



APPENDIX D: ECOLOGICAL MONITORING DATA

August 29, 2007

APPENDIX D – ECOLOGICAL MONITORING DATA

Table D-1 Summary of Site Nomenclature for 40 Atrazine Ecological Monitoring Sites

SITE	GROUP	WATERSHED NAME
IA 01	2004 - 2005	WOLF CREEK
IA 02	2004 - 2005	NISHNABOTNA RIVER
IL 01	2004 - 2005	PECATTONICA RIVER
IL 02	2004 - 2005	PINE CREEK
IL 03	2005 - 2006	SPRING CREEK
IL 04	2004 - 2005	IROQUOIS RIVER
IL 05	2004 - 2005	PANTHER CREEK
IL 06	2004 - 2005	SUGER CREEK WEST FORK
IL 07	2004 - 2005	GRINDSTONE CREEK
IL 08	2005 - 2006	HORSE CREEK
IL 09	2005 - 2006	MUDDY CREEK (IL)
IN 01	2004 - 2005	MILL CREEK
IN 02	2004 - 2005	EEL RIVER
IN 03	2005 - 2006	EIGHTMILE CREEK
IN 04*	2004 - 2006	ROCK CREEK
IN 05*	2004 - 2006	LIMBER LOST CREEK
IN 06	2005 - 2006	VERMILION RIVER, NORTH

Table D-1 Summary of Site Nomenclature for 40 Atrazine Ecological Monitoring Sites		
SITE	GROUP	WATERSHED NAME
IN 07	2005 - 2006	WHITE RIVER
IN 08	2005 - 2006	WHITEWATER, NOLANS FORK
IN 09	2005 - 2006	RACCOON CREEK
IN 10	2005 - 2006	BRANDYWINE CREEK
IN 11*	2004 - 2006	LITTLE PIGEON CREEK
KY 01	2005 - 2006	BRASHEARS CREEK
KY 02	2005 - 2006	TWOMILE CREEK
MN 01	2004 - 2005	WHITEWATER NORTH FORK
MO 01*	2004 - 2006	SOUTH FABIOUS RIVER
MO 02	2005 - 2006	YOUNGS CREEK
MO 03*	2004 - 2006	LITTLE SNI-A-BAR CREEK
NE 01	2004 - 2005	WAHOO CREEK
NE 02	2004 - 2005	MIDDLE LOUP CREEK
NE 03	2004 - 2005	PLATTE RIVER
NE 04	2005 - 2006	BIG BLUE RIVER, UPPER GAGE
NE 05	2005 - 2006	MUDDY CREEK (NE)
NE 06	2004 - 2005	CROOKED CREEK

Table D-1 Summary of Site Nomenclature for 40 Atrazine Ecological Monitoring Sites		
SITE	GROUP	WATERSHED NAME
NE 07	2005 - 2006	BIG BLUE RIVER, LOWER GAGE
OH 01	2004 - 2005	KOKOSING RIVER
OH 02	2005 - 2006	LICKING RIVER NORTH FORK
OH 03	2004 - 2005	MAD RIVER
OH 04	2005 - 2006	DEER CREEK
TN 01	2005 - 2006	OBION MIDDLE FORK

* - Sites with an additional third year of sampling

Table D-2 Summary of 2004 to 2006 Atrazine Ecological Monitoring Surface Water Data

Site	Year	Non Detects	Total Samples	Frequency of Detection	Max Value (ug/l)	Min Value (ug/l)	Mean Value (ug/l)	Median Value (ug/l)	Not Analyzed	Not Sampled
IA 01	2004	3	37	91.9	10.03	0.05	0.58	0.20		
IA 01	2005	14	38	63.2	1.21	0.05	0.20	0.12		
IA 02	2004	4	34	88.2	1.76	0.05	0.36	0.16	1	
IA 02	2005	14	39	64.1	5.53	0.05	0.41	0.14		1
IL 01	2004	0	37	100.0	13.18	0.07	1.25	0.64		
IL 01	2005	22	38	42.1	0.63	0.10	0.14	0.10		
IL 02	2004	0	37	100.0	4.86	0.06	0.75	0.39		
IL 02	2005	8	38	78.9	2.93	0.10	0.35	0.16		
IL 03	2005	25	38	34.2	5.63	0.05	0.29	0.10		
IL 03	2006	27	38	28.9	2.46	0.10	0.19	0.10		
IL 04	2005	11	36	69.4	2.80	0.08	0.33	0.14		
IL 04	2006	8	38	78.9	11.50	0.10	0.93	0.26		
IL 05	2004	0	35	100.0	22.13	0.06	0.98	0.27		
IL 05	2005	15	36	58.3	1.83	0.07	0.20	0.11		
IL 06	2004	3	33	90.9	2.20	0.05	0.32	0.20		2
IL 06	2005	29	36	19.4	0.23	0.07	0.11	0.10		
IL 07	2004	3	34	91.2	21.75	0.05	1.15	0.31		
IL 07	2005	7	36	80.6	2.31	0.05	0.30	0.19		
IL 08	2005	0	35	100.0	5.55	0.14	1.04	0.50		
IL 08	2006	4	37	89.2	33.10	0.10	1.94	0.30		

Table D-2 Summary of 2004 to 2006 Atrazine Ecological Monitoring Surface Water Data

Site	Year	Non Detects	Total Samples	Frequency of Detection	Max Value (ug/l)	Min Value (ug/l)	Mean Value (ug/l)	Median Value (ug/l)	Not Analyzed	Not Sampled
IL 09	2004	0	34	100.0	13.25	0.09	2.36	0.99		
IL 09	2005	0	36	100.0	16.02	0.18	1.27	0.55		
IN 01	2004	4	37	89.2	8.63	0.05	1.08	0.30		
IN 01	2005	15	36	58.3	4.38	0.05	0.36	0.13		
IN 02	2004	0	37	100.0	9.31	0.06	1.43	0.49		
IN 02	2005	0	36	100.0	20.33	0.10	1.46	0.44		
IN 03	2005	0	36	100.0	7.62	0.07	1.24	0.63		
IN 03	2006	7	40	82.5	16.90	0.10	1.73	0.46		
IN 04	2004	0	37	100.0	78.08	0.06	2.76	0.43		
IN 04	2005	3	32	90.6	8.78	0.10	0.77	0.24		4
IN 04	2006	9	39	76.9	10.20	0.10	0.99	0.24		
IN 05	2004	0	37	100.0	28.88	0.06	3.13	0.79		
IN 05	2005	1	36	97.2	17.31	0.05	2.37	1.06		
IN 05	2006	7	40	82.5	41.30	0.10	3.15	0.57		
IN 06	2005	15	36	58.3	7.23	0.06	0.47	0.11		
IN 06	2006	11	40	72.5	9.37	0.10	0.96	0.31		
IN 07	2005	5	36	86.1	22.55	0.06	1.76	0.39		
IN 07	2006	15	40	62.5	10.50	0.10	0.83	0.15		
IN 08	2005	5	36	86.1	21.11	0.06	1.33	0.32		
IN 08	2006	6	40	85.0	20.70	0.10	1.83	0.30		
IN 09	2005	1	33	97.0	9.36	0.10	0.93	0.36		3
IN 09	2006	6	40	85.0	8.31	0.10	0.59	0.24		

Table D-2 Summary of 2004 to 2006 Atrazine Ecological Monitoring Surface Water Data

Site	Year	Non Detects	Total Samples	Frequency of Detection	Max Value (ug/l)	Min Value (ug/l)	Mean Value (ug/l)	Median Value (ug/l)	Not Analyzed	Not Sampled
IN 10	2005	2	36	94.4	12.38	0.07	1.44	0.68		
IN 10	2006	8	40	80.0	16.40	0.10	1.55	0.39		
IN 11	2005	0	30	100.0	208.76	0.24	8.44	0.79		6
IN 11	2006	6	40	85.0	9.78	0.10	0.85	0.27		
KY 01	2005	8	35	77.1	2.21	0.05	0.47	0.22		
KY 01	2006	14	36	61.1	22.40	0.10	0.88	0.15		
KY 02	2005	0	32	100.0	19.33	0.42	2.74	1.46		3
KY 02	2006	2	28	92.9	14.30	0.10	1.34	0.49	3	5
MN 01	2005	11	37	70.3	5.85	0.09	0.39	0.12		
MN 01	2006	30	37	18.9	0.22	0.10	0.11	0.10		3
MO 01	2004	0	34	100.0	65.94	0.09	9.47	2.27		
MO 01	2005	0	37	100.0	82.75	0.10	8.03	1.23		
MO 01	2006	5	33	84.8	82.80	0.10	8.25	0.98		2
MO 02	2004	0	34	100.0	53.75	0.14	8.89	4.18		
MO 02	2005	0	36	100.0	28.07	0.74	6.25	3.95		
MO 02	2006	1	35	97.1	43.17	0.10	7.62	2.06		
MO 03	2004	0	34	100.0	59.03	0.60	4.42	2.395		
MO 03	2005	0	33	100.0	12.28	0.12	3.43	2.96		2
MO 03	2006	2	21	90.5	3.94	0.10	1.10	1.07		14
NE 01	2004	3	36	91.7	19.25	0.05	1.96	0.52	2	
NE 01	2005	11	36	69.4	16.66	0.05	1.62	0.25	1	1
NE 02	2005	5	36	86.1	20.72	0.08	2.74	0.34		

Table D-2 Summary of 2004 to 2006 Atrazine Ecological Monitoring Surface Water Data

Site	Year	Non Detects	Total Samples	Frequency of Detection	Max Value (ug/l)	Min Value (ug/l)	Mean Value (ug/l)	Median Value (ug/l)	Not Analyzed	Not Sampled
NE 02	2006	15	40	62.5	82.00	0.10	2.81	0.18		
NE 03	2004	3	38	92.1	2.29	0.05	0.35	0.18		
NE 03	2005	13	37	64.9	11.92	0.05	0.54	0.14		
NE 04	2005	0	22	100.0	49.85	0.13	7.22	0.66		15
NE 04	2006	1	10	90.0	4.12	0.10	0.67	0.18		30
NE 05	2005	2	24	91.7	49.87	0.05	4.67	0.41		13
NE 05	2006	7	15	53.3	6.76	0.10	0.89	0.13		25
NE 06	2004	3	36	91.7	7.74	0.05	1.00	0.17		2
NE 06	2005	11	33	66.7	33.11	0.07	1.83	0.12		4
NE 06	2006	24	27	11.1	0.13	0.10	0.10	0.10		13
NE 07	2005	5	29	82.8	112.19	0.05	7.86	0.61		8
NE 07	2006	2	3	33.3	1.94	0.10	0.71	0.10		37
OH 01	2004	9	38	76.3	18.34	0.05	1.32	0.13		
OH 01	2005	11	35	68.6	3.02	0.05	0.37	0.14		
OH 02	2005	14	35	60.0	18.13	0.12	1.38	0.59		
OH 02	2006	8	40	80.0	14.00	0.10	1.26	0.35		
OH 03	2004	16	38	57.9	21.50	0.05	1.83	0.08		
OH 03	2005	22	35	37.1	8.17	0.05	0.43	0.10		
OH 04	2005	8	35	77.1	20.15	0.08	1.26	0.21		
OH 04	2006	20	40	50.0	6.30	0.10	0.44	0.11		
TN 01	2005	0	34	100.0	7.55	0.21	1.57	0.78		
TN 01	2006	13	35	62.9	10.70	0.10	1.07	0.16		

Table D-2 Summary of 2004 to 2006 Atrazine Ecological Monitoring Surface Water Data										
Site	Year	Non Detects	Total Samples	Frequency of Detection	Max Value (ug/l)	Min Value (ug/l)	Mean Value (ug/l)	Median Value (ug/l)	Not Analyzed	Not Sampled
	TOTAL	622	2979	79.1					7	193

Table D-3 Summary of Rolling Averages From Ecological Watershed Monitoring Data for Comparison with Threshold Concentrations								
Site	Year	Maximum Peak (ug/l)	Maximum 14 Day Average (ug/l)	Maximum 21 Day Average (ug/l)	Maximum 30 Day Average (ug/l)	Maximum 60 Day Average (ug/l)	Maximum 90 Day Average (ug/l)	Annual Average (ug/l)
IA 01	2004	10.03	3.67	2.64	2.08	1.21	0.87	0.30
IA 01	2005	1.21	0.50	0.40	0.33	0.31	0.27	0.13
IA 02	2004	1.76	1.07	0.96	0.81	0.63	0.50	0.17
IA 02	2005	5.53	2.14	1.53	1.39	0.85	0.63	0.22
IL 01	2004	13.18	6.55	4.98	4.06	2.48	1.87	0.64
IL 01	2005	0.63	0.28	0.23	0.21	0.16	0.15	0.13
IL 02	2004	4.86	2.92	2.62	2.27	1.47	1.10	0.41
IL 02	2005	2.93	1.83	1.36	1.08	0.65	0.50	0.22
IL 03	2005	5.63	1.84	1.30	0.95	0.60	0.43	0.17
IL 03	2006	2.46	0.92	0.67	0.53	0.33	0.25	0.14
IL 04	2005	2.80	1.36	1.04	0.78	0.48	0.41	0.20
IL 04	2006	11.50	3.44	2.41	1.80	1.75	1.45	0.45
IL 05	2004	22.13	7.17	4.96	3.63	2.04	1.45	0.43
IL 05	2005	1.83	0.68	0.50	0.39	0.30	0.24	0.13
IL 06	2004	2.20	1.07	0.92	0.74	0.53	0.42	0.19

Table D-3 Summary of Rolling Averages From Ecological Watershed Monitoring Data for Comparison with Threshold Concentrations								
Site	Year	Maximum Peak (ug/l)	Maximum 14 Day Average (ug/l)	Maximum 21 Day Average (ug/l)	Maximum 30 Day Average (ug/l)	Maximum 60 Day Average (ug/l)	Maximum 90 Day Average (ug/l)	Annual Average (ug/l)
IL 06	2005	0.23	0.15	0.14	0.13	0.12	0.11	0.09
IL 07	2004	21.75	6.95	5.27	4.18	2.36	1.67	0.48
IL 07	2005	2.31	0.93	0.68	0.55	0.49	0.39	0.20
IL 08	2005	5.55	4.45	3.64	2.79	1.79	1.44	0.55
IL 08	2006	33.10	11.05	7.56	8.11	4.42	3.04	0.84
IL 09	2004	13.25	8.06	6.77	6.31	4.57	3.35	1.10
IL 09	2005	16.02	6.36	5.27	4.61	3.85	3.59	1.38
IN 01	2004	8.63	3.99	3.22	3.54	2.37	1.65	0.59
IN 01	2005	4.38	1.37	0.96	1.01	0.67	0.51	0.19
IN 02	2004	9.31	6.32	4.99	4.53	2.84	2.08	0.71
IN 02	2005	20.33	6.34	4.66	4.34	2.97	2.14	0.69
IN 03	2005	7.62	4.33	3.35	3.34	2.31	1.75	0.60
IN 03	2006	16.90	10.61	7.96	6.20	3.93	2.92	0.83
IN 04	2004	78.08	23.81	16.33	12.05	6.35	4.37	1.20
IN 04	2005	8.78	3.58	2.57	2.09	1.39	1.01	0.38

Table D-3 Summary of Rolling Averages From Ecological Watershed Monitoring Data for Comparison with Threshold Concentrations								
Site	Year	Maximum Peak (ug/l)	Maximum 14 Day Average (ug/l)	Maximum 21 Day Average (ug/l)	Maximum 30 Day Average (ug/l)	Maximum 60 Day Average (ug/l)	Maximum 90 Day Average (ug/l)	Annual Average (ug/l)
IN 04	2006	10.20	5.64	4.50	3.70	2.25	1.62	0.48
IN 05	2004	28.88	14.91	15.52	11.92	7.03	4.94	1.39
IN 05	2005	17.31	7.80	5.85	4.49	4.12	3.53	1.04
IN 05	2006	41.30	17.89	14.09	13.09	7.45	5.43	1.47
IN 06	2005	7.23	2.89	2.39	1.80	0.96	0.68	0.24
IN 06	2006	9.37	4.05	3.36	2.70	1.93	1.45	0.47
IN 07	2005	22.55	9.60	7.20	6.38	3.88	2.72	0.75
IN 07	2006	10.50	5.35	4.08	3.60	1.99	1.39	0.42
IN 08	2005	21.11	6.88	5.52	4.94	2.77	2.05	0.57
IN 08	2006	20.70	8.93	7.59	7.66	4.43	3.10	0.86
IN 09	2005	9.36	3.69	2.80	2.39	1.69	1.28	0.40
IN 09	2006	8.31	2.97	2.07	1.75	1.24	0.91	0.31
IN 10	2005	12.38	6.10	4.55	4.01	2.83	2.18	0.62
IN 10	2006	16.40	7.50	6.07	6.30	3.56	2.64	0.76
IN 11	2005	208.76	65.13	44.41	31.51	16.18	11.32	3.33

Table D-3 Summary of Rolling Averages From Ecological Watershed Monitoring Data for Comparison with Threshold Concentrations								
Site	Year	Maximum Peak (ug/l)	Maximum 14 Day Average (ug/l)	Maximum 21 Day Average (ug/l)	Maximum 30 Day Average (ug/l)	Maximum 60 Day Average (ug/l)	Maximum 90 Day Average (ug/l)	Annual Average (ug/l)
IN 11	2006	9.78	5.90	4.36	3.34	1.92	1.37	0.46
KY 01	2005	2.21	1.49	1.29	1.25	0.91	0.68	0.23
KY 01	2006	22.40	6.89	4.83	3.58	1.92	1.34	0.41
KY 02	2005	19.33	8.74	8.73	7.07	4.48	3.58	1.33
KY 02	2006	14.30	4.69	4.24	3.87	2.30	1.70	0.62
MN 01	2005	5.85	2.57	1.92	1.41	0.81	0.59	0.22
MN 01	2006	0.22	0.16	0.14	0.13	0.12	0.11	0.10
MO 01	2004	65.94	39.64	29.60	28.59	19.39	13.85	3.88
MO 01	2005	182.75	78.06	54.19	42.52	25.74	17.85	4.63
MO 01	2006	82.80	48.23	41.13	31.65	17.46	12.00	3.18
MO 02	2004	53.75	33.04	29.74	25.87	16.76	12.33	4.12
MO 02	2005	28.07	18.68	17.03	14.62	11.46	9.11	3.62
MO 02	2006	43.17	34.69	31.55	27.38	15.42	11.53	3.26
MO 03	2004	59.03	23.27	17.17	13.14	8.14	6.11	2.16
MO 03	2005	12.28	8.70	7.54	6.93	5.52	4.41	1.64

Table D-3 Summary of Rolling Averages From Ecological Watershed Monitoring Data for Comparison with Threshold Concentrations								
Site	Year	Maximum Peak (ug/l)	Maximum 14 Day Average (ug/l)	Maximum 21 Day Average (ug/l)	Maximum 30 Day Average (ug/l)	Maximum 60 Day Average (ug/l)	Maximum 90 Day Average (ug/l)	Annual Average (ug/l)
MO 03	2006	3.94	2.31	2.04	1.94	1.50	1.28	0.76
NE 01	2004	19.25	13.02	9.79	7.51	4.29	3.04	0.81
NE 01	2005	16.66	6.56	5.19	5.65	3.65	2.53	0.69
NE 02	2005	20.72	11.41	11.83	10.68	6.28	4.30	1.14
NE 02	2006	82.00	28.63	19.53	14.13	7.26	4.95	1.29
NE 03	2004	2.29	1.10	1.23	0.97	0.65	0.51	0.21
NE 03	2005	11.92	3.69	2.54	2.08	1.15	0.82	0.26
NE 04	2005	36.00	36.00	34.75	27.28	17.42	11.92	3.07
NE 04	2006	4.12	4.12	3.99	3.11	1.66	1.16	0.38
NE 05	2005	49.87	23.83	23.30	19.87	16.50	11.35	2.88
NE 05	2006	6.76	6.76	6.76	6.76	5.09	3.49	0.94
NE 06	2004	7.74	2.76	2.78	2.14	1.70	1.55	0.45
NE 06	2005	33.11	20.59	13.87	11.45	6.03	4.08	1.08
NE 06	2006	0.13	0.11	0.11	0.10	0.10	0.10	0.10
NE 07	2005	112.19	79.98	61.92	45.17	22.66	16.62	4.53

Table D-3 Summary of Rolling Averages From Ecological Watershed Monitoring Data for Comparison with Threshold Concentrations								
Site	Year	Maximum Peak (ug/l)	Maximum 14 Day Average (ug/l)	Maximum 21 Day Average (ug/l)	Maximum 30 Day Average (ug/l)	Maximum 60 Day Average (ug/l)	Maximum 90 Day Average (ug/l)	Annual Average (ug/l)
NE 07	2006	***	***	***	***	***	***	***
OH 01	2004	18.34	8.80	7.71	5.72	3.19	2.18	0.60
OH 01	2005	3.02	0.99	0.73	0.86	0.55	0.52	0.19
OH 02	2005	18.13	7.13	5.12	4.03	2.91	2.11	0.63
OH 02	2006	14.00	5.93	5.76	5.20	2.89	2.08	0.61
OH 03	2004	21.50	9.07	8.12	7.33	4.46	3.00	0.78
OH 03	2005	8.17	2.99	2.10	1.63	0.89	0.63	0.22
OH 04	2005	20.15	7.96	5.72	4.70	2.74	1.90	0.54
OH 04	2006	6.30	2.57	2.30	1.73	1.01	0.72	0.25
TN 01	2005	7.55	5.60	4.84	4.02	2.93	2.21	0.81
TN 01	2006	10.70	3.62	3.06	2.45	1.95	1.65	0.58
Minimum		0.13	0.11	0.11	0.10	0.10	0.10	0.09
Mean		22.08	10.61	8.47	6.96	4.29	3.11	0.94
Maximum		208.76	79.98	61.92	45.17	25.74	17.85	4.63

Table D-3 Summary of Rolling Averages From Ecological Watershed Monitoring Data for Comparison with Threshold Concentrations								
Site	Year	Maximum Peak (ug/l)	Maximum 14 Day Average (ug/l)	Maximum 21 Day Average (ug/l)	Maximum 30 Day Average (ug/l)	Maximum 60 Day Average (ug/l)	Maximum 90 Day Average (ug/l)	Annual Average (ug/l)
CASM Thresholds			38.00		27.00	18.00	12.00	

Table D-4 Summary of Number of Watersheds from Ecological Monitoring Data that Exceed PRZM Flow-Adjusted EECs							
Region	Flow (ft ³ /sed)	Peak Concentration (µg/L)	14 Day Average Concentration (µg/L)	21 Day Average Concentration (µg/L)	30 Day Average Concentration (µg/L)	60 Day Average Concentration (µg/L)	90 Day Average Concentration (µg/L)
South	105	120	15	10	7	3	2
North	22	69	17	13	8	4	3
West	90	74	7	5	4	2	1
East	110	68	10	6	4	2	2
	Sites Above Lowest Flowing EEC	5	11	10	12	17	17
	Sites 2 times above lowest flowing EEC	2	5	5	5	7	7
	Sites 3 times above lowest flowing EEC	1	3	3	5	6	6

Table D-5 Comparison of Flow Rate and Ecological Stream Monitoring Sites Above Flow-Adjusted Modeling

Site	Year	Average Flow (m3/s)	Average Flow (ft3/s)	Max Peak (ppb)	Grab Sample Rolling Averages						Annual Average (ppb)
					Max 14 Day (ppb)	Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)		
NE 07	2006	0.2	7.1	***	***	***	***	***	***	***	
MO 01	2005	0.1	3.5	182.75	78.06	54.19	42.52	25.74	17.85	4.63	
NE 07	2005	0.4	14.1	112.19	79.98	61.92	45.17	22.66	16.62	4.53	
MO 01	2004	0.1	3.5	65.94	39.64	29.60	28.59	19.39	13.85	3.88	
MO 02	2004	0.8	28.2	53.75	33.04	29.74	25.87	16.76	12.33	4.12	
MO 01	2006	0.1	3.5	82.80	48.23	41.13	31.65	17.46	12.00	3.18	
NE 04	2005	0.3	10.6	36.00	36.00	34.75	27.28	17.42	11.92	3.07	
MO 02	2006	0.8	28.2	43.17	34.69	31.55	27.38	15.42	11.53	3.26	
NE 05	2005	0.9	31.8	49.87	23.83	23.30	19.87	16.50	11.35	2.88	
IN 11	2005	0.3	10.6	208.76	65.13	44.41	31.51	16.18	11.32	3.33	
MO 02	2005	0.7	24.7	28.07	18.68	17.03	14.62	11.46	9.11	3.62	
MO 03	2004	2.4	84.7	59.03	23.27	17.17	13.14	8.14	6.11	2.16	
NE 02	2006	1.0	35.3	82.00	28.63	19.53	14.13	7.26	4.95	1.29	
IN 05	2004	0.2	7.1	28.88	14.91	15.52	11.92	7.03	4.94	1.39	

Table D-5 Comparison of Flow Rate and Ecological Stream Monitoring Sites Above Flow-Adjusted Modeling

Site	Year	Average Flow (m3/s)	Average Flow (ft3/s)	Max Peak (ppb)	Max 14 Day (ppb)	Grab Sample Rolling Averages					Annual Average (ppb)
						Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)		
MO 03	2005	2.0	70.6	12.28	8.70	7.54	6.93	5.52	4.41	1.64	
IN 04	2004	1.2	42.4	78.08	23.81	16.33	12.05	6.35	4.37	1.20	
NE 02	2005	2.0	70.6	20.72	11.41	11.83	10.68	6.28	4.30	1.14	
NE 06	2005	0.0	1.1	33.11	20.59	13.87	11.45	6.03	4.08	1.08	
IL 09	2005	0.7	24.7	16.02	6.36	5.27	4.61	3.85	3.59	1.38	
KY 02	2005	1.5	53.0	19.33	8.74	8.73	7.07	4.48	3.58	1.33	
IN 05	2005	0.2	7.1	17.31	7.80	5.85	4.49	4.12	3.53	1.04	
NE 05	2006	0.7	24.7	6.76	6.76	6.76	6.76	5.09	3.49	0.94	
IL 09	2004	0.9	31.8	13.25	8.06	6.77	6.31	4.57	3.35	1.10	
IN 08	2006	1.0	35.3	20.70	8.93	7.59	7.66	4.43	3.10	0.86	
NE 01	2004	1.2	42.4	19.25	13.02	9.79	7.51	4.29	3.04	0.81	
IL 08	2006	4.0	141.2	33.10	11.05	7.56	8.11	4.42	3.04	0.84	
OH 03	2004	0.6	21.2	21.50	9.07	8.12	7.33	4.46	3.00	0.78	
IN 03	2006	1.0	35.3	16.90	10.61	7.96	6.20	3.93	2.92	0.83	
IN 07	2005	0.6	21.2	22.55	9.60	7.20	6.38	3.88	2.72	0.75	

Table D-5 Comparison of Flow Rate and Ecological Stream Monitoring Sites Above Flow-Adjusted Modeling

Site	Year	Average Flow (m3/s)	Average Flow (ft3/s)	Max Peak (ppb)	Max 14 Day (ppb)	Grab Sample Rolling Averages					Annual Average (ppb)
						Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)		
IN 10	2006	0.7	24.7	16.40	7.50	6.07	6.30	3.56	2.64	0.76	
NE 01	2005	2.5	88.3	16.66	6.56	5.19	5.65	3.65	2.53	0.69	
TN 01	2005	0.5	17.7	7.55	5.60	4.84	4.02	2.93	2.21	0.81	
IN 10	2005	0.4	14.1	12.38	6.10	4.55	4.01	2.83	2.18	0.62	
OH 01	2004	1.0	35.3	18.34	8.80	7.71	5.72	3.19	2.18	0.60	
IN 02	2005	0.3	10.6	20.33	6.34	4.66	4.34	2.97	2.14	0.69	
OH 02	2005	0.9	31.8	18.13	7.13	5.12	4.03	2.91	2.11	0.63	
IN 02	2004	0.9	31.8	9.31	6.32	4.99	4.53	2.84	2.08	0.71	
OH 02	2006	1.0	35.3	14.00	5.93	5.76	5.20	2.89	2.08	0.61	
IN 08	2005	0.8	28.2	21.11	6.88	5.52	4.94	2.77	2.05	0.57	
OH 04	2005	5.0	176.5	20.15	7.96	5.72	4.70	2.74	1.90	0.54	
IL 01	2004	2.9	102.4	13.18	6.55	4.98	4.06	2.48	1.87	0.64	
IN 03	2005	0.5	17.7	7.62	4.33	3.35	3.34	2.31	1.75	0.60	
KY 02	2006	2.0	70.6	14.30	4.69	4.24	3.87	2.30	1.70	0.62	
IL 07	2004	0.8	28.2	21.75	6.95	5.27	4.18	2.36	1.67	0.48	

Table D-5 Comparison of Flow Rate and Ecological Stream Monitoring Sites Above Flow-Adjusted Modeling

Site	Year	Average Flow (m3/s)	Average Flow (ft3/s)	Max Peak (ppb)	Max 14 Day (ppb)	Grab Sample Rolling Averages				Annual Average (ppb)
						Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)	
IN 01	2004	1.8	63.5	8.63	3.99	3.22	3.54	2.37	1.65	0.59
TN 01	2006	0.5	17.7	10.70	3.62	3.06	2.45	1.95	1.65	0.58
NE 06	2004	0.1	3.5	7.74	2.76	2.78	2.14	1.70	1.55	0.45
IN 06	2006	5.0	176.5	9.37	4.05	3.36	2.70	1.93	1.45	0.47
IL 04	2006	3.0	105.9	11.50	3.44	2.41	1.80	1.75	1.45	0.45
IL 05	2004	2.9	102.4	22.13	7.17	4.96	3.63	2.04	1.45	0.43
IL 08	2005	4.0	141.2	5.55	4.45	3.64	2.79	1.79	1.44	0.55
IN 07	2006	5.0	176.5	10.50	5.35	4.08	3.60	1.99	1.39	0.42
IN 11	2006	1.0	35.3	9.78	5.90	4.36	3.34	1.92	1.37	0.46
KY 01	2006	0.4	14.1	22.40	6.89	4.83	3.58	1.92	1.34	0.41
MO 03	2006	2.0	70.6	3.94	2.31	2.04	1.94	1.50	1.28	0.76
IN 09	2005	1.5	53.0	9.36	3.69	2.80	2.39	1.69	1.28	0.40
NE 04	2006	0.2	7.1	4.12	4.12	3.99	3.11	1.66	1.16	0.38
IL 02	2004	2.0	70.6	4.86	2.92	2.62	2.27	1.47	1.10	0.41
IN 04	2005	0.2	7.1	8.78	3.58	2.57	2.09	1.39	1.01	0.38

Table D-5 Comparison of Flow Rate and Ecological Stream Monitoring Sites Above Flow-Adjusted Modeling

Site	Year	Average Flow (m3/s)	Average Flow (ft3/s)	Max Peak (ppb)	Max 14 Day (ppb)	Grab Sample Rolling Averages					Annual Average (ppb)
						Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)		
IN 09	2006	2.0	70.6	8.31	2.97	2.07	1.75	1.24	0.91	0.31	
IA 01	2004	1.4	49.4	10.03	3.67	2.64	2.08	1.21	0.87	0.30	
NE 03	2005	0.1	3.5	11.92	3.69	2.54	2.08	1.15	0.82	0.26	
OH 04	2006	5.0	176.5	6.30	2.57	2.30	1.73	1.01	0.72	0.25	
IN 06	2005	4.0	141.2	7.23	2.89	2.39	1.80	0.96	0.68	0.24	
KY 01	2005	0.2	7.1	2.21	1.49	1.29	1.25	0.91	0.68	0.23	
IA 02	2005	0.6	21.2	5.53	2.14	1.53	1.39	0.85	0.63	0.22	
OH 03	2005	0.5	17.7	8.17	2.99	2.10	1.63	0.89	0.63	0.22	
MN 01	2005	0.9	31.8	5.85	2.57	1.92	1.41	0.81	0.59	0.22	
OH 01	2005	0.7	24.7	3.02	0.99	0.73	0.86	0.55	0.52	0.19	
NE 03	2004	0.1	3.5	2.29	1.10	1.23	0.97	0.65	0.51	0.21	
IN 01	2005	4.0	141.2	4.38	1.37	0.96	1.01	0.67	0.51	0.19	
IA 02	2004	0.6	21.2	1.76	1.07	0.96	0.81	0.63	0.50	0.17	
IL 02	2005	1.5	53.0	2.93	1.83	1.36	1.08	0.65	0.50	0.22	
IL 03	2005	1.5	53.0	5.63	1.84	1.30	0.95	0.60	0.43	0.17	

Table D-5 Comparison of Flow Rate and Ecological Stream Monitoring Sites Above Flow-Adjusted Modeling										
Site	Year	Average Flow (m3/s)	Average Flow (ft3/s)	Max Peak (ppb)	Max 14 Day (ppb)	Grab Sample Rolling Averages				Annual Average (ppb)
						Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)	
IL 06	2004	0.9	31.8	2.20	1.07	0.92	0.74	0.53	0.42	0.19
IL 04	2005	0.6	21.2	2.80	1.36	1.04	0.78	0.48	0.41	0.20
IL 07	2005	0.6	21.2	2.31	0.93	0.68	0.55	0.49	0.39	0.20
IA 01	2005	2.0	70.6	1.21	0.50	0.40	0.33	0.31	0.27	0.13
IL 03	2006	1.0	35.3	2.46	0.92	0.67	0.53	0.33	0.25	0.14
IL 05	2005	2.0	70.6	1.83	0.68	0.50	0.39	0.30	0.24	0.13
IL 01	2005	0.5	17.7	0.63	0.28	0.23	0.21	0.16	0.15	0.13
MN 01	2006	0.5	17.7	0.22	0.16	0.14	0.13	0.12	0.11	0.10
IL 06	2005	0.6	21.2	0.23	0.15	0.14	0.13	0.12	0.11	0.09
NE 06	2006	0.0	1.1	0.13	0.11	0.11	0.10	0.10	0.10	0.10

1 - Sites in bold represent sites where one or more rolling average is above the equivalent flow adjusted rolling average EEC

*** - Insufficient data to estimate rolling averages

Table D-6 Comparison of Flow Rate and Ecological Stream Monitoring Sites Greater than Two Times Above Flow-Adjusted Modeling

Site	Year	Average Flow (m3/s)	Average Flow (ft3/s)	Max Peak (ppb)	Grab Sample Rolling Averages (ppb)						Annual Average (ppb)
					Max 14 Day (ppb)	Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)		
NE 07 ¹	2006	0.2	7.1	***	***	***	***	***	***	***	
MO 01	2005	0.1	3.5	182.75	78.06	54.19	42.52	25.74	17.85	4.63	
NE 07	2005	0.4	14.1	112.19	79.98	61.92	45.17	22.66	16.62	4.53	
MO 01	2004	0.1	3.5	65.94	39.64	29.60	28.59	19.39	13.85	3.88	
MO 02	2004	0.8	28.2	53.75	33.04	29.74	25.87	16.76	12.33	4.12	
MO 01	2006	0.1	3.5	82.80	48.23	41.13	31.65	17.46	12.00	3.18	
NE 04	2005	0.3	10.6	36.00	36.00	34.75	27.28	17.42	11.92	3.07	
MO 02	2006	0.8	28.2	43.17	34.69	31.55	27.38	15.42	11.53	3.26	
NE 05	2005	0.9	31.8	49.87	23.83	23.30	19.87	16.50	11.35	2.88	
IN 11	2005	0.3	10.6	208.76	65.13	44.41	31.51	16.18	11.32	3.33	
MO 02	2005	0.7	24.7	28.07	18.68	17.03	14.62	11.46	9.11	3.62	
MO 03	2004	2.4	84.7	59.03	23.27	17.17	13.14	8.14	6.11	2.16	
NE 02	2006	1.0	35.3	82.00	28.63	19.53	14.13	7.26	4.95	1.29	
IN 05	2004	0.2	7.1	28.88	14.91	15.52	11.92	7.03	4.94	1.39	

Table D-6 Comparison of Flow Rate and Ecological Stream Monitoring Sites Greater than Two Times Above Flow-Adjusted Modeling

Site	Year	Average Flow (m3/s)	Average Flow (ft3/s)	Max Peak (ppb)	Grab Sample Rolling Averages (ppb)						Annual Average (ppb)
					Max 14 Day (ppb)	Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)		
MO 03	2005	2.0	70.6	12.28	8.70	7.54	6.93	5.52	4.41	1.64	
IN 04	2004	1.2	42.4	78.08	23.81	16.33	12.05	6.35	4.37	1.20	
NE 02	2005	2.0	70.6	20.72	11.41	11.83	10.68	6.28	4.30	1.14	
NE 06	2005	0.0	1.1	33.11	20.59	13.87	11.45	6.03	4.08	1.08	
IL 09	2005	0.7	24.7	16.02	6.36	5.27	4.61	3.85	3.59	1.38	
KY 02	2005	1.5	53.0	19.33	8.74	8.73	7.07	4.48	3.58	1.33	
IN 05	2005	0.2	7.1	17.31	7.80	5.85	4.49	4.12	3.53	1.04	
NE 05	2006	0.7	24.7	6.76	6.76	6.76	6.76	5.09	3.49	0.94	
IL 09	2004	0.9	31.8	13.25	8.06	6.77	6.31	4.57	3.35	1.10	
IN 08	2006	1.0	35.3	20.70	8.93	7.59	7.66	4.43	3.10	0.86	
NE 01	2004	1.2	42.4	19.25	13.02	9.79	7.51	4.29	3.04	0.81	
IL 08	2006	4.0	141.2	33.10	11.05	7.56	8.11	4.42	3.04	0.84	
OH 03	2004	0.6	21.2	21.50	9.07	8.12	7.33	4.46	3.00	0.78	
IN 03	2006	1.0	35.3	16.90	10.61	7.96	6.20	3.93	2.92	0.83	
IN 07	2005	0.6	21.2	22.55	9.60	7.20	6.38	3.88	2.72	0.75	

Table D-6 Comparison of Flow Rate and Ecological Stream Monitoring Sites Greater than Two Times Above Flow-Adjusted Modeling

Site	Year	Average Flow (m3/s)	Average Flow (ft3/s)	Max Peak (ppb)	Grab Sample Rolling Averages (ppb)					Annual Average (ppb)
					Max 14 Day (ppb)	Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)	
IN 10	2006	0.7	24.7	16.40	7.50	6.07	6.30	3.56	2.64	0.76
NE 01	2005	2.5	88.3	16.66	6.56	5.19	5.65	3.65	2.53	0.69
TN 01	2005	0.5	17.7	7.55	5.60	4.84	4.02	2.93	2.21	0.81
IN 10	2005	0.4	14.1	12.38	6.10	4.55	4.01	2.83	2.18	0.62
OH 01	2004	1.0	35.3	18.34	8.80	7.71	5.72	3.19	2.18	0.60
IN 02	2005	0.3	10.6	20.33	6.34	4.66	4.34	2.97	2.14	0.69
OH 02	2005	0.9	31.8	18.13	7.13	5.12	4.03	2.91	2.11	0.63
IN 02	2004	0.9	31.8	9.31	6.32	4.99	4.53	2.84	2.08	0.71
OH 02	2006	1.0	35.3	14.00	5.93	5.76	5.20	2.89	2.08	0.61
IN 08	2005	0.8	28.2	21.11	6.88	5.52	4.94	2.77	2.05	0.57
OH 04	2005	5.0	176.5	20.15	7.96	5.72	4.70	2.74	1.90	0.54
IL 01	2004	2.9	102.4	13.18	6.55	4.98	4.06	2.48	1.87	0.64
IN 03	2005	0.5	17.7	7.62	4.33	3.35	3.34	2.31	1.75	0.60
KY 02	2006	2.0	70.6	14.30	4.69	4.24	3.87	2.30	1.70	0.62
IL 07	2004	0.8	28.2	21.75	6.95	5.27	4.18	2.36	1.67	0.48

Table D-6 Comparison of Flow Rate and Ecological Stream Monitoring Sites Greater than Two Times Above Flow-Adjusted Modeling

Site	Year	Grab Sample Rolling Averages (ppb)								
		Average Flow (m3/s)	Average Flow (ft3/s)	Max Peak (ppb)	Max 14 Day (ppb)	Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)	Annual Average (ppb)
IN 01	2004	1.8	63.5	8.63	3.99	3.22	3.54	2.37	1.65	0.59
TN 01	2006	0.5	17.7	10.70	3.62	3.06	2.45	1.95	1.65	0.58
NE 06	2004	0.1	3.5	7.74	2.76	2.78	2.14	1.70	1.55	0.45
IN 06	2006	5.0	176.5	9.37	4.05	3.36	2.70	1.93	1.45	0.47
IL 04	2006	3.0	105.9	11.50	3.44	2.41	1.80	1.75	1.45	0.45
IL 05	2004	2.9	102.4	22.13	7.17	4.96	3.63	2.04	1.45	0.43
IL 08	2005	4.0	141.2	5.55	4.45	3.64	2.79	1.79	1.44	0.55
IN 07	2006	5.0	176.5	10.50	5.35	4.08	3.60	1.99	1.39	0.42
IN 11	2006	1.0	35.3	9.78	5.90	4.36	3.34	1.92	1.37	0.46
KY 01	2006	0.4	14.1	22.40	6.89	4.83	3.58	1.92	1.34	0.41
MO 03	2006	2.0	70.6	3.94	2.31	2.04	1.94	1.50	1.28	0.76
IN 09	2005	1.5	53.0	9.36	3.69	2.80	2.39	1.69	1.28	0.40
NE 04	2006	0.2	7.1	4.12	4.12	3.99	3.11	1.66	1.16	0.38
IL 02	2004	2.0	70.6	4.86	2.92	2.62	2.27	1.47	1.10	0.41
IN 04	2005	0.2	7.1	8.78	3.58	2.57	2.09	1.39	1.01	0.38

Table D-6 Comparison of Flow Rate and Ecological Stream Monitoring Sites Greater than Two Times Above Flow-Adjusted Modeling

Site	Year	Average Flow (m3/s)	Average Flow (ft3/s)	Max Peak (ppb)	Grab Sample Rolling Averages (ppb)						Annual Average (ppb)
					Max 14 Day (ppb)	Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)		
IN 09	2006	2.0	70.6	8.31	2.97	2.07	1.75	1.24	0.91	0.31	
IA 01	2004	1.4	49.4	10.03	3.67	2.64	2.08	1.21	0.87	0.30	
NE 03	2005	0.1	3.5	11.92	3.69	2.54	2.08	1.15	0.82	0.26	
OH 04	2006	5.0	176.5	6.30	2.57	2.30	1.73	1.01	0.72	0.25	
IN 06	2005	4.0	141.2	7.23	2.89	2.39	1.80	0.96	0.68	0.24	
KY 01	2005	0.2	7.1	2.21	1.49	1.29	1.25	0.91	0.68	0.23	
IA 02	2005	0.6	21.2	5.53	2.14	1.53	1.39	0.85	0.63	0.22	
OH 03	2005	0.5	17.7	8.17	2.99	2.10	1.63	0.89	0.63	0.22	
MN 01	2005	0.9	31.8	5.85	2.57	1.92	1.41	0.81	0.59	0.22	
OH 01	2005	0.7	24.7	3.02	0.99	0.73	0.86	0.55	0.52	0.19	
NE 03	2004	0.1	3.5	2.29	1.10	1.23	0.97	0.65	0.51	0.21	
IN 01	2005	4.0	141.2	4.38	1.37	0.96	1.01	0.67	0.51	0.19	
IA 02	2004	0.6	21.2	1.76	1.07	0.96	0.81	0.63	0.50	0.17	
IL 02	2005	1.5	53.0	2.93	1.83	1.36	1.08	0.65	0.50	0.22	
IL 03	2005	1.5	53.0	5.63	1.84	1.30	0.95	0.60	0.43	0.17	

Table D-6 Comparison of Flow Rate and Ecological Stream Monitoring Sites Greater than Two Times Above Flow-Adjusted Modeling

Site	Year	Average Flow (m3/s)	Average Flow (ft3/s)	Max Peak (ppb)	Grab Sample Rolling Averages (ppb)					
					Max 14 Day (ppb)	Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)	Annual Average (ppb)
IL 06	2004	0.9	31.8	2.20	1.07	0.92	0.74	0.53	0.42	0.19
IL 04	2005	0.6	21.2	2.80	1.36	1.04	0.78	0.48	0.41	0.20
IL 07	2005	0.6	21.2	2.31	0.93	0.68	0.55	0.49	0.39	0.20
IA 01	2005	2.0	70.6	1.21	0.50	0.40	0.33	0.31	0.27	0.13
IL 03	2006	1.0	35.3	2.46	0.92	0.67	0.53	0.33	0.25	0.14
IL 05	2005	2.0	70.6	1.83	0.68	0.50	0.39	0.30	0.24	0.13
IL 01	2005	0.5	17.7	0.63	0.28	0.23	0.21	0.16	0.15	0.13
MN 01	2006	0.5	17.7	0.22	0.16	0.14	0.13	0.12	0.11	0.10
IL 06	2005	0.6	21.2	0.23	0.15	0.14	0.13	0.12	0.11	0.09
NE 06	2006	0.0	1.1	0.13	0.11	0.11	0.10	0.10	0.10	0.10

1 - Sites in bold represent sites where one or more rolling average is above the equivalent flow adjusted rolling average EEC

*** - Insufficient data to estimate rolling averages

Table D-7 Comparison of Results from Targeted and Non-Targeted Monitoring Data							
All Ecological Stream Monitoring Site Percentiles							
Percentile	Max Peak (ppb)	Max 14 day (ppb)	Max 21 day (ppb)	Max 30 day (ppb)	Max 60 day (ppb)	Max 90 day (ppb)	Annual Average (ppb)
Max Value	208.8	80.0	61.9	45.2	25.7	17.8	4.6
99 th Percentile	187.4	78.4	55.6	43.0	23.2	16.8	4.6
95 th Percentile	81.6	39.3	34.4	28.5	17.3	11.9	3.6
90 th Percentile	48.5	23.8	19.1	14.5	10.8	8.5	2.7
75 th Percentile	20.7	8.9	7.6	6.8	4.5	3.4	1.1
50 th Percentile	10.5	5.6	4.4	3.6	2.3	1.7	0.6
25 th Percentile	5.6	2.7	2.1	1.7	1.0	0.7	0.2
10 th Percentile	2.2	1.0	0.8	0.7	0.5	0.4	0.2
5 th Percentile	1.3	0.5	0.4	0.3	0.3	0.2	0.1
Heidelberg Monitoring Data (Sandusky)							
		14 day	21 day (ppb)	30 day (ppb)	60 day (ppb)	90 day (ppb)	
Maximum Value		28.26	21.11	18.3	12.38	8.89	
90 th Percentile		7.55	7.08	7.82	10.23	8.22	
USGS NAWQA DATA							

Table D-7 Comparison of Results from Targeted and Non-Targeted Monitoring Data		
Percentile	Peak (ppb)	TWM (ppb)
Max Value	201	9.6
99 th Percentile	195.9	8.7
95 th Percentile	132.15	6.0
90 th Percentile	108	4.5
75 th Percentile	28.725	2.7
50 th Percentile	17.2	1.4
25 th Percentile	10.375	0.8
10 th Percentile	3.857	0.7
5 th Percentile	2.4945	0.4
Heidelberg (Sandusky Watershed)		
	Peak (ppb)	TWM (ppb)
Max Value	53.21	3.32
99 th Percentile	51.1812	3.1344
95 th Percentile	43.066	2.392
90 th Percentile	40.23	2.04
75 th Percentile	24.61	1.76

Table D-7 Comparison of Results from Targeted and Non-Targeted Monitoring Data		
50 th Percentile	19.31	1.49
25 th Percentile	15.46	1.27
10 th Percentile	8.426	0.68
5 th Percentile	6.682	0.406
Heidelberg (Maumee Watershed)		
	Peak (ppb)	TWM (ppb)
Max Value	38.74	2.09
99 th Percentile	36.9608	2.08264
95 th Percentile	29.844	2.0532
90 th Percentile	24.644	1.9456
75 th Percentile	19.37	1.69
50 th Percentile	11.71	1.27
25 th Percentile	7.35	1
10 th Percentile	4.86	0.696
5 th Percentile	3.646	0.494