			**0.10**				**0.08**	**Ave kg/day**	**0.02**	**T/Ac/Year**		-
Mn, Dissolved								kg / day		lb / Ac / Year		Allowed
111308	09	1305	0.10	0.800	0.279	mg/L	0.07	0.20	0.05	0.14	**0.21**	**Ave kg/day**
022509	09	1213	0.10	1.225	0.236		0.06	0.30	0.04	0.22	**0.15**	**Ave lb / Ac / Year**
052109	09	1030	0.10	0.529	0.035		0.01	0.13	0.01	0.09		
Total Manganese			**0.10**				**0.04**	**Ave kg/day**	**0.01**	**T/Ac/Year**		-
Cl												
111308	09	1305	0.10		26.8							
Chlorine			**0.10**									
SO4												
111308	09	1305	-		17.3							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Sulfate			-								

SITE #10

Drainage Area: 4,427.55 Acres ** Part of Point 11 drainage area

Date	Site No	Time	Notes / Conditions
071708	10	1121	
081308	10	1518	
091608	10	0812	
101408	10	0900	No measureable flow. Oily sheen to surface. Remains (jaw, thigh) of deer carcass
111308	10	1040	No flow. Disconnected pool. Black, tannic water. Some oily surface sheen
121808	10	1015	Partially frozen. Deer carcass nearby (about 2' from water) Two buckets in water.
012109	10	1115	Mostly frozen. No evident stream flow. Heron tracks in snow. Wter light brown-yellow colour. Some new trash (empty food cans)
022509	10	954	Dead deer carcass.
032409	10	0950	Overwhelming odor of rotting deer (carcass under bridge). Water has slight pond-scum stench. Water level 2-3 lower than other months. Oil on bank in small pools
042209	10	1100	Sweet odor to water. Seems to have more flow than other months. Very cloudy, greenish colour
051809	10	0950	No discernable odor to water. Tan color
062309	10	0950	Water odor "reminds me of faint smell of ether". Air smells of anoxic soil. Tan color to water. The FIRST time have seen bottom of channel. Remains of computer p

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Turbidity							Apr - Oct Average NTU				
071708	10	1121	2.40	n/a	**38.0**	NTU	40.1	36.0			
081308	10	1518	0.10	< 36 NTU	**42.0**						36.0 NTU Allowed
091608	10	0812	8.96		**48.0**						
101408	10	0900	0.10		17.5						
111308	10	1040	0.10		15.0						
121808	10	1015	0.10		32.0						
012109	10	1115	0.10		21.6						
022509	10	954	3.60		42.0						
032409	10	0950	1.19		not recorded						
042209	10	1100	29.12		62.0						
051809	10	0950	61.22		50.0						
062309	10	0950	6.26		23.0						**improvement based on Apr-Oct average*
Turbidity			**9.44**		**35.6**						**10%**
Temperature							**Average May - Sept**				
071708	10	1121	2.40	90° Max	81.93	°F	70.0				
081308	10	1518	0.10	90° Max	71.09						
091608	10	0812	8.96	90° Max	70.28						
101408	10	0900	0.10	78° Max	64.43						
111308	10	1040	0.10	70° Max	48.15						
121808	10	1015	0.10	57° Max	33.46						
012109	10	1115	0.10	50° Max	34.71						
022509	10	954	3.60	50° Max	39.18						
032409	10	0950	1.19	60° Max	52.51						
042209	10	1100	29.12	70° Max	55.94						
051809	10	0950	61.22	80° Max	66.23						
062309	10	0950	6.26	90° Max	79.80						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Temperature			**9.44**								
Dissolved Oxygen							Apr - Oct Average mg/L				
071708	10	1121	2.40	Never < 4.0	5.30	mg/L	5.43				
081308	10	1518	0.10	Ave. >5.0	2.02						
091608	10	0812	8.96		6.76		Annual Average mg/L				Indiana average = 9.8 mg/L
101408	10	0900	0.10		0.90		7.61				
111308	10	1040	0.10		5.79						
121808	10	1015	0.10		15.21		Annual Average %				Good defined as 80-120%
012109	10	1115	0.10		11.32		69.11				
022509	10	954	3.60		12.74						
032409	10	0950	1.19		8.30						
042209	10	1100	29.12		9.76						
051809	10	0950	61.22		8.24						
062309	10	0950	6.26		5.00						
Dissolved Oxygen			**9.44**							**to reach Indiana Average (annual)**	**22%**
pH											
071708	10	1121	2.40	6.0 - 9.0	7.37						
081308	10	1518	0.10		7.00						
091608	10	0812	8.96		7.65						
101408	10	0900	0.10		7.29						
111308	10	1040	0.10		7.45						
121808	10	1015	0.10		8.15						
012109	10	1115	0.10		7.27						
022509	10	954	3.60		7.03						
032409	10	0950	1.19		7.46						
042209	10	1100	29.12		7.35						
051809	10	0950	61.22		7.58						
062309	10	0950	6.26		7.18						
pH			**9.44**		**7.40**						
Specific Conductance											
071708	10	1121	2.40	< 1.20 mS/cm	0.200	mS/cm					refer to TDS
081308	10	1518	0.10		0.238						
091608	10	0812	8.96		0.191						
101408	10	0900	0.10		0.230						
111308	10	1040	0.10		0.265						
121808	10	1015	0.10		0.319						
012109	10	1115	0.10		0.325						
022509	10	954	3.60		0.253						
032409	10	0950	1.19		0.353						
042209	10	1100	29.12		0.269						
051809	10	0950	61.22		0.176						
062309	10	0950	6.26		0.238						
Specific Conductance			**9.44**		**0.255**						
Total Dissolved Solids								kg / day		lbs / Ac / Year	**Allowed**
071708	10	1121	2.40	< 750 mg/L	0.130	g/L	763.33	4,403.84	138.73	800.38	**17,316.94 Ave kg/day**
081308	10	1518	0.10		0.155		37.92	183.49	6.89	33.35	**1.57 Ave T / Ac / Year**
091608	10	0812	8.96		0.124	YSI	2,718.24	16,440.99	494.03	2,988.08	
101408	10	0900	0.10		0.149		36.45	183.49	6.63	33.35	
111308	10	1040	0.10		0.172		42.08	183.49	7.65	33.35	
121808	10	1015	0.10		0.207		50.64	183.49	9.20	33.35	

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
012109	10	1115	0.10		0.211		51.62	183.49	9.38	33.35		
022509	10	954	3.60		0.164		1,444.46	6,605.75	262.52	1,200.57		
032409	10	0950	1.19		0.230		668.50	2,179.90	121.50	396.19		
042209	10	1100	29.12		0.175		12,467.75	53,433.21	2,265.96	9,711.25		
051809	10	0950	61.22		0.114		17,076.10	112,342.75	3,103.50	20,417.79		
062309	10	0950	6.26		0.155		2,372.40	11,479.33	431.17	2,086.32		
Total Dissolved Solids			**9.44**		**0.17**		**3,144.13**	**Ave kg/day**	**571.43**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
071708	10	1121	2.40	< 235 MPN	22.8	MPN	133,876.61	1,379,868.61	30.24	311.66	8,883,765.74	allowed 1000 mpn/day
081308	10	1518	0.10		15.0		3,669.86	57,494.53	0.83	12.99	2,006.47	allowed 1000 mpn/ac
091608	10	0812	8.96		16.8		368,278.12	5,151,509.47	83.18	1,163.51	1,594,612.38	ave 1000 mpn/day
101408	10	0900	0.10		133.3		32,612.85	57,494.53	7.37	12.99	360.16	ave 1000 mpn/ac
111308	10	1040	0.10		146.7		35,891.26	57,494.53	8.11	12.99		
121808	10	1015	0.10		7.4		1,810.47	57,494.53	0.41	12.99	Annual	
012109	10	1115	0.10		<.1		0.00	57,494.53	0.00	12.99	5,425,973.47	allowed 1000 mpn/day
022509	10	954	3.60		4.1		36,111.46	2,069,802.91	8.16	467.48	1,225.50	allowed 1000 mpn/ac
032409	10	0950	1.19		5.2		15,113.97	683,034.96	3.41	154.27	937,601.15	ave 1000 mpn/day
042209	10	1100	29.12		96.0		6,839,450.87	16,742,405.78	1,544.75	3,781.42	211.77	ave 1000 mpn/ac
051809	10	0950	61.22		21.3		3,190,534.23	35,200,729.80	720.61	7,950.39		
062309	10	0950	6.26		38.8		593,864.13	3,596,857.51	134.13	812.38		
E. Coli			**9.44**				**937,601.2**	Ave 1000MPN/day	**211.8**	Ave 1000 MPN/Ac		
Total Suspended Solids								kg/day		lbs / Ac / Year		**Allowed**
071708	10	1121	2.40	< 30.0 mg/L	(1)	mg/L					**739.63**	**Ave kg/day**
081308	10	1518	0.10		10		2.45	7.34	0.44	1.33	**134.43**	**Ave lbs / Ac / Year**
091608	10	0812	8.96		40		876.85	657.64	159.36	119.52		
101408	10	0900	0.10		2		0.49	7.34	0.09	1.33		
111308	10	1040	0.10		12		2.94	7.34	0.53	1.33		
121808	10	1015	0.10		12		2.94	7.34	0.53	1.33		
012109	10	1115	0.10		21		5.14	7.34	0.93	1.33		
022509	10	954	3.60		10		88.08	264.23	16.01	48.02		
032409	10	0950	1.19		20		58.13	87.20	10.56	15.85		
042209	10	1100	29.12		17		1,211.15	2,137.33	220.12	388.45		
051809	10	0950	61.22		19		2,846.02	4,493.71	517.25	816.71		
062309	10	0950	6.26		11		168.36	459.17	30.60	83.45		
Total Suspended Solids			**9.44**		**14.42**		**478.41**	**Ave kg/day**	**34.98**	**lbs/Ac/Year**		-
Ammonia												
071708	10	1121	2.40		<0.200	mg/L						
081308	10	1518	0.10		<0.200							
091608	10	0812	8.96		<0.200							
101408	10	0900	0.10		<0.200							
111308	10	1040	0.10		<0.200							
121808	10	1015	0.10		<0.200							
012109	10	1115	0.10		<0.200							
022509	10	954	3.60		<0.200							
032409	10	0950	1.19		<0.200							
042209	10	1100	29.12		<0.200							
051809	10	0950	61.22		<0.200							
062309	10	0950	6.26		<0.200							
Ammonia			**9.44**									
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
071708	10	1121	2.40	< 0.3 mg/L	0.10	mg/L	0.59	1.76	0.11	0.32	**8.71**	**Ave kg/day**
081308	10	1518	0.10		0.22		0.05	0.07	0.01	0.01	**1.58**	**Ave lb / Ac / Year**
091608	10	0812	8.96		0.14		3.07	6.58	0.56	1.20		
101408	10	0900	0.10		0.15		0.04	0.07	0.01	0.01		
111308	10	1040	0.10		<0.10							
121808	10	1015	0.10		<0.10							
012109	10	1115	0.10		0.21		0.05	0.07	0.01	0.01		
022509	10	954	3.60		0.17		1.50	2.64	0.27	0.48		
032409	10	0950	1.19		0.14		0.41	0.87	0.07	0.16		
042209	10	1100	29.12		0.20		14.25	21.37	2.59	3.88		
051809	10	0950	61.22		0.24		35.95	44.94	6.53	8.17		
062309	10	0950	6.26		<0.10							
Total Phosphorus			**9.44**				**6.21**	**Ave kg/day**	**1.13**	**lb / Ac / Year**		**-40%**
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
071708	10	1121	2.40	< 10 mg / L	0.253	mg/L	1.49	58.72	0.27	10.67	**230.89**	**Ave kg/day**
081308	10	1518	0.10		0.233		0.06	2.45	0.01	0.44	**41.96**	**Ave lb / Ac / Year**
091608	10	0812	8.96		1.230		26.96	219.21	4.90	39.84		
101408	10	0900	0.10		0.335		0.08	2.45	0.01	0.44		
111308	10	1040	0.10		0.225		0.06	2.45	0.01	0.44		
121808	10	1015	0.10		0.328		0.08	2.45	0.01	0.44		
012109	10	1115	0.10		0.654		0.16	2.45	0.03	0.44		
022509	10	954	3.60		0.284		2.50	88.08	0.45	16.01		
032409	10	0950	1.19		1.650		4.80	29.07	0.87	5.28		
042209	10	1100	29.12		0.943		67.18	712.44	12.21	129.48		
051809	10	0950	61.22		<0.020		-	1,497.90	-	272.24		
062309	10	0950	6.26		0.271		4.15	153.06	0.75	27.82		
Nitrate - Nitrite			**9.44**				**8.96**	**Ave kg/day**	**1.63**	**lb / Ac / Year**		
Hardness (CaCO3)												
081308	10	1518	0.10		110							
111308	10	1040	0.10		180							
022509	10	954	3.60		160							
051809	10	0950	61.22		160							
Hardness (CaCO3)			**16.26**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
081308	10	1518	0.10	< 174µg/L	0.425	mg/L	0.10	0.04	0.02	0.01	**6.92**	**Ave kg/day**
111308	10	1040	0.10		0.091		0.02	0.04	0.00	0.01	**1.26**	**Ave lb / Ac / Year**
022509	10	954	3.60		1.110		9.78	1.53	1.78	0.28		
051809	10	0950	61.22		1.750		262.13	26.06	47.64	4.74		
Total Aluminum			**16.26**				**68.01**	**Ave kg/day**	**12.36**	**lb / Ac / Year**		**-**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
111308	10	1040	0.10	< 174µg/L	0.085	mg/L	0.02	0.04	0.00	0.01	**9.21**	**Ave kg/day**
022509	10	954	3.60		0.115		1.01	1.53	0.18	0.28	**1.67**	**Ave lb / Ac / Year**
051809	10	0950	61.22		0.983		147.24	26.06	26.76	4.74		
Dissolved Aluminum			**21.64**				**49.43**	**Ave kg/day**	**8.98**	**lb / Ac / Year**		**-**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
081308	10	1518	0.10	< 2.5 mg/L	1.670	mg/L	0.41	0.61	0.07	0.11	**99.43**	**Ave kg/day**
111308	10	1040	0.10		0.712		0.17	0.61	0.03	0.11	**18.07**	**Ave lb / Ac / Year**
022509	10	954	3.60		0.905		7.97	22.02	1.45	4.00		
051809	10	0950	61.22		1.820		272.62	374.48	49.55	68.06		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Total Iron			**16.26**				**70.29**	**Ave kg/day**	**12.78**	**lb / Ac / Year**		-
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
111308	10	1040	0.10	< 2.5 mg/L	0.645	mg/L	0.16	0.61	0.03	0.11	**132.37**	**Ave kg/day**
022509	10	954	3.60		0.154		1.36	22.02	0.25	4.00	**24.06**	**Ave lb / Ac / Year**
051809	10	0950	61.22		0.801		119.98	374.48	21.81	68.06		
Dissolved Iron			**21.64**				**40.50**	**Ave kg/day**	**7.36**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
081308	10	1518	0.10	0.012	<0.001	mg/L	-	0.00	-	0.00	**0.67**	**Ave kg/day**
111308	10	1040	0.10	0.019	0.004		0.00	0.00	0.00	0.00	**0.12**	**Ave lb / Ac / Year**
022509	10	954	3.60	0.017	0.002		0.02	0.15	0.00	0.03		
051809	10	0950	61.22	0.017	0.003		0.45	2.54	0.08	0.46		
Total Copper			**16.26**				**0.12**	**Ave kg/day**	**0.01**	**T/Ac/Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
111308	10	1040	0.10	0.019	0.001	mg/L	0.00	0.00	0.00	0.00	**0.90**	**Ave kg/day**
022509	10	954	3.60	0.017	0.002		0.02	0.15	0.00	0.03	**0.16**	**Ave lb / Ac / Year**
051809	10	0950	61.22	0.017	0.003		0.45	2.54	0.08	0.46		
Dissolved Copper			**21.64**				**0.16**	**Ave kg/day**	**0.01**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
081308	10	1518	0.10	0.621	0.575	mg/L	0.14	0.15	0.03	0.03	**31.78**	**Ave kg/day**
111308	10	1040	0.10	0.421	0.887		0.22	0.10	0.04	0.02	**5.78**	**Ave lb / Ac / Year**
022509	10	954	3.60	0.800	0.205		1.81	7.05	0.33	1.28		
051809	10	0950	61.22	0.800	0.144		21.57	119.83	3.92	21.78		
Total Manganese			**16.26**				**5.93**	**Ave kg/day**	**0.43**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
111308	10	1040	0.10	0.421	0.361	mg/L	0.09	0.10	0.02	0.02	**42.33**	**Ave kg/day**
022509	10	954	3.60	0.800	0.150		1.32	7.05	0.24	1.28	**7.69**	**Ave lb / Ac / Year**
051809	10	0950	61.22	0.800	0.035		5.24	119.83	0.95	21.78		
Total Manganese			**21.64**				**2.22**	**Ave kg/day**	**0.16**	**T/Ac/Year**		-
Cl												
111308	10	1040	-		11.5							
Chlorine			**-**									
SO4												
111308	10	1040	-		20.5							
Sulfate			**-**									

SITE #11

Drainage Area: 5,577.92 Acres

Date	Site No	Time	Notes / Conditions
22-Jul-08	11	1018	Collapsed culvert on CR 400. Bed mostly gravel, good water flow.
13-Aug-08	11	1430	Aquatic plants colonizing
16-Sep-08	11	0900	Strong sulfphur smell when surface tension broken (stepped into creek)
14-Oct-08	11	0927	Most rocks, bed becoming embedded with combination of silt and algae cover.
13-Nov-08	11	1151	North pool - frogs, minnows, heron tracks, sedges, bullrush, cattail colonizing. South stream - tea-coloured, algae bottom, foaming.
18-Dec-08	11	0952	Boulder & Gravel to silt sized bottom.
21-Jan-09	11	1035	Slimy bottom. South side of stream deeper / higher. More heron tracks. Water light yellow-brown colour.
25-Feb-09	11	No samples - Culvert Repair	
24-Mar-09	11	No samples - Culvert Repair	
22-Apr-09	11	No samples - Culvert Repair	
18-May-09	11	No samples - Culvert Repair	
23-Jun-09	11	1025	Nothing seems to have been disturbed since May. Very sharp, ammonia like odor to water. Clear light tan. Bluegill w/ fungus and a second bluegill recently dead
18-Aug-09	11	0945	Construction near complete. Concrete culvet in place. Grade done or near done. No seeding. Sample taken on downstream (E side) Almost briny (sea odor to wa
9-Nov-09	11	0945	No seeding. Extensive erosion in disturbed areas. Black midges in air. Rust-coloured slime/algae coating bed. No odor. Light tan color.

							Daily Load		Area Load		Needed
Date	**Site No**	**Time**	**Flow**	**Load Std**	**Meas**	**Units**	**Measured**	**Allowed**	**Measured**	**Allowed**	**Improvement**
Turbidity							Apr - Oct Average NTU				36.0 NTU Allowed
22-Jul-08	11	1018	8.81	n/a	52.0	NTU	30.1	36.0			
13-Aug-08	11	1430	5.75	< 36 NTU	18.2						
16-Sep-08	11	0900	0.71		32.8						
14-Oct-08	11	0927	0.71		17.5						
13-Nov-08	11	1151	0.78		38.0						
18-Dec-08	11	0952	1.20		15.0						
21-Jan-09	11	1035	2.67		16.8						
25-Feb-09	11	No samples - Culvert Repair									
24-Mar-09	11	No samples - Culvert Repair									
22-Apr-09	11	No samples - Culvert Repair									
18-May-09	11	No samples - Culvert Repair									
23-Jun-09	11	1025	20.40		19.9						
18-Aug-09	11	0945	0.65		19.3						
9-Nov-09	11	0945	5.43		19.8						
Turbidity			**2.95**		**24.9**		**52.0**	**15.0**	**27.2**		-
Temperature							Average May - Sept				
22-Jul-08	11	1018	8.81	90° Max	82.79	°F	82.0				
13-Aug-08	11	1430	5.75	90° Max	82.64						
16-Sep-08	11	0900	0.71	90° Max	71.63						
14-Oct-08	11	0927	0.99	78° Max	68.81						
13-Nov-08	11	1151	2.67	70° Max	52.21						
18-Dec-08	11	0952	1.20	57° Max	35.48						
21-Jan-09	11	1035	2.67	50° Max	37.06						
25-Feb-09	11	No samples - Culvert Repair									
24-Mar-09	11	No samples - Culvert Repair									
22-Apr-09	11	No samples - Culvert Repair									
18-May-09	11	No samples - Culvert Repair									
23-Jun-09	11	1025	20.40		84.29						
18-Aug-09	11	0945	0.65	90° Max	80.60						
9-Nov-09	11	0945	5.43	70° Max	55.38						
Temperature			**4.93**								

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Dissolved Oxygen							Apr - Oct Average mg/L					
22-Jul-08	11	1018	8.81	Never < 4.0	5.42	mg/L	6.92					
13-Aug-08	11	1430	5.75	Ave. >5.0	7.20							
16-Sep-08	11	0900	0.71		5.98		Annual Average mg/L				Indiana average = 9.8 mg/L	
14-Oct-08	11	0927	0.99		8.30	8.30	9.77					
13-Nov-08	11	1151	2.67		14.43							
18-Dec-08	11	0952	1.20		17.50		Annual Average %				Good defined as 80-120%	
21-Jan-09	11	1035	2.67		13.74		99.03					
25-Feb-09	11	No samples - Culvert Repair										
24-Mar-09	11	No samples - Culvert Repair										
22-Apr-09	11	No samples - Culvert Repair										
18-May-09	11	No samples - Culvert Repair										
23-Jun-09	11	1025	20.40		8.4							
18-Aug-09	11	0945	0.65		6.21							
9-Nov-09	11	0945	5.43		10.49							
Dissolved Oxygen			**4.93**		**9.77**						**to reach Indiana Average (annual)**	**0%**
pH												
22-Jul-08	11	1018	8.81	6.0 - 9.0	7.44							
13-Aug-08	11	1430	5.75		7.17							
16-Sep-08	11	0900	0.71		7.38							
14-Oct-08	11	0927	0.99		7.23							
13-Nov-08	11	1151	2.67		8.08							
18-Dec-08	11	0952	1.20		7.56							
21-Jan-09	11	1035	2.67		7.44							
25-Feb-09	11	No samples - Culvert Repair										
24-Mar-09	11	No samples - Culvert Repair										
22-Apr-09	11	No samples - Culvert Repair										
18-May-09	11	No samples - Culvert Repair										
23-Jun-09	11	1025	20.40		7.40							
18-Aug-09	11	0945	0.65		7.33							
9-Nov-09	11	0945	5.43		7.67							
pH			**4.93**		**7.47**							
Specific Conductance												
22-Jul-08	11	1018	8.81	< 1.20 mS/cm	0.521	mS/cm						
13-Aug-08	11	1430	5.75		0.611							refer to TDS
16-Sep-08	11	0900	0.71		0.484							
14-Oct-08	11	0927	0.99		0.563							
13-Nov-08	11	1151	2.67		0.565							
18-Dec-08	11	0952	1.20		0.535							
21-Jan-09	11	1035	2.67		0.473							
25-Feb-09	11	No samples - Culvert Repair										
24-Mar-09	11	No samples - Culvert Repair										
22-Apr-09	11	No samples - Culvert Repair										
18-May-09	11	No samples - Culvert Repair										
23-Jun-09	11	1025	20.40		0.582							
18-Aug-09	11	0945	0.65		0.716							
9-Nov-09	11	0945	5.43		0.554							
Specific Conductance			**4.93**		**0.560**		**0.716**	**0.473**	**0.560**			
Total Dissolved Solids						g/L		kg / day		lbs / Ac / Year		**Allowed**
22-Jul-08	11	1018	8.81	< 750 mg/L	0.338	YSI	7,287.02	16,169.42	1,051.25	2,332.65	**9,040.34**	**Ave kg/day**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
13-Aug-08	11	1430	5.75		0.397		5,580.47	10,542.45	805.05	1,520.88	**0.65**	**Ave T / Ac / Year**
16-Sep-08	11	0900	0.71		0.314		548.97	1,311.24	79.20	189.16		
14-Oct-08	11	0927	0.99		0.366		886.49	1,816.58	127.89	262.07		
13-Nov-08	11	1151	2.67		0.367		2,393.33	4,891.01	345.27	705.59		
18-Dec-08	11	0952	1.20		0.348		1,021.69	2,201.92	147.39	317.66		
21-Jan-09	11	1035	2.67		0.307		2,002.05	4,891.01	288.82	705.59		
25-Feb-09	11	No samples - Culvert Repair										
24-Mar-09	11	No samples - Culvert Repair										
22-Apr-09	11	No samples - Culvert Repair										
18-May-09	11	No samples - Culvert Repair										
23-Jun-09	11	1025	20.40		0.379		18,915.94	37,432.61	2,728.87	5,400.14		
18-Aug-09	11	0945	0.65		0.466		741.07	1,192.71	106.91	172.06		
9-Nov-09	11	0945	5.43		0.360		4,778.16	9,954.50	689.31	1,436.07		
Total Dissolved Solids			**4.93**		**0.364**		**4,415.52**	**Ave kg/day**	**637.00**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
22-Jul-08	11	1018	8.81	< 235 MPN	12.2	MPN	263,022.53	5,066,417.57	47.15	908.30	3,510,206.41	allowed 1000 mpn/day
13-Aug-08	11	1430	5.75		11.6		163,056.51	3,303,300.04	29.23	592.21	629.30	allowed 1000 mpn/ac
16-Sep-08	11	0900	0.71		65.7		114,864.81	410,855.88	20.59	73.66	161,459.29	ave 1000 mpn/day
14-Oct-08	11	0927	0.99		71.2		172,454.22	569,195.80	30.92	102.04	28.95	ave 1000 mpn/ac
13-Nov-08	11	1151	2.67		313.0		2,041,181.65	1,532,516.57	365.94	274.75		
18-Dec-08	11	0952	1.20		5.2		15,266.63	689,934.30	2.74	123.69	Annual	
21-Jan-09	11	1035	2.67		18.1		118,036.38	1,532,516.57	21.16	274.75	2,832,641.23	allowed 1000 mpn/day
25-Feb-09	11	No samples - Culvert Repair									507.83	allowed 1000 mpn/ac
24-Mar-09	11	No samples - Culvert Repair									330,469.97	ave 1000 mpn/day
22-Apr-09	11	No samples - Culvert Repair									59.25	ave 1000 mpn/ac
18-May-09	11	No samples - Culvert Repair										
23-Jun-09	11	1025	20.40		3.0		149,730.42	11,728,883.17	26.84	2,102.73		
18-Aug-09	11	0945	0.65		5.2		8,269.43	373,714.41	1.48	67.00		
9-Nov-09	11	0945	5.43		19.5		258,817.11	3,119,078.00	46.40	559.18		
E. Coli			**4.93**		**52.5**		**330,470.0**	Ave 1000MPN/day	**59.2**	Ave 1000 MPN/Ac		**-95%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
22-Jul-08	11	1018	8.81	< 30.0 mg/L	39	mg/L	840,809.72	646,776.71	60.65	46.65	448,111.46	allowed kg/day
13-Aug-08	11	1430	5.75		8		112,452.77	421,697.88	8.11	30.42	32.32	allowed T / Ac / Year
16-Sep-08	11	0900	0.71		48		83,919.50	52,449.69	6.05	3.78	187,233.68	ave kg/day
14-Oct-08	11	0927	0.99		18		43,597.98	72,663.29	3.14	5.24	13.51	Ave T / Ac / Year
13-Nov-08	11	1151	2.67		24		156,512.33	195,640.41	11.29	14.11		
18-Dec-08	11	0952	1.20		6		17,615.34	88,076.72	1.27	6.35	Annual	
21-Jan-09	11	1035	2.67		11		68,474.14	195,640.41	4.94	14.11	361,613.77	allowed kg/day
25-Feb-09	11	No samples - Culvert Repair									26.08	allowed T / Ac / Year
24-Mar-09	11	No samples - Culvert Repair									155,323.76	ave kg/day
22-Apr-09	11	No samples - Culvert Repair									11.20	Ave T / Ac / Year
18-May-09	11	No samples - Culvert Repair										
23-Jun-09	11	1025	20.40		1		49,910.14	1,497,304.23	3.60	108.00		
18-Aug-09	11	0945	0.65		13.0		20,673.56	47,708.22	1.49	3.44		
9-Nov-09	11	0945	5.43		12.0		159,272.07	398,180.17	11.49	28.72		
Total Suspended Solids			**4.93**		**18**		**155,323.76**	**Ave kg/day**	**11.20**	**T/Ac/Year**		**-189%**
Ammonia												
22-Jul-08	11	1018	8.81		<0.200	mg/L				kg / day		
13-Aug-08	11	1430	5.75		<0.200							
16-Sep-08	11	1430	0.71		<0.200							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
14-Oct-08	11	0900	0.99		<0.200							
13-Nov-08	11	1151	2.67		<0.200							
18-Dec-08	11	0952	1.20		<0.200							
21-Jan-09	11	1025	2.67		<0.200							
25-Feb-09	11	No samples - Culvert Repair										
24-Mar-09	11	No samples - Culvert Repair										
22-Apr-09	11	No samples - Culvert Repair										
18-May-09	11	No samples - Culvert Repair										
23-Jun-09	11	1025	20.40		<0.200							
18-Aug-09	11	0945	0.65		<0.200							
9-Nov-09	11	0945	5.43		<0.200							
Ammonia			**4.93**									
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
22-Jul-08	11	1018	8.81	< 0.04 mg/L	<0.10	mg/L					**260.85**	**Ave kg/day**
13-Aug-08	11	1430	5.75		<0.10						**37.63**	**Ave lb / Ac / Year**
16-Sep-08	11	0900	0.71		<0.10							
14-Oct-08	11	0927	0.99		<0.10							
13-Nov-08	11	1151	2.67		<0.10							
18-Dec-08	11	0952	1.20		<0.10							
21-Jan-09	11	1035	2.67		12.50		81,516.84	260.85	11,759.86	37.63		
25-Feb-09	11	No samples - Culvert Repair										
24-Mar-09	11	No samples - Culvert Repair										
22-Apr-09	11	No samples - Culvert Repair										
18-May-09	11	No samples - Culvert Repair										
23-Jun-09	11	1025	20.40		<0.10							
18-Aug-09	11	0945	0.65		<0.10							
9-Nov-09	11	0945	5.43		0.10		1,327.27	530.91	191.48	76.59		
Total Phosphorus			**4.93**		**6.30**		**41,422.05**	**Ave kg/day**	**5,975.67**	**lb / Ac / Year**		**99%**
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
22-Jul-08	11	1018	8.81	< 10 mg / L	0.214	mg/L	4,613.67	215,592.24	665.58	31,101.97	**132,164.06**	**Ave kg/day**
13-Aug-08	11	1430	5.75		0.212		2,972.97	140,565.96	428.89	20,278.46		
16-Sep-08	11	0900	0.71		1.510		2,639.97	17,483.23	380.85	2,522.18		
14-Oct-08	11	0927	0.99		0.364		881.65	24,221.10	127.19	3,494.21		
13-Nov-08	11	1151	2.67		0.241		1,571.64	65,213.47	226.73	9,407.89		
18-Dec-08	11	0952	1.20		0.276		810.31	29,358.91	116.90	4,235.40		
21-Jan-09	11	1035	2.67		0.434		2,830.26	65,213.47	408.30	9,407.89		
25-Feb-09	11	No samples - Culvert Repair										
24-Mar-09	11	No samples - Culvert Repair										
22-Apr-09	11	No samples - Culvert Repair										
18-May-09	11	No samples - Culvert Repair										
23-Jun-09	11	1025	20.40		0.395		19,714.51	499,101.41	2,844.07	72,001.85		
18-Aug-09	11	0945	0.65		<0.050							
9-Nov-09	11	0945	5.43		0.118		1,566.18	132,726.72	225.94	19,147.55		
Nitrate - Nitrite			**4.93**				**4,177.91**	**Ave kg/day**	**0.30**	**T / Ac / Year**		
Hardness (CaCO3)												
13-Aug-08	11	1430	5.75		350							
13-Nov-08	11	1151	1.56		300							
25-Feb-09	11	No samples - Culvert Repair										
18-May-09	11	No samples - Culvert Repair										
Hardness (CaCO3)			**3.65**				**350**	**300**	**325**			

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Al, Total								kg / day		lb / Ac / Year		Allowed
13-Aug-08	11	1430	5.75	< 174µg/L	0.238	mg/L	3,345.47	2,445.85	482.63	352.85	**1,554.97**	**Ave kg/day**
13-Nov-08	11	1151	1.56		0.402		1,534.30	664.10	221.34	95.80		
25-Feb-09	11	No samples - Culvert Repair										
18-May-09	11	No samples - Culvert Repair										
Total Aluminum			**3.65**		**0.320**		**2,439.88**	**Ave kg/day**	**351.98**	**lb / Ac / Year**		**36%**
Al, Dissolved								kg / day		lb / Ac / Year		Allowed
13-Nov-08	11	1151	1.56	< 174µg/L	0.227	mg/L	866.38	664.10	124.99	95.80	**664.10**	**Ave kg/day**
25-Feb-09	11	No samples - Culvert Repair									**95.80**	**Ave lb / Ac / Year**
18-May-09	11	No samples - Culvert Repair										
Dissolved Aluminum			**1.56**				**1,653.13**	**Ave kg/day**	**238.49**	**lb / Ac / Year**		**60%**
Fe, Total								kg / day		lb / Ac / Year		Allowed
13-Aug-08	11	1430	5.75	< 2.5 mg/L	0.532	mg/L	7,478.11	35,141.49	1,078.81	5,069.62	**35,141.49**	**Ave kg/day**
13-Nov-08	11	1151	1.56		1.500							
25-Feb-09	11	No samples - Culvert Repair										
18-May-09	11	No samples - Culvert Repair										
Total Iron			**3.65**				**7,478.11**	**Ave kg/day**	**1,078.81**	**lb / Ac / Year**		-
Fe, Dissolved								kg / day		lb / Ac / Year		Allowed
13-Nov-08	11	1151	1.56	< 2.5 mg/L	0.304	mg/L	1,160.26	9,541.64	167.38	1,376.51	**9,541.64**	**Ave kg/day**
25-Feb-09	11	No samples - Culvert Repair									**1,376.51**	**Ave lb / Ac / Year**
18-May-09	11	No samples - Culvert Repair										
Dissolved Iron			**1.56**				**1160.264**	**Ave kg/day**	**167.383**	**lb / Ac / Year**		
Cu, Total								kg / day		lb / Ac / Year		Allowed
13-Aug-08	11	1430	5.75	0.033	<0.001	mg/L	0.00	465.39	0.00	67.14	**465.39**	**Ave kg/day**
13-Nov-08	11	1151	1.56	0.029	<0.001							
25-Feb-09	11	No samples - Culvert Repair										
18-May-09	11	No samples - Culvert Repair										
Total Copper			**3.65**				**0.001**	**Ave kg/day**	**0.000**	**lb / Ac / Year**		
Cu, Dissolved								kg / day		lb / Ac / Year		Allowed
13-Nov-08	11	1151	1.56	0.029	<0.001	mg/L	0.00	110.77	0.00	15.98	**110.77**	**Ave kg/day**
25-Feb-09	11	No samples - Culvert Repair									**15.98**	**Ave lb / Ac / Year**
18-May-09	11	No samples - Culvert Repair										
Dissolved Copper			**1.56**				**0.001**	**Ave kg/day**	**0.000**	**lb / Ac / Year**		
Mn, Total												
13-Aug-08	11	1430	5.75	1.590	0.241	mg/L				kg / day		
13-Nov-08	11	1151	1.56	1.389	0.957							
25-Feb-09	11	No samples - Culvert Repair										
18-May-09	11	No samples - Culvert Repair										
Total Manganese			**3.65**				**0.957**	**Ave kg/day**	**0.599**	**lb / Ac / Year**		
Mn, Dissolved								kg / day		lb / Ac / Year		Allowed
13-Nov-08	11	1151	1.56	1.389	0.155	mg/L	591.58	5,300.61	85.34	764.68	**5,300.61**	**Ave kg/day**
25-Feb-09	11	No samples - Culvert Repair									**764.68**	**Ave lb / Ac / Year**
18-May-09	11	No samples - Culvert Repair										
Total Manganese			**1.56**				**591.582**	**Ave kg/day**	**85.343**	**lb / Ac / Year**		

Cl

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
13-Nov-08	11	1151	1.56		8.9						
Chlorine			**1.56**				**8.900**	**8.900**	**8.900**		
SO4											
13-Nov-08	11	1151	1.56		120.8						
Sulfate			**1.56**				**120.800**	**120.800**	**120.800**		

SITE #12

Drainage Area: 2,250.38 Acres

Date	Site No	Time	Notes / Conditions
17-Jul-08	12	1050	Flow not measured - unsafe
13-Aug-08	12	1358	Bed mostly rock, gravel. Trash dumped from bridge.
16-Sep-08	12	0930	Foaming - phosphates?
14-Oct-08	12	1008	Little to no flow. Compost-like odor. Water clear, but colour of a white tea.
13-Nov-08	12	1131	VERY slight flow - below measureable levels. Deer carcass in stream, fur floating downstream (and into samples)
18-Dec-08	12	0940	Low flow. Trash, deer carcass in stream. Partially frozen. No photos - camera frozen.
21-Jan-09	12	1000	Stream partly frozen. Deer carcass now 50' downstream. New fencing trash. 10" bridge support down.
25-Feb-09	12	0905	Water a little murky. New floor covering trash. New insulation trash
24-Mar-09	12	0910	No apparent odor to water. Yellowish-brownish in color. New christmas tree (trash). Algae growing. Starting to imbed. Very slow flow - would not register on flow
22-Apr-09	12	1020	Sweet smell to water. Surprisingly clear. Good flow. No new trash
21-May-09	12	0920	Slight poo smell. Significant foaming. Very light tan color to wtaer.
23-Jun-09	12	1100	Somewhat mossy smell to water. Colour is clear tan. SIGNIFICANT foaming (1ft x 1ft x 2ft). Good amount of slime on bottom of stream.
18-Aug-09	12	0845	Slight sweet odor. Sandy color. Foul smell in air - like burning carpet. Stream bed black, lots of algae. Road recently graded.
9-Nov-09	12	0915	Slight mossy odor. Light tan with hint of green. SIGNIFICANT foaming. Leaves nearly done falling, bottom not as slimy as usual

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Turbidity							Apr - Oct Average NTU				
17-Jul-08	12	1050	0.10	n/a	15.0	NTU	19.9	36.0			36.0 NTU Allowed
13-Aug-08	12	1358	0.10	< 36 NTU	15.0						
16-Sep-08	12	0930	2.64		16.9						
14-Oct-08	12	1008	0.10		15.0						
13-Nov-08	12	1131	0.10		19.4						
18-Dec-08	12	0940	1.32		16.0						
21-Jan-09	12	1000	0.10		16.6						
25-Feb-09	12	0905	1.66		22.8						
24-Mar-09	12	0910	0.60		19.8						
22-Apr-09	12	1020	7.92		19.6						
21-May-09	12	0920	14.40		43.8						
23-Jun-09	12	1100	9.24		17.5						
18-Aug-09	12	0845	0.10		16.9						
9-Nov-09	12	0915	1.19		19.2						
Turbidity			**2.83**								-
Temperature							**Average May - Sept**				
17-Jul-08	12	1050	0.10	90° Max	77.04	°F	70.5				
13-Aug-08	12	1358	0.10	90° Max	67.21						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
16-Sep-08	12	0930	2.64	90° Max	64.21						
14-Oct-08	12	1008	0.10	78° Max	59.23						
13-Nov-08	12	1131	0.10	70° Max	49.06						
18-Dec-08	12	0940	1.32	57° Max	33.44						
21-Jan-09	12	1000	0.10	50° Max	32.32						
25-Feb-09	12	0905	1.66	50° Max	37.05						
24-Mar-09	12	0910	0.60	60° Max	52.05						
22-Apr-09	12	1020	7.92	70° Max	50.84						
21-May-09	12	0920	14.40	80° Max	62.30						
23-Jun-09	12	1100	9.24	90° Max	78.96						
18-Aug-09	12	0845	0.10	90° Max	73.30						
9-Nov-09	12	0915	1.19	70° Max	51.69						
Temperature											
Dissolved Oxygen							Apr - Oct Average mg/L				
17-Jul-08	12	1050	0.10	Never < 4.0	4.14	mg/L	4.99				
13-Aug-08	12	1358	0.10	Ave. >5.0	4.78						
16-Sep-08	12	0930	2.64		5.11		Annual Average mg/L				Indiana average = 9.8 mg/L
14-Oct-08	12	1008	0.10		1.98		6.90				
13-Nov-08	12	1131	0.10		5.06						
18-Dec-08	12	0940	1.32		14.08		Annual Average %				Good defined as 80-120%
21-Jan-09	12	1000	0.10		12.08		60.34				
25-Feb-09	12	0905	1.66		11.95						
24-Mar-09	12	0910	0.60		6.26						
22-Apr-09	12	1020	7.92		11.14						
21-May-09	12	0920	14.40		6.24						
23-Jun-09	12	1100	9.24		4.10						
18-Aug-09	12	0845	0.10		2.45						
9-Nov-09	12	0915	1.19		7.17						
Dissolved Oxygen					**6.90**					**to reach Indiana Average (annual)**	**30%**
pH											
17-Jul-08	12	1050	0.10	6.0 - 9.0	6.83						
13-Aug-08	12	1358	0.10		7.05						
16-Sep-08	12	0930	2.64		7.00						
14-Oct-08	12	1008	0.10		7.05						
13-Nov-08	12	1131	0.10		7.23						
18-Dec-08	12	0940	1.32		6.91						
21-Jan-09	12	1000	0.10		6.99						
25-Feb-09	12	0905	1.66		7.02						
24-Mar-09	12	0910	0.60		7.15						
22-Apr-09	12	1020	7.92		7.25						
21-May-09	12	0920	14.40		7.29						
23-Jun-09	12	1100	9.24		7.11						
18-Aug-09	12	0845	0.10		7.60						
9-Nov-09	12	0915	1.19		7.86						
pH					**7.17**						
Specific Conductance											
17-Jul-08	12	1050	0.10	< 1.20 mS/cm	0.177	mS/cm					refer to TDS
13-Aug-08	12	1358	0.10		0.241						
16-Sep-08	12	0930	2.64		0.222						
14-Oct-08	12	1008	0.10		0.314						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
13-Nov-08	12	1131	0.10		0.341							
18-Dec-08	12	0940	1.32		0.295							
21-Jan-09	12	1000	0.10		0.385							
25-Feb-09	12	0905	1.66		0.231							
24-Mar-09	12	0910	0.60		0.317							
22-Apr-09	12	1020	7.92		0.225							
21-May-09	12	0920	14.40		0.161							
23-Jun-09	12	1100	9.24		0.204							
18-Aug-09	12	0845	0.10		0.358							
9-Nov-09	12	0915	1.19		0.262							
Specific Conductance					**0.267**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
17-Jul-08	12	1050	0.10	< 750 mg/L	0.115	g/L	28.14	183.49	10.06	65.61	**4,842.26**	**Ave kg/day**
13-Aug-08	12	1358	0.10		0.157		38.41	183.49	13.74	65.61	**0.87**	**Ave T / Ac / Year**
16-Sep-08	12	0930	2.64		0.144	YSI	929.12	4,839.17	332.23	1,730.38		
14-Oct-08	12	1008	0.10		0.204		49.91	183.49	17.85	65.61		
13-Nov-08	12	1131	0.10		0.222		54.31	183.49	19.42	65.61		
18-Dec-08	12	0940	1.32		0.192		620.06	2,422.11	221.72	866.09		
21-Jan-09	12	1000	0.10		0.250		58.11	174.32	20.78	62.33		
25-Feb-09	12	0905	1.66		0.150		607.73	3,038.65	217.31	1,086.55		
24-Mar-09	12	0910	0.60		0.206		302.40	1,100.96	108.13	393.68		
22-Apr-09	12	1020	7.92		0.147		2,848.40	14,532.66	1,018.53	5,196.56		
21-May-09	12	0920	14.40		0.105		3,699.22	26,423.02	1,322.76	9,448.30		
23-Jun-09	12	1100	9.24		0.133		3,006.65	16,954.77	1,075.11	6,062.66		
18-Aug-09	12	0845	0.10		0.233		57.01	183.49	20.38	65.61		
9-Nov-09	12	0915	1.19		0.170		494.94	2,183.57	176.98	780.80		
Total Dissolved Solids			**2.95**		**0.174**		**946.11**	**Ave kg/day**	**338.31**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
17-Jul-08	12	1050	0.10	< 235 MPN	10.8	MPN	2,642.30	57,494.53	1.17	25.55	2,486,440.58	allowed 1000 mpn/day
13-Aug-08	12	1358	0.10		33.1		8,098.17	57,494.53	3.60	25.55	1,104.90	allowed 1000 mpn/ac
16-Sep-08	12	0930	2.64		90.8		585,862.61	1,516,274.37	260.34	673.79	539,793.56	ave 1000 mpn/day
14-Oct-08	12	1008	0.10		410.6		100,456.39	57,494.53	44.64	25.55	239.87	ave 1000 mpn/ac
13-Nov-08	12	1131	0.10		524.7		128,371.82	57,494.53	57.04	25.55		
18-Dec-08	12	0940	1.32		14.4		46,504.51	758,927.73	20.67	337.24	Annual	
21-Jan-09	12	1000	0.10		<.1		0.00	54,619.80	0.00	24.27	1,696,895.63	allowed 1000 mpn/day
25-Feb-09	12	0905	1.66		4.1		16,611.27	952,109.34	7.38	423.09	754.05	allowed 1000 mpn/ac
24-Mar-09	12	0910	0.60		29.0		42,570.41	344,967.15	18.92	153.29	350,185.11	ave 1000 mpn/day
22-Apr-09	12	1020	7.92		31.8		616,184.73	4,553,566.41	273.81	2,023.47	155.61	ave 1000 mpn/ac
21-May-09	12	0920	14.40		16.0		563,691.01	8,279,211.65	250.49	3,679.03		
23-Jun-09	12	1100	9.24		86.5		1,955,449.97	5,312,494.14	868.94	2,360.71		
18-Aug-09	12	0845	0.10		1,986.3		485,963.30	57,494.53	215.95	25.55		
9-Nov-09	12	0915	1.19		69.7		202,926.32	684,184.85	90.17	304.03		
E. Coli			**2.95**		**269.8**		**350,185.1**	Ave 1000MPN/day	**155.6**	Ave 1000 MPN/Ac		**-78%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
17-Jul-08	12	1050	0.10	< 30.0 mg/L	4	mg/L	978.63	7,339.73	0.17	1.31	317,417.95	allowed kg/day
13-Aug-08	12	1358	0.10		-		-	7,339.73	-	1.31	56.75	allowed T / Ac / Year
16-Sep-08	12	0930	2.64		48		309,707.11	193,566.94	55.37	34.61	117,468.65	ave kg/day
14-Oct-08	12	1008	0.10		2		489.32	7,339.73	0.09	1.31	21.00	Ave T / Ac / Year
13-Nov-08	12	1131	0.10		9		2,201.92	7,339.73	0.39	1.31		
18-Dec-08	12	0940	1.32		4		12,917.92	96,884.39	2.31	17.32	Annual	

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
21-Jan-09	12	1000	0.10		8		1,859.40	6,972.74	0.33	1.25	216,624.97	allowed kg/day
25-Feb-09	12	0905	1.66		12		46,592.58	121,545.87	8.33	21.73	38.73	allowed T / Ac / Year
24-Mar-09	12	0910	0.60		17		24,955.07	44,038.36	4.46	7.87	79,098.16	ave kg/day
22-Apr-09	12	1020	7.92		16		310,030.05	581,306.35	55.43	103.93	14.14	Ave T / Ac / Year
21-May-09	12	0920	14.40		9		317,076.19	1,056,920.64	56.69	188.97		
23-Jun-09	12	1100	9.24		-		-	678,190.74	-	121.25		
18-Aug-09	12	0845	0.10		6.0		1,467.95	7,339.73	0.26	1.31		
9-Nov-09	12	0915	1.19		12.0		34,937.10	87,342.75	6.25	15.62		
Total Suspended Solids			**2.95**		**10**		**79,098.16**	**Ave kg/day**	**5.69**	**T/Ac/Year**		-
Ammonia												
17-Jul-08	12	1050	0.10		<0.200	mg/L						
13-Aug-08	12	1358	0.10		<0.200							
16-Sep-08	12	0930	2.64		<0.200							
14-Oct-08	12	1008	0.10		<0.200							
13-Nov-08	12	1131	0.10		<0.200							
18-Dec-08	12	0940	1.32		<0.200							
21-Jan-09	12	1000	0.10		<0.200							
25-Feb-09	12	0905	1.66		<0.200							
24-Mar-09	12	0910	0.60		<0.200							
22-Apr-09	12	1020	7.92		<0.200							
21-May-09	12	0920	14.40		<0.200							
23-Jun-09	12	1100	9.24		<0.200							
18-Aug-09	12	0845	0.10		<0.200							
9-Nov-09	12	0915	1.19		<0.200							
Ammonia			**2.95**									-
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
17-Jul-08	12	1050	0.10	< 0.04 mg/L	0.10	mg/L	24.47	9.79	8.75	3.50	**339.24**	**Ave kg/day**
13-Aug-08	12	1358	0.10		<0.10						**121.30**	**Ave lb / Ac / Year**
16-Sep-08	12	0930	2.64		0.13		838.79	258.09	299.93	92.29		
14-Oct-08	12	1008	0.10		<0.10							
13-Nov-08	12	1131	0.10		0.16		39.15	9.79	14.00	3.50		
18-Dec-08	12	0940	1.32		<0.10							
21-Jan-09	12	1000	0.10		0.10		23.24	9.30	8.31	3.32		
25-Feb-09	12	0905	1.66		<0.10							
24-Mar-09	12	0910	0.60		<0.10							
22-Apr-09	12	1020	7.92		<0.10							
21-May-09	12	0920	14.40		0.20		7,046.14	1,409.23	2,519.55	503.91		
23-Jun-09	12	1100	9.24		<0.10							
18-Aug-09	12	0845	0.10		<0.10							
9-Nov-09	12	0915	1.19		<0.10							
Total Phosphorus			**2.95**				**1,594.36**	**Ave kg/day**	**570.11**	**lb / Ac / Year**		**79%**
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
17-Jul-08	12	1050	0.10	< 10 mg / L	0.277	mg/L	67.77	2,446.58	24.23	874.84	**72,208.32**	**Ave kg/day**
13-Aug-08	12	1358	0.10		0.209		51.13	2,446.58	18.28	874.84	**12.91**	**Ave T / Ac / Year**
16-Sep-08	12	0930	2.64		1.550		10,000.96	64,522.31	3,576.13	23,071.78		
14-Oct-08	12	1008	0.10		0.407		99.58	2,446.58	35.61	874.84		
13-Nov-08	12	1131	0.10		0.226		55.29	2,446.58	19.77	874.84		
18-Dec-08	12	0940	1.32		0.231		746.01	32,294.80	266.76	11,547.92		
21-Jan-09	12	1000	0.10		0.411		95.53	2,324.25	34.16	831.10		
25-Feb-09	12	0905	1.66		0.702		2,844.17	40,515.29	1,017.01	14,487.39		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
24-Mar-09	12	0910	0.60		1.890		2,774.42	14,679.45	992.07	5,249.06		
22-Apr-09	12	1020	7.92		0.504		9,765.95	193,768.78	3,492.09	69,287.53		
21-May-09	12	0920	14.40		0.083		2,924.15	352,306.88	1,045.61	125,977.33		
23-Jun-09	12	1100	9.24		0.840		18,989.34	226,063.58	6,790.18	80,835.45		
18-Aug-09	12	0845	0.10		0.198		48.44	2,446.58	17.32	874.84		
9-Nov-09	12	0915	1.19		0.130		378.49	29,114.25	135.34	10,410.63		
Nitrate - Nitrite			**2.95**				**3,727.90**	**Ave kg/day**	**0.67**	**T / Ac / Year**		-
Hardness (CaCO3)												
13-Aug-08	12	1358	0.10		140							
13-Nov-08	12	1131	0.10		180							
25-Feb-09	12	0905	1.66		180							
21-May-09	12	0920	14.40		120							
Hardness (CaCO3)			**4.06**									-
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Aug-08	12	1358	0.10	< 174µg/L	0.103	mg/L	25.20	42.57	9.01	15.22	**1,730.06**	**Ave kg/day**
13-Nov-08	12	1131	0.10		0.084		20.55	42.57	7.35	15.22	**618.63**	**Ave lb / Ac / Year**
25-Feb-09	12	0905	1.66		0.893		3,618.02	704.97	1,293.72	252.08		
21-May-09	12	0920	14.40		3.310		116,613.58	6,130.14	41,698.50	2,192.01		
Total Aluminum			**4.06**				**30,069.34**	**Ave kg/day**	**10,752.14**	**lb / Ac / Year**		**94%**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	12	1131	0.10	< 174µg/L	0.077	mg/L	18.84	42.57	6.74	15.22	**2,292.56**	**Ave kg/day**
25-Feb-09	12	0905	1.66		0.149		603.68	704.97	215.86	252.08	**819.77**	**Ave lb / Ac / Year**
21-May-09	12	0920	14.40		3.250		114,499.74	6,130.14	40,942.63	2,192.01		
Dissolved Aluminum			**5.39**				**38,374.08**	**Ave kg/day**	**13,721.74**	**lb / Ac / Year**		**94%**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Aug-08	12	1358	0.10	< 2.5 mg/L	0.563	mg/L	137.74	611.64	49.25	218.71	**24,857.21**	**Ave kg/day**
13-Nov-08	12	1131	0.10		0.791		193.52	611.64	69.20	218.71	**8,888.40**	**Ave lb / Ac / Year**
25-Feb-09	12	0905	1.66		0.741		3,002.18	10,128.82	1,073.52	3,621.85		
21-May-09	12	0920	14.40		3.170		111,681.28	88,076.72	39,934.81	31,494.33		
Total Iron			**4.06**				**28,753.68**	**Ave kg/day**	**10,281.70**	**lb / Ac / Year**		**14%**
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	12	1131	0.10	< 2.5 mg/L	0.479	mg/L	117.19	611.64	41.90	218.71	**32,939.06**	**Ave kg/day**
25-Feb-09	12	0905	1.66		0.168		680.66	10,128.82	243.39	3,621.85	**11,778.30**	**Ave lb / Ac / Year**
21-May-09	12	0920	14.40		2.610		91,952.10	88,076.72	32,880.08	31,494.33		
Dissolved Iron			**5.39**				**30,916.65**	**Ave kg/day**	**11,055.13**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Aug-08	12	1358	0.10	0.015	<0.001	mg/L	0.00	3.70	0.00	1.32	**137.90**	**Ave kg/day**
13-Nov-08	12	1131	0.10	0.019	<0.001		0.00	4.59	0.00	1.64	**49.31**	**Ave lb / Ac / Year**
25-Feb-09	12	0905	1.66	0.019	0.001		4.05	75.99	1.45	27.17		
21-May-09	12	0920	14.40	0.013	0.004		140.92	467.32	50.39	167.10		
Total Copper			**4.06**				**36.24**	**Ave kg/day**	**5.21**	**T/Ac/Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	12	1131	0.10	0.019	<0.001	mg/L	0.00	4.59	0.00	1.64	**182.63**	**Ave kg/day**
25-Feb-09	12	0905	1.66	0.019	0.001		4.05	75.99	1.45	27.17	**65.31**	**Ave lb / Ac / Year**
21-May-09	12	0920	14.40	0.013	0.004		140.92	467.32	50.39	167.10		
Dissolved Copper			**5.39**				**48.33**	**Ave kg/day**	**6.95**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
13-Aug-08	12	1358	0.10	0.711	0.521	mg/L	127.47	173.96	45.58	62.21	**6,465.41**	**Ave kg/day**
13-Nov-08	12	1131	0.10	0.887	0.975		238.54	216.93	85.30	77.57	**2,311.89**	**Ave lb / Ac / Year**
25-Feb-09	12	0905	1.66	0.887	0.191		773.84	3,592.44	276.71	1,284.58		
21-May-09	12	0920	14.40	0.621	0.319		11,238.59	21,878.29	4,018.68	7,823.20		
Total Manganese			**4.06**				**3,094.61**	**Ave kg/day**	**445.22**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	12	1131	0.10	0.887	0.898	mg/L	219.70	216.93	78.56	77.57	**8,562.56**	**Ave kg/day**
25-Feb-09	12	0905	1.66	0.887	0.187		757.64	3,592.44	270.91	1,284.58	**3,061.79**	**Ave lb / Ac / Year**
21-May-09	12	0920	14.40	0.621	0.306		10,780.59	21,878.29	3,854.91	7,823.20		
Total Manganese			**5.39**				**3,919.31**	**Ave kg/day**	**563.87**	**T/Ac/Year**		-
Cl												
13-Nov-08	12	1131	-		16.3							
Chlorine			**-**									
SO4												
13-Nov-08	12	1131	-		19.7							
Sulfate			**-**									

SITE #13

Drainage Area: 711.92 Acres ** Part of Point 12 drainage area

Date	Site No	Time	Notes / Conditions
17-Jul-08	13	0955	
12-Aug-08	13	1248	Little to no flow.
16-Sep-08	13	1000	Barely moving, if at all. Water is tea-coloured
14-Oct-08	13	1120	Water level much lower than Sept. No water downstream about 30 yds (higher streambed). Oily sheen on surface -had to wipe light brown film off dipper.
13-Nov-08	13	1006	No flow - disconnected pools. Oily surface film. Black, tannic water and grey, turbid water present
18-Dec-08	13	0900	Frozen. Had to break ice for samples. May have stirred up sediment
21-Jan-09	13	0920	Frozen. Ice approx 5" thick. No apparent flow. Field tile to E of site repaired / opened. "Pump site" (looked like brick cistern) removed
23-Feb-09	13	1147	Slight mossy pond smell to water. Ice covered (about 1-1/2") except upstream where ditch enters.
23-Mar-09	13	1200	Slight "cow pond" smell to water. Bits of oil sheen. Kind of scummy surface
21-Apr-09	13	1245	Stream appears to be dark grey - could be bottom
19-May-09	13	1205	Slightly mossy odor to water. Very clear.
24-Jun-09	13	0830	Stagnant, septic? Odor to water. Somewhat milky color to water. Strong influx from field tile. High water mark 3' above surface of water. Diesel exhaust smell in a
17-Aug-09	13	1150	Slight urine-like smell. Greyish brown. First time have seen goats have access to stream. Disconnected pool downstream. Millfoil?-on surface. Oily surface sheen
10-Nov-09	13	1040	Slight sulfur smell. No color

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Turbidity							Apr - Oct Average NTU					
17-Jul-08	13	0955	0.10	n/a	15.9	NTU	26.5	36.0			36.0	NTU Allowed
12-Aug-08	13	1248	0.10	< 36 NTU	34.0							
16-Sep-08	13	1000	0.10		19.7							
14-Oct-08	13	1120	0.10		42.0							
13-Nov-08	13	1006	0.10		86.0							
18-Dec-08	13	0900	0.10		19.2							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
21-Jan-09	13	0920	0.10		16.2						
23-Feb-09	13	1147	0.10		15.0						
23-Mar-09	13	1200	0.10		15.0						
21-Apr-09	13	1245	0.10		15.8						
19-May-09	13	1205	0.10		17.8						
24-Jun-09	13	0830	0.10		36.00						
17-Aug-09	13	1150	0.10		30.4						
10-Nov-09	13	1040	0.10								
Turbidity			**0.10**		**27.9**						-
Temperature							**Average May - Sept**				
17-Jul-08	13	0955	0.10	90° Max	72.50	°F	68.1				
12-Aug-08	13	1248	0.10	90° Max	66.98						
16-Sep-08	13	1000	0.10	90° Max	64.11						
14-Oct-08	13	1120	0.10	78° Max	61.75						
13-Nov-08	13	1006	0.10	70° Max	46.76						
18-Dec-08	13	0900	0.10	57° Max	38.64						
21-Jan-09	13	0920	0.10	50° Max	34.07						
23-Feb-09	13	1147	0.10	50° Max	34.50						
23-Mar-09	13	1200	0.10	60° Max	48.35						
21-Apr-09	13	1245	0.10	70° Max	49.47						
19-May-09	13	1205	0.10	80° Max	57.34						
24-Jun-09	13	0830	0.10	90° Max	74.02						
17-Aug-09	13	1150	0.10	90° Max	73.41						
10-Nov-09	13	1040	0.10	70° Max	54.20						
Temperature			**0.10**								
Dissolved Oxygen							Apr - Oct Average mg/L				
17-Jul-08	13	0955	0.10	Never < 4.0	2.79	mg/L	4.24				
12-Aug-08	13	1248	0.10	Ave. >5.0	2.59						
16-Sep-08	13	1000	0.10		1.50		Annual Average mg/L				Indiana average = 9.8 mg/L
14-Oct-08	13	1120	0.10		0.81		5.14				
13-Nov-08	13	1006	0.10		1.76						
18-Dec-08	13	0900	0.10		2.61		Annual Average %				Good defined as 80-120%
21-Jan-09	13	0920	0.10		9.56		44.96				
23-Feb-09	13	1147	0.10		12.68						
23-Mar-09	13	1200	0.10		8.02						
21-Apr-09	13	1245	0.10		12.41						
19-May-09	13	1205	0.10		8.27						
24-Jun-09	13	0830	0.10		5.10						
17-Aug-09	13	1150	0.10		0.42						
10-Nov-09	13	1040	0.10		3.39						
Dissolved Oxygen			**0.10**		**5.14**					**to reach Indiana Average (annual)**	**48%**
pH											
17-Jul-08	13	0955	0.10	6.0 - 9.0	6.90						
12-Aug-08	13	1248	0.10		7.20						
16-Sep-08	13	1000	0.10		6.83						
14-Oct-08	13	1120	0.10		7.10						
13-Nov-08	13	1006	0.10		7.45						
18-Dec-08	13	0900	0.10		6.78						
21-Jan-09	13	0920	0.10		7.37						
23-Feb-09	13	1147	0.10		7.43						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
23-Mar-09	13	1200	0.10		7.44							
21-Apr-09	13	1245	0.10		7.54							
19-May-09	13	1205	0.10		7.45							
24-Jun-09	13	0830	0.10		7.16							
17-Aug-09	13	1150	0.10		7.29							
10-Nov-09	13	1040	0.10		7.39							
pH			**0.10**		**7.24**							
Specific Conductance												
17-Jul-08	13	0955	0.10	< 1.20 mS/cm	0.437	mS/cm						refer to TDS
12-Aug-08	13	1248	0.10		0.363							
16-Sep-08	13	1000	0.10		0.157							
14-Oct-08	13	1120	0.10		0.256							
13-Nov-08	13	1006	0.10		0.326							
18-Dec-08	13	0900	0.10		0.378							
21-Jan-09	13	0920	0.10		0.683							
23-Feb-09	13	1147	0.10		0.585							
23-Mar-09	13	1200	0.10		0.530							
21-Apr-09	13	1245	0.10		0.426							
19-May-09	13	1205	0.10		0.492							
24-Jun-09	13	0830	0.10		0.565							
17-Aug-09	13	1150	0.10		0.286							
10-Nov-09	13	1040	0.10		0.562							
Specific Conductance			**0.10**		**0.432**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
17-Jul-08	13	0955	0.10	< 750 mg/L	0.284	g/L	69.48	183.49	78.54	207.40	**183.49**	**Ave kg/day**
12-Aug-08	13	1248	0.10		0.236		57.74	183.49	65.26	207.40	**0.10**	**Ave T / Ac / Year**
16-Sep-08	13	1000	0.10		0.102	YSI	24.96	183.49	28.21	207.40		
14-Oct-08	13	1120	0.10		0.166		40.61	183.49	45.91	207.40		
13-Nov-08	13	1006	0.10		0.212		51.87	183.49	58.63	207.40		
18-Dec-08	13	0900	0.10		0.246		60.19	183.49	68.03	207.40		
21-Jan-09	13	0920	0.10		0.444		108.63	183.49	122.78	207.40		
23-Feb-09	13	1147	0.10		0.380		92.97	183.49	105.08	207.40		
23-Mar-09	13	1200	0.10		0.344		84.16	183.49	95.13	207.40		
21-Apr-09	13	1245	0.10		0.277		67.77	183.49	76.60	207.40		
19-May-09	13	1205	0.10		0.320		78.29	183.49	88.49	207.40		
24-Jun-09	13	0830	0.10		0.367		89.79	183.49	101.49	207.40		
17-Aug-09	13	1150	0.10		0.186		45.51	183.49	51.44	207.40		
10-Nov-09	13	1040	0.10		0.365		89.30	183.49	100.94	207.40		
Total Dissolved Solids			**0.10**		**0.281**		**68.66**	**Ave kg/day**	**77.61**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
17-Jul-08	13	0955	0.10	< 235 MPN	57.1	MPN	13,969.95	57,494.53	19.62	80.76	57,494.53	allowed 1000 mpn/day
12-Aug-08	13	1248	0.10		365.4		89,397.87	57,494.53	125.57	80.76	80.76	allowed 1000 mpn/ac
16-Sep-08	13	1000	0.10		88.2		21,578.80	57,494.53	30.31	80.76	176,667.22	ave 1000 mpn/day
14-Oct-08	13	1120	0.10		78.7		19,254.55	57,494.53	27.05	80.76	248.16	ave 1000 mpn/ac
13-Nov-08	13	1006	0.10		210.5		51,500.42	57,494.53	72.34	80.76		
18-Dec-08	13	0900	0.10		16.0		3,914.52	57,494.53	5.50	80.76	Annual	
21-Jan-09	13	0920	0.10		1.0		244.66	57,494.53	0.34	80.76	57,494.53	allowed 1000 mpn/day
23-Feb-09	13	1147	0.10		16.1		3,938.99	57,494.53	5.53	80.76	80.76	allowed 1000 mpn/ac
23-Mar-09	13	1200	0.10		517.0		126,487.96	57,494.53	177.67	80.76	126,863.68	ave 1000 mpn/day
21-Apr-09	13	1245	0.10		313.0		76,577.81	57,494.53	107.57	80.76	178.20	ave 1000 mpn/ac

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
19-May-09	13	1205	0.10		108.1		26,447.48	57,494.53	37.15	80.76		
24-Jun-09	13	0830	0.10		*2,419.6*		591,973.42	57,494.53	831.52	80.76		
17-Aug-09	13	1150	0.10		*>2419.6*		592,071.28	57,494.53	831.65	80.76		
10-Nov-09	13	1040	0.10		648.8		158,733.82	57,494.53	222.97	80.76		
E. Coli			**0.10**		**372.3**		**126,863.7**	Ave 1000MPN/day	**178.2**	Ave 1000 MPN/Ac		**207%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
17-Jul-08	13	0955	0.10	< 30.0 mg/L	5	mg/L	1,223.29	7,339.73	0.69	4.15	7,339.73	allowed kg/day
12-Aug-08	13	1248	0.10		-		-	7,339.73	-	4.15	4.15	allowed T / Ac / Year
16-Sep-08	13	1000	0.10		81		19,817.26	7,339.73	11.20	4.15	3,968.89	ave kg/day
14-Oct-08	13	1120	0.10		17		4,159.18	7,339.73	2.35	4.15	2.24	Ave T / Ac / Year
13-Nov-08	13	1006	0.10		42		10,275.62	7,339.73	5.81	4.15		
18-Dec-08	13	0900	0.10		6		1,467.95	7,339.73	0.83	4.15	Annual	
21-Jan-09	13	0920	0.10		9		2,201.92	7,339.73	1.24	4.15	7,339.73	allowed kg/day
23-Feb-09	13	1147	0.10		7		1,712.60	7,339.73	0.97	4.15	4.15	allowed T / Ac / Year
23-Mar-09	13	1200	0.10		8		1,834.93	7,339.73	1.04	4.15	3,800.93	ave kg/day
21-Apr-09	13	1245	0.10		9		2,201.92	7,339.73	1.24	4.15	2.15	Ave T / Ac / Year
19-May-09	13	1205	0.10		13		3,180.55	7,339.73	1.80	4.15		
24-Jun-09	13	0830	0.10		2		489.32	7,339.73	0.28	4.15		
17-Aug-09	13	1150	0.10		14.0		3,425.21	7,339.73	1.94	4.15		
10-Nov-09	13	1040	0.10		5.0		1,223.29	7,339.73	0.69	4.15		
Total Suspended Solids			**0.10**		**16**		**3,800.93**	**Ave kg/day**	**0.86**	**T/Ac/Year**		-
Ammonia								kg/day		lb / Ac / Year		
17-Jul-08	13	0955	0.10		<0.200	mg/L						
12-Aug-08	13	1248	0.10		<0.200							
16-Sep-08	13	1000	0.10		<0.200							
14-Oct-08	13	1120	0.10		<0.200							
13-Nov-08	13	1006	0.10	<.0083 mg/L	0.878		214.81	2.03	242.80	2.30		
18-Dec-08	13	0900	0.10		<0.200							
21-Jan-09	13	0920	0.10		<0.200							
23-Feb-09	13	1147	0.10		<0.200							
23-Mar-09	13	1200	0.10		<0.200							
21-Apr-09	13	1245	0.10		<0.200							
19-May-09	13	1205	0.10		<0.200							
24-Jun-09	13	0830	0.10		<0.200							
17-Aug-09	13	1150	0.10		<0.200							
10-Nov-09	13	1040	0.10		<0.200							
Ammonia			**0.10**				**214.81**	**2.03**	**242.80**	**2.30**		**99%**
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
17-Jul-08	13	0955	0.10	< 0.04 mg/L	<0.10	mg/L					**9.79**	**Ave kg/day**
12-Aug-08	13	1248	0.10		0.29		70.95	9.79	80.20	11.06	**11.06**	**Ave lb / Ac / Year**
16-Sep-08	13	1000	0.10		0.38		92.97	9.79	105.08	11.06		
14-Oct-08	13	1120	0.10		0.35		85.63	9.79	96.79	11.06		
13-Nov-08	13	1006	0.10		0.66		161.47	9.79	182.51	11.06		
18-Dec-08	13	0900	0.10		0.33		80.74	9.79	91.26	11.06		
21-Jan-09	13	0920	0.10		0.26		63.61	9.79	71.90	11.06		
23-Feb-09	13	1147	0.10		<0.10							
23-Mar-09	13	1200	0.10		<0.10							
21-Apr-09	13	1245	0.10		<0.10							
19-May-09	13	1205	0.10		0.11		26.91	9.79	30.42	11.06		
24-Jun-09	13	0830	0.10		<0.10							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
17-Aug-09	13	1150	0.10		<0.10							
10-Nov-09	13	1040	0.10		0.15		36.70	9.79	41.48	11.06		
Total Phosphorus			**0.10**		**0.316**		**77.37**	**Ave kg/day**	**87.46**	**lb / Ac / Year**		87%
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
17-Jul-08	13	0955	0.10	< 10 mg / L	1.450	mg/L	354.75	2,446.58	400.98	2,765.38	**2,446.58**	**Ave kg/day**
12-Aug-08	13	1248	0.10		0.155		37.92	2,446.58	42.86	2,765.38	**1.38**	**Ave T / Ac / Year**
16-Sep-08	13	1000	0.10		0.307		75.11	2,446.58	84.90	2,765.38		
14-Oct-08	13	1120	0.10		0.220		53.82	2,446.58	60.84	2,765.38		
13-Nov-08	13	1006	0.10		0.292		71.44	2,446.58	80.75	2,765.38		
18-Dec-08	13	0900	0.10		1.020		249.55	2,446.58	282.07	2,765.38		
21-Jan-09	13	0920	0.10		3.150		770.67	2,446.58	871.09	2,765.38		
23-Feb-09	13	1147	0.10		5.840		1,428.80	2,446.58	1,614.98	2,765.38		
23-Mar-09	13	1200	0.10		0.284		69.48	2,446.58	78.54	2,765.38		
21-Apr-09	13	1245	0.10		1.630		398.79	2,446.58	450.76	2,765.38		
19-May-09	13	1205	0.10		0.187		45.75	2,446.58	51.71	2,765.38		
24-Jun-09	13	0830	0.10		0.991		242.46	2,446.58	274.05	2,765.38		
17-Aug-09	13	1150	0.10		0.180		44.04	2,446.58	49.78	2,765.38		
10-Nov-09	13	1040	0.10		0.118		28.87	2,446.58	32.63	2,765.38		
Nitrate - Nitrite			**0.10**		**1.130**		**276.53**	**Ave kg/day**	**0.16**	**T / Ac / Year**		
Hardness (CaCO3)												
12-Aug-08	13	1248	0.10		190							
13-Nov-08	13	1006	0.10		260							
23-Feb-09	13	1147	0.10		306							
19-May-09	13	1205	0.10		150							
Hardness (CaCO3)			**0.10**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
12-Aug-08	13	1248	0.10	< 174µg/L	0.691	mg/L	169.06	42.57	191.09	48.12	**42.57**	**Ave kg/day**
13-Nov-08	13	1006	0.10		2.400		587.18	42.57	663.69	48.12	**48.12**	**Ave lb / Ac / Year**
23-Feb-09	13	1147	0.10		0.104		25.44	42.57	28.76	48.12		
19-May-09	13	1205	0.10		0.249		60.92	42.57	68.86	48.12		
Total Aluminum			**0.10**		**0.861**		**210.65**	**Ave kg/day**	**238.10**	**lb / Ac / Year**		**80%**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	13	1006	0.10	< 174µg/L	2.220	mg/L	543.14	42.57	613.91	48.12	**42.57**	**Ave kg/day**
23-Feb-09	13	1147	0.10		<0.004		0.00	42.57	0.00	48.12	**48.12**	**Ave lb / Ac / Year**
19-May-09	13	1205	0.10		0.472		115.48	42.57	130.53	48.12		
Dissolved Aluminum			**0.10**		**1.346**		**219.54**	**Ave kg/day**	**248.15**	**lb / Ac / Year**		**81%**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
12-Aug-08	13	1248	0.10	< 2.5 mg/L	1.370	mg/L	335.18	611.64	378.86	691.34	**611.64**	**Ave kg/day**
13-Nov-08	13	1006	0.10		3.130		765.78	611.64	865.56	691.34	**691.34**	**Ave lb / Ac / Year**
23-Feb-09	13	1147	0.10		0.239		58.47	611.64	66.09	691.34		
19-May-09	13	1205	0.10		0.294		71.93	611.64	81.30	691.34		
Total Iron			**0.10**		**1.258**		**307.84**	**Ave kg/day**	**347.95**	**lb / Ac / Year**		-
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	13	1006	0.10	< 2.5 mg/L	2.760	mg/L	675.25	611.64	763.24	691.34	**611.64**	**Ave kg/day**
23-Feb-09	13	1147	0.10		<0.060		0.00	611.64	0.00	691.34	**691.34**	**Ave lb / Ac / Year**
19-May-09	13	1205	0.10		0.412		100.80	611.64	113.93	691.34		
Dissolved Iron			**0.10**		**1.586**		**258.68**	**Ave kg/day**	**292.39**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
12-Aug-08	13	1248	0.10	0.020	<0.001	mg/L	0.00	4.81	0.00	5.43	**5.56**	**Ave kg/day**
13-Nov-08	13	1006	0.10	0.026	0.004		0.98	6.28	1.11	7.10	**6.28**	**Ave lb / Ac / Year**
23-Feb-09	13	1147	0.10	0.030	<0.001		0.00	7.22	0.00	8.16		
19-May-09	13	1205	0.10	0.016	<0.001		0.00	3.93	0.00	4.44		
Total Copper			**0.10**				**0.25**	**Ave kg/day**	**0.11**	**T/Ac/Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	13	1006	0.10	0.026	0.002	mg/L	0.49	6.28	0.55	7.10	**2.09**	**Ave kg/day**
23-Feb-09	13	1147	0.10		<0.001		0.00	-	0.00	-	**2.37**	**Ave lb / Ac / Year**
19-May-09	13	1205	0.10		0.001		0.24	-	0.28	-		
Dissolved Copper			**0.10**				**0.24**	**Ave kg/day**	**0.11**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
12-Aug-08	13	1248	0.10	0.930	0.761	mg/L	186.18	227.49	210.45	257.13	**264.43**	**Ave kg/day**
13-Nov-08	13	1006	0.10	1.225	0.969		237.07	299.65	267.97	338.69	**298.88**	**Ave lb / Ac / Year**
23-Feb-09	13	1147	0.10	1.413	0.044		10.76	345.74	12.17	390.80		
19-May-09	13	1205	0.10	0.755	0.057		13.95	184.83	15.76	208.92		
Total Manganese			**0.10**				**111.99**	**Ave kg/day**	**50.93**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	13	1006	0.10	1.225	0.919	mg/L	224.84	299.65	254.14	338.69	**276.74**	**Ave kg/day**
23-Feb-09	13	1147	0.10	1.413	0.035		8.56	345.74	9.68	390.80	**312.80**	**Ave lb / Ac / Year**
19-May-09	13	1205	0.10	0.755	0.063		15.41	184.83	17.42	208.92		
Total Manganese			**0.10**				**82.94**	**Ave kg/day**	**37.72**	**T/Ac/Year**		-
Cl												
13-Nov-08	13	1006	0.10		7							
Chlorine			**0.10**									
SO4												
13-Nov-08	13	1006	0.10		11							
Sulfate			**0.10**									

SITE #14

Drainage Area: 8,102.21 Acres

Date	Site No	Time	Notes / Conditions
17-Jul-08	14	0921	
13-Aug-08	14	1327	
16-Sep-08	14	1030	Bottom is very sandy
14-Oct-08	14	1045	Extremely clear. Riffles formed in sandy substrate. Mink scratch under bridge
13-Nov-08	14	0912	
16-Dec-08	14	1044	Camera disc full. No additional photos for day. Used sample bottle marked 17 (clean) for grab.
21-Jan-09	14	0840	Frozen - flow not measured. Ice approx 2" thick
23-Feb-09	14	1213	Water color is "cattle poop green". Fairly clear - can see entire bottom. Beaver working the surrounding trees. Slight sulphur smell
23-Mar-09	14	1230	No evident smell. VERY soft bottom - muddy, silty. First minnow and first crawdad of season.
21-Apr-09	14	1215	Slightly sweed odor to water. Water has green tinge, slightly milky appearance
19-May-09	14	1235	No real smell. Colour light tan. Rock/sand bottom

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
24-Jun-09	14	0800	Little bit mossy odor to water. Color slightly milky-grey. About 1/3 of stream bed sandy, rest is heavily sedimented. Rust staining on N bank. Flecks of foam (abou								
17-Aug-09	14	1125									
10-Nov-09	14	1105									

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Turbidity							Apr - Oct Average NTU				
17-Jul-08	14	0921	1.06	n/a	32.0	NTU	30.5	36.0			36.0 NTU Allowed
13-Aug-08	14	1327	1.11	< 36 NTU	15.7						
16-Sep-08	14	1030	1.41		26.0						
14-Oct-08	14	1045	1.01		15.0						
13-Nov-08	14	0912	0.56		16.5						
16-Dec-08	14	1044	0.61		15.0						
21-Jan-09	14	0840	0.10		15.0						
23-Feb-09	14	1213	3.90		16.8						
23-Mar-09	14	1230	4.84		16.9						
21-Apr-09	14	1215	59.29		60.4						
19-May-09	14	1235	16.08		47.6						
24-Jun-09	14	0800	8.88		30.4						***Improvement based on Apr-Oct average*
17-Aug-09	14	1125	4.37		17.0						
10-Nov-09	14	1105	7.49		15.0						
Turbidity			**7.94**		**24.2**						**-18%**
Temperature							**Average May - Sept**				
17-Jul-08	14	0921	1.06	90° Max	79.76	°F	74.9				
13-Aug-08	14	1327	1.11	90° Max	74.47						
16-Sep-08	14	1030	1.41	90° Max	69.24						
14-Oct-08	14	1045	1.01	78° Max	67.92						
13-Nov-08	14	0912	0.56	70° Max	51.79						
16-Dec-08	14	1044	0.61	57° Max	32.53						
21-Jan-09	14	0840	0.10	50° Max	32.18						
23-Feb-09	14	1213	3.90	50° Max	35.45						
23-Mar-09	14	1230	4.84	60° Max	51.93						
21-Apr-09	14	1215	59.29	70° Max	53.81						
19-May-09	14	1235	16.08	80° Max	65.41						
24-Jun-09	14	0800	8.88	90° Max	80.42						
17-Aug-09	14	1125	4.37	90° Max	79.91						
10-Nov-09	14	1105	7.49	70° Max	56.11						
Temperature			**7.94**								
Dissolved Oxygen							Apr - Oct Average mg/L				
17-Jul-08	14	0921	1.06	Never < 4.0	7.05	mg/L	7.89				
13-Aug-08	14	1327	1.11	Ave. >5.0	8.21						
16-Sep-08	14	1030	1.41		7.87		Annual Average mg/L				Indiana average = 9.8 mg/L
14-Oct-08	14	1045	1.01		7.88		10.62				
13-Nov-08	14	0912	0.56		10.29						
16-Dec-08	14	1044	0.61		22.02		Annual Average %				Good defined as 80-120%
21-Jan-09	14	0840	0.10		14.68		99.13				
23-Feb-09	14	1213	3.90		14.95						
23-Mar-09	14	1230	4.84		11.80						
21-Apr-09	14	1215	59.29		10.83						
19-May-09	14	1235	16.08		8.83						
24-Jun-09	14	0800	8.88		5.70						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
17-Aug-09	14	1125	4.37		6.77							
10-Nov-09	14	1105	7.49		11.82							
Dissolved Oxygen			**7.94**		**10.6**							**0%**
pH												
17-Jul-08	14	0921	1.06	6.0 - 9.0	7.93							
13-Aug-08	14	1327	1.11		7.71							
16-Sep-08	14	1030	1.41		7.65							
14-Oct-08	14	1045	1.01		7.65							
13-Nov-08	14	0912	0.56		8.10							
16-Dec-08	14	1044	0.61		8.43							
21-Jan-09	14	0840	0.10		7.49							
23-Feb-09	14	1213	3.90		7.74							
23-Mar-09	14	1230	4.84		8.00							
21-Apr-09	14	1215	59.29		7.95							
19-May-09	14	1235	16.08		7.72							
24-Jun-09	14	0800	8.88		7.67							
17-Aug-09	14	1125	4.37		7.88							
10-Nov-09	14	1105	7.49		7.87							
pH			**7.94**		**7.84**							
Specific Conductance												
17-Jul-08	14	0921	1.06	< 1.20 mS/cm	0.427	mS/cm						refer to TDS
13-Aug-08	14	1327	1.11		0.484							
16-Sep-08	14	1030	1.41		0.506							
14-Oct-08	14	1045	1.01		0.572							
13-Nov-08	14	0912	0.56		0.942							
16-Dec-08	14	1044	0.61		0.819							
21-Jan-09	14	0840	0.10		0.759							
23-Feb-09	14	1213	3.90		0.568							
23-Mar-09	14	1230	4.84		0.600							
21-Apr-09	14	1215	59.29		0.433							
19-May-09	14	1235	16.08		0.350							
24-Jun-09	14	0800	8.88		0.399							
17-Aug-09	14	1125	4.37		0.515							
10-Nov-09	14	1105	7.49		0.619							
Specific Conductance			**7.94**		**0.571**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
17-Jul-08	14	0921	1.06	< 750 mg/L	0.277	g/L	718.36	1,945.03	71.35	193.17	**14,510.19**	**Ave kg/day**
13-Aug-08	14	1327	1.11		0.315		855.45	2,036.77	84.96	202.29	**0.72**	**Ave T / Ac / Year**
16-Sep-08	14	1030	1.41		0.329	YSI	1,134.94	2,587.25	112.72	256.96		
14-Oct-08	14	1045	1.01		0.372		919.23	1,853.28	91.29	184.06		
13-Nov-08	14	0912	0.56		0.612		838.49	1,027.56	83.28	102.05		
16-Dec-08	14	1044	0.61		0.533		790.32	1,112.08	78.49	110.45		
21-Jan-09	14	0840	0.10		0.494		120.86	183.49	12.00	18.22		
23-Feb-09	14	1213	3.90		0.568		5,419.65	7,156.23	538.26	710.74		
23-Mar-09	14	1230	4.84		0.600		7,104.86	8,881.07	705.63	882.04		
21-Apr-09	14	1215	59.29		0.433		62,812.00	108,796.77	6,238.30	10,805.37		
19-May-09	14	1235	16.08		0.350		13,769.33	29,505.70	1,367.53	2,930.42		
24-Jun-09	14	0800	8.88		0.259		5,628.51	16,298.78	559.01	1,618.75		
17-Aug-09	14	1125	4.37		0.335		3,580.03	8,014.98	355.56	796.02		
10-Nov-09	14	1105	7.49		0.402		7,366.59	13,743.64	731.63	1,364.98		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Total Dissolved Solids			**7.94**		**0.420**		**7,932.758**	**Ave kg/day**	**787.858**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
17-Jul-08	14	0921	1.06	< 235 MPN	59.2	MPN	153,527.51	609,441.97	18.95	75.22	6,699,010.55	allowed 1000 mpn/day
13-Aug-08	14	1327	1.11		107.6		292,209.20	638,189.23	36.07	78.77	826.81	allowed 1000 mpn/ac
16-Sep-08	14	1030	1.41		85.3		294,084.50	810,672.81	36.30	100.06	10,668,530.97	ave 1000 mpn/day
14-Oct-08	14	1045	1.01		108.1		267,119.56	580,694.71	32.97	71.67	1,316.74	ave 1000 mpn/ac
13-Nov-08	14	0912	0.56		243.6		333,752.05	321,969.34	41.19	39.74		
16-Dec-08	14	1044	0.61		78.0		115,656.30	348,451.67	14.27	43.01	Annual	
21-Jan-09	14	0840	0.10		<.1		0.00	57,494.53	0.00	7.10	4,546,525.82	allowed 1000 mpn/day
23-Feb-09	14	1213	3.90		2.0		19,083.29	2,242,286.49	2.36	276.75	7,627.80	allowed 1000 mpn/ac
23-Mar-09	14	1230	4.84		46.0		544,705.58	2,782,735.03	67.23	343.45	6,309,514.21	ave 1000 mpn/day
21-Apr-09	14	1215	59.29		193.3		28,033,300.55	34,089,653.96	3,459.96	4,207.45	778.74	ave 1000 mpn/ac
19-May-09	14	1235	16.08		1,299.7		51,131,412.94	9,245,119.67	6,310.80	1,141.06		
24-Jun-09	14	0800	8.88		122.2		2,655,614.63	5,106,951.21	327.76	630.32		
17-Aug-09	14	1125	4.37		235.9		2,520,978.84	2,511,360.87	311.15	309.96		
10-Nov-09	14	1105	7.49		107.6		1,971,753.95	4,306,339.95	243.36	531.50		
E. Coli			**7.94**		**206.8**		**6,309,514.2**	Ave 1000MPN/day	**778.7**	Ave 1000 MPN/Ac		**59%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
17-Jul-08	14	0921	1.06	< 30.0 mg/L	11	mg/L	28,527.07	77,801.10	1.42	3.86	808,759.24	allowed kg/day
13-Aug-08	14	1327	1.11		7		19,009.89	81,470.97	0.94	4.05	40.16	allowed T / Ac / Year
16-Sep-08	14	1030	1.41		13		43,120.89	103,490.15	2.14	5.14	501,997.46	ave kg/day
14-Oct-08	14	1045	1.01		2		4,942.08	74,131.24	0.25	3.68	24.93	Ave T / Ac / Year
13-Nov-08	14	0912	0.56		-							
16-Dec-08	14	1044	0.61		2		2,965.55	44,483.19	0.15	2.21	Annual	
21-Jan-09	14	0840	0.10		14		3,425.21	7,339.73	0.17	0.36	577,693.61	allowed kg/day
23-Feb-09	14	1213	3.90		10		95,416.45	286,249.34	4.74	14.21	28.69	allowed T / Ac / Year
23-Mar-09	14	1230	4.84		12		142,097.11	355,242.77	7.06	17.64	341,626.05	ave kg/day
21-Apr-09	14	1215	59.29		21		2,973,778.32	4,351,870.72	147.67	216.11	16.96	Ave T / Ac / Year
19-May-09	14	1235	16.08		-							
24-Jun-09	14	0800	8.88		18		391,170.73	651,951.22	19.42	32.37		
17-Aug-09	14	1125	4.37		5.0		53,433.21	320,599.26	2.65	15.92		
10-Nov-09	14	1105	7.49		<4.0							
Total Suspended Solids			**7.94**		**9**		**341,626**	**Ave kg/day**	**17**	**T/Ac/Year**		-
Ammonia												
17-Jul-08	14	0921	1.06		<0.200	mg/L						
13-Aug-08	14	1327	1.11		<0.200							
16-Sep-08	14	1030	1.41		<0.200							
14-Oct-08	14	1045	1.01		<0.200							
13-Nov-08	14	0912	0.56		<0.200							
16-Dec-08	14	1044	0.61		<0.200							
21-Jan-09	14	0840	0.10		<0.200							
23-Feb-09	14	1213	3.90		<0.200							
23-Mar-09	14	1230	4.84		<0.200							
21-Apr-09	14	1215	59.29		<0.200							
19-May-09	14	1235	16.08		<0.200							
24-Jun-09	14	0800	8.88		<0.200							
17-Aug-09	14	1125	4.37		<0.200							
10-Nov-09	14	1105	7.49		<0.200							
Ammonia			**7.94**									
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
17-Jul-08	14	0921	1.06	< 0.04 mg/L	<0.10	mg/L					**5,802.49**	**Ave kg/day**
13-Aug-08	14	1327	1.11		<0.10						**576.29**	**Ave lb / Ac / Year**
16-Sep-08	14	1030	1.41		<0.10							
14-Oct-08	14	1045	1.01		<0.10							
13-Nov-08	14	0912	0.56		<0.10							
16-Dec-08	14	1044	0.61		<0.10							
21-Jan-09	14	0840	0.10		<0.10							
23-Feb-09	14	1213	3.90		<0.10							
23-Mar-09	14	1230	4.84		<0.10							
21-Apr-09	14	1215	59.29		0.06		7,978.43	5,802.49	792.39	576.29		
19-May-09	14	1235	16.08		<0.10							
24-Jun-09	14	0800	8.88		<0.10							
17-Aug-09	14	1125	4.37		<0.10							
10-Nov-09	14	1105	7.49		<0.10							
Total Phosphorus			**7.94**				**7,978.43**	**Ave kg/day**	**792.39**	**lb / Ac / Year**		27%
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
17-Jul-08	14	0921	1.06	< 10 mg / L	0.571	mg/L	1,480.81	25,933.70	147.07	2,575.66	**178,089.17**	**Ave kg/day**
13-Aug-08	14	1327	1.11		0.300		814.71	27,156.99	80.91	2,697.15	**8.84**	**Ave T / Ac / Year**
16-Sep-08	14	1030	1.41		0.275		946.93	34,496.72	94.05	3,426.11		
14-Oct-08	14	1045	1.01		0.290		716.60	24,710.41	71.17	2,454.16		
13-Nov-08	14	0912	0.56		0.360		493.23	13,700.82	48.99	1,360.72		
16-Dec-08	14	1044	0.61		0.458		679.11	14,827.73	67.45	1,472.65		
21-Jan-09	14	0840	0.10		0.211		51.62	2,446.58	5.13	242.99		
23-Feb-09	14	1213	3.90		0.793		7,566.52	95,416.45	751.48	9,476.48		
23-Mar-09	14	1230	4.84		0.243		2,877.47	118,414.26	285.78	11,760.55		
21-Apr-09	14	1215	59.29		0.334		48,450.83	1,450,623.57	4,811.99	144,071.59		
19-May-09	14	1235	16.08		<0.20							
24-Jun-09	14	0800	8.88		1.260		27,381.95	217,317.07	2,719.49	21,583.28		
17-Aug-09	14	1125	4.37		0.130		1,389.26	106,866.42	137.98	10,613.65		
10-Nov-09	14	1105	7.49		0.132		2,418.88	183,248.51	240.24	18,199.69		
Nitrate - Nitrite			**7.94**		**0.412**		**7,328.303**	**Ave kg/day**	**0.36**	**T / Ac / Year**		
Hardness (CaCO3)												
13-Aug-08	14	1327	1.11		200							
13-Nov-08	14	0912	0.56		370							
23-Feb-09	14	1213	3.90		220							
19-May-09	14	1235	16.08		270							
Hardness (CaCO3)			**5.41**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Aug-08	14	1327	1.11	< 174µg/L	0.378	mg/L	1,026.53	472.53	101.95	46.93	**2,304.12**	**Ave kg/day**
13-Nov-08	14	0912	0.56		0.239		327.45	238.39	32.52	23.68	**228.84**	**Ave lb / Ac / Year**
23-Feb-09	14	1213	3.90		0.315		3,005.62	1,660.25	298.51	164.89		
19-May-09	14	1235	16.08		1.680		66,092.77	6,845.32	6,564.14	679.86		
Total Aluminum			**5.41**				**17,613.09**	**Ave kg/day**	**1,749.28**	**lb / Ac / Year**		**87%**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	14	0912	0.56	< 174µg/L	0.180	mg/L	246.61	238.39	24.49	23.68	**2,914.65**	**Ave kg/day**
23-Feb-09	14	1213	3.90		<0.004		0.00	1,660.25	0.00	164.89	**289.47**	**Ave lb / Ac / Year**
19-May-09	14	1235	16.08		3.240		127,464.63	6,845.32	12,659.41	679.86		
Dissolved Aluminum			**6.85**				**42,570.41**	**Ave kg/day**	**4,227.97**	**lb / Ac / Year**		**93%**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
13-Aug-08	14	1327	1.11	< 2.5 mg/L	0.442	mg/L	1,200.34	6,789.25	119.21	674.29	**33,105.23**	**Ave kg/day**
13-Nov-08	14	0912	0.56		0.376		515.15	3,425.21	51.16	340.18	**3,287.91**	**Ave lb / Ac / Year**
23-Feb-09	14	1213	3.90		0.674		6,431.07	23,854.11	638.71	2,369.12		
19-May-09	14	1235	16.08		1.490		58,617.99	98,352.34	5,821.76	9,768.06		
Total Iron			**5.41**				**16,691.14**	**Ave kg/day**	**1,657.71**	**lb / Ac / Year**		-
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	14	0912	0.56	< 2.5 mg/L	0.296	mg/L	405.54	3,425.21	40.28	340.18	**41,877.22**	**Ave kg/day**
23-Feb-09	14	1213	3.90		<0.060		0.00	23,854.11	0.00	2,369.12	**4,159.12**	**Ave lb / Ac / Year**
19-May-09	14	1235	16.08		1.890		74,354.37	98,352.34	7,384.65	9,768.06		
Dissolved Iron			**6.85**				**24,919.97**	**Ave kg/day**	**2,474.98**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Aug-08	14	1327	1.11	0.027	<0.001	mg/L	0.00	72.03	0.00	7.15	**340.78**	**Ave kg/day**
13-Nov-08	14	0912	0.56	0.026	0.002		2.74	35.19	0.27	3.49	**33.85**	**Ave lb / Ac / Year**
23-Feb-09	14	1213	3.90	0.022	0.001		9.54	212.45	0.95	21.10		
19-May-09	14	1235	16.08	0.027	<0.001		0.00	1,043.46	0.00	103.63		
Total Copper			**5.41**				**3.07**	**Ave kg/day**	**0.12**	**T/Ac/Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	14	0912	0.56	0.026	0.001	mg/L	1.37	35.19	0.14	3.49	**430.36**	**Ave kg/day**
23-Feb-09	14	1213	3.90	0.022	0.001		9.54	212.45	0.95	21.10	**42.74**	**Ave lb / Ac / Year**
19-May-09	14	1235	16.08	0.027	0.002		78.68	1,043.46	7.81	103.63		
Dissolved Copper			**6.85**				**29.86**	**Ave kg/day**	**1.19**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Aug-08	14	1327	1.11	0.973	0.442	mg/L	1,200.34	2,641.47	119.21	262.34	**16,206.97**	**Ave kg/day**
13-Nov-08	14	0912	0.56	1.670	0.028		38.36	2,287.68	3.81	227.21	**1,609.63**	**Ave lb / Ac / Year**
23-Feb-09	14	1213	3.90	1.058	0.110		1,049.58	10,091.29	104.24	1,002.24		
19-May-09	14	1235	16.08	1.266	0.062		2,439.14	49,807.43	242.25	4,946.72		
Total Manganese			**5.41**				**1,181.86**	**Ave kg/day**	**47.23**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
13-Nov-08	14	0912	0.56	1.670	0.016	mg/L	21.92	2,287.68	2.18	227.21	**1,838.81**	**Ave kg/day**
23-Feb-09	14	1213	3.90	0.091	0.110		1,049.58	868.29	104.24	86.24	**182.62**	**Ave lb / Ac / Year**
19-May-09	14	1235	16.08	0.060	0.062		2,439.14	2,360.46	242.25	234.43		
Total Manganese			**6.85**				**1,170.21**	**Ave kg/day**	**46.76**	**T/Ac/Year**		-
Cl												
13-Nov-08	14	0912	0.56		25.6							
Chlorine			**0.56**									
SO4												
13-Nov-08	14	0912	0.56		242.9							
Sulfate			**0.56**									

SITE #15

Drainage Area: 3,549.77 Acres ** Part of Point 14 drainage area

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement

Date	Site No	Time	Notes / Conditions
17-Jul-08	15	0747	
12-Aug-08	15	1218	
16-Sep-08	15	1130	Strongest Flow of all sites. Water seems to be milky.
14-Oct-08	15	1150	Dead dog (English Bulldog? Pitt Bull?) in creek. .410 shell on bridge
10-Nov-08	15	1156	Dog remains nearly gone. "Slimy" coating of rocks.
16-Dec-08	15	1157	Flow meter frozen, estimated volume.
19-Jan-09	15	1225	Slime on bottom of creek. Only creek really running - ice only around edges. Water the colour of light straw.
23-Feb-09	15	1113	Bike and electrical panel in center channel. Mink scratch. Slimy bottom. No odor, water clear.
23-Mar-09	15	1130	Faintly sharpish smell, almost like a household cleaner. Slightly mikly appearance. Serious algae growing near stream influx - waves with water flow. Dead panfis
21-Apr-09	15	1145	Slight sulphur smell at stream, sweet in container. Muddy, less milky than previous months. Washer still in stream. Soft bottom in spots. Sand bar forming.
19-May-09	15	1125	Slight "sewage" type smell. Whitish, milky colour. Meth lab remnants
24-Jun-09	15	0850	Butter-like odor to water. No color - clear. Muddy high water mark not as obvious as other sites. No new trash. Odor something like decaying fleshh in air. Sand
18-Aug-09	15	0800	No odor. Clear. Slight in-stream milkiness. Electronic scale (dumped) tire (dumped)
10-Nov-09	15	1225	No odor. Clear. Roofing or siding material in water - 1 side concrete like.

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Turbidity							Apr - Oct Average NTU				
17-Jul-08	15	0747	8.10	n/a	32.0	NTU	22.3	36.0			36.0 NTU Allowed
12-Aug-08	15	1218	5.67		16.5						
16-Sep-08	15	1130	0.41		15.0						
14-Oct-08	15	1150	7.44		15.0						
10-Nov-08	15	1156	6.34		15.0						
16-Dec-08	15	1157	9.60		18.7						
19-Jan-09	15	1225	12.70		15.0						
23-Feb-09	15	1113	2.63		15.0						
23-Mar-09	15	1130	7.60		15.5						
21-Apr-09	15	1145	19.62		50.0						
19-May-09	15	1125	16.20		19.5						
24-Jun-09	15	0850	10.43		15.0						
18-Aug-09	15	0800	9.52		15.0						
10-Nov-09	15	1225	7.39		15.0						
Turbidity			**8.83**		**19.4**						-
Temperature							**Average May - Sept**				
17-Jul-08	15	0747	8.10	90° Max	80.36	°F	75.9				
12-Aug-08	15	1218	5.67	90° Max	77.57						
16-Sep-08	15	1130	0.41	90° Max	68.74						
14-Oct-08	15	1150	7.44	78° Max	69.19						
10-Nov-08	15	1156	6.34	70° Max	47.13						
16-Dec-08	15	1157	9.60	57° Max	35.08						
19-Jan-09	15	1225	12.70	50° Max	33.90						
23-Feb-09	15	1113	2.63	50° Max	36.71						
23-Mar-09	15	1130	7.60	60° Max	52.40						
21-Apr-09	15	1145	19.62	70° Max	54.80						
19-May-09	15	1125	16.20	80° Max	66.34						
24-Jun-09	15	0850	10.43	90° Max	82.57						
18-Aug-09	15	0800	9.52	90° Max	80.05						
10-Nov-09	15	1225	7.39	70° Max	57.32						
Temperature			**8.83**								
Dissolved Oxygen							Apr - Oct Average mg/L				

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
17-Jul-08	15	0747	8.10	Never < 4.0	7.32	mg/L	8.46					
12-Aug-08	15	1218	5.67		8.35							
16-Sep-08	15	1130	0.41		9.02		Annual Average mg/L				Indiana average = 9.8 mg/L	
14-Oct-08	15	1150	7.44		9.47		11.29					
10-Nov-08	15	1156	6.34		14.39							
16-Dec-08	15	1157	9.60		21.49		Annual Average %				Good defined as 80-120%	
19-Jan-09	15	1225	12.70		14.08		106.56					
23-Feb-09	15	1113	2.63		15.30							
23-Mar-09	15	1130	7.60		12.72							
21-Apr-09	15	1145	19.62		10.84							
19-May-09	15	1125	16.20		9.22							
24-Jun-09	15	0850	10.43		6.70							
18-Aug-09	15	0800	9.52		6.79							
10-Nov-09	15	1225	7.39		12.37							
Dissolved Oxygen			**8.83**		**11.29**							**0%**
pH												
17-Jul-08	15	0747	8.10	6.0 - 9.0	8.16							
12-Aug-08	15	1218	5.67		8.27							
16-Sep-08	15	1130	0.41		7.75							
14-Oct-08	15	1150	7.44		8.19							
10-Nov-08	15	1156	6.34		8.39							
16-Dec-08	15	1157	9.60		8.54							
19-Jan-09	15	1225	12.70		8.15							
23-Feb-09	15	1113	2.63		8.05							
23-Mar-09	15	1130	7.60		8.27							
21-Apr-09	15	1145	19.62		8.03							
19-May-09	15	1125	16.20		7.94							
24-Jun-09	15	0850	10.43		8.20							
18-Aug-09	15	0800	9.52		8.26							
10-Nov-09	15	1225	7.39		7.95							
pH			**8.83**		**8.15**							
Specific Conductance												
17-Jul-08	15	0747	8.10	< 1.20 mS/cm	0.432	mS/cm						refer to TDS
12-Aug-08	15	1218	5.67		0.602							
16-Sep-08	15	1130	0.41		0.614							
14-Oct-08	15	1150	7.44		0.688							
10-Nov-08	15	1156	6.34		0.469							
16-Dec-08	15	1157	9.60		1.076							
19-Jan-09	15	1225	12.70		0.940							
23-Feb-09	15	1113	2.63		0.789							
23-Mar-09	15	1130	7.60		0.794							
21-Apr-09	15	1145	19.62		0.571							
19-May-09	15	1125	16.20		0.491							
24-Jun-09	15	0850	10.43		0.558							
18-Aug-09	15	0800	9.52		0.756							
10-Nov-09	15	1225	7.39		0.314							
Specific Conductance			**8.83**		**0.650**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
17-Jul-08	15	0747	8.10	< 750 mg/L	0.281	g/L	5,568.65	14,862.95	1,262.34	3,369.24	**16,204.54**	**Ave kg/day**
12-Aug-08	15	1218	5.67		0.391	YSI	5,423.98	10,404.06	1,229.55	2,358.47	**1.84**	**Ave T / Ac / Year**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
16-Sep-08	15	1130	0.41		0.180		178.36	743.15	40.43	168.46		
14-Oct-08	15	1150	7.44		0.447		8,136.53	13,651.89	1,844.45	3,094.71		
10-Nov-08	15	1156	6.34		0.305		4,727.96	11,626.13	1,071.77	2,635.49		
16-Dec-08	15	1157	9.60		0.700		16,440.99	17,615.34	3,726.96	3,993.17		
19-Jan-09	15	1225	12.70		0.611		18,984.69	23,303.63	4,303.59	5,282.63		
23-Feb-09	15	1113	2.63		0.513		3,294.62	4,816.70	746.85	1,091.88		
23-Mar-09	15	1130	7.60		0.516		9,594.49	13,945.48	2,174.95	3,161.26		
21-Apr-09	15	1145	19.62		0.371		17,808.67	36,001.36	4,037.00	8,161.05		
19-May-09	15	1125	16.20		0.319		12,643.41	29,725.89	2,866.10	6,738.48		
24-Jun-09	15	0850	10.43		0.362		9,235.67	19,134.67	2,093.61	4,337.58		
18-Aug-09	15	0800	9.52		0.492		11,459.37	17,468.55	2,597.69	3,959.90		
10-Nov-09	15	1225	7.39		0.204		3,689.36	13,563.81	836.33	3,074.74		
Total Dissolved Solids			**8.83**		**0.407**		**9,084.77**	**Ave kg/day**	**2,059.40**	**Ave lb/Ac/Year**		**-**
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
17-Jul-08	15	0747	8.10	< 235 MPN	35.4	MPN	701,531.07	4,657,056.55	197.63	1,311.93	5,561,373.57	allowed 1000 mpn/day
12-Aug-08	15	1218	5.67		49.7		689,442.54	3,259,939.59	194.22	918.35	1,566.69	allowed 1000 mpn/ac
16-Sep-08	15	1130	0.41		109.5		108,499.51	232,852.83	30.57	65.60	1,930,918.43	ave 1000 mpn/day
14-Oct-08	15	1150	7.44		59.1		1,075,769.05	4,277,592.69	303.05	1,205.03	543.96	ave 1000 mpn/ac
10-Nov-08	15	1156	6.34		101.2		1,568,752.07	3,642,853.13	441.93	1,026.22		
16-Dec-08	15	1157	9.60		3.1		72,810.09	5,519,474.43	20.51	1,554.88	Annual	
19-Jan-09	15	1225	12.70		2.0		62,143.02	7,301,804.72	17.51	2,056.98	5,077,423.67	allowed 1000 mpn/day
23-Feb-09	15	1113	2.63		1.0		6,422.26	1,509,231.29	1.81	425.16	1,430.35	allowed 1000 mpn/ac
23-Mar-09	15	1130	7.60		33.0		613,601.15	4,369,583.93	172.86	1,230.95	1,277,500.86	ave 1000 mpn/day
21-Apr-09	15	1145	19.62		113.7		5,457,806.05	11,280,425.87	1,537.51	3,177.79	359.88	ave 1000 mpn/ac
19-May-09	15	1125	16.20		32.2		1,276,231.67	9,314,113.10	359.53	2,623.86		
24-Jun-09	15	0850	10.43		172.3		4,395,870.91	5,995,529.10	1,238.35	1,688.99		
18-Aug-09	15	0800	9.52		74.8		1,742,196.66	5,473,478.81	490.79	1,541.92		
10-Nov-09	15	1225	7.39		6.3		113,936.04	4,249,995.31	32.10	1,197.26		
E. Coli			**8.83**		**56.7**		**1,277,500.9**	Ave 1000MPN/day	**359.9**	Ave 1000 MPN/Ac		**-65%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
17-Jul-08	15	0747	8.10	< 30.0 mg/L	3	mg/L	59,451.79	594,517.86	6.74	67.38	709,962.58	allowed kg/day
12-Aug-08	15	1218	5.67		3		41,616.25	416,162.50	4.72	47.17	80.47	allowed T / Ac / Year
16-Sep-08	15	1130	0.41		4		3,963.45	29,725.89	0.45	3.37	170,835.20	ave kg/day
14-Oct-08	15	1150	7.44		2		36,405.04	546,075.66	4.13	61.89	19.36	Ave T / Ac / Year
10-Nov-08	15	1156	6.34		-							
16-Dec-08	15	1157	9.60		9		211,384.13	704,613.76	23.96	79.86	Annual	
19-Jan-09	15	1225	12.70		4						639,779.51	allowed kg/day
23-Feb-09	15	1113	2.63		6		38,533.56	192,667.82	4.37	21.84	72.51	allowed T / Ac / Year
23-Mar-09	15	1130	7.60		8		148,751.79	557,819.22	16.86	63.23	153,140.95	ave kg/day
21-Apr-09	15	1145	19.62		18		864,032.62	1,440,054.37	97.93	163.22	17.36	Ave T / Ac / Year
19-May-09	15	1125	16.20		5		198,172.62	1,189,035.72	22.46	134.77		
24-Jun-09	15	0850	10.43		-		-	765,386.69	-	86.75		
18-Aug-09	15	0800	9.52		7.0		163,039.79	698,741.98	18.48	79.20		
10-Nov-09	15	1225	7.39		4.0		72,340.35	542,552.59	8.20	61.49		
Total Suspended Solids			**8.83**		**5.2**		**153,140.95**	**Ave kg/day**	**6.98**	**T/Ac/Year**		**-**
Ammonia							kg/day		lb / Ac / Year			**Allowed**
17-Jul-08	15	0747	8.10		<0.200	mg/L					**1,668.54**	**Ave kg/day**
12-Aug-08	15	1218	5.67		<0.200						**378.24**	**Ave lb / Ac / Year**
16-Sep-08	15	1130	0.41		<0.200							
14-Oct-08	15	1150	7.44		<0.200							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
10-Nov-08	15	1156	6.34		<0.200							
16-Dec-08	15	1157	9.60		<0.200							
19-Jan-09	15	1225	12.70	0.0537	0.367		11,403.24	1,668.54	2,584.97	378.24		
23-Feb-09	15	1113	2.63		<0.200							
23-Mar-09	15	1130	7.60		<0.200							
21-Apr-09	15	1145	19.62		<0.200							
19-May-09	15	1125	16.20		<0.200							
24-Jun-09	15	0850	10.43		<0.200							
18-Aug-09	15	0800	9.52		<0.200							
10-Nov-09	15	1225	7.39		<0.200							
Ammonia			**8.83**				**11,403.24**	**1,668.54**	**2,584.97**	**378.24**		**85%**
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
17-Jul-08	15	0747	8.10	< 0.04 mg/L	<0.10	mg/L					**1,585.38**	**Ave kg/day**
12-Aug-08	15	1218	5.67		<0.10						**359.39**	**Ave lb / Ac / Year**
16-Sep-08	15	1130	0.41		<0.10							
14-Oct-08	15	1150	7.44		<0.10							
10-Nov-08	15	1156	6.34		<0.10							
16-Dec-08	15	1157	9.60		<0.10							
19-Jan-09	15	1225	12.70		<0.10							
23-Feb-09	15	1113	2.63		<0.10							
23-Mar-09	15	1130	7.60		<0.10							
21-Apr-09	15	1145	19.62		<0.10							
19-May-09	15	1125	16.20		0.08		2,972.59	1,585.38	673.85	359.39		
24-Jun-09	15	0850	10.43		<0.10							
18-Aug-09	15	0800	9.52		<0.10							
10-Nov-09	15	1225	7.39		<0.10							
Total Phosphorus			**8.83**				**2,972.59**	**Ave kg/day**	**673.85**	**lb / Ac / Year**		47%
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
17-Jul-08	15	0747	8.10	< 10 mg / L	0.600	mg/L	11,890.36	198,172.62	2,695.39	44,923.19	**216,060.58**	**Ave kg/day**
12-Aug-08	15	1218	5.67		0.166		2,302.77	138,720.83	522.01	31,446.23	**24.49**	**Ave T / Ac / Year**
16-Sep-08	15	1130	0.41		0.854		846.20	9,908.63	191.82	2,246.16		
14-Oct-08	15	1150	7.44		0.247		4,496.02	182,025.22	1,019.19	41,262.78		
10-Nov-08	15	1156	6.34		0.342		5,301.51	155,015.03	1,201.79	35,139.92		
16-Dec-08	15	1157	9.60		0.454		10,663.15	234,871.25	2,417.20	53,242.30		
19-Jan-09	15	1225	12.70		0.458		14,230.75	310,715.09	3,225.93	70,435.12		
23-Feb-09	15	1113	2.63		0.484		3,108.37	64,222.61	704.63	14,558.44		
23-Mar-09	15	1130	7.60		1.480		27,519.08	185,939.74	6,238.22	42,150.15		
21-Apr-09	15	1145	19.62		0.229		10,992.41	480,018.12	2,491.84	108,813.94		
19-May-09	15	1125	16.20		0.391		15,497.10	396,345.24	3,512.99	89,846.37		
24-Jun-09	15	0850	10.43		0.459		11,710.42	255,128.90	2,654.60	57,834.44		
18-Aug-09	15	0800	9.52		0.370		8,617.82	232,913.99	1,953.55	52,798.61		
10-Nov-09	15	1225	7.39		0.140		2,531.91	180,850.86	573.95	40,996.57		
Nitrate - Nitrite			**8.83**		**0.477**		**9,264.85**	**Ave kg/day**	**1.05**	**T / Ac / Year**		
Hardness (CaCO3)												
12-Aug-08	15	1218	5.67		240							
10-Nov-08	15	1156	6.34		330							
23-Feb-09	15	1113	2.63		410							
19-May-09	15	1125	16.20		250							
Hardness (CaCO3)			**7.71**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
12-Aug-08	15	1218	5.67	< 174µg/L	0.343	mg/L	4,758.12	2,413.74	1,078.61	547.16	**3,281.22**	**Ave kg/day**
10-Nov-08	15	1156	6.34		0.363		5,627.05	2,697.26	1,275.58	611.43	**743.81**	**Ave lb / Ac / Year**
23-Feb-09	15	1113	2.63		0.131		841.32	1,117.47	190.72	253.32		
19-May-09	15	1125	16.20		0.551		21,838.62	6,896.41	4,950.54	1,563.33		
Total Aluminum			**7.71**				**8,266.28**	**Ave kg/day**	**1,873.86**	**lb / Ac / Year**		**60%**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	15	1156	6.34	< 174µg/L	0.336	mg/L	5,208.50	2,697.26	1,180.70	611.43	**3,570.38**	**Ave kg/day**
23-Feb-09	15	1113	2.63		<0.004		0.00	1,117.47	0.00	253.32	**809.36**	**Ave lb / Ac / Year**
19-May-09	15	1125	16.20		1.095		43,399.80	6,896.41	9,838.18	1,563.33		
Dissolved Aluminum			**8.39**				**16,202.77**	**Ave kg/day**	**3,672.96**	**lb / Ac / Year**		**78%**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
12-Aug-08	15	1218	5.67	< 2.5 mg/L	0.406	mg/L	5,632.07	34,680.21	1,276.72	7,861.56	**47,143.98**	**Ave kg/day**
10-Nov-08	15	1156	6.34		0.341		5,286.01	38,753.76	1,198.27	8,784.98	**10,686.94**	**Ave lb / Ac / Year**
23-Feb-09	15	1113	2.63		0.301		1,933.10	16,055.65	438.21	3,639.61		
19-May-09	15	1125	16.20		0.568		22,492.59	99,086.31	5,098.78	22,461.59		
Total Iron			**7.71**				**8,835.94**	**Ave kg/day**	**2,002.99**	**lb / Ac / Year**		-
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	15	1156	6.34	< 2.5 mg/L	0.335	mg/L	5,193.00	38,753.76	1,177.19	8,784.98	**51,298.57**	**Ave kg/day**
23-Feb-09	15	1113	2.63		<0.060		0.00	16,055.65	0.00	3,639.61	**11,628.73**	**Ave lb / Ac / Year**
19-May-09	15	1125	16.20		0.783		31,033.83	99,086.31	7,034.97	22,461.59		
Dissolved Iron			**8.39**				**12,075.61**	**Ave kg/day**	**2,737.39**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
12-Aug-08	15	1218	5.67	0.024	<0.001	mg/L	0.00	332.71	0.00	75.42	**537.15**	**Ave kg/day**
10-Nov-08	15	1156	6.34	0.031	<0.001		0.00	488.06	0.00	110.64	**121.77**	**Ave lb / Ac / Year**
23-Feb-09	15	1113	2.63	0.038	<0.001		0.00	243.41	0.00	55.18		
19-May-09	15	1125	16.20	0.027	<0.001		0.00	1,084.43	0.00	245.83		
Total Copper			**7.71**				**0.00**	**Ave kg/day**	**0.00**	**T/Ac/Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	15	1156	6.34	0.031	<0.001	mg/L	0.00	488.06	0.00	110.64	**605.30**	**Ave kg/day**
23-Feb-09	15	1113	2.63	0.038	0.001		6.42	243.41	1.46	55.18	**137.21**	**Ave lb / Ac / Year**
19-May-09	15	1125	16.20	0.027	0.002		79.27	1,084.43	17.97	245.83		
Dissolved Copper			**8.39**				**28.56**	**Ave kg/day**	**2.61**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
12-Aug-08	15	1218	5.67	1.142	0.036	mg/L	499.40	15,836.48	113.21	3,589.93	**25,697.12**	**Ave kg/day**
10-Nov-08	15	1156	6.34	1.510	0.034		527.05	23,408.63	119.48	5,306.44	**5,825.21**	**Ave lb / Ac / Year**
23-Feb-09	15	1113	2.63	1.827	0.093		597.27	11,735.37	135.39	2,660.26		
19-May-09	15	1125	16.20	1.307	0.047		1,843.01	51,807.99	417.79	11,744.21		
Total Manganese			**7.71**				**866.68**	**Ave kg/day**	**79.05**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	15	1156	6.34	1.510	0.033	mg/L	511.55	23,408.63	115.96	5,306.44	**28,984.00**	**Ave kg/day**
23-Feb-09	15	1113	2.63	1.827	0.550		3,532.24	11,735.37	800.71	2,660.26	**6,570.30**	**Ave lb / Ac / Year**
19-May-09	15	1125	16.20	1.307	0.048		1,902.46	51,807.99	431.26	11,744.21		
Total Manganese			**8.39**				**1,982.08**	**Ave kg/day**	**180.78**	**T/Ac/Year**		-
Cl												
10-Nov-08	15	1156	6.34		11.6							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Chlorine			**6.34**								
SO4											
10-Nov-08	15	1156	6.34		172.5						
Sulfate			**6.34**								

SITE #16

Drainage Area: 6,920.00 Acres ** Part of Point 17 drainage area

Date	Site No	Time	Notes / Conditions
17-Jul-08	16	0834	
12-Aug-08	16	1143	Very low, but not completely stagnant…
16-Sep-08	16	1105	
14-Oct-08	16	1225	Odor of rotting flesh under bridge - not strong. No evidence of carcass - perhaps from rotting trash?
10-Nov-08	16	1114	
16-Dec-08	16	1127	No flow recorded. Surface frozen. Had to knock hole in ice for samples.
19-Jan-09	16	1150	No flow recorded. Very slight flow under bridge. Holes shot into ice w/ .22. Ice approx 5" thick. Water very clear.
23-Feb-09	16	1038	Good water flow. Pea green color. Barely see botom. Ice on banks. Clear of debris. No obvious smell
23-Mar-09	16	1056	No discernable odor. Bottom sandy with layer of silt. Rust staining near bridge. "worm" tracks on bed
21-Apr-09	16	1115	Somewhat sweet smell. Mudy water - can only see down 4" on side. 50/50 sand/silt. Lots of foaming.
19-May-09	16	1055	Sweet odor. Khaki color. Bottom is sand and silt.
24-Jun-09	16	0940	Very sweet, cake-like odor to water. Yellowish-brown color. Some foaming. Bank erosion? (tough to see because of annual weeds) Dead swallow. Mix of sand / sedir
17-Aug-09	16	1045	No odor. Very, very light white tea color. Schools of minnow. Heavily sedimented bed. Very little flow.
10-Nov-09	16	1145	No odor. Light brown tinge. Oily crud on top of sample. Whoops! Someone lost their groceries: brocolli, tomatoes, oranges, and a package of tampons

							Daily Load		Area Load		Needed
Date	**Site No**	**Time**	**Flow**	**Load Std**	**Meas**	**Units**	**Measured**	**Allowed**	**Measured**	**Allowed**	**Improvement**
Turbidity							Apr - Oct Average NTU				
17-Jul-08	16	0834	19.98	n/a	**47.0**	NTU	30.7	36.0			36.0 NTU Allowed
12-Aug-08	16	1143	0.10	< 36 NTU	15.0						
16-Sep-08	16	1105	9.35		19.7						
14-Oct-08	16	1225	0.10		15.0						
10-Nov-08	16	1114	0.10		15.0						
16-Dec-08	16	1127	0.10		15.0						
19-Jan-09	16	1150	0.10		15.0						
23-Feb-09	16	1038	6.55		70.0						
23-Mar-09	16	1056	2.20		18.0						
21-Apr-09	16	1115	24.92		43.2						
19-May-09	16	1055	43.56		48.0						
24-Jun-09	16	0940	18.45		42.0						
17-Aug-09	16	1045	0.14		15.7						
10-Nov-09	16	1145	2.16		15.0						
Turbidity			**9.13**		**28.1**						-
Temperature							**Average May - Sept**				
17-Jul-08	16	0834	19.98	90° Max	75.24	°F	73.7				
12-Aug-08	16	1143	0.10	90° Max	73.71						
16-Sep-08	16	1105	9.35	90° Max	70.89						
14-Oct-08	16	1225	0.10	78° Max	69.43						
10-Nov-08	16	1114	0.10	70° Max	42.62						
16-Dec-08	16	1127	0.10	57° Max	32.30						
19-Jan-09	16	1150	0.10	50° Max	32.07						
23-Feb-09	16	1038	6.55	50° Max	32.34						
23-Mar-09	16	1056	2.20	60° Max	51.26						
21-Apr-09	16	1115	24.92	70° Max	54.87						
19-May-09	16	1055	43.56	80° Max	63.13						
24-Jun-09	16	0940	18.45	90° Max	77.63						
17-Aug-09	16	1045	0.14	90° Max	81.73						
10-Nov-09	16	1145	2.16	70° Max	57.07						
Temperature			**9.13**								
Dissolved Oxygen							Apr - Oct Average mg/L				
17-Jul-08	16	0834	19.98	Never < 4.0	7.32	mg/L	8.20				

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
12-Aug-08	16	1143	0.10	Ave. >5.0	8.57							
16-Sep-08	16	1105	9.35		8.36		Annual Average mg/L				Indiana average = 9.8 mg/L	
14-Oct-08	16	1225	0.10		9.28		10.61					
10-Nov-08	16	1114	0.10		13.00							
16-Dec-08	16	1127	0.10		20.18		Annual Average %				Good defined as 80-120%	
19-Jan-09	16	1150	0.10		7.31		99.25					
23-Feb-09	16	1038	6.55		15.07							
23-Mar-09	16	1056	2.20		13.97							
21-Apr-09	16	1115	24.92		11.09							
19-May-09	16	1055	43.56		9.12							
24-Jun-09	16	0940	18.45		6.20							
17-Aug-09	16	1045	0.14		5.68							
10-Nov-09	16	1145	2.16		13.41							
Dissolved Oxygen			**9.13**		**10.61**							**0%**
pH												
17-Jul-08	16	0834	19.98	6.0 - 9.0	7.49							
12-Aug-08	16	1143	0.10		7.63							
16-Sep-08	16	1105	9.35		8.00							
14-Oct-08	16	1225	0.10		7.84							
10-Nov-08	16	1114	0.10		7.88							
16-Dec-08	16	1127	0.10		7.94							
19-Jan-09	16	1150	0.10		7.55							
23-Feb-09	16	1038	6.55		7.32							
23-Mar-09	16	1056	2.20		8.04							
21-Apr-09	16	1115	24.92		7.76							
19-May-09	16	1055	43.56		7.45							
24-Jun-09	16	0940	18.45		7.88							
17-Aug-09	16	1045	0.14		7.75							
10-Nov-09	16	1145	2.16		8.47							
pH			**9.13**		**7.79**							
Specific Conductance												
17-Jul-08	16	0834	19.98	< 1.20 mS/cm	0.170	mS/cm						refer to TDS
12-Aug-08	16	1143	0.10		0.325							
16-Sep-08	16	1105	9.35		0.614							
14-Oct-08	16	1225	0.10		0.291							
10-Nov-08	16	1114	0.10		0.237							
16-Dec-08	16	1127	0.10		0.299							
19-Jan-09	16	1150	0.10		0.298							
23-Feb-09	16	1038	6.55		0.250							
23-Mar-09	16	1056	2.20		0.332							
21-Apr-09	16	1115	24.92		0.227							
19-May-09	16	1055	43.56		0.183							
24-Jun-09	16	0940	18.45		0.209							
17-Aug-09	16	1045	0.14		0.364							
10-Nov-09	16	1145	2.16		0.851							
Specific Conductance			**9.13**		**0.332**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
17-Jul-08	16	0834	19.98	< 750 mg/L	0.111	g/L	5,425.97	36,661.93	630.95	4,263.21	**16,750.17**	**Ave kg/day**
12-Aug-08	16	1143	0.10		0.212		51.87	183.49	6.03	21.34	**0.97**	**Ave T / Ac / Year**
16-Sep-08	16	1105	9.35		0.399	YSI	9,122.44	17,147.44	1,060.80	1,993.98		
14-Oct-08	16	1225	0.10		0.189		46.24	183.49	5.38	21.34		
10-Nov-08	16	1114	0.10		0.154		37.68	183.49	4.38	21.34		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
16-Dec-08	16	1127	0.10		0.194		47.46	183.49	5.52	21.34		
19-Jan-09	16	1150	0.10		0.194		47.46	183.49	5.52	21.34		
23-Feb-09	16	1038	6.55		0.162		2,596.85	12,022.47	301.97	1,398.02		
23-Mar-09	16	1056	2.20		0.215		1,155.13	4,029.51	134.32	468.57		
21-Apr-09	16	1115	24.92		0.148		9,021.55	45,717.32	1,049.06	5,316.21		
19-May-09	16	1055	43.56		0.119		12,682.17	79,929.62	1,474.74	9,294.56		
24-Jun-09	16	0940	18.45		0.136		6,138.95	33,854.49	713.86	3,936.75		
17-Aug-09	16	1045	0.14		0.237		81.76	258.73	9.51	30.09		
10-Nov-09	16	1145	2.16		0.553		2,922.39	3,963.45	339.83	460.89		
Total Dissolved Solids			**9.13**		**0.216**		**3,526.99**	**Ave kg/day**	**410.13**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
17-Jul-08	16	0834	19.98	< 235 MPN	40.0	MPN	1,955,303.18	11,487,406.16	282.56	1,660.03	8,379,180.25	allowed 1000 mpn/day
12-Aug-08	16	1143	0.10		8.4		2,055.12	57,494.53	0.30	8.31	1,210.86	allowed 1000 mpn/ac
16-Sep-08	16	1105	9.35		114.5		2,617,841.95	5,372,863.39	378.30	776.43	1,934,752.89	ave 1000 mpn/day
14-Oct-08	16	1225	0.10		103.9		25,419.92	57,494.53	3.67	8.31	279.59	ave 1000 mpn/ac
10-Nov-08	16	1114	0.10		53.7		13,138.11	57,494.53	1.90	8.31		
16-Dec-08	16	1127	0.10		24.3		5,945.18	57,494.53	0.86	8.31	Annual	
19-Jan-09	16	1150	0.10		<.1		0.00	57,494.53	0.00	8.31	5,248,387.75	allowed 1000 mpn/day
23-Feb-09	16	1038	6.55		8.5		136,254.69	3,767,041.30	19.69	544.37	758.44	allowed 1000 mpn/ac
23-Mar-09	16	1056	2.20		101.0		542,640.67	1,262,579.78	78.42	182.45	1,196,422.12	ave 1000 mpn/day
21-Apr-09	16	1115	24.92		111.2		6,778,354.99	14,324,760.99	979.53	2,070.05	172.89	ave 1000 mpn/ac
19-May-09	16	1055	43.56		17.5		1,865,024.54	25,044,615.24	269.51	3,619.16		
24-Jun-09	16	0940	18.45		48.7		2,198,284.83	10,607,739.92	317.67	1,532.91		
17-Aug-09	16	1045	0.14		103.6		35,738.60	81,067.28	5.16	11.71		
10-Nov-09	16	1145	2.16		108.6		573,907.91	1,241,881.75	82.93	179.46		
E. Coli			**9.13**		**64.9**		**1,196,422.1**	Ave 1000MPN/day	**172.9**	Ave 1000 MPN/Ac		**-77%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
17-Jul-08	16	0834	19.98	< 30.0 mg/L	25	mg/L	1,222,064.49	1,466,477.38	71.05	85.26	1,069,682.59	allowed kg/day
12-Aug-08	16	1143	0.10		-		-	7,339.73	-	0.43	62.19	allowed T / Ac / Year
16-Sep-08	16	1105	9.35		5		114,316.24	685,897.45	6.65	39.88	440,788.81	ave kg/day
14-Oct-08	16	1225	0.10		5		1,223.29	7,339.73	0.07	0.43	25.63	Ave T / Ac / Year
10-Nov-08	16	1114	0.10		3		733.97	7,339.73	0.04	0.43		
16-Dec-08	16	1127	0.10		2		489.32	7,339.73	0.03	0.43	Annual	
19-Jan-09	16	1150	0.10		5		1,223.29	7,339.73	0.07	0.43	670,006.95	allowed kg/day
23-Feb-09	16	1038	6.55		28		448,838.96	480,898.89	26.10	27.96	38.96	allowed T / Ac / Year
23-Mar-09	16	1056	2.20		10		53,726.80	161,180.40	3.12	9.37	289,838.99	ave kg/day
21-Apr-09	16	1115	24.92		16		975,302.88	1,828,692.89	56.71	106.32	16.85	Ave T / Ac / Year
19-May-09	16	1055	43.56		5		532,864.15	3,197,184.92	30.98	185.89		
24-Jun-09	16	0940	18.45		15		677,089.78	1,354,179.56	39.37	78.73		
17-Aug-09	16	1045	0.14		10.0		3,449.67	10,349.01	0.20	0.60		
10-Nov-09	16	1145	2.16		5.0		26,423.02	158,538.10	1.54	9.22		
Total Suspended Solids			**9.13**		**10**		**289,838.99**	**Ave kg/day**	**6.78**	**T/Ac/Year**		-
Ammonia												
17-Jul-08	16	0834	19.98		<0.200	mg/L						
12-Aug-08	16	1143	0.10		<0.200							
16-Sep-08	16	1105	9.35		<0.200							
14-Oct-08	16	1225	0.10		<0.200							
10-Nov-08	16	1114	0.10		<0.200							
16-Dec-08	16	1127	0.10		<0.200							
19-Jan-09	16	1150	0.10		<0.200							
23-Feb-09	16	1038	6.55		<0.200							
23-Mar-09	16	1056	2.20		<0.200							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
21-Apr-09	16	1115	24.92		<0.200							
19-May-09	16	1055	43.56		<0.200							
24-Jun-09	16	0940	18.45		<0.200							
17-Aug-09	16	1045	0.14		<0.200							
10-Nov-09	16	1145	2.16		<0.200							
Ammonia			**9.13**									-
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
17-Jul-08	16	0834	19.98	< 0.04 mg/L	0.13	mg/L	6,354.74	1,955.30	738.96	227.37	**1,775.27**	**Ave kg/day**
12-Aug-08	16	1143	0.10		<0.10						**206.44**	**Ave lb / Ac / Year**
16-Sep-08	16	1105	9.35		<0.10							
14-Oct-08	16	1225	0.10		<0.10							
10-Nov-08	16	1114	0.10		<0.10							
16-Dec-08	16	1127	0.10		<0.10							
19-Jan-09	16	1150	0.10		<0.10							
23-Feb-09	16	1038	6.55		0.31		4,969.29	641.20	577.85	74.56		
23-Mar-09	16	1056	2.20		<0.10							
21-Apr-09	16	1115	24.92		<0.10							
19-May-09	16	1055	43.56		0.16		17,051.65	4,262.91	1,982.84	495.71		
24-Jun-09	16	0940	18.45		0.16		7,222.29	1,805.57	839.84	209.96		
17-Aug-09	16	1045	0.14		<0.10							
10-Nov-09	16	1145	2.16		0.10		528.46	211.38	61.45	24.58		
Total Phosphorus			**9.13**				**7,225.29**	**Ave kg/day**	**840.19**	**lb / Ac / Year**		75%
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
17-Jul-08	16	0834	19.98	< 10 mg / L	0.284	mg/L	13,882.65	488,825.79	1,614.33	56,842.76	**223,335.65**	**Ave kg/day**
12-Aug-08	16	1143	0.10		0.266		65.08	2,446.58	7.57	284.50	**12.99**	**Ave T / Ac / Year**
16-Sep-08	16	1105	9.35		0.907		20,736.97	228,632.48	2,411.38	26,586.37		
14-Oct-08	16	1225	0.10		0.219		53.58	2,446.58	6.23	284.50		
10-Nov-08	16	1114	0.10		0.210		51.38	2,446.58	5.97	284.50		
16-Dec-08	16	1127	0.10		0.209		51.13	2,446.58	5.95	284.50		
19-Jan-09	16	1150	0.10		0.319		78.05	2,446.58	9.08	284.50		
23-Feb-09	16	1038	6.55		0.520		8,335.58	160,299.63	969.30	18,640.33		
23-Mar-09	16	1056	2.20		0.212		1,139.01	53,726.80	132.45	6,247.58		
21-Apr-09	16	1115	24.92		0.320		19,506.06	609,564.30	2,268.25	70,882.75		
19-May-09	16	1055	43.56		0.321		34,209.88	1,065,728.31	3,978.07	123,927.45		
24-Jun-09	16	0940	18.45		0.628		28,347.49	451,393.19	3,296.37	52,489.93		
17-Aug-09	16	1045	0.14		0.224		77.27	3,449.67	8.99	401.14		
10-Nov-09	16	1145	2.16		0.231		1,220.74	52,846.03	141.95	6,145.16		
Nitrate - Nitrite			**9.13**		**0.348**		**9,125.35**	**Ave kg/day**	**0.53**	**T / Ac / Year**		-
Hardness (CaCO3)												
12-Aug-08	16	1143	0.10		180							
10-Nov-08	16	1114	0.10		230							
23-Feb-09	16	1038	6.55		200							
17-Aug-09	16	1055	43.56		160							
Hardness (CaCO3)			**12.58**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
12-Aug-08	16	1143	0.10	< 174µg/L	0.086	mg/L	21.04	42.57	2.45	4.95	**5,354.51**	**Ave kg/day**
10-Nov-08	16	1114	0.10		0.081		19.82	42.57	2.30	4.95	**622.64**	**Ave lb / Ac / Year**
23-Feb-09	16	1038	6.55		3.400		54,501.87	2,789.21	6,337.71	324.34		
17-Aug-09	16	1055	43.56		1.290		137,478.95	18,543.67	15,986.64	2,156.34		
Total Aluminum			**12.58**				**48,005.42**	**Ave kg/day**	**5,582.28**	**lb / Ac / Year**		**89%**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	16	1114	0.10	< 174µg/L	0.024	mg/L	5.87	42.57	0.68	4.95	**7,125.15**	**Ave kg/day**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
23-Feb-09	16	1038	6.55		0.935		14,988.02	2,789.21	1,742.87	324.34	**828.54**	**Ave lb / Ac / Year**
17-Aug-09	16	1055	43.56		2.010		214,211.39	18,543.67	24,909.42	2,156.34		
Dissolved Aluminum			**16.74**				**76,401.76**	**Ave kg/day**	**8,884.32**	**lb / Ac / Year**		**91%**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
12-Aug-08	16	1143	0.10	< 2.5 mg/L	0.624	mg/L	152.67	611.64	17.75	71.12	**76,932.57**	**Ave kg/day**
10-Nov-08	16	1114	0.10		0.351		85.87	611.64	9.99	71.12	**8,946.05**	**Ave lb / Ac / Year**
23-Feb-09	16	1038	6.55		2.690		43,120.60	40,074.91	5,014.25	4,660.08		
17-Aug-09	16	1055	43.56		1.460		155,596.33	266,432.08	18,093.41	30,981.86		
Total Iron			**12.58**				**49,738.87**	**Ave kg/day**	**5,783.85**	**lb / Ac / Year**		-
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	16	1114	0.10	< 2.5 mg/L	0.224	mg/L	54.80	611.64	6.37	71.12	**102,372.88**	**Ave kg/day**
23-Feb-09	16	1038	6.55		0.510		8,175.28	40,074.91	950.66	4,660.08	**11,904.36**	**Ave lb / Ac / Year**
17-Aug-09	16	1055	43.56		1.490		158,793.52	266,432.08	18,465.19	30,981.86		
Dissolved Iron			**16.74**				**55,674.53**	**Ave kg/day**	**6,474.07**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
12-Aug-08	16	1143	0.10	0.019	<0.001	mg/L	0.00	4.59	0.00	0.53	**536.71**	**Ave kg/day**
10-Nov-08	16	1114	0.10	0.023	<0.001		0.00	5.66	0.00	0.66	**62.41**	**Ave lb / Ac / Year**
23-Feb-09	16	1038	6.55	0.021	0.004		64.12	329.00	7.46	38.26		
17-Aug-09	16	1055	43.56	0.017	<0.001		0.00	1,807.58	0.00	210.19		
Total Copper			**12.58**				**16.03**	**Ave kg/day**	**0.75**	**T/Ac/Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	16	1114	0.10	0.023	<0.001	mg/L	0.00	5.66	0.00	0.66	**714.08**	**Ave kg/day**
23-Feb-09	16	1038	6.55	0.021	0.002		32.06	329.00	3.73	38.26	**83.04**	**Ave lb / Ac / Year**
17-Aug-09	16	1055	43.56	0.017	0.002		213.15	1,807.58	24.79	210.19		
Dissolved Copper			**16.74**				**81.74**	**Ave kg/day**	**3.82**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
12-Aug-08	16	1143	0.10	0.887	0.687	mg/L	168.08	216.93	19.55	25.23	**25,321.68**	**Ave kg/day**
10-Nov-08	16	1114	0.10	1.100	0.141		34.50	269.05	4.01	31.29	**2,944.51**	**Ave lb / Ac / Year**
23-Feb-09	16	1038	6.55	0.973	0.209		3,350.26	15,591.82	389.58	1,813.08		
17-Aug-09	16	1055	43.56	0.800	0.169		18,010.81	85,208.91	2,094.37	9,908.46		
Total Manganese			**12.58**				**5,390.91**	**Ave kg/day**	**252.22**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	16	1114	0.10	1.100	0.107	mg/L	26.18	269.05	3.04	31.29	**33,689.93**	**Ave kg/day**
23-Feb-09	16	1038	6.55	0.973	0.151		2,420.52	15,591.82	281.47	1,813.08	**3,917.61**	**Ave lb / Ac / Year**
17-Aug-09	16	1055	43.56	0.800	0.128		13,641.32	85,208.91	1,586.27	9,908.46		
Total Manganese			**16.74**				**5,362.68**	**Ave kg/day**	**250.90**	**T/Ac/Year**		-
Cl												
10-Nov-08	16	1114	-		4							
Chlorine			**-**									
SO4												
10-Nov-08	16	1114	-		27							
Sulfate			**-**									

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
SITE #17											
Drainage Area:		10,665.73	Acres								
Date	**Site No**	**Time**	**Notes / Conditions**								
22-Jul-08	17	0958	Rained night before. No flow measured for safety reasons								
11-Aug-08	17	0958	Creek mostly clear. Much fish activity (including 1 man fishing). Mostly sand and silt bottom - some gravel.								
18-Sep-08	17	0735	Beaver working on dam approximately 100 yards downstream								
15-Oct-08	17	1015	No discernable flow. Beavers have raised pool level at bridge.								
10-Nov-08	17	1253	No discernable flow. Sediment may be building on S side of bridge. Willows appear to be taking root midstream. Land / ditch clearing to E of sample point.								
16-Dec-08	17	not sampled - bridge construction									
19-Jan-09	17	not sampled - bridge construction									
23-Feb-09	17	not sampled - bridge construction									
23-Mar-09	17	not sampled - bridge construction									
21-Apr-09	17	not sampled - bridge construction									
19-May-09	17	not sampled - bridge construction									
24-Jun-09	17	not sampled - bridge construction									
17-Aug-09	17	1015	Slightly sweet, cake-like odor. Light white tea color. Bridge JUST opening on 8/17. Very small channel compared to pre-construction. Herons have been working stream								
10-Nov-09	17	1015	Slight pond smell. Light tan caste. Oxidation on sidews of channels. Looks like new introduction or rip-rap runoff. Stringy mosses on bed. Minnows present.								
Date	**Site No**	**Time**	**Flow**	**Load Std**	**Meas**	**Units**	**Daily Load Measured**	**Daily Load Allowed**	**Area Load Measured**	**Area Load Allowed**	**Needed Improvement**
Turbidity							Apr - Oct Average NTU				
22-Jul-08	17	0958	nm	n/a	18.9	NTU	28.5	36.0			36.0 NTU Allowed
11-Aug-08	17	0958	nm	< 36 NTU	15.0						
18-Sep-08	17	0735	-		34.0						
15-Oct-08	17	1015	-		**58.0**						
10-Nov-08	17	1253	-		21.0						
16-Dec-08	17	not sampled - bridge construction									
19-Jan-09	17	not sampled - bridge construction									
23-Feb-09	17	not sampled - bridge construction									
23-Mar-09	17	not sampled - bridge construction									
21-Apr-09	17	not sampled - bridge construction									
19-May-09	17	not sampled - bridge construction									
24-Jun-09	17	not sampled - bridge construction									
17-Aug-09	17	1015	0.30		16.7						
10-Nov-09	17	1015	2.49		15.0						
Turbidity					**25.5**						-
Temperature							**Average May - Sept**				
22-Jul-08	17	0958	19.98	90° Max	74.76	°F	71.1				
11-Aug-08	17	0958	0.10	90° Max	68.12						
18-Sep-08	17	0735	9.35	90° Max	61.27						
15-Oct-08	17	1015	0.10	78° Max	67.17						
10-Nov-08	17	1253	0.10	70° Max	39.85						
16-Dec-08	17	not sampled - bridge construction									
19-Jan-09	17	not sampled - bridge construction									
23-Feb-09	17	not sampled - bridge construction									
23-Mar-09	17	not sampled - bridge construction									
21-Apr-09	17	not sampled - bridge construction									
19-May-09	17	not sampled - bridge construction									
24-Jun-09	17	not sampled - bridge construction									
17-Aug-09	17	1015	0.30	90° Max	77.29						
10-Nov-09	17	1015	2.49	70° Max	55.10						
Temperature											

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Dissolved Oxygen							Apr - Oct Average mg/L					
22-Jul-08	17	0958	19.98	Never < 4.0	6.82	mg/L	6.17					
11-Aug-08	17	0958	0.10	Ave. >5.0	5.81							
18-Sep-08	17	0735	9.35		5.91		Annual Average mg/L				Indiana average = 9.8 mg/L	
15-Oct-08	17	1015	0.10		3.57		7.88					
10-Nov-08	17	1253	0.10		11.43							
16-Dec-08	17	not sampled - bridge construction					Annual Average %				Good defined as 80-120%	
19-Jan-09	17	not sampled - bridge construction					79.23					
23-Feb-09	17	not sampled - bridge construction										
23-Mar-09	17	not sampled - bridge construction										
21-Apr-09	17	not sampled - bridge construction										
19-May-09	17	not sampled - bridge construction										
24-Jun-09	17	not sampled - bridge construction										
17-Aug-09	17	1015	0.30		8.39							
10-Nov-09	17	1015	2.49		11.15							
Dissolved Oxygen					**7.88**					**to reach Indiana Average (annual)**		**20%**
pH												
22-Jul-08	17	0958	19.98	6.0 - 9.0	7.72							
11-Aug-08	17	0958	0.10		7.51							
18-Sep-08	17	0735	9.35		7.59							
15-Oct-08	17	1015	0.10		7.40							
10-Nov-08	17	1253	0.10		7.47							
16-Dec-08	17	not sampled - bridge construction										
19-Jan-09	17	not sampled - bridge construction										
23-Feb-09	17	not sampled - bridge construction										
23-Mar-09	17	not sampled - bridge construction										
21-Apr-09	17	not sampled - bridge construction										
19-May-09	17	not sampled - bridge construction										
24-Jun-09	17	not sampled - bridge construction										
17-Aug-09	17	1015	0.30		7.99							
10-Nov-09	17	1015	2.49		7.70							
pH					**7.65**							
Specific Conductance												
22-Jul-08	17	0958	19.98	< 1.20 mS/cm	0.209	mS/cm						refer to TDS
11-Aug-08	17	0958	0.10		0.274							
18-Sep-08	17	0735	9.35		0.296							
15-Oct-08	17	1015	0.10		0.344							
10-Nov-08	17	1253	0.10		0.156							
16-Dec-08	17	not sampled - bridge construction										
19-Jan-09	17	not sampled - bridge construction										
23-Feb-09	17	not sampled - bridge construction										
23-Mar-09	17	not sampled - bridge construction										
21-Apr-09	17	not sampled - bridge construction										
19-May-09	17	not sampled - bridge construction										
24-Jun-09	17	not sampled - bridge construction										
17-Aug-09	17	1015	0.30		0.371							
10-Nov-09	17	1015	2.49		0.323							
Specific Conductance					**0.283**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
22-Jul-08	17	0958	19.98	< 750 mg/L	0.136	g/L	6,648.03	36,661.93	501.57	2,766.00	**10,871.97**	**Ave kg/day**
11-Aug-08	17	0958	0.10		0.178		43.55	183.49	3.29	13.84	**0.41**	**Ave T / Ac / Year**
18-Sep-08	17	0735	9.35		0.192	YSI	4,389.74	17,147.44	331.19	1,293.71		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
15-Oct-08	17	1015	0.10		0.224		54.80	183.49	4.13	13.84		
10-Nov-08	17	1253	0.10		0.101		24.71	183.49	1.86	13.84		
16-Dec-08	17	not sampled - bridge construction										
19-Jan-09	17	not sampled - bridge construction										
23-Feb-09	17	not sampled - bridge construction										
23-Mar-09	17	not sampled - bridge construction										
21-Apr-09	17	not sampled - bridge construction										
19-May-09	17	not sampled - bridge construction										
24-Jun-09	17	not sampled - bridge construction										
17-Aug-09	17	1015	0.30		0.241		179.25	557.82	13.52	42.09		
10-Nov-09	17	1015	2.49		0.210		1,276.75	4,559.81	96.33	344.02		
Total Dissolved Solids			**4.63**		**0.184**		**1,802.40**	**Ave kg/day**	**135.98**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
22-Jul-08	17	0958	19.98	< 235 MPN	222.4	MPN	10,871,485.66	11,487,406.16	1,019.29	1,077.04	3,430,008.39	allowed 1000 mpn/day
11-Aug-08	17	0958	0.10		52.0		12,722.19	57,494.53	1.19	5.39	321.59	allowed 1000 mpn/ac
18-Sep-08	17	0735	9.35		1,046.2		23,919,530.56	5,372,863.39	2,242.65	503.75	6,989,048.89	ave 1000 mpn/day
15-Oct-08	17	1015	0.10		435.2		106,474.97	57,494.53	9.98	5.39	655.28	ave 1000 mpn/ac
10-Nov-08	17	1253	0.10		260.3		63,684.36	57,494.53	5.97	5.39		
16-Dec-08	17	not sampled - bridge construction									Annual	
19-Jan-09	17	not sampled - bridge construction									2,662,325.06	allowed 1000 mpn/day
23-Feb-09	17	not sampled - bridge construction									249.61	allowed 1000 mpn/ac
23-Mar-09	17	not sampled - bridge construction									5,097,856.56	ave 1000 mpn/day
21-Apr-09	17	not sampled - bridge construction									477.97	ave 1000 mpn/ac
19-May-09	17	not sampled - bridge construction										
24-Jun-09	17	not sampled - bridge construction										
17-Aug-09	17	1015	0.30		47.1		35,031.05	174,783.36	3.28	16.39		
10-Nov-09	17	1015	2.49		111.2		676,067.11	1,428,738.95	63.39	133.96		
E. Coli			**4.63**		**310.6**		**5,097,856.6**	Ave 1000MPN/day	**478.0**	Ave 1000 MPN/Ac		**104%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
22-Jul-08	17	0958	19.98	< 30.0 mg/L	14	mg/L	684,356.11	1,466,477.38	25.82	55.32	437,873.41	allowed kg/day
11-Aug-08	17	0958	0.10		4		978.63	7,339.73	0.04	0.28	16.52	allowed T / Ac / Year
18-Sep-08	17	0735	9.35		22		502,991.47	685,897.45	18.97	25.87	239,876.95	ave kg/day
15-Oct-08	17	1015	0.10		30		7,339.73	7,339.73	0.28	0.28	9.05	Ave T / Ac / Year
10-Nov-08	17	1253	0.10		14		3,425.21	7,339.73	0.13	0.28		
16-Dec-08	17	not sampled - bridge construction									Annual	
19-Jan-09	17	not sampled - bridge construction									366,117.80	allowed kg/day
23-Feb-09	17	not sampled - bridge construction									13.81	allowed T / Ac / Year
23-Mar-09	17	not sampled - bridge construction									200,468.32	ave kg/day
21-Apr-09	17	not sampled - bridge construction									7.56	Ave T / Ac / Year
19-May-09	17	not sampled - bridge construction										
24-Jun-09	17	not sampled - bridge construction										
17-Aug-09	17	1015	0.30		5.0		3,718.79	22,312.77	0.14	0.84		
10-Nov-09	17	1015	2.49		<4.0							
Total Suspended Solids			**4.63**		**15**		**200,468.32**	**Ave kg/day**	**7.56**	**T/Ac/Year**		-
Ammonia												
22-Jul-08	17	0958	19.98		<0.200	mg/L						
11-Aug-08	17	0958	0.10		<0.200							
18-Sep-08	17	0735	9.35		<0.200							
15-Oct-08	17	1015	0.10		<0.200							
10-Nov-08	17	1253	0.10		<0.200							
16-Dec-08	17	not sampled - bridge construction										
19-Jan-09	17	not sampled - bridge construction										

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
23-Feb-09	17	not sampled - bridge construction										
23-Mar-09	17	not sampled - bridge construction										
21-Apr-09	17	not sampled - bridge construction										
19-May-09	17	not sampled - bridge construction										
24-Jun-09	17	not sampled - bridge construction										
17-Aug-09	17	1015	0.30		<0.200							
10-Nov-09	17	1015	2.49		<0.200							
Ammonia			**4.63**									
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
22-Jul-08	17	0958	19.98	< 0.04 mg/L	0.12	mg/L	5,865.91	1,955.30	442.56	147.52	**1,434.92**	**Ave kg/day**
11-Aug-08	17	0958	0.10		<0.10						**108.26**	**Ave lb / Ac / Year**
18-Sep-08	17	0735	9.35		0.11		2,514.96	914.53	189.74	69.00		
15-Oct-08	17	1015	0.10		<0.10							
10-Nov-08	17	1253	0.10		<0.10							
16-Dec-08	17	not sampled - bridge construction										
19-Jan-09	17	not sampled - bridge construction										
23-Feb-09	17	not sampled - bridge construction										
23-Mar-09	17	not sampled - bridge construction										
21-Apr-09	17	not sampled - bridge construction										
19-May-09	17	not sampled - bridge construction										
24-Jun-09	17	not sampled - bridge construction										
17-Aug-09	17	1015	0.30		<0.10							
10-Nov-09	17	1015	2.49		<0.10							
Total Phosphorus			**4.63**				**4,190.43**	**Ave kg/day**	**316.15**	**lb / Ac / Year**		66%
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
22-Jul-08	17	0958	19.98	< 10 mg / L	0.386	mg/L	18,868.68	488,825.79	1,423.57	36,879.98	**113,290.43**	**Ave kg/day**
11-Aug-08	17	0958	0.10		0.277		67.77	2,446.58	5.11	184.58	**4.27**	**Ave T / Ac / Year**
18-Sep-08	17	0735	9.35		0.546		12,483.33	228,632.48	941.82	17,249.42		
15-Oct-08	17	1015	0.10		0.286		69.97	2,446.58	5.28	184.58		
10-Nov-08	17	1253	0.10		0.218		53.34	2,446.58	4.02	184.58		
16-Dec-08	17	not sampled - bridge construction										
19-Jan-09	17	not sampled - bridge construction										
23-Feb-09	17	not sampled - bridge construction										
23-Mar-09	17	not sampled - bridge construction										
21-Apr-09	17	not sampled - bridge construction										
19-May-09	17	not sampled - bridge construction										
24-Jun-09	17	not sampled - bridge construction										
17-Aug-09	17	1015	0.30		0.164		121.98	7,437.59	9.20	561.14		
10-Nov-09	17	1015	2.49		0.151		918.04	60,797.40	69.26	4,586.92		
Nitrate - Nitrite			**4.63**		**0.290**		**4,654.73**	**Ave kg/day**	**0.18**	**T / Ac / Year**		
Hardness (CaCO3)												
11-Aug-08	17	0958	0.10		130							
10-Nov-08	17	1253	0.10		230							
23-Feb-09	17	not sampled - bridge construction										
19-May-09	17	not sampled - bridge construction										
Hardness (CaCO3)			**0.10**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Aug-08	17	0958	0.10	< 174µg/L	0.076	mg/L	18.59	42.57	1.40	3.21	**42.57**	**Ave kg/day**
10-Nov-08	17	1253	0.10		0.886		216.77	42.57	16.35	3.21	**3.21**	**Ave lb / Ac / Year**
23-Feb-09	17	not sampled - bridge construction										
19-May-09	17	not sampled - bridge construction										
Total Aluminum			**0.10**				**117.68**	**Ave kg/day**	**8.88**	**lb / Ac / Year**		**64%**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Al, Dissolved								kg / day		lb / Ac / Year		Allowed
10-Nov-08	17	1253	0.10	< 174µg/L	0.765	mg/L	187.16	42.57	14.12	3.21	**42.57**	**Ave kg/day**
23-Feb-09	17	not sampled - bridge construction									**3.21**	**Ave lb / Ac / Year**
19-May-09	17	not sampled - bridge construction										
Dissolved Aluminum			**0.10**				**187.16**	**Ave kg/day**	**14.12**	**lb / Ac / Year**		**77%**
Fe, Total								kg / day		lb / Ac / Year		Allowed
11-Aug-08	17	0958	0.10	< 2.5 mg/L	0.684	mg/L	167.35	611.64	12.63	46.15	**611.64**	**Ave kg/day**
10-Nov-08	17	1253	0.10		0.978		239.28	611.64	18.05	46.15	**46.15**	**Ave lb / Ac / Year**
23-Feb-09	17	not sampled - bridge construction										
19-May-09	17	not sampled - bridge construction										
Total Iron			**0.10**				**203.31**	**Ave kg/day**	**15.34**	**lb / Ac / Year**		
Fe, Dissolved								kg / day		lb / Ac / Year		Allowed
10-Nov-08	17	1253	0.10	< 2.5 mg/L	0.890	mg/L	217.75	611.64	16.43	46.15	**611.64**	**Ave kg/day**
23-Feb-09	17	not sampled - bridge construction									**46.15**	**Ave lb / Ac / Year**
19-May-09	17	not sampled - bridge construction										
Dissolved Iron			**0.10**				**217.75**	**Ave kg/day**	**16.43**	**lb / Ac / Year**		
Cu, Total								kg / day		lb / Ac / Year		Allowed
11-Aug-08	17	0958	0.10	0.014	<0.001	mg/L	0.00	3.47	0.00	0.26	**4.57**	**Ave kg/day**
10-Nov-08	17	1253	0.10	0.023	<0.001		0.00	5.66	0.00	0.43	**0.34**	**Ave lb / Ac / Year**
23-Feb-09	17	not sampled - bridge construction										
19-May-09	17	not sampled - bridge construction										
Total Copper			**0.10**				**0.00**	**Ave kg/day**	**0.00**	**T/Ac/Year**		-
Cu, Dissolved								kg / day		lb / Ac / Year		Allowed
10-Nov-08	17	1253	0.10	0.023	<0.001	mg/L	0.00	5.66	0.00	0.43	**5.66**	**Ave kg/day**
23-Feb-09	17	not sampled - bridge construction									**0.43**	**Ave lb / Ac / Year**
19-May-09	17	not sampled - bridge construction										
Dissolved Copper			**0.10**				**0.00**	**Ave kg/day**	**0.00**	**T/Ac/Year**		-
Mn, Total								kg / day		lb / Ac / Year		Allowed
11-Aug-08	17	0958	0.10	0.666	1.010	mg/L	247.10	163.00	18.64	12.30	**216.03**	**Ave kg/day**
10-Nov-08	17	1253	0.10	1.100	0.118		28.87	269.05	2.18	20.30	**16.30**	**Ave lb / Ac / Year**
23-Feb-09	17	not sampled - bridge construction										
19-May-09	17	not sampled - bridge construction										
Total Manganese			**0.10**				**137.99**	**Ave kg/day**	**4.19**	**T/Ac/Year**		-
Mn, Dissolved								kg / day		lb / Ac / Year		Allowed
10-Nov-08	17	1253	0.10	1.100	0.100	mg/L	24.47	269.05	1.85	20.30	**269.05**	**Ave kg/day**
23-Feb-09	17	not sampled - bridge construction									**20.30**	**Ave lb / Ac / Year**
19-May-09	17	not sampled - bridge construction										
Total Manganese			**0.10**				**24.47**	**Ave kg/day**	**0.74**	**T/Ac/Year**		-
Cl												
10-Nov-08	17	1253	0.00		7							
Chlorine			**0.00**									
SO4												
10-Nov-08	17	1253	0.00		15.6							
Sulfate			**0.00**									

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement

SITE #18

Drainage Area: 7,304.35 Acres

Date	Site No	Time	Notes / Conditions
16-Jul-08	18	1205	Stream Flow not measured for safety reasons - only one person sampling
11-Aug-08	18	1247	Creek dead still and very cloudy. Sandy bed. Beer bottles & tailpipe in creek. Fish present (about 6"). Frogs present. Good minnow population. Raccoon tracks.
18-Sep-08	18	0755	Oily film on top of water. Dead fish present
15-Oct-08	18	0910	Diconnected pool. Heavily silted upstream and downstream. Oily surface film. Large (18-24") bull catfish at sample site - did not move when pulling samples.
10-Nov-08	18	1013	No flow. Disconnected pool.
16-Dec-08	18	0958	Flow meter frozen - flow estimated
19-Jan-09	18	1100	Ice covered - except for one small opening. Flowing channel estimated 3' wide. Light color to water, but clear
23-Feb-09	18	0954	Frozen over in spots. Oily, gritty films at ice water border. Sage green-brown color. Lots of small debris/straw size on north side of bridge. Cannot see bottom.
23-Mar-09	18	1005	No discernable odor. Rust staining downstream with oily sheen. Sandy bottom. Fresh beaver tracks
21-Apr-09	18	1028	Slightly sweet smell. Extremely soft side channel. Sandy bottom main channel. Very cloudy. High flow
19-May-09	18	0945	Light khaki colour. No apparent odor
24-Jun-09	18	1020	No apparent odor to water. Tan in color. Gravel bar in center of channel with heron tracks beside. Sides are heavily silted, no sand.
17-Aug-09	18	0945	Brackish, almost fishy odor. Greenish khaki. Disconnected pool - samples taken on E side of bridge. Significant rust staining on W side of bridge.
10-Nov-09	18	0915	No smell. Greenish tan color. Very soft sediment. Milky, murky water. Slimy algae. Tannic sheen. Brown side stream.

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Turbidity							Apr - Oct Average NTU				
16-Jul-08	18	1205	0.10	n/a	**54.0**	NTU	43.0	36.0			36.0 NTU Allowed
11-Aug-08	18	1247	0.10	< 36 NTU	15.0						
18-Sep-08	18	0755	0.10		15.0						
15-Oct-08	18	0910	0.00		15.0						
10-Nov-08	18	1013	0.00	disconnected pool	15.0						
16-Dec-08	18	0958	2.77		15.0						
19-Jan-09	18	1100	0.40		15.0						
23-Feb-09	18	0954	10.61		44.4						
23-Mar-09	18	1005	2.64		19.9						
21-Apr-09	18	1028	23.52		65.6						
19-May-09	18	0945	53.34		37.6						
24-Jun-09	18	1020	7.85		60.0						
17-Aug-09	18	0945	0.00		82.1						
10-Nov-09	18	0915	2.99		66.0						
Turbidity			**7.46**		**37.1**						-
Temperature							**Average May - Sept**				
16-Jul-08	18	1205	0.10	90° Max	77.92	NTU	71.8				
11-Aug-08	18	1247	0.10	90° Max	67.53						
18-Sep-08	18	0755	0.10	90° Max	61.08						
15-Oct-08	18	0910	0.00	78° Max	63.55						
10-Nov-08	18	1013	0.00	70° Max	42.00						
16-Dec-08	18	0958	2.77	57° Max	32.38						
19-Jan-09	18	1100	0.40	50° Max	32.18						
23-Feb-09	18	0954	10.61	50° Max	32.14						
23-Mar-09	18	1005	2.64	60° Max	50.54						
21-Apr-09	18	1028	23.52	70° Max	55.13						
19-May-09	18	0945	53.34	80° Max	62.63						
24-Jun-09	18	1020	7.85	90° Max	79.91						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
17-Aug-09	18	0945	0.00	90° Max	77.55						
10-Nov-09	18	0915	2.99	70° Max	54.29						
Temperature			**7.46**								
Dissolved Oxygen							Apr - Oct Average mg/L				
16-Jul-08	18	1205	0.10	Never < 4.0	6.39	mg/L	5.51				
11-Aug-08	18	1247	0.10	Ave. >5.0	8.00						
18-Sep-08	18	0755	0.10		5.45		Annual Average mg/L				Indiana average = 9.8 mg/L
15-Oct-08	18	0910	0.00		0.93		8.29				
10-Nov-08	18	1013	0.00		3.79						
16-Dec-08	18	0958	2.77		17.99		Annual Average %				Good defined as 80-120%
19-Jan-09	18	1100	0.40		11.26		72.45				
23-Feb-09	18	0954	10.61		14.87						
23-Mar-09	18	1005	2.64		11.33						
21-Apr-09	18	1028	23.52		10.10						
19-May-09	18	0945	53.34		8.79						
24-Jun-09	18	1020	7.85		6.30						
17-Aug-09	18	0945	0.00		0.64						
10-Nov-09	18	0915	2.99		9.94						
Dissolved Oxygen			**7.46**		**8.29**				**to reach Indiana Average (Apr-Oct)**		**44%**
pH											
16-Jul-08	18	1205	0.10	6.0 - 9.0	7.44						
11-Aug-08	18	1247	0.10		7.64						
18-Sep-08	18	0755	0.10		7.46						
15-Oct-08	18	0910	0.00		7.24						
10-Nov-08	18	1013	0.00		7.49						
16-Dec-08	18	0958	2.77		7.81						
19-Jan-09	18	1100	0.40		7.05						
23-Feb-09	18	0954	10.61		7.31						
23-Mar-09	18	1005	2.64		7.60						
21-Apr-09	18	1028	23.52		7.60						
19-May-09	18	0945	53.34		7.43						
24-Jun-09	18	1020	7.85		7.67						
17-Aug-09	18	0945	0.00		7.44						
10-Nov-09	18	0915	2.99		7.63						
pH			**7.46**		**7.47**						
Specific Conductance											
16-Jul-08	18	1205	0.10	< 1.20 mS/cm	0.148	mS/cm					refer to TDS
11-Aug-08	18	1247	0.10		0.315						
18-Sep-08	18	0755	0.10		0.467						
15-Oct-08	18	0910	0.00		0.569						
10-Nov-08	18	1013	0.00		0.428						
16-Dec-08	18	0958	2.77		0.508						
19-Jan-09	18	1100	0.40		0.323						
23-Feb-09	18	0954	10.61		0.275						
23-Mar-09	18	1005	2.64		0.350						
21-Apr-09	18	1028	23.52		0.260						
19-May-09	18	0945	53.34		0.187						
24-Jun-09	18	1020	7.85		0.275						
17-Aug-09	18	0945	0.00		0.571						
10-Nov-09	18	0915	2.99		0.300						
Specific Conductance			**7.46**		**0.359**						
Total Dissolved Solids								kg / day		lbs / Ac / Year	**Allowed**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
16-Jul-08	18	1205	0.10	< 750 mg/L	0.096	g/L	23.49	183.49	2.59	20.21	**13,685.93**	**Ave kg/day**
11-Aug-08	18	1247	0.10		0.205		50.15	183.49	5.53	20.21	**0.75**	**Ave T / Ac / Year**
18-Sep-08	18	0755	0.10		0.304	YSI	74.38	183.49	8.19	20.21		
15-Oct-08	18	0910	0.00		0.370		0.91	1.83	0.10	0.20		
10-Nov-08	18	1013	0.00		0.370		0.91	1.83	0.10	0.20		
16-Dec-08	18	0958	2.77		0.278		1,883.49	5,081.35	207.50	559.79		
19-Jan-09	18	1100	0.40		0.210		203.46	726.63	22.41	80.05		
23-Feb-09	18	0954	10.61		0.179		4,644.32	19,459.45	511.64	2,143.76		
23-Mar-09	18	1005	2.64		0.227		1,466.18	4,844.22	161.52	533.67		
21-Apr-09	18	1028	23.52		0.169		9,724.84	43,157.59	1,071.34	4,754.48		
19-May-09	18	0945	53.34		0.122		15,921.04	97,875.25	1,753.95	10,782.47		
24-Jun-09	18	1020	7.85		0.179		3,439.56	14,411.55	378.92	1,587.66		
17-Aug-09	18	0945	0.00		0.371		0.91	1.83	0.10	0.20		
10-Nov-09	18	0915	2.99		0.195		1,427.67	5,491.03	157.28	604.92		
Total Dissolved Solids			**7.46**		**0.236**		**2,775.81**	**Ave kg/day**	**305.80**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
16-Jul-08	18	1205	0.10	< 235 MPN	272.3	MPN	66,620.25	57,494.53	9.12	7.87	6,109,943.21	allowed 1000 mpn/day
11-Aug-08	18	1247	0.10		185.0		45,261.65	57,494.53	6.20	7.87	836.48	allowed 1000 mpn/ac
18-Sep-08	18	0755	0.10		218.7		53,506.61	57,494.53	7.33	7.87	4,473,400.75	ave 1000 mpn/day
15-Oct-08	18	0910	0.00		7.5		18.35	574.95	0.00	0.08	612.43	ave 1000 mpn/ac
10-Nov-08	18	1013	0.00		25.0		61.16	574.95	0.01	0.08		
16-Dec-08	18	0958	2.77		3.0		20,325.40	1,592,156.09	2.78	217.97	Annual	
19-Jan-09	18	1100	0.40		10.9		10,560.40	227,678.32	1.45	31.17	4,288,259.18	allowed 1000 mpn/day
23-Feb-09	18	0954	10.61		35.9		931,459.02	6,097,294.41	127.52	834.75	587.08	allowed 1000 mpn/ac
23-Mar-09	18	1005	2.64		344.0		2,221,882.05	1,517,855.47	304.19	207.80	3,024,812.94	ave 1000 mpn/day
21-Apr-09	18	1028	23.52		360.9		20,767,433.58	13,522,712.36	2,843.16	1,851.32	414.11	ave 1000 mpn/ac
19-May-09	18	0945	53.34		79.8		10,413,927.10	30,667,579.81	1,425.72	4,198.54		
24-Jun-09	18	1020	7.85		231.0		4,438,758.40	4,515,620.02	607.69	618.21		
17-Aug-09	18	0945	0.00		686.7		1,680.06	574.95	0.23	0.08		
10-Nov-09	18	0915	2.99		461.1		3,375,887.08	1,720,523.67	462.17	235.55		
E. Coli			**7.46**		**208.7**		**3,024,812.9**	Ave 1000MPN/day	**414.1**	Ave 1000 MPN/Ac		**-27%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
16-Jul-08	18	1205	0.10	< 30.0 mg/L	46	mg/L	11,254.25	7,339.73	0.62	0.40	779,992.75	allowed kg/day
11-Aug-08	18	1247	0.10		2		489.32	7,339.73	0.03	0.40	42.96	allowed T / Ac / Year
18-Sep-08	18	0755	0.10		10		2,446.58	7,339.73	0.13	0.40	276,704.33	ave kg/day
15-Oct-08	18	0910	0.00		4		9.79	73.40	0.00	0.00	15.24	Ave T / Ac / Year
10-Nov-08	18	1013	0.00		2		4.89	73.40	0.00	0.00		
16-Dec-08	18	0958	2.77		2		13,550.26	203,253.97	0.75	11.20	Annual	
19-Jan-09	18	1100	0.40		6		5,813.06	29,065.32	0.32	1.60	547,437.34	allowed kg/day
23-Feb-09	18	0954	10.61		20		518,918.67	778,378.01	28.58	42.88	30.15	allowed T / Ac / Year
23-Mar-09	18	1005	2.64		17		109,802.31	193,768.78	6.05	10.67	214,867.96	ave kg/day
21-Apr-09	18	1028	23.52		16		920,695.31	1,726,303.71	50.71	95.09	11.84	Ave T / Ac / Year
19-May-09	18	0945	53.34		7		913,502.38	3,915,010.19	50.32	215.65		
24-Jun-09	18	1020	7.85		19		365,092.68	576,462.13	20.11	31.75		
17-Aug-09	18	0945	0.00		59.0		144.35	73.40	0.01	0.00		
10-Nov-09	18	0915	2.99		20.0		146,427.55	219,641.32	8.07	12.10		
Total Suspended Solids			**7.46**		**16**		**214,867.96**	**Ave kg/day**	**4.76**	**T/Ac/Year**		-
Ammonia												
16-Jul-08	18	1205	0.10		<0.200	mg/L						
11-Aug-08	18	1247	0.10		<0.200							
18-Sep-08	18	0755	0.10		<0.200							
15-Oct-08	18	0910	0.00		<0.200							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
10-Nov-08	18	1013	0.00		<0.200							
16-Dec-08	18	0958	2.77		<0.200							
19-Jan-09	18	1100	0.40		<0.200							
23-Feb-09	18	0954	10.61		<0.200							
23-Mar-09	18	1005	2.64		<0.200							
21-Apr-09	18	1028	23.52		<0.200							
19-May-09	18	0945	53.34		<0.200							
24-Jun-09	18	1020	7.85		<0.200							
17-Aug-09	18	0945	0.00		<0.200							
10-Nov-09	18	0915	2.99		<0.200							
Ammonia			**7.46**									
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
16-Jul-08	18	1205	0.10	< 0.04 mg/L	0.19	mg/L	46.48	9.79	5.12	1.08	**1,568.26**	**Ave kg/day**
11-Aug-08	18	1247	0.10		<0.10						**172.77**	**Ave lb / Ac / Year**
18-Sep-08	18	0755	0.10		<0.10							
15-Oct-08	18	0910	0.00		0.10							
10-Nov-08	18	1013	0.00		0.11							
16-Dec-08	18	0958	2.77		0.11		745.26	271.01	82.10	29.86		
19-Jan-09	18	1100	0.40		0.24		232.52	38.75	25.62	4.27		
23-Feb-09	18	0954	10.61		<0.10							
23-Mar-09	18	1005	2.64		<0.10							
21-Apr-09	18	1028	23.52		0.20		11,508.69	2,301.74	1,267.86	253.57		
19-May-09	18	0945	53.34		0.26		33,930.09	5,220.01	3,737.92	575.07		
24-Jun-09	18	1020	7.85		<0.10							
17-Aug-09	18	0945	0.00		0.27		0.66	0.10	0.07	0.01		
10-Nov-09	18	0915	2.99		0.16		1,171.42	292.86	129.05	32.26		
Total Phosphorus			**7.46**		**0.18**		**6,805.02**	**Ave kg/day**	**749.68**	**lb / Ac / Year**		77%
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
16-Jul-08	18	1205	0.10	< 10 mg / L	0.328	mg/L	80.25	2,446.58	8.84	269.53	**212,888.22**	**Ave kg/day**
11-Aug-08	18	1247	0.10		1.700		415.92	2,446.58	45.82	269.53	**11.73**	**Ave T / Ac / Year**
18-Sep-08	18	0755	0.10		0.209		51.13	2,446.58	5.63	269.53		
15-Oct-08	18	0910	0.00		0.229							
10-Nov-08	18	1013	0.00		0.209							
16-Dec-08	18	0958	2.77		0.209		1,416.00	67,751.32	155.99	7,463.86		
19-Jan-09	18	1100	0.40		0.485		469.89	9,688.44	51.77	1,067.33		
23-Feb-09	18	0954	10.61		0.209		5,422.70	259,459.34	597.39	28,583.46		
23-Mar-09	18	1005	2.64		0.211		1,362.84	64,589.59	150.14	7,115.54		
21-Apr-09	18	1028	23.52		0.353		20,312.84	575,434.57	2,237.77	63,393.03		
19-May-09	18	0945	53.34		0.425		55,462.64	1,305,003.40	6,110.07	143,766.33		
24-Jun-09	18	1020	7.85		0.244		4,688.56	192,154.04	516.52	21,168.74		
17-Aug-09	18	0945	0.00		0.122		0.30	24.47	0.03	2.70		
10-Nov-09	18	0915	2.99		0.371		2,716.23	73,213.77	299.23	8,065.63		
Nitrate - Nitrite			**7.46**		**0.379**		**7,699.94**	**Ave kg/day**	**0.42**	**T / Ac / Year**		
Hardness (CaCO3)												
11-Aug-08	18	1247	0.10		170							
10-Nov-08	18	1013	-		420							
23-Feb-09	18	0954	10.61		190							
21-Apr-09	18	0945	53.34		120							
Hardness (CaCO3)			**16.01**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Aug-08	18	1247	0.10	< 174µg/L	0.160	mg/L	39.15	42.57	4.31	4.69	**6,816.06**	**Ave kg/day**
10-Nov-08	18	1013	-		0.018		-	-	-	-	**750.89**	**Ave lb / Ac / Year**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
23-Feb-09	18	0954	10.61		1.380		35,805.39	4,514.59	3,944.52	497.35		
21-Apr-09	18	0945	53.34		0.843		110,011.79	22,707.06	12,119.50	2,501.53		
Total Aluminum			**16.01**				**36,464.08**	**Ave kg/day**	**4,017.08**	**lb / Ac / Year**		**81%**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	18	1013	-	< 174µg/L	0.006	mg/L	-	-	-	-	**9,073.88**	**Ave kg/day**
23-Feb-09	18	0954	10.61		0.300		7,783.78	4,514.59	857.50	497.35	**999.63**	**Ave lb / Ac / Year**
21-Apr-09	18	0945	53.34		1.230		160,515.42	22,707.06	17,683.26	2,501.53		
Dissolved Aluminum			**21.32**				**56,099.73**	**Ave kg/day**	**6,180.25**	**lb / Ac / Year**		**84%**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Aug-08	18	1247	0.10	< 2.5 mg/L	0.893	mg/L	218.48	611.64	24.07	67.38	**97,931.83**	**Ave kg/day**
10-Nov-08	18	1013	-		0.781		-	-	-	-	**10,788.71**	**Ave lb / Ac / Year**
23-Feb-09	18	0954	10.61		1.610		41,772.95	64,864.83	4,601.94	7,145.87		
21-Apr-09	18	0945	53.34		1.180		153,990.40	326,250.85	16,964.43	35,941.58		
Total Iron			**16.01**				**48,995.46**	**Ave kg/day**	**5,397.61**	**lb / Ac / Year**		**-**
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	18	1013	-	< 2.5 mg/L	0.404	mg/L	-	-	-	-	**130,371.89**	**Ave kg/day**
23-Feb-09	18	0954	10.61		0.231		5,993.51	64,864.83	660.28	7,145.87	**14,362.48**	**Ave lb / Ac / Year**
21-Apr-09	18	0945	53.34		1.190		155,295.40	326,250.85	17,108.19	35,941.58		
Dissolved Iron			**21.32**				**53,762.97**	**Ave kg/day**	**5,922.82**	**lb / Ac / Year**		**-**
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Aug-08	18	1247	0.10	0.018	<0.001	mg/L	0.00	4.37	0.00	0.48	**561.27**	**Ave kg/day**
10-Nov-08	18	1013	-	0.039	0.003		-	-	-	-	**61.83**	**Ave lb / Ac / Year**
23-Feb-09	18	0954	10.61	0.020	<0.001		0.00	509.68	0.00	56.15		
21-Apr-09	18	0945	53.34	0.013			-	1,731.02	-	190.70		
Total Copper			**16.01**				**0.00**	**Ave kg/day**	**0.00**	**T/Ac/Year**		**-**
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	18	1013	-	0.039	<0.001	mg/L	0.00	-	0.00	-	**746.90**	**Ave kg/day**
23-Feb-09	18	0954	10.61	0.020	0.002		51.89	509.68	5.72	56.15	**82.28**	**Ave lb / Ac / Year**
21-Apr-09	18	0945	53.34	0.013	0.002		261.00	1,731.02	28.75	190.70		
Dissolved Copper			**21.32**				**104.30**	**Ave kg/day**	**4.62**	**T/Ac/Year**		**-**
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Aug-08	18	1247	0.10	0.843	0.442	mg/L	108.14	206.31	11.91	22.73	**26,343.02**	**Ave kg/day**
10-Nov-08	18	1013	-	1.866	2.660		-	-	-	-	**2,902.09**	**Ave lb / Ac / Year**
23-Feb-09	18	0954	10.61	0.930	0.267		6,927.56	24,124.93	763.18	2,657.73		
21-Apr-09	18	0945	53.34	0.621	0.125		16,312.54	81,040.85	1,797.08	8,927.90		
Total Manganese			**16.01**				**5,837.06**	**Ave kg/day**	**258.72**	**T/Ac/Year**		**-**
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	18	1013	-	1.866	2.600	mg/L	-	-	-	-	**35,055.26**	**Ave kg/day**
23-Feb-09	18	0954	10.61	0.930	0.237		6,149.19	24,124.93	677.43	2,657.73	**3,861.88**	**Ave lb / Ac / Year**
21-Apr-09	18	0945	53.34	0.621	0.102		13,311.03	81,040.85	1,466.42	8,927.90		
Total Manganese			**21.32**				**6,486.74**	**Ave kg/day**	**287.52**	**T/Ac/Year**		**-**
Cl												
10-Nov-08	18	1013	-		7.2							
Chlorine			**-**									
SO4												
10-Nov-08	03	0928	-		59.6							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Sulfate			-								

SITE #19

Drainage Area: 6,301.82 Acres ** Part of Point 18 drainage area

Date	Site No	Time	Notes / Conditions
16-Jul-08	19	1250	Stream Flow not measured for safety reasons - only one person sampling
11-Aug-08	19	1218	Creek dead still and very cloudy. Beavers in creek stirring up sediment. Oily sheen to surface of water.
18-Sep-08	19	0820	Clung to dipper, instruments
15-Oct-08	19	0936	No discernable flow.
10-Nov-08	19	0938	Oily surface.
16-Dec-08	19	0930	Flow meter frozen, estimated flow. Influx from field tiles.
19-Jan-09	19	1030	Snow Covered. Water running under 3-4" thick ice. Running channel approx 5-6' wide. Water colour of "white tea"
23-Feb-09	19	0929	Murky, pale urine in color. Channel clear of debris. Some ice on banks. Sulphur odor
23-Mar-09	19	0944	No discernable odor. Definite mud color to water. Could not really see bottom. Fine algae in shallow (1"-2") areas.
21-Apr-09	19	1015	Slightly sweet smell. Water very turbid / muddy. Can only see 2" down on bank. Strong flow. Sediment soft on sides. Middle of channel gravel
19-May-09	19	1015	khaki colour. No discernable odor. Extremely heavy sediment in western ditch. Channel bottom gravely
24-Jun-09	19	1050	No apparent odor. Tan color. Gravel-ly bottom, but couldn't see past 4/10 ft. Money-wort? Purselane? On bank
17-Aug-09	19	0915	Light, sharp moss odor. Light khaki color. Very very slow flow. Will be disconnected pool soon - connection 18" wide x 3/4" deep
10-Nov-09	19	0945	No odor. Tan color. Murky, mikly color. Gravel-ly bottom. Suspension with water movement

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Turbidity							Apr - Oct Average NTU				
16-Jul-08	19	1250	0.10	n/a	**62.0**	NTU	46.3	36.0			36.0 NTU Allowed
11-Aug-08	19	1218	0.10	< 36 NTU	30.0						
18-Sep-08	19	0820	0.10		20.0						
15-Oct-08	19	0936	0.10		15.0						
10-Nov-08	19	0938	0.10		15.0						
16-Dec-08	19	0930	1.40		15.9						
19-Jan-09	19	1030	1.28		19.2						
23-Feb-09	19	0929	5.04		43.2						
23-Mar-09	19	0944	1.86		40.0						
21-Apr-09	19	1015	27.84		77.6						
19-May-09	19	1015	70.29		61.4						
24-Jun-09	19	1050	9.15		70.0						
17-Aug-09	19	0915	0.10		34.1						
10-Nov-09	19	0945	3.99		63.3						
Turbidity			**8.67**		**40.5**						**22%**
Temperature							**Average May - Sept**				
16-Jul-08	19	1250	0.10	90° Max	78.48	°F	72.7				
11-Aug-08	19	1218	0.10	90° Max	69.05						
18-Sep-08	19	0820	0.10	90° Max	63.17						
15-Oct-08	19	0936	0.10	78° Max	64.04						
10-Nov-08	19	0938	0.10	70° Max	44.31						
16-Dec-08	19	0930	1.40	57° Max	32.50						
19-Jan-09	19	1030	1.28	50° Max	32.30						
23-Feb-09	19	0929	5.04	50° Max	33.47						
23-Mar-09	19	0944	1.86	60° Max	51.65						
21-Apr-09	19	1015	27.84	70° Max	56.45						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
19-May-09	19	1015	70.29	80° Max	63.66						
24-Jun-09	19	1050	9.15	90° Max	81.79						
17-Aug-09	19	0915	0.10	90° Max	76.55						
10-Nov-09	19	0945	3.99	70° Max	55.22						
Temperature			**8.67**								
Dissolved Oxygen							Apr - Oct Average mg/L				
16-Jul-08	19	1250	0.10	Never < 4.0	6.56	mg/L	6.3				
11-Aug-08	19	1218	0.10	Ave. >5.0	6.77						
18-Sep-08	19	0820	0.10		4.61		Annual Average mg/L				Indiana average = 9.8 mg/L
15-Oct-08	19	0936	0.10		7.99		8.62				
10-Nov-08	19	0938	0.10		2.89						
16-Dec-08	19	0930	1.40		18.36		Annual Average %				Good defined as 80-120%
19-Jan-09	19	1030	1.28		13.48		76.74				
23-Feb-09	19	0929	5.04		14.26						
23-Mar-09	19	0944	1.86		10.35						
21-Apr-09	19	1015	27.84		9.43						
19-May-09	19	1015	70.29		9.13						
24-Jun-09	19	1050	9.15		4.20						
17-Aug-09	19	0915	0.10		2.17						
10-Nov-09	19	0945	3.99		8.63						
Dissolved Oxygen			**8.67**		**8.62**					**to reach Indiana Average (annual)**	**12%**
pH											
16-Jul-08	19	1250	0.10	6.0 - 9.0	7.35						
11-Aug-08	19	1218	0.10		7.35						
18-Sep-08	19	0820	0.10		7.38						
15-Oct-08	19	0936	0.10		7.92						
10-Nov-08	19	0938	0.10		7.50						
16-Dec-08	19	0930	1.40		7.76						
19-Jan-09	19	1030	1.28		7.27						
23-Feb-09	19	0929	5.04		7.40						
23-Mar-09	19	0944	1.86		7.89						
21-Apr-09	19	1015	27.84		7.69						
19-May-09	19	1015	70.29		7.50						
24-Jun-09	19	1050	9.15		7.66						
17-Aug-09	19	0915	0.10		7.57						
10-Nov-09	19	0945	3.99		7.64						
pH			**8.67**		**7.58**						
Specific Conductance											
16-Jul-08	19	1250	0.10	< 1.20 mS/cm	0.142	mS/cm					refer to TDS
11-Aug-08	19	1218	0.10		0.342						
18-Sep-08	19	0820	0.10		0.354						
15-Oct-08	19	0936	0.10		0.469						
10-Nov-08	19	0938	0.10		0.481						
16-Dec-08	19	0930	1.40		0.398						
19-Jan-09	19	1030	1.28		0.305						
23-Feb-09	19	0929	5.04		0.257						
23-Mar-09	19	0944	1.86		0.310						
21-Apr-09	19	1015	27.84		0.257						
19-May-09	19	1015	70.29		0.182						
24-Jun-09	19	1050	9.15		0.260						
17-Aug-09	19	0915	0.10		0.408						
10-Nov-09	19	0945	3.99		0.272						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Specific Conductance			**8.67**		**0.315**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
16-Jul-08	19	1250	0.10	< 750 mg/L	0.093	g/L	22.75	183.49	2.91	23.43	**15,917.93**	**Ave kg/day**
11-Aug-08	19	1218	0.10		0.222		54.31	183.49	6.94	23.43	**1.02**	**Ave T / Ac / Year**
18-Sep-08	19	0820	0.10		0.230	YSI	56.27	183.49	7.19	23.43		
15-Oct-08	19	0936	0.10		0.305		74.62	183.49	9.53	23.43		
10-Nov-08	19	0938	0.10		0.312		76.33	183.49	9.75	23.43		
16-Dec-08	19	0930	1.40		0.258		883.70	2,568.90	112.84	328.03		
19-Jan-09	19	1030	1.28		0.198		619.45	2,346.42	79.10	299.62		
23-Feb-09	19	0929	5.04		0.167		2,059.23	9,248.06	262.95	1,180.90		
23-Mar-09	19	0944	1.86		0.201		915.66	3,416.64	116.92	436.28		
21-Apr-09	19	1015	27.84		0.167		11,374.81	51,084.50	1,452.46	6,523.04		
19-May-09	19	1015	70.29		0.118		20,292.44	128,977.35	2,591.17	16,469.28		
24-Jun-09	19	1050	9.15		0.169		3,784.09	16,793.29	483.20	2,144.36		
17-Aug-09	19	0915	0.10		0.265		64.83	183.49	8.28	23.43		
10-Nov-09	19	0945	3.99		0.177		1,726.33	7,314.96	220.44	934.06		
Total Dissolved Solids			**8.67**		**0.205**		**3,000.35**	**Ave kg/day**	**383.12**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac		Apr - Oct
16-Jul-08	19	1250	0.10	< 235 MPN	238.2	MPN	58,277.43	57,494.53	9.25	9.12	6,566,039.06	allowed 1000 mpn/day
11-Aug-08	19	1218	0.10		259.5		63,488.64	57,494.53	10.07	9.12	9,179.73	allowed 1000 mpn/ac
18-Sep-08	19	0820	0.10		435.2		106,474.97	57,494.53	16.90	9.12	4,028,746.29	ave 1000 mpn/day
15-Oct-08	19	0936	0.10		1.0		244.66	57,494.53	0.04	9.12	639.30	ave 1000 mpn/ac
10-Nov-08	19	0938	0.10		9.7		2,373.18	57,494.53	0.38	9.12		
16-Dec-08	19	0930	1.40		137.6		471,308.31	804,923.35	74.79	127.73		Annual
19-Jan-09	19	1030	1.28		1.0		3,128.56	735,211.24	0.50	116.67	4,987,619.27	allowed 1000 mpn/day
23-Feb-09	19	0929	5.04		5.2		64,119.85	2,897,724.08	10.17	459.82	791.46	allowed 1000 mpn/ac
23-Mar-09	19	0944	1.86		50.0		227,776.18	1,070,548.06	36.14	169.88	2,509,408.38	ave 1000 mpn/day
21-Apr-09	19	1015	27.84		185.0		12,600,842.69	16,006,475.85	1,999.56	2,539.98	398.20	ave 1000 mpn/ac
19-May-09	19	1015	70.29		106.7		18,349,177.14	40,412,901.86	2,911.73	6,412.89		
24-Jun-09	19	1050	9.15		45.0		1,007,597.67	5,261,898.96	159.89	834.98		
17-Aug-09	19	0915	0.10		179.3		43,867.10	57,494.53	6.96	9.12		
10-Nov-09	19	0945	3.99		218.7		2,133,040.90	2,292,019.25	338.48	363.71		
E. Coli			**8.67**		**133.7**		**2,509,408.4**	Ave 1000MPN/day	**398.2**	Ave 1000 MPN/Ac		**-39%**
Total Suspended Solids								kg/day		T / Ac / Year		Apr - Oct
16-Jul-08	19	1250	0.10	< 30.0 mg/L	47	mg/L	11,498.91	7,339.73	0.73	0.47	988,863.02	allowed kg/day
11-Aug-08	19	1218	0.10		-		-	7,339.73	-	0.47	63.13	allowed T / Ac / Year
18-Sep-08	19	0820	0.10		18		4,403.84	7,339.73	0.28	0.47	581,327.76	ave kg/day
15-Oct-08	19	0936	0.10		1		244.66	7,339.73	0.02	0.47	37.12	Ave T / Ac / Year
10-Nov-08	19	0938	0.10		2		489.32	7,339.73	0.03	0.47		
16-Dec-08	19	0930	1.40		-		0.00	102,756.17	0.00	6.56		Annual
19-Jan-09	19	1030	1.28		11		34,414.14	93,856.75	2.20	5.99	636,717.35	allowed kg/day
23-Feb-09	19	0929	5.04		21		258,945.56	369,922.22	16.53	23.62	40.65	allowed T / Ac / Year
23-Mar-09	19	0944	1.86		29		132,110.19	136,665.71	8.43	8.73	386,299.47	ave kg/day
21-Apr-09	19	1015	27.84		32		2,179,605.22	2,043,379.90	139.16	130.46	24.66	Ave T / Ac / Year
19-May-09	19	1015	70.29		11		1,891,667.75	5,159,093.85	120.77	329.39		
24-Jun-09	19	1050	9.15		25		559,776.48	671,731.78	35.74	42.89		
17-Aug-09	19	0915	0.10		14.0		3,425.21	7,339.73	0.22	0.47		
10-Nov-09	19	0945	3.99		34.0		331,611.30	292,598.20	21.17	18.68		
Total Suspended Solids			**8.67**		**18**		**386,299.47**	**Ave kg/day**	**9.92**	**T/Ac/Year**		-
Ammonia												
16-Jul-08	19	1250	0.10		<0.200	mg/L						
11-Aug-08	19	1218	0.10		<0.200							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
18-Sep-08	19	0820	0.10		<0.200							
15-Oct-08	19	0936	0.10		<0.200							
10-Nov-08	19	0938	0.10		<0.200							
16-Dec-08	19	0930	1.40		<0.200							
19-Jan-09	19	1030	1.28		<0.200							
23-Feb-09	19	0929	5.04		<0.200							
23-Mar-09	19	0944	1.86		<0.200							
21-Apr-09	19	1015	27.84		<0.200							
19-May-09	19	1015	70.29		<0.200							
24-Jun-09	19	1050	9.15		<0.200							
17-Aug-09	19	0915	0.10		<0.200							
10-Nov-09	19	0945	3.99		<0.200							
Ammonia			**8.67**									
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
16-Jul-08	19	1250	0.10	< 0.04 mg/L	0.17	mg/L	41.59	9.79	5.31	1.25	**1,502.29**	**Ave kg/day**
11-Aug-08	19	1218	0.10		0.10		24.47	9.79	3.12	1.25	**191.83**	**Ave lb / Ac / Year**
18-Sep-08	19	0820	0.10		<0.10							
15-Oct-08	19	0936	0.10		<0.10							
10-Nov-08	19	0938	0.10		<0.10							
16-Dec-08	19	0930	1.40		<0.10							
19-Jan-09	19	1030	1.28		<0.10							
23-Feb-09	19	0929	5.04		0.14		1,726.30	493.23	220.43	62.98		
23-Mar-09	19	0944	1.86		<0.10							
21-Apr-09	19	1015	27.84		0.19		12,941.41	2,724.51	1,652.50	347.90		
19-May-09	19	1015	70.29		0.17		29,234.87	6,878.79	3,733.04	878.36		
24-Jun-09	19	1050	9.15		<0.10							
17-Aug-09	19	0915	0.10		0.13		31.81	9.79	4.06	1.25		
10-Nov-09	19	0945	3.99		0.18		1,755.59	390.13	224.17	49.82		
Total Phosphorus			**8.67**		**0.15**		**6,536.58**	**Ave kg/day**	**834.66**	**lb / Ac / Year**		77%
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
16-Jul-08	19	1250	0.10	< 10 mg / L	0.307	mg/L	75.11	2,446.58	9.59	312.41	**212,239.12**	**Ave kg/day**
11-Aug-08	19	1218	0.10		0.847		207.22	2,446.58	26.46	312.41	**13.55**	**Ave T / Ac / Year**
18-Sep-08	19	0820	0.10		0.369		90.28	2,446.58	11.53	312.41		
15-Oct-08	19	0936	0.10		0.270		66.06	2,446.58	8.43	312.41		
10-Nov-08	19	0938	0.10		0.210		51.38	2,446.58	6.56	312.41		
16-Dec-08	19	0930	1.40		0.323		1,106.34	34,252.06	141.27	4,373.69		
19-Jan-09	19	1030	1.28		0.402		1,257.68	31,285.58	160.59	3,994.90		
23-Feb-09	19	0929	5.04		0.625		7,706.71	123,307.41	984.08	15,745.28		
23-Mar-09	19	0944	1.86		0.212		965.77	45,555.24	123.32	5,817.00		
21-Apr-09	19	1015	27.84		0.292		19,888.90	681,126.63	2,539.64	86,973.91		
19-May-09	19	1015	70.29		0.186		31,986.38	1,719,697.95	4,084.38	219,590.38		
24-Jun-09	19	1050	9.15		1.250		27,988.82	223,910.59	3,573.93	28,591.42		
17-Aug-09	19	0915	0.10		0.220		53.82	2,446.58	6.87	312.41		
10-Nov-09	19	0945	3.99		0.083		809.52	97,532.73	103.37	12,454.08		
Nitrate - Nitrite			**8.67**		**0.400**		**6,589.57**	**Ave kg/day**	**0.42**	**T / Ac / Year**		
Hardness (CaCO3)												
11-Aug-08	19	1218	0.10		320							
10-Nov-08	19	0938	0.10		440							
23-Feb-09	19	0929	5.04		160							
19-May-09	19	1015	70.29		120							
Hardness (CaCO3)			**18.88**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
11-Aug-08	19	1218	0.10	< 174µg/L	1.160	mg/L	283.80	42.57	36.24	5.44	**8,038.36**	**Ave kg/day**
10-Nov-08	19	0938	0.10		0.044		10.76	42.57	1.37	5.44	**1,026.43**	**Ave lb / Ac / Year**
23-Feb-09	19	0929	5.04		2.060		25,401.33	2,145.55	3,243.53	273.97		
19-May-09	19	1015	70.29		1.150		197,765.26	29,922.74	25,252.89	3,820.87		
Total Aluminum			**18.88**				**55,865.29**	**Ave kg/day**	**7,133.51**	**lb / Ac / Year**		**86%**
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	19	0938	0.10	< 174µg/L	0.019	mg/L	4.65	42.57	0.59	5.44	**10,703.62**	**Ave kg/day**
23-Feb-09	19	0929	5.04		0.083		1,023.45	2,145.55	130.69	273.97	**1,366.76**	**Ave lb / Ac / Year**
19-May-09	19	1015	70.29		2.020		347,378.99	29,922.74	44,357.26	3,820.87		
Dissolved Aluminum			**25.14**				**116,135.70**	**Ave kg/day**	**14,829.51**	**lb / Ac / Year**		**91%**
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Aug-08	19	1218	0.10	< 2.5 mg/L	2.280	mg/L	557.82	611.64	71.23	78.10	**115,493.66**	**Ave kg/day**
10-Nov-08	19	0938	0.10		0.227		55.54	611.64	7.09	78.10	**14,747.53**	**Ave lb / Ac / Year**
23-Feb-09	19	0929	5.04		1.950		24,044.94	30,826.85	3,070.33	3,936.32		
19-May-09	19	1015	70.29		1.320		227,000.13	429,924.49	28,985.93	54,897.59		
Total Iron			**18.88**				**62,914.61**	**Ave kg/day**	**8,033.64**	**lb / Ac / Year**		-
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	19	0938	0.10	< 2.5 mg/L	0.143	mg/L	34.99	611.64	4.47	78.10	**153,787.66**	**Ave kg/day**
23-Feb-09	19	0929	5.04		0.089		1,097.44	30,826.85	140.13	3,936.32	**19,637.34**	**Ave lb / Ac / Year**
19-May-09	19	1015	70.29		1.610		276,871.37	429,924.49	35,354.05	54,897.59		
Dissolved Iron			**25.14**				**92,667.93**	**Ave kg/day**	**11,832.88**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Aug-08	19	1218	0.10	0.031	<0.001	mg/L	0.00	7.50	0.00	0.96	**626.90**	**Ave kg/day**
10-Nov-08	19	0938	0.10	0.040	<0.001		0.00	9.85	0.00	1.26	**80.05**	**Ave lb / Ac / Year**
23-Feb-09	19	0929	5.04	0.017	0.003		36.99	209.14	4.72	26.71		
19-May-09	19	1015	70.29	0.013	<0.001		0.00	2,281.09	0.00	291.28		
Total Copper			**18.88**				**9.25**	**Ave kg/day**	**0.48**	**T/Ac/Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	19	0938	0.10	0.040	<0.001	mg/L	0.00	9.85	0.00	1.26	**833.36**	**Ave kg/day**
23-Feb-09	19	0929	5.04	0.017	0.001		12.33	209.14	1.57	26.71	**106.41**	**Ave lb / Ac / Year**
19-May-09	19	1015	70.29	0.013	0.002		343.94	2,281.09	43.92	291.28		
Dissolved Copper			**25.14**				**118.76**	**Ave kg/day**	**6.10**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Aug-08	19	1218	0.10	1.470	1.070	mg/L	261.78	359.60	33.43	45.92	**29,371.89**	**Ave kg/day**
10-Nov-08	19	0938	0.10	1.944	0.066		16.15	475.67	2.06	60.74	**3,750.53**	**Ave lb / Ac / Year**
23-Feb-09	19	0929	5.04	0.800	0.234		2,885.39	9,858.88	368.44	1,258.89		
19-May-09	19	1015	70.29	0.621	0.193		33,190.17	106,793.42	4,238.09	13,636.59		
Total Manganese			**18.88**				**9,088.37**	**Ave kg/day**	**466.92**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	19	0938	0.10	1.944	0.056	mg/L	13.70	475.67	1.75	60.74	**39,042.66**	**Ave kg/day**
23-Feb-09	19	0929	5.04	0.800	0.193		2,379.83	9,858.88	303.88	1,258.89	**4,985.41**	**Ave lb / Ac / Year**
19-May-09	19	1015	70.29	0.621	0.170		29,234.87	106,793.42	3,733.04	13,636.59		
Total Manganese			**25.14**				**10,542.80**	**Ave kg/day**	**541.64**	**T/Ac/Year**		-
Cl												
10-Nov-08	19	0938	-		7.3							
Chlorine			**-**									

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
SO4											
10-Nov-08	19	0938	-		72						
Sulfate			**-**								

SITE #20

Drainage Area: 3,845.07 Acres

Date	Site No	Time	Notes / Conditions
16-Jul-08	20	1335	
11-Aug-08	20	1055	Trash dumped off bridge. Creek appears generally healthy. Meandering with gravel bottom. Wide, wooded riparian buffer. Good crop of smart weed & horsetail.
18-Sep-08	20	0900	Fish & mussel shells present
15-Oct-08	20	1022	
10-Nov-08	20	0841	
16-Dec-08	20	0846	Bitter cold. Deer heads and "parts" (not whole carcass) in stream
19-Jan-09	20	1000	Snow covered. Mostly frozen. Water running under ice - channel approx 4' wide. Beaver damage to trees.
23-Feb-09	20	0837	clear water. Good flow. Clear of debris
23-Mar-09	20	0905	No discernable odor. Carcass of crayfish - probably eaten by raccon or mink. Greening up of plants, moss. Some sedimentation of bottom - more than februrary
21-Apr-09	20	0915	Good flow. Water very clear, can see bottom. Very clear very clear very clear. Sweet cake-like smell
19-May-09	20	0900	Little to no color. No odor. Chair caught on log. Some bank erosion - from road run-off
24-Jun-09	20	1210	Cake-like, sweet odor. VERY clear. Seems like a lot of algae growing on stream bed - dark green.
17-Aug-09	20	0820	Slight muddy odor. Very very light tan color. Very low flow (no rain past week). Black slime on gravel bed. Road grading since June sampling event. 4-6" lip from road to
10-Nov-09	20	0835	No odor. Clear. Extremely clear. Good flow. Lots of trash thrown from bank.

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Turbidity							Apr - Oct Average NTU				
16-Jul-08	20	1335	1.50	n/a	15.0	NTU	15.3	36.0			36.0 NTU Allowed
11-Aug-08	20	1055	1.49	< 36 NTU	15.0						
18-Sep-08	20	0900	1.68		15.0						
15-Oct-08	20	1022	0.59		15.0						
10-Nov-08	20	0841	0.86		15.0						
16-Dec-08	20	0846	2.18		15.0						
19-Jan-09	20	1000	2.23		15.0						
23-Feb-09	20	0837	11.70		15.0						
23-Mar-09	20	0905	21.07		15.0						
21-Apr-09	20	0915	24.10		15.0						
19-May-09	20	0900	43.65		15.0						
24-Jun-09	20	1210	10.28		15.0						
17-Aug-09	20	0820	0.35		17.0						
10-Nov-09	20	0835	4.54		15.0						
Turbidity			**9.02**		**15.1**						-
Temperature							**Average May - Sept**				
16-Jul-08	20	1335	1.50	90° Max	81.18	°F	72.7				
11-Aug-08	20	1055	1.49	90° Max	65.59						
18-Sep-08	20	0900	1.68	90° Max	64.02						
15-Oct-08	20	1022	0.59	78° Max	65.35						
10-Nov-08	20	0841	0.86	70° Max	43.41						
16-Dec-08	20	0846	2.18	57° Max	32.26						
19-Jan-09	20	1000	2.23	50° Max	32.11						
23-Feb-09	20	0837	11.70	50° Max	34.04						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
23-Mar-09	20	0905	21.07	60° Max	48.16						
21-Apr-09	20	0915	24.10	70° Max	53.81						
19-May-09	20	0900	43.65	80° Max	64.42						
24-Jun-09	20	1210	10.28	90° Max	78.28						
17-Aug-09	20	0820	0.35	90° Max	75.57						
10-Nov-09	20	0835	4.54	70° Max	53.74						
Temperature			**9.02**								
Dissolved Oxygen							Apr - Oct Average mg/L				
16-Jul-08	20	1335	1.50	Never < 4.0	7.19	mg/L	7.29				
11-Aug-08	20	1055	1.49	Ave. >5.0	7.33						
18-Sep-08	20	0900	1.68		7.22		Annual Average mg/L				Indiana average = 9.8 mg/L
15-Oct-08	20	1022	0.59		4.34		10.09				
10-Nov-08	20	0841	0.86		12.28						
16-Dec-08	20	0846	2.18		18.98		Annual Average %				Good defined as 80-120%
19-Jan-09	20	1000	2.23		14.33		90.02				
23-Feb-09	20	0837	11.70		14.81						
23-Mar-09	20	0905	21.07		10.41						
21-Apr-09	20	0915	24.10		10.91						
19-May-09	20	0900	43.65		9.24						
24-Jun-09	20	1210	10.28		7.00						
17-Aug-09	20	0820	0.35		5.11						
10-Nov-09	20	0835	4.54		9.40						
Dissolved Oxygen			**9.02**		**10.09**						**0%**
pH											
16-Jul-08	20	1335	1.50	6.0 - 9.0	7.58						
11-Aug-08	20	1055	1.49		7.33						
18-Sep-08	20	0900	1.68		7.27						
15-Oct-08	20	1022	0.59		7.32						
10-Nov-08	20	0841	0.86		8.07						
16-Dec-08	20	0846	2.18		7.75						
19-Jan-09	20	1000	2.23		7.41						
23-Feb-09	20	0837	11.70		7.41						
23-Mar-09	20	0905	21.07		7.37						
21-Apr-09	20	0915	24.10		7.80						
19-May-09	20	0900	43.65		7.53						
24-Jun-09	20	1210	10.28		7.69						
17-Aug-09	20	0820	0.35		7.67						
10-Nov-09	20	0835	4.54		7.88						
pH			**9.02**		**7.60**						
Specific Conductance											
16-Jul-08	20	1335	1.50	< 1.20 mS/cm	0.167	mS/cm					refer to TDS
11-Aug-08	20	1055	1.49		0.177						
18-Sep-08	20	0900	1.68		0.196						
15-Oct-08	20	1022	0.59		0.231						
10-Nov-08	20	0841	0.86		0.275						
16-Dec-08	20	0846	2.18		0.298						
19-Jan-09	20	1000	2.23		0.188						
23-Feb-09	20	0837	11.70		0.188						
23-Mar-09	20	0905	21.07		0.188						
21-Apr-09	20	0915	24.10		0.216						
19-May-09	20	0900	43.65		0.189						
24-Jun-09	20	1210	10.28		0.205						

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
17-Aug-09	20	0820	0.35		0.245							
10-Nov-09	20	0835	4.54		0.199							
Specific Conductance			**9.02**		**0.214**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
16-Jul-08	20	1335	1.50	< 750 mg/L	0.108	g/L	396.35	2,752.40	82.95	576.02	**18,525.80**	**Ave kg/day**
11-Aug-08	20	1055	1.49		0.115		419.22	2,734.05	87.73	572.18	**1.94**	**Ave T / Ac / Year**
18-Sep-08	20	0900	1.68		0.127	YSI	522.00	3,082.69	109.24	645.14		
15-Oct-08	20	1022	0.59		0.150		216.52	1,082.61	45.31	226.57		
10-Nov-08	20	0841	0.86		0.179		378.38	1,585.38	79.19	331.78		
16-Dec-08	20	0846	2.18		0.194		1,036.60	4,007.49	216.94	838.68		
19-Jan-09	20	1000	2.23		0.122		666.21	4,095.57	139.42	857.11		
23-Feb-09	20	0837	11.70		0.122		3,493.44	21,476.04	731.10	4,494.46		
23-Mar-09	20	0905	21.07		0.140		7,216.91	38,662.01	1,510.34	8,091.10		
21-Apr-09	20	0915	24.10		0.123		7,251.18	44,214.51	1,517.51	9,253.11		
19-May-09	20	0900	43.65		0.119		12,707.79	80,091.10	2,659.46	16,761.28		
24-Jun-09	20	1210	10.28		0.133		3,345.06	18,863.10	700.05	3,947.62		
17-Aug-09	20	0820	0.35		0.159		137.71	649.57	28.82	135.94		
10-Nov-09	20	0835	4.54		0.129		1,431.60	8,323.25	299.60	1,741.87		
Total Dissolved Solids			**9.02**		**0.139**		**2,801.35**	**Ave kg/day**	**586.26**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
16-Jul-08	20	1335	1.50	< 235 MPN	49.6	MPN	182,025.22	862,417.88	47.34	224.29	6,010,908.89	allowed 1000 mpn/day
11-Aug-08	20	1055	1.49		248.9		907,339.45	856,668.43	235.97	222.80	1,563.28	allowed 1000 mpn/ac
18-Sep-08	20	0900	1.68		435.2		1,788,779.46	965,908.03	465.21	251.21	1,920,344.55	ave 1000 mpn/day
15-Oct-08	20	1022	0.59		105.0		151,565.36	339,217.70	39.42	88.22	1,563.28	ave 1000 mpn/ac
10-Nov-08	20	0841	0.86		52.8		111,610.82	496,752.70	29.03	129.19		
16-Dec-08	20	0846	2.18		57.3		306,172.29	1,255,680.43	79.63	326.57	Annual	
19-Jan-09	20	1000	2.23		141.1		770,512.76	1,283,277.81	200.39	333.75	5,183,870.67	allowed 1000 mpn/day
23-Feb-09	20	0837	11.70		22.3		638,554.26	6,729,159.25	166.07	1,750.07	1,348.19	allowed 1000 mpn/ac
23-Mar-09	20	0905	21.07		118.0		6,082,822.92	12,114,096.49	1,581.98	3,150.55	1,743,091.55	ave 1000 mpn/day
21-Apr-09	20	0915	24.10		50.4		2,971,215.29	13,853,880.83	772.73	3,603.02	453.33	ave 1000 mpn/ac
19-May-09	20	0900	43.65		34.5		3,684,190.47	25,095,210.42	958.16	6,526.59		
24-Jun-09	20	1210	10.28		187.2		4,708,229.13	5,910,437.20	1,224.48	1,537.15		
17-Aug-09	20	0820	0.35		1,119.3		969,412.01	203,530.62	252.12	52.93		
10-Nov-09	20	0835	4.54		101.9		1,130,852.23	2,607,951.67	294.10	678.26		
E. Coli			**9.02**		**194.5**		**1,743,091.5**	Ave 1000MPN/day	**453.3**	Ave 1000 MPN/Ac		**-68%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
16-Jul-08	20	1335	1.50	< 30.0 mg/L	11	mg/L	40,368.50	110,095.90	4.22	11.52	767,350.07	allowed kg/day
11-Aug-08	20	1055	1.49		-		-	109,361.93	-	11.44	80.29	allowed T / Ac / Year
18-Sep-08	20	0900	1.68		8		32,881.98	123,307.41	3.44	12.90	174,626.16	ave kg/day
15-Oct-08	20	1022	0.59		2		2,886.96	43,304.39	0.30	4.53	18.27	Ave T / Ac / Year
10-Nov-08	20	0841	0.86		8		16,910.73	63,415.24	1.77	6.64		
16-Dec-08	20	0846	2.18		6		32,059.93	160,299.63	3.35	16.77	Annual	
19-Jan-09	20	1000	2.23		4		21,843.03	163,822.70	2.29	17.14	661,770.72	allowed kg/day
23-Feb-09	20	0837	11.70		13		372,251.36	859,041.61	38.95	89.89	69.25	allowed T / Ac / Year
23-Mar-09	20	0905	21.07		6		309,296.08	1,546,480.40	32.36	161.82	157,489.91	ave kg/day
21-Apr-09	20	0915	24.10		6		353,716.11	1,768,580.53	37.01	185.06	16.48	Ave T / Ac / Year
19-May-09	20	0900	43.65		9		961,093.16	3,203,643.88	100.57	335.23		
24-Jun-09	20	1210	10.28		-		-	754,523.90	-	78.95		
17-Aug-09	20	0820	0.35		7.0		6,062.61	25,982.63	0.63	2.72		
10-Nov-09	20	0835	4.54		5.0		55,488.33	332,930.00	5.81	34.84		
Total Suspended Solids			**9.02**		**6**		**157,489.91**	**Ave kg/day**	**6.63**	**T/Ac/Year**		-
Ammonia								**kg / Day**		**lb / Ac / Year**		

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
16-Jul-08	20	1335	1.50	.1336	2.770	mg/L	10,165.52	490.29	2,127.42	102.61		
11-Aug-08	20	1055	1.49		<0.200							
18-Sep-08	20	0900	1.68		<0.200							
15-Oct-08	20	1022	0.59		<0.200							
10-Nov-08	20	0841	0.86		<0.200							
16-Dec-08	20	0846	2.18		<0.200							
19-Jan-09	20	1000	2.23		<0.200							
23-Feb-09	20	0837	11.70		<0.200							
23-Mar-09	20	0905	21.07		<0.200							
21-Apr-09	20	0915	24.10		<0.200							
19-May-09	20	0900	43.65		<0.200							
24-Jun-09	20	1210	10.28		<0.200							
17-Aug-09	20	0820	0.35		<0.200							
10-Nov-09	20	0835	4.54		<0.200							
Ammonia			**9.02**				**10,165.52**	**490.29**	**2,127.42**	**102.61**		**95%**
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
16-Jul-08	20	1335	1.50	< 0.04 mg/L	<0.10	mg/L					**57.74**	**Ave kg/day**
11-Aug-08	20	1055	1.49		<0.10						**12.08**	**Ave lb / Ac / Year**
18-Sep-08	20	0900	1.68		<0.10							
15-Oct-08	20	1022	0.59		0.14		202.09	57.74	42.29	12.08		
10-Nov-08	20	0841	0.86		<0.10							
16-Dec-08	20	0846	2.18		<0.10							
19-Jan-09	20	1000	2.23		<0.10							
23-Feb-09	20	0837	11.70		<0.10							
23-Mar-09	20	0905	21.07		<0.10							
21-Apr-09	20	0915	24.10		<0.10							
19-May-09	20	0900	43.65		<0.10							
24-Jun-09	20	1210	10.28		<0.10							
17-Aug-09	20	0820	0.35		<0.10							
10-Nov-09	20	0835	4.54		<0.10							
Total Phosphorus			**9.02**				**202.09**	**Ave kg/day**	**42.29**	**lb / Ac / Year**		**-**
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
16-Jul-08	20	1335	1.50	< 10 mg / L	0.216	mg/L	792.69	36,698.63	165.89	7,680.20	**220,590.24**	**Ave kg/day**
11-Aug-08	20	1055	1.49		1.790		6,525.26	36,453.98	1,365.59	7,629.00	**23.08**	**Ave T / Ac / Year**
18-Sep-08	20	0900	1.68		1.310		5,384.42	41,102.47	1,126.84	8,601.83		
15-Oct-08	20	1022	0.59		0.670		967.13	14,434.80	202.40	3,020.88		
10-Nov-08	20	0841	0.86		0.292		617.24	21,138.41	129.17	4,423.80		
16-Dec-08	20	0846	2.18		0.209		1,116.75	53,433.21	233.71	11,182.38		
19-Jan-09	20	1000	2.23		0.305		1,665.53	54,607.57	348.56	11,428.14		
23-Feb-09	20	0837	11.70		0.348		9,964.88	286,347.20	2,085.43	59,926.07		
23-Mar-09	20	0905	21.07		1.060		54,642.31	515,493.47	11,435.41	107,881.27		
21-Apr-09	20	0915	24.10		0.259		15,268.75	589,526.84	3,195.41	123,374.80		
19-May-09	20	0900	43.65		0.257		27,444.55	1,067,881.29	5,743.53	223,483.70		
24-Jun-09	20	1210	10.28		0.966		24,295.67	251,507.97	5,084.54	52,635.00		
17-Aug-09	20	0820	0.35		1.040		900.73	8,660.88	188.50	1,812.53		
10-Nov-09	20	0835	4.54		0.118		1,309.52	110,976.67	274.05	23,224.94		
Nitrate - Nitrite			**9.02**		**0.631**		**10,778.25**	**Ave kg/day**	**1.13**	**T / Ac / Year**		
Hardness (CaCO3)												
11-Aug-08	20	1055	1.49		230							
10-Nov-08	20	0841	0.86		120							
23-Feb-09	20	0837	11.70		140							
19-May-09	20	0900	43.65		130							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Hardness (CaCO3)			**14.43**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Aug-08	20	1055	1.49	< 174µg/L	0.171	mg/L	623.36	634.30	130.46	132.74	**6,141.42**	**Ave kg/day**
10-Nov-08	20	0841	0.86		0.098		207.16	367.81	43.35	76.97	**1,285.26**	**Ave lb / Ac / Year**
23-Feb-09	20	0837	11.70		0.190		5,440.60	4,982.44	1,138.60	1,042.71		
19-May-09	20	0900	43.65		0.110		11,746.69	18,581.13	2,458.32	3,888.62		
Total Aluminum			**14.43**				**4,504.45**	**Ave kg/day**	**942.68**	**lb / Ac / Year**		-
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	20	0841	0.86	< 174µg/L	0.096	mg/L	202.93	367.81	42.47	76.97	**7,977.13**	**Ave kg/day**
23-Feb-09	20	0837	11.70		0.015		429.52	4,982.44	89.89	1,042.71	**1,669.43**	**Ave lb / Ac / Year**
19-May-09	20	0900	43.65		0.186		19,862.59	18,581.13	4,156.80	3,888.62		
Dissolved Aluminum			**18.74**				**6,831.68**	**Ave kg/day**	**1,429.72**	**lb / Ac / Year**		-
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Aug-08	20	1055	1.49	< 2.5 mg/L	0.512	mg/L	1,866.44	9,113.49	390.60	1,907.25	**88,238.81**	**Ave kg/day**
10-Nov-08	20	0841	0.86		0.227		479.84	5,284.60	100.42	1,105.95	**18,466.41**	**Ave lb / Ac / Year**
23-Feb-09	20	0837	11.70		0.365		10,451.67	71,586.80	2,187.30	14,981.52		
19-May-09	20	0900	43.65		0.258		27,551.34	266,970.32	5,765.88	55,870.92		
Total Iron			**14.43**				**10,087.32**	**Ave kg/day**	**2,111.05**	**lb / Ac / Year**		-
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	20	0841	0.86	< 2.5 mg/L	0.167	mg/L	353.01	5,284.60	73.88	1,105.95	**114,613.91**	**Ave kg/day**
23-Feb-09	20	0837	11.70		<0.060		0.00	71,586.80	0.00	14,981.52	**23,986.13**	**Ave lb / Ac / Year**
19-May-09	20	0900	43.65		0.195		20,823.69	266,970.32	4,357.93	55,870.92		
Dissolved Iron							**7,058.90**	**Ave kg/day**	**1,477.27**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Aug-08	20	1055	1.49	0.023	<0.001	mg/L	0.00	84.31	0.00	17.64	**515.60**	**Ave kg/day**
10-Nov-08	20	0841	0.86	0.013	<0.001		0.00	28.04	0.00	5.87	**107.90**	**Ave lb / Ac / Year**
23-Feb-09	20	0837	11.70	0.015	<0.001		0.00	433.30	0.00	90.68		
19-May-09	20	0900	43.65	0.014	<0.001		0.00	1,516.76	0.00	317.42		
Total Copper			**14.43**				**0.00**	**Ave kg/day**	**0.00**	**T/Ac/Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	20	0841	0.86	0.013	<0.001	mg/L	0.00	28.04	0.00	5.87	**659.37**	**Ave kg/day**
23-Feb-09	20	0837	11.70	0.015	<0.001		0.00	433.30	0.00	90.68	**137.99**	**Ave lb / Ac / Year**
19-May-09	20	0900	43.65	0.014	0.001		106.79	1,516.76	22.35	317.42		
Dissolved Copper			**18.74**				**35.60**	**Ave kg/day**	**3.00**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
11-Aug-08	20	1055	1.49	1.100	0.195	mg/L	710.85	4,008.91	148.77	838.98	**24,207.05**	**Ave kg/day**
10-Nov-08	20	0841	0.86	0.621	0.011		23.25	1,312.70	4.87	274.72	**5,066.00**	**Ave lb / Ac / Year**
23-Feb-09	20	0837	11.70	0.711	0.148		4,237.94	20,360.64	886.91	4,261.03		
19-May-09	20	0900	43.65	0.666	0.065		6,941.23	71,145.98	1,452.64	14,889.26		
Total Manganese			**14.43**				**2,978.32**	**Ave kg/day**	**250.78**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
10-Nov-08	20	0841	0.86	0.621	0.011	mg/L	23.25	1,312.70	4.87	274.72	**30,939.77**	**Ave kg/day**
23-Feb-09	20	0837	11.70	0.711	0.106		3,035.28	20,360.64	635.22	4,261.03	**6,475.00**	**Ave lb / Ac / Year**
19-May-09	20	0900	43.65	0.666	0.041		4,378.31	71,145.98	916.28	14,889.26		
Dissolved Manganese			**18.74**				**2,478.95**	**Ave kg/day**	**208.73**	**T/Ac/Year**		-
Cl												
10-Nov-08	20	0841	0.86		12.2							
10-Nov-08	20	0847	0.86		12.1							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
Chlorine			**0.86**								
SO4											
10-Nov-08	20	0841	0.86		7.3						
10-Nov-08	20	0847	0.86		7.5						
Sulfate			**0.86**								

SITE #21

Drainage Area: 1,064.69 Acres ** Part of Point 22 drainage area

Date	Site No	Time	Notes / Conditions
22-Jan-09	21	1110	East of Dave Phegley's shop. Fragmites along bank. Very soft bottom. CAUTION when taking flow!!! Hunting traffic.
24-Feb-09	21	0910	Very clear. Slight sulphur smell
25-Mar-09	21	1145	Smelled like household dust. Turkey manure odor in the air. Too much debris under bridge to calculate flow
23-Apr-09	21	0945	Very clear. Smelled a little sweed.
18-May-09	21	0930	Very clear. Smelled a little sweet.
22-Jun-09	21	0835	Very clear. No apparent odor. Gurgling sound. Creeping water primrose over large area. Duck weed
20-Aug-09	21	1305	No odor. VERY slight tan color. A lot of brown crud (foam?) floating among REED CANARY GRASS
11-Nov-09	21	1115	No odor or color. Yellow blooming aquatic weed. VERY mossy. Heavy algae mats

Flow from USGS on Busseron Creek (1/10)

							Daily Load		Area Load		Needed
Date	**Site No**	**Time**	**Flow**	**Load Std**	**Meas**	**Units**	**Measured**	**Allowed**	**Measured**	**Allowed**	**Improvement**
Turbidity							Apr - Oct Average NTU				
22-Jan-09	21	1110	5.00	n/a	15.0	NTU	15.00	36.0			36.0 NTU Allowed
24-Feb-09	21	0910	17.60	< 36 NTU	15.0						
25-Mar-09	21	1145	6.60		15.0						
23-Apr-09	21	0945	34.40		15.0						
18-May-09	21	0930	241.00		15.0						
22-Jun-09	21	0835	7.20		15.0						
20-Aug-09	21	1305	3.40		15.0						
11-Nov-09	21	1115	8.70		17.0						
Turbidity			**40.49**		**15.25**						-
Temperature							**Average May - Sept**				
22-Jan-09	21	1110	5.00	50° Max	33.79	°F	69.1				
24-Feb-09	21	0910	17.60	50° Max	33.76						
25-Mar-09	21	1145	6.60	60° Max	58.84						
23-Apr-09	21	0945	34.40	70° Max	51.55						
18-May-09	21	0930	241.00	80° Max	57.13						
22-Jun-09	21	0835	7.20	90° Max	69.20						
20-Aug-09	21	1305	3.40	90° Max	80.90						
11-Nov-09	21	1115	8.70	70° Max	52.75						
Temperature			**40.49**								
Dissolved Oxygen							Apr - Oct Average mg/L				
22-Jan-09	21	1110	5.00	Never < 4.0	11.71	mg/L	6.10				
24-Feb-09	21	0910	17.60	Ave. >5.0	12.78						
25-Mar-09	21	1145	6.60		11.70		Annual Average mg/L				Indiana average = 9.8 mg/L
23-Apr-09	21	0945	34.40		7.66		8.87				
18-May-09	21	0930	241.00		5.68						
22-Jun-09	21	0835	7.20		1.50		Annual Average %				Good defined as 80-120%
20-Aug-09	21	1305	3.40		9.56		80.74				

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
11-Nov-09	21	1115	8.70		10.37							
Dissolved Oxygen			**40.49**		**8.87**							**0%**
pH												
22-Jan-09	21	1110	5.00	6.0 - 9.0	7.46							
24-Feb-09	21	0910	17.60		7.52							
25-Mar-09	21	1145	6.60		7.55							
23-Apr-09	21	0945	34.40		7.42							
18-May-09	21	0930	241.00		7.41							
22-Jun-09	21	0835	7.20		7.31							
20-Aug-09	21	1305	3.40		8.04							
11-Nov-09	21	1115	8.70		7.69							
pH			**40.49**		**7.55**							
Specific Conductance												
22-Jan-09	21	1110	5.00	< 1.20 mS/cm	0.586	mS/cm						refer to TDS
24-Feb-09	21	0910	17.60		0.534							
25-Mar-09	21	1145	6.60		0.492							
23-Apr-09	21	0945	34.40		0.535							
18-May-09	21	0930	241.00		0.511							
22-Jun-09	21	0835	7.20		0.526							
20-Aug-09	21	1305	3.40		0.505							
11-Nov-09	21	1115	8.70		0.618							
Specific Conductance			**40.49**		**0.538**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
22-Jan-09	21	1110	5.00	< 750 mg/L	0.381	g/L	4,660.73	9,174.66	3,522.55	6,934.16	**74,291.80**	**Ave kg/day**
24-Feb-09	21	0910	17.60		0.347	YSI	14,941.73	32,294.80	11,292.88	24,408.24	**56,149.36**	**Ave lb / Ac / Year**
25-Mar-09	21	1145	6.60		0.320		5,167.17	12,110.55	3,905.32	9,153.09		
23-Apr-09	21	0945	34.40		0.348		29,288.45	63,121.65	22,136.06	47,707.02		
18-May-09	21	0930	241.00		0.332		195,755.40	442,218.53	147,950.93	334,226.50		
22-Jun-09	21	0835	7.20		0.340		5,989.22	13,211.51	4,526.62	9,985.19		
20-Aug-09	21	1305	3.40		0.328		2,728.42	6,238.77	2,062.13	4,715.23		
11-Nov-09	21	1115	8.70		0.401		8,535.37	15,963.91	6,450.99	12,065.44		
Total Dissolved Solids			**40.49**		**0.350**		**33,383.31**	**Ave kg/day**	**25,230.93**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
22-Jan-09	21	1110	5.00	< 235 MPN	17.3	MPN	211,628.78	2,874,726.27	198.77	2,700.06	41,108,585.62	allowed 1000 mpn/day
24-Feb-09	21	0910	17.60		3.1		133,485.16	10,119,036.46	125.37	9,504.21	38,610.85	allowed 1000 mpn/ac
25-Mar-09	21	1145	6.60		2,103.0		33,957,979.27	3,794,638.67	31,894.71	3,564.08	16,986,451.69	ave 1000 mpn/day

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
23-Apr-09	21	0945	34.40		93.3		7,852,333.15	19,778,116.72	7,375.23	18,576.41	15,954.36	ave 1000 mpn/ac
18-May-09	21	0930	241.00		93.4		55,070,947.60	138,561,806.06	51,724.87	130,142.86		
22-Jun-09	21	0835	7.20		122.3		2,154,356.56	4,139,605.82	2,023.46	3,888.09	Annual	
20-Aug-09	21	1305	3.40		344.8		2,868,169.44	1,954,813.86	2,693.90	1,836.04	23,278,095.95	allowed 1000 mpn/day
11-Nov-09	21	1115	8.70		461.1		9,814,609.06	5,002,023.70	9,218.28	4,698.10	21,863.73	allowed 1000 mpn/ac
											14,007,938.63	ave 1000 mpn/day
											13,156.82	ave 1000 mpn/ac
E. Coli			**40.49**		**404.8**		**14,007,938.6**	Ave 1000MPN/day	**13,156.8**	Ave 1000 MPN/Ac		**-59%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
22-Jan-09	21	1110	5.00	< 30.0 mg/L	6	mg/L	73,397.27	366,986.33	27.74	138.68	6,914,022.49	allowed kg/day
24-Feb-09	21	0910	17.60		5		215,298.65	1,291,791.89	81.36	488.16	2,612.79	allowed T / Ac / Year
25-Mar-09	21	1145	6.60		3		48,442.20	484,421.96	18.31	183.06	393,083.14	ave kg/day
23-Apr-09	21	0945	34.40		-		-	2,524,865.96	-	954.14	148.55	Ave T / Ac / Year
18-May-09	21	0930	241.00		2		1,179,249.41	17,688,741.20	445.64	6,684.53		
22-Jun-09	21	0835	7.20		-		-	528,460.32	-	199.70	Annual	
20-Aug-09	21	1305	3.40		<4.0						3,360,546.27	allowed kg/day
11-Nov-09	21	1115	8.70		11.0		234,137.28	638,556.22	88.48	241.31	1,269.94	allowed T / Ac / Year
											250,074.97	ave kg/day
											94.50	Ave T / Ac / Year
Total Suspended Solids			**40.49**		**4**		**250,074.97**	**Ave kg/day**	**38.02**	**T/Ac/Year**		-
Ammonia												
22-Jan-09	21	1110	5.00		<0.200	mg/L						
24-Feb-09	21	0910	17.60		<0.200							
25-Mar-09	21	1145	6.60		<0.200							
23-Apr-09	21	0945	34.40		<0.200							
18-May-09	21	0930	241.00		<0.200							
22-Jun-09	21	0835	7.20		<0.200							
20-Aug-09	21	1305	3.40		<0.200							
11-Nov-09	21	1115	8.70		<0.200							
Ammonia			**40.49**									
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
22-Jan-09	21	1110	5.00	< 0.04 mg/L	<0.10	mg/L					**2,108.95**	**Ave kg/day**
24-Feb-09	21	0910	17.60		<0.10						**1,593.93**	**Ave lb / Ac / Year**
25-Mar-09	21	1145	6.60		<0.10							
23-Apr-09	21	0945	34.40		0.53		44,605.97	3,366.49	33,712.96	2,544.37		
18-May-09	21	0930	241.00		<0.10							
22-Jun-09	21	0835	7.20		<0.10							
20-Aug-09	21	1305	3.40		<0.10							
11-Nov-09	21	1115	8.70		0.11		2,341.37	851.41	1,769.60	643.49		
Total Phosphorus			**40.49**				**23,473.67**	**Ave kg/day**	**17,741.28**	**lb / Ac / Year**		91%

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Nitrate - Nitrite								kg / day		lb / Ac / Year		Allowed
22-Jan-09	21	1110	5.00	< 10 mg / L	12.900	mg/L	157,804.12	122,328.78	119,267.55	92,455.46	**1,120,182.09**	**Ave kg/day**
24-Feb-09	21	0910	17.60		4.510		194,199.38	430,597.30	146,774.90	325,443.23	**423.31**	**Ave T / Ac / Year**
25-Mar-09	21	1145	6.60		0.929		15,000.93	161,473.99	11,337.63	122,041.21		
23-Apr-09	21	0945	34.40		0.360		30,298.39	841,621.99	22,899.37	636,093.59		
18-May-09	21	0930	241.00		10.100		5,955,209.54	5,896,247.07	4,500,916.91	4,456,353.37		
22-Jun-09	21	0835	7.20		0.880		15,501.50	176,153.44	11,715.96	133,135.87		
20-Aug-09	21	1305	3.40		2.070							
11-Nov-09	21	1115	8.70		0.119		2,532.94	212,852.07	1,914.38	160,872.51		
Nitrate - Nitrite			**40.49**		**3.98**		**910,078.12**	**Ave kg/day**	**343.92**	**T / Ac / Year**		
Hardness (CaCO3)												
24-Feb-09	21	0910	17.60		370	mg/L						
18-May-09	21	0930	241.00		310							
Hardness (CaCO3)			**129.30**									
Al, Total								kg / day		lb / Ac / Year		Allowed
24-Feb-09	21	0910	17.60		0.005	mg/L	215.30	7,492.39	162.72	5,662.71	**27,521.77**	**Ave kg/day**
18-May-09	21	0930	241.00		0.174		102,594.70	102,594.70	77,540.55	77,540.55	**20,800.82**	**Ave lb / Ac / Year**
							-	-	-	-		
							-	-	-	-		
Total Aluminum			**129.30**				**25,702.50**	**Ave kg/day**	**19,425.82**	**lb / Ac / Year**		-
Al, Dissolved								kg / day		lb / Ac / Year		Allowed
24-Feb-09	21	0910	17.60		<0.004	mg/L	0.00	7,492.39	0.00	5,662.71	**36,695.70**	**Ave kg/day**
18-May-09	21	0930	241.00		0.169		99,646.58	102,594.70	75,312.37	77,540.55	**27,734.42**	**Ave lb / Ac / Year**
							-	-	-	-		
Dissolved Aluminum			**129.30**				**33,215.53**	**Ave kg/day**	**25,104.12**	**lb / Ac / Year**		-
Fe, Total								kg / day		lb / Ac / Year		Allowed
24-Feb-09	21	0910	17.60		0.247	mg/L	10,635.75	107,649.32	8,038.45	81,360.81	**395,427.77**	**Ave kg/day**
18-May-09	21	0930	241.00		0.272		160,377.92	1,474,061.77	121,212.81	1,114,088.34	**298,862.29**	**Ave lb / Ac / Year**
							-	-	-	-		
							-	-	-	-		
Total Iron			**129.30**				**42,753.42**	**Ave kg/day**	**32,312.81**	**lb / Ac / Year**		-
Fe, Dissolved								kg / day		lb / Ac / Year		Allowed
24-Feb-09	21	0910	17.60		0.109	mg/L	4,693.51	107,649.32	3,547.33	81,360.81	**527,237.03**	**Ave kg/day**
18-May-09	21	0930	241.00		0.240		141,509.93	1,474,061.77	106,952.48	1,114,088.34	**398,483.05**	**Ave lb / Ac / Year**
							-	-	-	-		
Dissolved Iron			**129.30**				**48,734.48**	**Ave kg/day**	**36,833.27**	**lb / Ac / Year**		-
Cu, Total								kg / day		lb / Ac / Year		Allowed
24-Feb-09	21	0910	17.60	0.035	0.004	mg/L	0.00	1,494.96	0.00	1,129.88	**4,773.35**	**Ave kg/day**
18-May-09	21	0930	241.00	0.030	<0.001		0.00	17,598.44	0.00	13,300.81	**3,607.67**	**Ave lb / Ac / Year**
							-	-	-	-		
							-	-	-	-		
Total Copper			**129.30**				**0.00**	**Ave kg/day**	**0.00**	**T/Ac/Year**		-
Cu, Dissolved								kg / day		lb / Ac / Year		Allowed
24-Feb-09	21	0910	17.60	0.035	0.003	mg/L	0.00	1,494.96	0.00	1,129.88	**6,364.47**	**Ave kg/day**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
18-May-09	21	0930	241.00	0.030	0.001		589.62	17,598.44	445.64	13,300.81	**4,810.23**	**Ave lb / Ac / Year**
							-	-	-	-		
Dissolved Copper			**129.30**				**196.54**	**Ave kg/day**	**59.77**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
24-Feb-09	21	0910	17.60	1.670	0.028	mg/L	1,205.67	71,898.40	911.24	54,340.44	**228,675.95**	**Ave kg/day**
18-May-09	21	0930	241.00	1.429	0.041		24,174.61	842,805.38	18,271.05	636,988.00	**172,832.11**	**Ave lb / Ac / Year**
							-	-	-	-		
							-	-	-	-		
Total Manganese			**129.30**				**6,345.07**	**Ave kg/day**	**1,929.47**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
24-Feb-09	21	0910	17.60	1.670	0.022	mg/L	947.31	71,898.40	715.98	54,340.44	**304,901.26**	**Ave kg/day**
18-May-09	21	0930	241.00	1.429	0.036		21,226.49	842,805.38	16,042.87	636,988.00	**230,442.81**	**Ave lb / Ac / Year**
							-	-	-	-		
Dissolved Manganese			**129.30**				**7,391.27**	**Ave kg/day**	**2,247.61**	**T/Ac/Year**		-
Cl												
Chlorine			**#DIV/0!**									
SO4												
Sulfate			**#DIV/0!**									

SITE #22

Drainage Area: 11,647.31 Acres

Date	Site No	Time	Notes / Conditions
22-Jan-09	22	1200	9 Mile ditch near pump station. Beaver. Computer screen (trash). Depth, width, flow estimated.
24-Feb-09	22	0945	
25-Mar-09	22	1110	
23-Apr-09	22	1020	
18-May-09	22	1000	
22-Jun-09	22	0915	Lipton green tea color. Flowing to North - backpressure from Wabash.
20-Aug-09	22	1220	Smells like the river. No color. Flowing to North - backpressure from Wabash. HEAVY algal matts. 8-12" white bass. Small school crappie. Bluegill, Catfish. Redear & c
11-Nov-09	22	1045	No odor. Very clear. Relatively low flow considering recent rains. REMC had trees trimmed since Aug sampling.

All Flow from USGS Busseron (1/5)

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Turbidity							Average					
22-Jan-09	22	1200	10.00	n/a	15.0	NTU	18.9				36.0	NTU Allowed
24-Feb-09	22	0945	35.20	< 36 NTU	16.0							
25-Mar-09	22	1110	13.20		16.0							
23-Apr-09	22	1020	68.80		15.0							
18-May-09	22	1000	482.00		19.2							

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement
22-Jun-09	22	0915	316.00		nm						
20-Aug-09	22	1220	6.80		15.0						
11-Nov-09	22	1045	17.40		36.0						
Turbidity			**118.68**		**18.89**						-
Temperature							**Average May - Sept**				
22-Jan-09	22	1200	10.00	50° Max	41.16	°F	71.3				
24-Feb-09	22	0945	35.20	50° Max	37.9						
25-Mar-09	22	1110	13.20	60° Max	58.18						
23-Apr-09	22	1020	68.80	70° Max	55.88						
18-May-09	22	1000	482.00	80° Max	59.92						
22-Jun-09	22	0915	316.00	90° Max	76.32						
20-Aug-09	22	1220	6.80	90° Max	77.76						
11-Nov-09	22	1045	17.40	70° Max	52.68						
Temperature			**118.68**								
Dissolved Oxygen							Apr - Oct Average mg/L				
22-Jan-09	22	1200	10.00	Never < 4.0	10.90	ml/L	7.20				
24-Feb-09	22	0945	35.20	Ave. >5.0	14.40						
25-Mar-09	22	1110	13.20		9.96		Annual Average mg/L				Indiana average = 9.8 mg/L
23-Apr-09	22	1020	68.80		8.51		9.20				
18-May-09	22	1000	482.00		5.90						
22-Jun-09	22	0915	316.00		0.40		Annual Average %				Good defined as 80-120%
20-Aug-09	22	1220	6.80		13.98		88.40				
11-Nov-09	22	1045	17.40		9.56						
Dissolved Oxygen			**118.68**		**9.20**						**0%**
pH											
22-Jan-09	22	1200	10.00	6.0 - 9.0	7.60						
24-Feb-09	22	0945	35.20		7.93						
25-Mar-09	22	1110	13.20		7.73						
23-Apr-09	22	1020	68.80		7.52						
18-May-09	22	1000	482.00		7.37						
22-Jun-09	22	0915	316.00		7.27						
20-Aug-09	22	1220	6.80		8.45						
11-Nov-09	22	1045	17.40		7.75						
pH			**118.68**		**7.70**						
Specific Conductance											
22-Jan-09	22	1200	10.00	< 1.20 mS/cm	0.554	mS/cm					refer to TDS

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
24-Feb-09	22	0945	35.20		0.485							
25-Mar-09	22	1110	13.20		0.518							
23-Apr-09	22	1020	68.80		0.491							
18-May-09	22	1000	482.00		0.408							
22-Jun-09	22	0915	316.00		0.366							
20-Aug-09	22	1220	6.80		0.512							
11-Nov-09	22	1045	17.40		0.583							
Specific Conductance			**118.68**		**0.490**							
Total Dissolved Solids								kg / day		lbs / Ac / Year		**Allowed**
22-Jan-09	22	1200	10.00	< 750 mg/L	0.360	g/L	8,807.67	18,349.32	608.50	1,267.71	**217,760.51**	**Ave kg/day**
24-Feb-09	22	0945	35.20		0.315	YSI	27,127.63	64,589.59	1,874.19	4,462.35	**7.52**	**Ave T / Ac / Year**
25-Mar-09	22	1110	13.20		0.337		10,883.35	24,221.10	751.91	1,673.38		
23-Apr-09	22	1020	68.80		0.319		53,695.48	126,243.30	3,709.70	8,721.87		
18-May-09	22	1000	482.00		0.265		312,501.09	884,437.06	21,590.02	61,103.83		
22-Jun-09	22	0915	316.00		0.238		184,002.05	579,838.40	12,712.30	40,059.77		
20-Aug-09	22	1220	6.80		0.333		5,540.03	12,477.54	382.75	862.05		
11-Nov-09	22	1045	17.40		0.379		16,134.19	31,927.81	1,114.68	2,205.82		
Total Dissolved Solids			**118.68**		**0.318**		**77,336.44**	**Ave kg/day**	**5,343.01**	**Ave lb/Ac/Year**		-
E. Coli								1000 MPN / day		1000 MPN / Ac	Apr - Oct	
22-Jan-09	22	1200	10.00	< 235 MPN	<.1	MPN	0.00	5,749,452.53	0.00	493.63	125,568,043.34	allowed 1000 mpn/day
24-Feb-09	22	0945	35.20		1.0		86,119.46	20,238,072.92	7.39	1,737.57	10,780.86	allowed 1000 mpn/ac
25-Mar-09	22	1110	13.20		461.0		14,887,901.51	7,589,277.34	1,278.23	651.59	32,458,203.99	ave 1000 mpn/day
23-Apr-09	22	1020	68.80		27.9		4,696,250.69	39,556,233.43	403.20	3,396.17	2,786.76	ave 1000 mpn/ac
18-May-09	22	1000	482.00		34.5		40,684,104.76	277,123,612.12	3,493.00	23,792.93		
22-Jun-09	22	0915	316.00		108.1		83,574,042.03	181,682,700.06	7,175.39	15,598.68	Annual	
20-Aug-09	22	1220	6.80		52.8		878,418.48	3,909,627.72	75.42	335.67	68,231,627.94	allowed 1000 mpn/day
11-Nov-09	22	1045	17.40		101.9		4,337,925.24	10,004,047.41	372.44	858.91	5,858.14	allowed 1000 mpn/ac
											18,643,095.27	ave 1000 mpn/day
											1,600.64	ave 1000 mpn/ac
E. Coli			**118.68**		**112.5**		**18,643,095.3**	Ave 1000MPN/day	**1,600.6**	Ave 1000 MPN/Ac		**-74%**
Total Suspended Solids								kg/day		T / Ac / Year	Apr - Oct	
22-Jan-09	22	1200	10.00	< 30.0 mg/L	13	mg/L	318,054.82	733,972.66	10.99	25.35	21,206,916.83	allowed kg/day
24-Feb-09	22	0945	35.20		6		516,716.76	2,583,583.78	17.85	89.25	732.57	allowed T / Ac / Year
25-Mar-09	22	1110	13.20		-		-	968,843.92	-	33.47	4,423,082.38	ave kg/day
23-Apr-09	22	1020	68.80		2		336,648.80	5,049,731.93	11.63	174.44	152.79	Ave T / Ac / Year
18-May-09	22	1000	482.00		9		10,613,244.72	35,377,482.40	366.62	1,222.08		
22-Jun-09	22	0915	316.00		3		2,319,353.62	23,193,536.18	80.12	801.20	Annual	
20-Aug-09	22	1220	6.80		<4.0						11,317,858.48	allowed kg/day
11-Nov-09	22	1045	17.40		<4.0						390.96	allowed T / Ac / Year
											2,350,669.78	ave kg/day
											81.20	Ave T / Ac / Year

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
Total Suspended Solids			**118.68**		**6**		**2,350,669.78**	**Ave kg/day**	**32.67**	**T/Ac/Year**		-
Ammonia												
22-Jan-09	22	1200	10.00		<0.200	mg/L						
24-Feb-09	22	0945	35.20		<0.200							
25-Mar-09	22	1110	13.20		<0.200							
23-Apr-09	22	1020	68.80		<0.200							
18-May-09	22	1000	482.00		<0.200							
22-Jun-09	22	0915	316.00		<0.200							
20-Aug-09	22	1220	6.80		<0.200							
11-Nov-09	22	1045	17.40		<0.200							
Ammonia			**118.68**									
Total Phosphorus								**kg / day**		**lb / Ac / Year**		**Allowed**
22-Jan-09	22	1200	10.00	< 0.04 mg/L	<0.10	mg/L					**39,047.35**	**Ave kg/day**
24-Feb-09	22	0945	35.20		<0.10						**2,697.70**	**Ave lb / Ac / Year**
25-Mar-09	22	1110	13.20		<0.10							
23-Apr-09	22	1020	68.80		<0.10							
18-May-09	22	1000	482.00		0.15		176,887.41	47,169.98	12,220.77	3,258.87		
22-Jun-09	22	0915	316.00		0.14		108,236.50	30,924.71	7,477.82	2,136.52		
20-Aug-09	22	1220	6.80		<0.10							
11-Nov-09	22	1045	17.40		<0.10							
Total Phosphorus			**118.68**				**142,561.96**	**Ave kg/day**	**9,849.29**	**lb / Ac / Year**		73%
Nitrate - Nitrite								**kg / day**		**lb / Ac / Year**		**Allowed**
22-Jan-09	22	1200	10.00	< 10 mg / L	6.210	mg/L	151,932.34	244,657.55	10,496.67	16,902.86	**2,903,473.53**	**Ave kg/day**
24-Feb-09	22	0945	35.20		3.210		276,443.46	861,194.59	19,098.88	59,498.06	**100.30**	**Ave T / Ac / Year**
25-Mar-09	22	1110	13.20		2.900		93,654.91	322,947.97	6,470.41	22,311.77		
23-Apr-09	22	1020	68.80		0.324		54,537.10	1,683,243.98	3,767.85	116,291.66		
	22	1000	482.00		4.690		5,530,679.75	11,792,494.13	382,102.61	814,717.71		
22-Jun-09	22	0915	316.00		0.578		446,862.13	7,731,178.73	30,872.73	534,130.28		
20-Aug-09	22	1220	6.80		2.680		44,586.39	166,367.14	3,080.38	11,493.94		
11-Nov-09	22	1045	17.40		1.560		66,409.85	425,704.15	4,588.11	29,410.97		
Nitrate - Nitrite			**118.68**		**2.769**		**833,138.24**	**Ave kg/day**	**28.78**	**T / Ac / Year**		
Hardness (CaCO3)												
24-Feb-09	21	0910	35.20		350	mg/L						
18-May-09	21	0930	482.00		210							
Hardness (CaCO3)			**258.60**									
Al, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
24-Feb-09	21	0910	35.20		0.480	mg/L	41,337.34	14,984.79	2,855.91	1,035.27	**55,043.55**	**Ave kg/day**

Date	Site No	Time	Flow	Load Std	Meas	Units	Daily Load Measured	Daily Load Allowed	Area Load Measured	Area Load Allowed	Needed Improvement	
18-May-09	21	0930	482.00		0.815		961,088.27	205,189.40	66,399.49	14,176.09	**3,802.84**	**Ave lb / Ac / Year**
							-	-	-	-		
							-	-	-	-		
Total Aluminum			**258.60**				**250,606.40**	**Ave kg/day**	**17,313.85**	**lb / Ac / Year**		-
Al, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
24-Feb-09	21	0910	35.20		0.020	mg/L	1,722.39	14,984.79	119.00	1,035.27	**73,391.39**	**Ave kg/day**
18-May-09	21	0930	482.00		0.853		1,005,899.75	205,189.40	69,495.42	14,176.09	**5,070.45**	**Ave lb / Ac / Year**
							-	-	-	-		
Dissolved Aluminum			**258.60**				**335,874.05**	**Ave kg/day**	**23,204.81**	**lb / Ac / Year**		-
Fe, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
24-Feb-09	21	0910	35.20		0.396	mg/L	34,103.31	215,298.65	2,356.12	14,874.51	**790,855.55**	**Ave kg/day**
18-May-09	21	0930	482.00		0.863		1,017,692.24	2,948,123.53	70,310.14	203,679.43	**54,638.49**	**Ave lb / Ac / Year**
							-	-	-	-		
							-	-	-	-		
Total Iron			**258.60**				**262,948.89**	**Ave kg/day**	**18,166.57**	**lb / Ac / Year**		-
Fe, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
24-Feb-09	21	0910	35.20		0.098	mg/L	8,439.71	215,298.65	583.08	14,874.51	**1,581,711.09**	**Ave kg/day**
18-May-09	21	0930	482.00		0.714		841,984.08	2,948,123.53	58,170.84	203,679.43	**109,276.97**	**Ave lb / Ac / Year**
Dissolved Iron			**258.60**				**425,211.89**	**Ave kg/day**	**29,376.96**	**lb / Ac / Year**		-
Cu, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
24-Feb-09	21	0910	35.20	0.033	0.002	mg/L	172.24	2,851.26	11.90	196.99	**14,042.22**	**Ave kg/day**
18-May-09	21	0930	482.00	0.021	0.038		44,811.48	25,233.17	3,095.93	1,743.30	**970.15**	**Ave lb / Ac / Year**
Total Copper			**258.60**				**22,491.86**	**Ave kg/day**	**625.21**	**T/Ac/Year**		-
Cu, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
24-Feb-09	21	0910	35.20	0.033	0.001	mg/L	86.12	2,851.26	5.95	196.99	**9,361.48**	**Ave kg/day**
18-May-09	21	0930	482.00	0.021	0.001		1,179.25	25,233.17	81.47	1,743.30	**646.76**	**Ave lb / Ac / Year**
							-	-	-	-		
Dissolved Copper			**258.60**				**421.79**	**Ave kg/day**	**11.72**	**T/Ac/Year**		-
Mn, Total								**kg / day**		**lb / Ac / Year**		**Allowed**
24-Feb-09	21	0910	35.20	1.590	0.026	mg/L	2,239.11	136,946.26	154.69	9,461.32	**333,547.53**	**Ave kg/day**
18-May-09	21	0930	482.00	1.015	0.115		135,613.68	1,197,243.85	9,369.25	82,714.97	**23,044.07**	**Ave lb / Ac / Year**
							-	-	-	-		
							-	-	-	-		
Total Manganese			**258.60**				**34,463.20**	**Ave kg/day**	**957.98**	**T/Ac/Year**		-
Mn, Dissolved								**kg / day**		**lb / Ac / Year**		**Allowed**
24-Feb-09	21	0910	35.20	1.590	0.016	mg/L	1,377.91	136,946.26	95.20	9,461.32	**444,730.04**	**Ave kg/day**
18-May-09	21	0930	482.00	1.015	0.102		120,283.44	1,197,243.85	8,310.12	82,714.97	**30,725.43**	**Ave lb / Ac / Year**
							-	-	-	-		
Dissolved Manganese			**258.60**				**40,553.78**	**Ave kg/day**	**1,127.28**	**T/Ac/Year**		-
Cl												
Chlorine			**#DIV/0!**									
SO4												

							Daily Load		Area Load		Needed
Date	Site No	Time	Flow	Load Std	Meas	Units	Measured	Allowed	Measured	Allowed	Improvement
Sulfate			#DIV/0!								