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STATE OF ILLINOIS
DEPARTMENT OF ENERGY AND NATURAL RESOURCES

Illinois Benchmark Network Instream Suspended Sediment Monitoring Program, Water Year 1985

by D. Kevin Davie

ILLINOIS STATE WATER SURVEY
CHAMPAIGN
1989

CIRCULAR 171-85

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Abstract: Beginning in Water Year 1981, the Water Survey's suspended sediment monitoring program evolved from the effort to gather data on sediment transport and sedimentation in Illinois waterways. In Water Year 1981, the program consisted of 50 stations throughout the state. However, by Water Year 1983, a series of cuts in funding reduced the number of stations to 18. In 1983, the suspended sediment monitoring program was combined with two other Water Survey monitoring programs under the program name of the Illinois Benchmark Network (IBN). Since that time, the IBN has continued to maintain suspended sediment stations statewide. This report, which presents the suspended sediment data collected during Water Year 1985, is a continuation of the Water Survey's Circular 171 series presenting data collected in the suspended sediment monitoring program. In Water Year 1985, 18 stations were maintained. All the techniques used in the data collection process and the laboratory analyses were based upon those used by the U.S. Geological Survey. All the data for Water Year 1985, including those pertaining to water discharge, sediment concentration, sediment load, and particle size distribution of the suspended sediment samples, are given in the appendices to this report The appendices also include the statistical parameters for the regression equations relating water discharge and suspended sediment load data for Water Year 1985.

Reference: Davie, D. Kevin. Illinois Benchmark Network Instream Suspended Sediment Monitoring Program, Water Year 1985. Illinois State Water Survey, Champaign, Circular 171-85, 1989.

Indexing Terms: Data collection, Illinois Benchmark Network, particle size distribution, regression equations, rivers, sediment concentrations, streams, suspended sediment load.

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ILLINOIS BENCHMARK NETWORK
INSTREAM SUSPENDED SEDIMENT MONITORING PROGRAM, WATER YEAR 1985

by D. Kevin Davie

INTRODUCTION

Beginning in Water Year 1981, the Illinois State Water Survey's instream suspended sediment monitoring program has provided a means for gathering data on sediment transport and sedimentation in Illinois waterways. In Water Year 1981, the program consisted of 50 stations throughout the state. However, by Water Year 1983, a series of cuts in funding had reduced the number of stations to 18. In 1983, the suspended sediment monitoring program was combined with two other Water Survey monitoring programs under the program name of the Illinois Benchmark Network (IBN). Since that time the IBN has continued to maintain suspended sediment stations statewide.

This report presents the suspended sediment data collected during Water Year 1985. This publication is a continuation of the Water Survey's Circular 171 series presenting data collected by the Illinois Benchmark Network's instream suspended sediment monitoring program.

Acknowledgments

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DATA COLLECTION AND ANALYSIS

The 18 stations monitored in Water Year 1985 were maintained by regional offices at Batavia (northern region), Peoria (west-central), Champaign (east-central), and Carbondale (southern region). Each station was maintained by an IBN technician, and each location was sampled on a weekly basis by a locally hired observer. The locations of the 18 stations monitored in Water Year 1985 are shown in figure 1, and additional information on the sta-

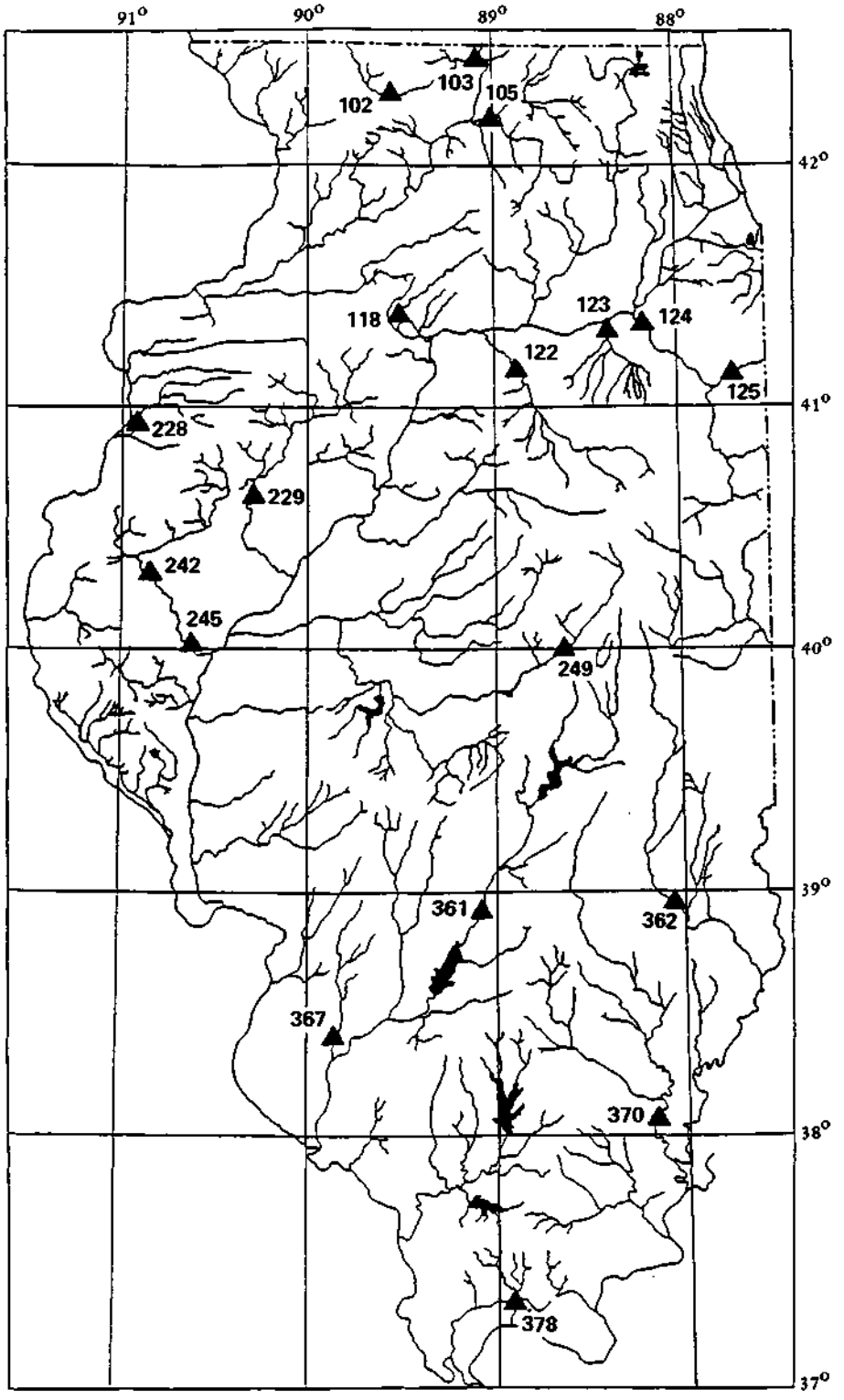

Figure 1. Illinois Benchmark Network suspended sediment stations for Water Year 1985 (October 1984 through September 1985)

Table 1. Illinois Benchmark Network Instream Suspended Sediment Monitoring Program, Water Year 1985

Station name	*USGS ID*	*ISWS ID*	*Drainage area (square miles)*	*ISWS period of record (water years)*	*County*
Northern District					
Pecatonica R. at Freeport	05435500	102	1326	1981 to Present	Stephenson
Rock R. at Rockton	05437500	103	6363	1981 to Present	Winnebago
Kishwaukee R. near Perryville	05438600	105	655	1984 to Present	Winnebago
Big Bureau Cr. at Princeton	05556500	118	196	1981 to Present	Bureau
Mazon R. near Coal City	05542000	123	455	1981 to Present	Grundy
Kankakee R. near Wilmington	05527500	124	5150	1984 to Present	Will
West-Central District					
Henderson Cr. near Oquawka	05469000	228	432	1984 to Present	Henderson
Spoon R. at London Mills	05569500	229	1062	1981 to Present	Fulton
La Moine R. at Colmar	05584500	242	655	1981 to Present	McDonough
La Moine R. at Ripley	05585000	245	1293	1984 to Present	Brown
East-Central District					
Vermilion R. near Leonore	05555300	122	1251	1984 to Present	La Salle
Kankakee R. at Momence	05520500	125	2294	1982 to Present	Kankakee
Sangamon R. at Monticello	05572000	249	550	1981 to Present	Piatt
Southern District					
Kaskaskia R. at Vandalia	05592500	361	1940	1981 to Present	Fayette
Embarras R. at Ste. Marie	03345500	362	1516	1981 to Present	Jasper
Silver Cr. near Freeburg	05594800	367	464	1981 to Present	St. Clair
Little Wabash R. at Carmi	03381500	370	3102	1981 to Present	White
Cache R. at Forman	03612000	378	244	1981 to Present	Johnson

tions is given in table 1. Station 125 (Kankakee River at Momence) and station 370 (Little Wabash River at Carmi) were not sampled consistently throughout the entire water year.

The suspended sediment samples collected at each location were transported to the Inter-Survey Geotechnical Laboratory, Champaign. The laboratory analyzed 1,324 samples for sediment concentration in parts per million and 370 samples for particle size distribution. All the techniques used in the data collection process and the laboratory analyses were based upon those used by the U.S. Geological Survey. Descriptions of these methods are contained in the U.S. Department of the Interior's series of publications entitled *Techniques of Water-Resources Investigations of the United States Geological Survey* (Buchanan and Somers, 1969; Guy, 1969; Guy and Norman, 1970; Porterfield, 1972).

Instrumentation

Three types of suspended sediment samplers were used in this program. All of them have been approved by the Federal Inter-Agency Sedimentation Project of the Inter-Agency Committee on Water Resources, located at the St. Anthony Falls Hydraulic Laboratory in Minneapolis, Minnesota. The three samplers are 1) the depth-integrating suspended sediment wading-type hand sampler, US DH-48; 2) the depth-integrating suspended sediment hand-type sampler, US DH-59; and 3) the point-integrating suspended sediment cable and reel sampler, also used for depth integration, US P-72. More detailed information on these sediment samplers and on the methods used for collecting suspended sediment is provided by Davie (1988).

Data Analysis

After suspended sediment samples were analyzed at the Inter-Survey Geotechnical Laboratory, the data were transferred to a computer format, and a computer printout was sent to each technician. The format allowed the technicians to check the data for errors by making comparisons with the information on their field sheets. The technicians' printouts were returned to the supervisor, and any errors were corrected on a master copy. After all errors were corrected, the data were designated as "provisional data."

Data were extracted from the provisional data for statistical analysis and were formatted according to date, time, stage, temperature, concentration of suspended sediments, and instantaneous water discharge (Qw), taken from records supplied by the USGS.

Instantaneous suspended sediment load (Qs) was computed by the following equation:

$$Qs = Cs(Qw)k \qquad (1)$$

where Cs is the suspended sediment sample concentration (ppm), Qw is the instantaneous water discharge (cfs), and k is a coefficient with the value 0.0027. Instantaneous suspended sediment load (Qs) was calculated for each sample collected within the water year.

The computed values of Qs and the values of Qw for Water Year 1985 for all the stations are given in Appendix A. Appendix B shows the total number of samples collected for analyses of suspended sediment concentration and particle size distribution.

Nonlinear regression equations relating Qs and Qw for each station were developed for the data collected in Water Year 1985. The statistical parameters for the equations are given in Appendix C. The general regression equation is:

$$Qs = a\ (Qw)^{b} \qquad (2)$$

where a is a coefficient and b is slope.

Appendix D presents the results of the particle size analyses for the data collected in Water Year 1985. The results are listed as the total number of bottles composited for analysis, the percent of suspended sediment finer than 62.5 microns in size, and the average suspended sediment concentration in parts per million for the respective number of composited samples.

SUMMARY

In Water Year 1985, 18 instream suspended sediment monitoring stations were maintained by the Illinois Benchmark Network (IBN). Samples were collected weekly by locally hired observers and transferred by IBN technicians to the Inter-Survey Geotechnical Laboratory, Champaign. The laboratory analyzed the samples for sediment concentration in parts per million, as well as for particle size distribution.

Instantaneous values for water discharge (Qw) and sediment discharge (Qs) were used to develop an annual regression equation for each suspended sediment station.

All the data, including those pertaining to water discharge (Qw), suspended sediment load (Qs), and particle size distribution of the suspended sediment samples, are given in the appendices to this report. The appendices also include the statistical parameters for the regression equations relating water discharge and suspended sediment load data for Water Year 1985.

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Appendix A. Suspended Sediment Data and Statistical Parameters for Water Year 1985

Explanation of data set:

Date	Day the sample was taken
Time	Time of sample in 24-hour clock
Stage	Gage height of stream at time of sampling, ft
Temp	Temperature of water in degrees celsius at time of sampling
Cs	Concentration of suspended sediment, mg/l
Qw	Instantaneous water discharge, cfs
Qs	Instantaneous sediment load, tons/day

(Note: station locations can be found on figure 1, and additional information on the stations is given in table 1.)

PECATONICA RIVER at FREEPORT

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/05/84	1300	3.59	13	118	624	199
10/11/84	1430	4.30	15	108	779	227
10/18/84	1130	6.59	12	143	1345	519
10/23/84	1045	11.26	8	114	2810	865
10/31/84	1300	7.99	8	196	1741	921
11/07/84	1645	7.69	6	106	1654	473
11/15/84	1430	7.06	4	124	1475	494
11/21/84	1245	5.89	3	96	1162	301
11/30/84	1400	6.28	4	96	1263	327
12/06/84	1315	4.84	1	48	906	117
12/14/84	1130	5.46	2	55	1055	157
12/19/84	1030	7.28	1	81	1537	336
01/02/85	1350	9.23	0	59	2115	337
01/10/85	1130	6.91	0	71	1433	275
02/18/85	1215	5.38	0	79	1036	221
02/25/85	1200	14.92	0	89	7396	1777
02/28/85	1415	15.41	1	91	8593	2111
03/06/85	1400	11.84	2	52	3069	431
03/15/85	1330	10.34	6	128	2476	856
03/19/85	1230	8.27	7	146	1823	719
03/29/85	1640	8.98	8	150	2037	825
04/05/85	1200	8.63	6	129	1930	672
04/12/85	1210	7.67	11	168	1668	757
04/19/85	1700	6.55	17	123	1412	469
04/27/85	1130	5.93	14	168	1269	576
04/30/85	1330	5.62	14	155	1198	501
05/03/85	1430	5.36	16	155	1138	476
05/10/85	1430	5.06	19	203	1069	586
05/18/85	1500	6.01	17	304	1287	1056
05/29/85	1630	6.12	19	327	1313	1159
06/08/85	1000	4.32	20	376	898	912
06/10/85	1320	4.16	22	371	861	862
06/18/85	1630	4.28	20	216	888	518
06/25/85	1630	4.31	21	293	895	708

PECATONICA RIVER at FREEPORT (concluded)

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
07/02/85	1630	4.34	24	311	902	757
07/09/85	1630	3.55	26	142	719	276
07/16/85	1900	3.55	25	234	719	454
07/24/85	0930	3.12	22	201	619	336
07/31/85	1400	3.40	21	147	684	271
07/31/85	1630	3.40	21	314	684	580
08/07/85	1130	3.18	23	190	633	325
08/14/85	1630	3.43	21	157	691	293
08/20/85	1630	3.28	20	198	657	351
08/31/85	1200	3.73	19	220	761	452
09/10/85	1600	5.17	22	270	1094	797
09/14/85	1130	3.43	20	185	691	345
09/21/85	1045	3.79	18	182	775	381
09/26/85	1630	4.04	19	275	833	618

ROCK RIVER at ROCKTON

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/05/84	1200	2.78	13	102	1901	523
10/09/84	1715	3.68	16	60	3143	509
10/18/84	1030	4.10	12	74	3779	755
10/23/84	1000	6.66	9	151	8283	3377
10/31/84	1145	6.28	8	59	7554	1203
11/07/84	1345	7.53	5	56	10020	1515
11/15/84	1320	6.76	5	37	8478	847
11/21/84	1115	5.84	3	30	6735	545
11/30/84	1320	5.70	3	48	6480	840
12/06/84	1200	4.47	1	26	4367	307
12/14/84	1000	5.04	2	19	5316	273
12/19/84	1000	5.42	1	30	5978	484
12/27/84	1115	5.17	1	15	5540	224
01/04/85	1330	7.09	0	36	9130	887
01/10/85	1030	7.11	0	15	9170	371
01/18/85	1000	8.44	0	9	11940	290
02/18/85	1050	4.96	0	73	5180	1021
02/25/85	1100	9.22	1	77	13670	2842
02/26/85	1400	10.38	0	110	16370	4862
03/06/85	1300	10.49	1	48	16640	2156
03/15/85	1230	9.00	4	43	13170	1529
03/19/85	1030	8.37	5	75	11790	2387
03/29/85	1400	7.89	8	74	10770	2152
04/06/85	1500	8.02	5	83	11040	2474
04/12/85	1045	7.64	10	73	10250	2020
04/19/85	1500	6.75	15	66	8458	1507
04/26/85	1000	6.25	15	70	7498	1417
05/09/85	1050	4.83	18	75	4960	1004
05/16/85	1130	4.74	17	160	4810	2078
05/23/85	1515	4.28	21	78	4062	855
05/30/85	1515	4.63	22	252	4628	3149
06/07/85	0900	3.60	20	169	3026	1381
06/07/85	1220	3.36	20	202	2682	1463
06/13/85	1445	3.45	19	215	2809	1631
06/20/85	1500	3.25	22	117	2528	799
06/27/85	1400	3.64	28	144	3084	1199

ROCK RIVER at ROCKTON (concluded)

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
07/05/85	0515	2.91	20	156	2070	872
07/11/85	1230	2.83	26	198	1966	1051
07/18/85	1500	2.69	27	108	1787	521
07/23/85	1145	3.34	25	114	2654	817
07/25/85	1135	2.88	24	138	2030	756
08/02/85	0800	3.28	21	71	2570	493
08/08/85	1400	3.10	26	92	2323	577
08/16/85	1500	3.06	25	96	2269	588
08/23/85	1045	3.46	23	62	2824	473
08/29/85	0800	3.29	21	123	2584	858
09/06/85	0800	3.48	24	91	2852	701
09/10/85	1230	5.51	22	89	6138	1475
09/13/85	1430	6.50	20	79	7974	1701
09/20/85	1305	4.09	22	88	3764	894
09/26/85	1435	4.11	14	61	3795	625

KISHWAUKEE RIVER near PERRYVILLE

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/05/84	1030	5.14	13	84	140	32
10/09/84	1400	5.24	16	43	175	20
10/18/84	0930	5.77	12	55	399	59
10/23/84	0845	6.12	17	51	578	80
10/31/84	1000	6.12	7	79	578	123
11/07/84	1215	6.31	6	37	684	68
11/15/84	1215	6.15	6	35	594	56
11/26/84	1300	5.79	7	56	408	62
12/06/84	1040	5.99	1	49	509	67
12/14/84	0900	6.77	1	61	967	159
12/19/84	0900	6.95	1	86	1086	252
12/27/84	1000	9.18	1	97	2893	758
01/04/85	1230	8.36	0	82	2200	487
01/10/85	0930	6.48	0	59	785	125
02/18/85	0945	6.48	0	48	785	102
02/25/85	0945	12.95	2	126	6725	2288
02/26/85	1115	13.61	0	112	7481	2262
05/16/85	1400	6.12	17	95	580	149
05/22/85	1020	5.84	16	95	434	111
05/31/85	1204	5.82	21	109	424	125
06/07/85	1530	5.61	23	94	326	83
06/14/85	1110	5.57	18	128	308	106
06/20/85	1655	5.61	24	130	326	114
06/28/85	1040	5.51	22	122	282	93
07/05/85	1000	5.79	23	68	410	75
07/11/85	1400	5.44	25	52	253	35
07/19/85	1250	5.24	24	137	175	65
07/23/85	1620	5.14	26	79	140	30
07/31/85	1100	5.53	20	113	291	89
08/09/85	1320	5.14	26	154	140	58
08/15/85	1310	5.96	22	119	495	159
08/26/85	1618	5.44	22	116	253	79
08/30/85	1230	5.24	22	99	175	47
09/05/85	1430	5.15	24	56	144	22
09/09/85	1635	5.39	24	70	232	44
09/20/85	1005	5.10	20	107	127	37
09/30/85	1400	5.14	15	92	140	35

BIG BUREAU CREEK at PRINCETON

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/17/84	1100	2.83	15	78	135	28
10/04/84	1200	2.72	14	17	115	5
10/10/84	1100	2.75	17	20	120	6
10/26/84	1100	2.82	10	38	133	14
11/02/84	1200	3.87	7	542	430	629
11/09/84	1100	2.88	10	56	144	22
11/14/84	1015	2.84	4	19	136	7
11/21/84	1100	2.59	1	70	94	18
11/27/84	1140	2.77	9	114	124	38
12/06/84	1120	2.96	0	52	160	22
12/13/84	1205	2.83	0	11	135	4
12/18/84	1100	3.23	1	71	223	43
12/26/84	1120	3.47	0	94	293	74
01/09/85	1200	3.09	0	38	189	19
02/18/85	1425	2.84	0	14	136	5
02/25/85	1210	6.45	1	1057	1860	5308
03/05/85	1040	7.05	0	2432	2312	15181
03/14/85	0930	3.69	3	116	368	115
03/18/85	0945	3.23	3	95	223	57
03/28/85	1100	3.07	13	126	184	63
04/03/85	1050	3.29	9	95	239	61
04/11/85	1050	2.94	9	76	156	32
04/25/85	1200	2.58	16	94	93	24
05/10/85	1130	2.30	22	51	57	8
05/17/85	0930	2.45	14	68	75	14
05/22/85	1520	2.23	22	60	50	8
05/30/85	1025	2.10	19	43	38	4
06/06/85	1530	2.00	23	40	31	3
06/13/85	1500	1.97	21	104	29	8
06/19/85	1330	1.90	22	25	24	2
06/26/85	1050	1.89	27	48	23	3
07/03/85	0940	2.02	24	38	32	3
07/11/85	1710	1.82	28	184	19	9
07/19/85	1630	1.87	25	60	22	4
07/26/85	1630	1.71	28	48	14	2
07/29/85	1155	1.63	28	39	11	1

BIG BUREAU CREEK at PRINCETON (concluded)

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
08/02/85	1600	1.62	28	36	10	1
08/20/85	1330	1.54	25	26	8	1
08/25/85	1330	1.54	23	27	8	1
09/03/85	1500	1.53	27	32	7	1
09/10/85	1600	1.52	24	33	7	1
09/11/85	1715	1.51	23	31	7	1
09/23/85	1700	1.64	17	59	11	2

VERMILION RIVER near LEONORE

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/03/84	1030	2.72	14	54	15	2
10/10/84	1030	2.77	18	52	17	2
10/17/84	1445	2.87	17	80	25	5
10/23/84	1030	3.06	10	71	47	9
10/26/84	1500	3.05	12	59	46	7
11/07/84	1045	3.23	7	6	75	1
11/14/84	1100	4.01	6	46	265	33
11/20/84	1030	3.22	2	13	74	3
11/27/84	0945	3.29	9	29	88	7
12/05/84	0945	3.55	0	13	145	5
12/11/84	1230	3.39	2	11	108	3
12/19/84	1300	4.05	3	21	279	16
01/02/85	1415	12.84	2	1068	6955	20055
01/10/85	1200	4.65	0	16	510	22
01/16/85	1000	4.12	0	7	300	6
02/23/85	1300	5.56	-	382	1000	1031
02/26/85	1200	14.49	-	850	9000	20655
03/07/85	1015	12.00	3	184	6000	2981
03/13/85	1400	7.39	5	299	2050	1655
03/20/85	1400	5.29	8	35	840	79
03/27/85	1400	4.44	12	33	440	39
04/03/85	1000	8.67	9	164	3000	1328
04/10/85	1400	7.82	7	71	2351	451
04/19/85	1600	5.27	20	57	831	128
04/27/85	1400	4.50	18	56	470	71
05/03/85	0900	4.26	16	52	358	50
05/08/85	1400	4.90	20	49	639	84
05/15/85	1000	4.10	21	51	296	41
05/22/85	1200	3.92	18	71	237	45
05/22/85	1500	3.91	19	37	234	23
05/30/85	1400	3.79	25	70	200	38
06/04/85	1045	3.41	19	61	113	19
06/11/85	1400	4.01	21	13	265	9
06/19/85	1600	4.55	22	46	489	61
06/25/85	1500	3.54	28	28	143	11

VERMILION RIVER near LEONORE (concluded)

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
07/03/85	1600	3.85	27	41	217	24
07/09/85	1030	3.55	27	32	145	12
07/12/85	1500	3.83	25	34	211	19
07/17/85	1400	4.86	26	99	621	16
07/25/85	1800	3.58	28	16	151	6
07/31/85	1200	3.97	23	32	252	22
08/07/85	1100	3.90	23	19	231	12
08/15/85	1000	2.87	21	24	25	2
08/20/85	1030	2.88	22	32	26	2
08/22/85	1600	3.34	23	16	98	4
08/28/85	1400	3.37	25	25	104	7
09/04/85	1200	3.25	22	38	79	8
09/12/85	1400	3.39	19	37	108	11
09/19/85	1400	3.13	24	24	58	4
09/26/85	1200	3.31	14	28	92	7

MAZON RIVER near COAL CITY

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/04/84	1400	0.89	15	21	6	0
10/10/84	1520	0.96	18	22	9	0
10/17/84	0930	1.04	13	17	12	1
10/26/84	0900	1.07	10	11	14	0
11/02/84	1400	1.89	7	90	129	31
11/09/84	1300	1.14	9	14	19	1
11/14/84	1225	1.65	5	30	81	7
11/21/84	0930	1.21	1	9	25	1
11/29/84	1200	2.67	5	83	361	81
12/13/84	1010	1.47	2	7	54	1
12/18/84	0930	2.10	2	39	180	19
12/28/84	1255	2.47	6	25	290	20
01/03/85	0945	4.85	0	132	1457	519
01/09/85	0930	2.57	0	11	324	10
02/11/85	1400	2.21	0	109	209	61
02/24/85	0850	16.18	2	882	15680	37340
03/05/85	1300	8.49	1	661	4414	7878
03/14/85	1100	4.96	3	119	1525	490
03/18/85	1115	3.23	5	108	610	178
03/28/85	1300	4.09	11	324	1031	902
04/03/85	1230	3.78	10	125	880	297
04/11/85	1330	2.97	8	55	485	72
04/18/85	1800	2.62	19	11	343	10
04/24/85	1700	2.22	-	103	212	59
04/30/85	1700	1.82	-	68	113	21
05/03/85	1420	1.82	16	46	113	14
05/17/85	0800	1.67	-	48	85	11
06/06/85	1140	1.36	21	65	40	7
06/15/85	1830	1.92	-	267	136	98
06/23/85	1720	1.61	-	157	75	32
07/02/85	1700	1.86	-	17	122	6
07/11/85	1830	1.24	-	39	28	3
07/22/85	1640	1.00	30	14	10	0
07/22/85	1800	0.97	28	16	10	0
08/15/85	1500	1.48	25	34	55	5
09/12/85	1800	1.37	20	79	41	9
09/13/85	1245	1.25	18	61	29	5
09/27/85	1640	1.04	19	44	12	1

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KANKAKEE RIVER near WILMINGTON

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/04/84	1450	2.39	16	15	5974	242
10/10/84	1630	2.48	17	37	6395	639
10/17/84	0900	2.57	15	19	6830	350
10/26/84	0815	2.91	11	36	8590	835
11/02/84	1600	2.89	8	16	8481	366
11/09/84	1400	3.01	9	14	9143	346
11/14/84	1340	3.75	6	53	13720	1963
11/21/84	0830	3.21	2	29	10300	806
11/29/84	1115	3.47	6	79	11890	2536
12/06/84	1400	3.28	0	20	10710	578
12/13/84	0925	3.25	2	26	10530	739
12/18/84	0900	3.91	3	41	14820	1641
12/28/84	1215	4.01	6	28	15520	1173
01/03/85	0900	6.63	0	346	39260	36677
01/09/85	0900	4.89	0	37	22390	2237
02/24/85	1140	10.10	1	712	85360	164096
02/27/85	1330	8.46	2	239	61550	39718
03/05/85	1400	7.70	2	363	51740	50710
03/14/85	1200	6.49	4	277	37740	28226
03/18/85	1230	5.56	5	105	28370	8043
03/28/85	1200	5.02	11	135	23500	8566
04/03/85	1300	6.25	8	177	35210	16827
04/11/85	1430	5.67	7	53	29410	4209
04/18/85	1700	4.91	17	44	22550	2679
04/24/85	1830	4.45	16	149	18810	7567
05/02/85	1220	3.92	16	70	14890	2814
05/09/85	1730	3.55	22	78	12400	2611
05/16/85	1800	3.35	19	76	11140	2286
06/05/85	1355	1.65	21	68	2925	537
06/13/85	1230	1.41	19	39	2135	225
06/19/85	1130	1.77	21	3	3367	27
06/28/85	1300	1.39	24	23	2075	129
07/03/85	1210	1.30	25	48	1814	235
07/09/85	1700	1.26	29	17	1704	78
07/17/85	1540	1.20	29	63	1545	263
07/22/85	1420	0.93	27	41	927	103
07/26/85	1600	1.00	29	81	1073	235

KANKAKEE RIVER near WILMINGTON (concluded)

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
08/03/85	1020	0.95	26	69	968	180
08/09/85	1415	1.44	27	81	2227	487
08/16/85	1525	1.53	26	33	2514	224
08/23/85	1435	1.29	24	28	1786	135
08/29/85	1150	1.13	26	88	1370	325
09/05/85	1850	1.00	27	82	1073	238
09/12/85	1300	1.06	21	62	1205	202
09/15/85	1330	1.10	20	78	1298	273
09/22/85	1630	1.04	21	58	1160	182
09/29/85	1620	0.97	19	71	1009	193

KANKAKEE RIVER at MOMENCE

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/03/84	1315	1.25	15	51	697	96
10/10/84	1330	1.40	18	61	852	140
10/17/84	1245	1.50	17	71	962	184
10/23/84	1330	1.69	12	44	1188	141
10/26/84	1300	1.80	12	45	1328	161
11/07/84	1245	1.90	8	42	1461	166
11/14/84	1300	2.17	7	68	1851	340
11/20/84	1215	2.02	5	82	1629	361
11/27/84	1130	1.85	9	77	1394	290
12/05/84	1130	2.05	1	21	1672	95
12/11/84	1030	1.99	3	38	1586	163
12/19/84	1030	2.30	5	25	2053	139
01/02/85	1230	3.45	3	167	4127	1861
01/10/85	1000	3.15	0	36	3568	347
01/16/85	1330	3.15	0	25	3568	241
02/25/85	0930	4.65	1	268	6652	4813
03/04/85	1155	4.72	5	274	6813	5040
03/11/85	0930	4.25	7	51	5760	793
03/18/85	1730	4.04	6	37	5312	531
03/25/85	1730	3.61	7	33	4437	395
04/01/85	1530	4.08	7	126	5396	1836
04/08/85	1740	3.98	6	40	5186	560
04/15/85	1745	3.90	14	28	5021	380
04/22/85	1730	3.53	20	23	4281	266
04/29/85	1940	2.97	16	68	3241	595
05/07/85	1800	2.42	20	72	2249	437
05/13/85	1345	2.10	22	103	1746	486
05/21/85	1330	2.20	18	100	1897	512
05/31/85	1145	1.98	21	94	1572	399
06/27/85	1230	1.62	26	115	1102	342

HENDERSON CREEK near OQUAWKA

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/02/84	1300	12.00	13	36	24	2
10/11/84	1315	12.18	17	72	37	7
10/18/84	1300	13.69	12	428	171	198
10/24/84	1345	12.85	10	50	90	12
10/29/84	1215	13.64	11	141	166	63
11/08/84	1245	14.71	11	61	282	46
11/13/84	1300	13.98	7	102	201	55
11/19/84	1300	13.75	4	62	177	30
11/28/84	1300	14.95	6	137	310	115
12/10/84	1300	13.84	1	29	186	15
12/17/84	1330	15.13	6	100	332	90
12/27/84	1300	15.07	2	71	325	62
01/11/85	1315	16.87	0	73	556	110
02/22/85	1400	25.16	5	769	3896	8089
02/25/85	1535	24.38	5	764	2959	6104
02/26/85	0845	25.27	4	638	4054	6983
02/27/85	0900	20.83	4	467	1345	1696
02/28/85	1515	19.44	6	368	997	991
03/01/85	1030	19.38	6	368	985	979
03/02/85	1620	19.10	7	302	928	757
03/03/85	1710	18.78	4	357	864	833
03/05/85	1610	26.65	4	1407	6870	26098
03/06/85	1010	24.71	3	679	3302	6054
03/07/85	1130	22.51	5	512	1865	2578
03/08/85	0915	21.09	5	372	1423	1429
03/10/85	1545	19.16	8	239	940	607
03/11/85	1100	20.69	8	690	1304	2429
03/14/85	1715	19.20	9	218	948	558
03/21/85	1700	16.76	8	116	541	169
03/28/85	1715	17.42	17	915	632	1561
04/02/85	1610	14.72	18	50	284	38
04/12/85	1755	15.62	19	68	392	72
04/19/85	1545	14.94	23	58	309	48
04/23/85	1425	14.70	21	134	281	102
04/25/85	1720	14.52	18	67	261	47
05/04/85	1800	16.52	11	124	509	170
05/09/85	1400	13.79	20	43	181	21
05/17/85	1930	15.41	16	240	366	237
05/24/85	1930	13.87	20	119	189	61
05/30/85	1915	13.88	22	234	191	121

HENDERSON CREEK near OQUAWKA (concluded)

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
06/05/85	1100	13.41	18	128	143	49
06/05/85	1330	13.39	19	94	141	36
06/13/85	1945	13.09	19	59	112	18
06/20/85	1915	13.00	23	57	104	16
06/27/85	1645	13.24	25	71	126	24
07/05/85	1700	12.72	27	27	79	6
07/12/85	1830	12.55	21	21	65	4
07/19/85	1550	12.26	24	23	42	3
07/23/85	1045	12.25	22	43	42	5
07/26/85	1650	12.38	27	37	51	5
08/02/85	1915	12.18	25	24	37	2
08/09/85	2000	11.94	25	38	21	2
08/18/85	1920	12.01	25	33	25	2
08/23/85	1745	11.86	21	44	16	2
08/28/85	1030	11.93	-	333	20	18
08/30/85	1730	11.89	26	38	18	2
09/06/85	1930	11.78	30	30	12	1
09/15/85	1710	12.13	19	56	33	5
09/20/85	1730	11.99	21	76	24	5
09/27/85	1850	12.16	15	83	35	8

SPOON RIVER at LONDON MILLS

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/02/84	1400	2.28	13	74	34	7
10/11/84	1430	2.28	19	117	34	11
10/18/84	1445	3.03	14	82	186	41
10/24/84	1545	2.95	11	61	168	28
10/29/84	1600	2.97	12	99	173	46
11/08/84	1400	3.41	10	100	275	74
11/13/84	1400	3.55	6	108	311	91
11/19/84	1430	3.09	4	146	198	78
11/28/84	1630	3.70	6	129	347	121
12/10/84	1515	3.05	2	103	190	53
12/17/84	1500	4.37	5	78	521	110
12/27/84	1600	5.29	1	105	801	227
01/11/85	1415	4.80	0	64	646	112
01/18/85	1400	5.40	0	50	837	113
01/23/85	1330	4.48	0	122	551	181
02/22/85	1450	16.88	-	1015	8244	22593
03/05/85	1530	23.80	-	3110	23470	197078
03/11/85	1450	11.89	9	848	3765	8620
03/11/85	1700	12.30	-	881	4054	9643
03/22/85	0930	7.12	-	201	1349	732
04/07/85	1700	7.29	8	212	1416	810
04/14/85	1530	6.90	15	157	1265	536
04/21/85	1800	5.38	22	163	744	327
04/23/85	1630	5.30	21	143	721	278
04/28/85	1800	4.92	19	153	616	254
05/09/85	1630	4.37	22	135	475	173
05/12/85	1930	4.34	22	150	467	189
05/17/85	1000	6.63	15	1160	1166	3652
05/27/85	1500	4.50	21	201	510	277
06/02/85	1830	4.30	23	74	457	91
06/05/85	1400	4.16	20	156	422	178
06/09/85	2030	3.92	24	42	365	41
06/17/85	1330	3.77	22	81	333	73
06/24/85	1200	4.37	-	333	475	427

SPOON RIVER at LONDON MILLS (concluded)

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
07/01/85	1930	3.72	-	216	322	188
07/07/85	1445	3.18	-	53	214	31
07/15/85	1900	3.28	-	44	233	28
07/21/85	1930	2.65	26	31	121	10
07/23/85	1345	2.63	26	56	118	18
07/29/85	1730	2.43	25	64	89	15
08/04/85	1840	2.38	22	108	82	24
08/12/85	1800	2.22	27	72	62	12
08/19/85	1740	2.30	22	81	72	16
08/25/85	1230	2.10	20	108	47	14
08/28/85	1345	2.20	24	48	60	8
08/31/85	1830	2.11	23	110	48	14
09/08/85	1845	1.95	29	60	31	5
09/23/85	1145	2.25	17	71	66	13
09/29/85	1745	2.08	16	60	44	7

LA MOINE RIVER at COLMAR

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/02/84	1145	2.30	12	52	4	1
10/11/84	1200	2.58	18	92	13	3
10/18/84	1145	4.55	14	195	153	81
10/24/84	1215	3.44	9	64	60	10
10/29/84	1030	3.94	11	82	98	22
11/08/84	1200	5.38	9	43	243	28
11/13/84	1200	5.40	7	42	245	28
11/19/84	1215	4.45	5	26	143	10
11/28/84	1130	6.81	7	158	432	184
12/10/84	1215	4.35	2	81	134	29
12/17/84	1115	7.44	7	127	528	181
12/27/84	1115	6.34	1	35	365	34
01/11/85	1200	6.39	0	28	372	28
01/17/85	1145	5.72	0	48	284	37
02/25/85	0914	23.04	-	544	11180	16421
03/04/85	0910	24.25	-	1942	17340	90921
03/11/85	1159	19.81	-	2249	4115	24987
03/12/85	1400	21.37	8	1073	6295	18237
03/18/85	1159	8.98	-	163	765	337
03/25/85	1201	7.21	-	50	486	66
04/01/85	1224	8.34	-	159	*651*	282
04/08/85	1335	6.46	-	33	381	34
04/15/85	1410	5.86	-	758	304	622
04/23/85	1249	5.39	22	143	244	94
04/24/85	1315	5.19	20	227	221	135
04/30/85	1206	4.89	20	75	188	38
05/06/85	1515	6.57	19	96	395	102
05/13/85	1337	5.57	20	359	266	258
05/20/85	1513	6.61	20	168	401	182
05/29/85	0808	6.25	17	181	354	173
06/03/85	1516	4.14	24	72	114	22
06/04/85	1335	4.70	19	82	168	37
06/10/85	1459	4.29	24	52	128	18
06/18/85	1121	4.32	20	157	130	55
06/24/85	1611	4.19	25	156	119	50

LA MOINE RIVER at COLMAR (concluded)

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
07/01/85	1609	3.76	24	94	83	21
07/08/85	1751	3.52	23	85	65	15
07/15/85	1043	3.39	23	150	56	23
07/22/85	1103	3.14	24	172	40	19
07/24/85	1400	3.23	27	100	45	12
07/29/85	1215	3.12	25	82	39	9
08/05/85	0851	2.95	20	74	30	6
08/15/85	1147	7.62	20	2649	546	3905
08/26/85	0805	2.68	17	104	17	5
08/29/85	1300	2.65	22	93	16	4
09/16/85	1215	2.32	18	98	6	2
09/23/85	1203	3.18	16	91	42	10
09/29/85	1745	2.08	16	60	0	0

LA MOINE RIVER at RIPLEY

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/02/84	1045	4.75	11	53	47	7
10/11/84	1030	4.80	18	145	51	20
10/18/84	1045	7.40	15	314	463	392
10/24/84	1015	6.20	9	79	228	49
10/30/84	1100	5.70	12	57	151	23
11/08/84	1030	8.26	9	87	667	157
11/13/84	1030	8.76	7	139	798	299
11/19/84	1100	6.98	5	56	374	56
11/29/84	1100	10.13	7	263	1203	854
12/10/84	1045	6.68	2	58	315	49
12/17/84	1030	10.55	6	301	1340	1089
12/28/84	1130	8.64	4	45	766	93
01/11/85	1100	8.62	0	47	761	97
01/17/85	1315	8.04	0	31	612	51
02/24/85	0930	26.70	3	1621	18400	80531
03/03/85	0830	17.45	6	647	3973	6940
03/10/85	0800	22.43	9	528	8041	11463
03/12/85	1030	21.52	7	890	6825	16400
03/17/85	0800	17.11	8	488	3792	4996
03/24/85	0800	12.25	9	190	1611	826
03/31/85	0800	12.38	10	866	1658	3877
04/07/85	0800	10.37	10	108	1017	297
04/13/85	0800	8.96	15	72	650	126
05/05/85	0800	9.55	17	229	796	492
05/12/85	0800	7.77	21	102	394	108
06/02/85	0800	7.05	24	101	272	74
06/09/85	0900	6.48	24	83	184	41
06/23/85	0800	5.88	23	108	112	33
06/30/85	0800	5.62	23	108	85	25
07/14/85	0800	5.20	26	119	49	16
07/21/85	0800	5.20	26	108	49	14
07/28/85	1700	5.04	28	114	38	12
08/04/85	0800	5.65	22	150	88	36
08/11/85	0800	5.10	25	659	42	75
08/18/85	0800	6.60	23	181	201	98
08/29/85	1030	5.10	21	1100	42	125

LA MOINE RIVER at RIPLEY (concluded)

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
09/01/85	0800	5.57	24	344	80	74
09/08/85	0800	4.95	27	87	33	8
09/15/85	0800	4.82	18	87	25	6
09/22/85	0800	5.19	21	118	49	16
09/29/85	0800	5.29	15	110	57	17

SANGAMON RIVER at MONTICELLO

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/02/84	1630	3.76	15	82	10	2
10/12/84	0800	3.90	18	51	13	2
10/19/84	0800	3.86	15	76	12	2
10/25/84	0800	4.22	10	59	25	4
11/01/84	1045	4.36	16	80	31	7
11/07/84	1600	4.22	9	7	25	0
11/13/84	1615	3.93	8	26	14	1
11/19/84	1700	3.93	5	6	14	0
11/26/84	1030	3.89	7	61	13	2
12/05/84	1515	4.42	1	4	34	0
12/11/84	1430	4.25	2	24	26	2
12/18/84	1500	4.77	5	19	53	3
12/26/84	1500	5.51	0	30	109	.9
01/10/85	1430	6.91	1	21	276	16
03/06/85	1530	12.96	4	399	2819	3037
04/15/85	1500	8.58	14	99	553	148
04/25/85	1430	7.29	18	128	333	115
05/02/85	1200	8.03	14	132	453	161
05/09/85	1100	6.89	18	77	273	57
05/15/85	1715	7.12	19	194	307	161
05/22/85	1200	6.27	18	130	191	67
06/01/85	1030	6.06	22	125	167	56
06/06/85	0800	6.04	20	118	165	53
06/13/85	0930	5.46	17	127	104	36
06/21/85	1300	6.03	23	166	164	73
06/28/85	1530	6.82	23	202	263	143
07/03/85	1300	8.26	23	334	494	445
07/10/85	-	6.14	26	230	176	109
07/17/85	0900	8.73	23	371	581	582
07/26/85	1000	5.30	25	146	91	36
08/02/85	1300	4.78	23	85	54	12
08/06/85	1130	5.65	25	97	123	32
08/15/85	1445	7.64	23	304	389	319
08/21/85	0930	6.75	20	159	254	109
08/30/85	1115	5.19	23	110	82	24
09/13/85	1130	4.72	19	75	50	10
09/27/85	1030	4.40	14	46	33	4

KASKASKIA RIVER at VANDALIA

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/11/84	1330	2.62	22	78	121	25
10/24/84	1230	3.75	14	84	323	73
10/29/84	1315	3.34	-	63	243	41
12/11/84	1200	8.61	6	216	1625	948
01/02/85	1340	21.89	5	294	11840	9399
02/27/85	1300	19.80	6	167	8551	3856
04/09/85	1506	17.37	-	277	6157	4605
04/15/85	1337	16.40	-	369	5425	5405
04/22/85	1100	9.72	-	591	2000	3191
04/29/85	1415	7.55	-	262	1298	918
05/07/85	1000	7.30	-	226	1224	745
05/14/85	0900	6.28	-	222	935	560
05/21/85	1000	3.90	-	130	354	124
05/27/85	1430	3.70	-	144	313	122
06/04/85	1315	6.14	-	618	897	1497
06/04/85	1430	6.15	-	728	900	1769
06/19/85	0930	4.75	-	248	543	364
06/25/85	1400	8.64	-	956	1634	4218
07/02/85	0900	6.05	-	397	873	936
07/09/85	1300	5.57	-	321	746	647
07/15/85	1400	5.75	-	317	793	679
07/21/85	1400	5.70	-	262	780	552
07/28/85	1000	3.61	-	212	295	169
08/06/85	1100	4.70	-	437	531	626
08/12/85	1400	3.39	-	216	253	147
08/19/85	1300	5.23	-	411	660	732
08/27/85	1305	3.75	-	167	323	146
09/03/85	0900	2.85	-	143	157	61
09/10/85	1400	2.35	-	129	82	29
09/17/85	0700	2.35	-	112	82	25
09/19/85	1230	2.38	-	103	86	24
09/24/85	0730	2.33	-	134	79	29

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EMBARRAS RIVER at STE. MARIE

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/15/84	1315	1.13	21	53	64	9
10/23/84	1215	4.04	13	254	771	529
10/31/84	1430	1.32	-	47	93	12
11/28/84	1400	10.13	9	704	3265	6206
12/12/84	1215	3.44	7	35	589	56
01/29/85	1350	3.25	2	34	535	49
04/17/85	1350	6.75	-	104	1750	491
04/23/85	1300	4.32	-	119	860	276
04/30/85	1400	3.34	-	75	561	114
05/02/85	1450	10.05	-	586	3226	5104
05/09/85	1500	4.43	-	179	896	433
05/15/85	1400	4.10	-	210	789	447
05/22/85	1450	3.77	-	179	687	332
05/29/85	1400	2.65	-	91	375	92
06/06/85	1300	2.71	-	173	390	182
06/12/85	1300	9.25	-	3231	2843	24801
06/13/85	1255	9.48	-	895	2952	7133
06/20/85	1450	3.33	-	181	558	273
06/26/85	1300	3.70	-	332	666	597
07/03/85	1300	4.65	-	544	969	1423
07/11/85	1450	2.40	-	93	314	79
07/18/85	1300	1.79	-	48	180	23
07/25/85	1500	1.48	-	70	121	23
08/01/85	1345	0.98	-	55	43	6
08/05/85	0745	13.95	-	2397	5287	34217
08/09/85	1550	3.61	-	173	639	298
08/16/85	1500	6.95	-	576	1831	2848
08/21/85	1600	3.50	-	193	607	316
08/30/85	1600	2.35	-	83	302	68
09/06/85	1700	1.57	-	82	137	30
09/13/85	1230	1.39	-	71	105	20
09/21/85	1500	1.17	-	50	70	9
09/28/85	1500	1.07	-	65	55	10

SILVER CREEK near FREEBURG

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/11/84	1100	1.44	18	166	53	26
10/24/84	1030	9.12	13	135	1177	477
10/29/84	1030	3.55	-	120	245	88
11/29/84	1040	14.67	8	211	2955	1870
12/11/84	1000	3.07	4	15	191	9
01/02/85	1100	17.84	4	171	5741	2945
02/27/84	1025	16.68	6	88	4577	1208
03/13/85	1030	7.78	-	419	902	1134
03/19/85	1411	3.37	-	68	224	46
03/26/85	1033	2.28	-	58	116	20
04/09/85	1010	12.15	-	140	1943	816
04/09/85	1040	12.15	-	139	1943	810
04/16/85	1300	9.70	-	216	1306	846
04/27/85	0945	2.85	-	44	169	22
05/02/85	1815	6.26	-	963	636	1837
05/10/85	2000	1.83	-	68	80	16
05/17/85	0800	2.22	-	113	111	38
05/23/85	1900	1.70	-	82	71	17
05/31/85	2000	1.20	-	53	39	6
06/04/85	1030	1.55	-	146	61	27
06/07/85	1100	9.40	-	499	1238	1853
06/14/85	1525	10.06	-	327	1390	1364
06/19/85	1200	5.17	-	252	462	349
07/08/85	1730	1.32	-	238	46	33
07/17/85	1200	0.81	-	62	19	3
07/24/85	1200	1.74	-	110	74	24
07/30/85	1300	1.06	-	128	32	12
08/06/85	0930	1.12	-	117	35	12
08/14/85	0830	3.08	-	407	192	234
08/21/85	0800	1.10	-	99	34	10
08/29/85	1830	1.35	-	106	48	15
09/04/85	0900	0.81	-	64	19	4
09/12/85	0830	0.54	-	11	7	0
09/23/85	0830	0.54	-	137	7	3
09/29/85	1500	0.64	-	14	11	0

LITTLE WABASH RIVER at CARMI

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/15/84	1110	3.37	20	50	343	46
10/23/84	1015	15.18	13	477	4586	5906
10/31/84	1021	14.02	-	140	4023	1521
11/28/84	1021	18.63	9	447	6309	7614
12/12/84	1015	10.77	5	29	2703	212
01/29/85	1015	3.32	2	12	331	11
03/27/85	0951	6.82	-	33	1301	116
05/24/85	1027	4.78	-	124	694	232
06/13/85	1015	9.02	-	192	2058	1067
09/20/85	1030	2.04	-	48	91	12

CACHE RIVER at FORMAN

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
10/16/84	0915	4.68	19	197	246	131
10/22/84	1215	9.12	15	255	867	597
10/30/84	1115	8.81	16	119	815	262
11/13/84	1340	6.08	10	50	411	55
11/19/84	0930	11.35	5	160	1274	550
11/27/84	1115	6.25	9	88	433	103
12/14/84	0900	12.50	12	347	1532	1435
01/03/85	1115	13.81	-	67	1835	332
01/30/85	1100	2.63	2	12	64	2
02/25/85	1230	17.27	8	168	2908	1319
03/07/85	1530	5.91	-	57	390	60
03/11/85	1701	4.91	11	71	271	52
03/15/85	1656	6.03	11	115	405	126
03/19/85	1723	3.72	11	50	151	20
03/23/85	1019	3.60	11	44	140	17
03/27/85	1800	3.25	14	59	110	17
03/31/85	1323	16.41	8	421	2594	2949
04/04/85	1735	13.42	-	42	1745	198
04/08/85	1639	7.48	-	131	606	214
04/12/85	1440	4.95	-	65	276	48
04/14/85	1815	9.29	-	1147	895	2772
04/18/85	1705	7.29	-	93	578	145
04/22/85	1610	4.32	-	38	209	21
04/26/85	1450	5.12	-	160	295	127
04/29/85	1613	7.03	-	137	540	200
05/03/85	1840	8.58	-	168	777	352
05/06/85	1603	8.14	-	92	707	176
05/11/85	1250	4.92	-	45	272	33
05/14/85	1434	8.20	-	426	716	823
05/18/85	1722	4.59	-	85	237	54
05/22/85	1624	12.92	-	1525	1631	6716
05/26/85	1900	8.74	-	94	803	204
05/30/85	1830	5.97	-	40	397	43
06/03/85	1536	3.64	-	36	144	14
06/08/85	0914	4.82	-	180	261	127
06/12/85	1930	8.83	-	436	818	963
06/16/85	1727	4.69	-	106	247	71
06/20/85	1740	5.78	-	172	373	173
06/24/85	1628	3.66	-	77	145	30
06/28/85	1540	6.27	-	787	436	926

CACHE RIVER at FORMAN (concluded)

Date	Time	Stage (ft)	Temp (° C)	Cs (mg/l)	Qw (cfs)	Qs (t/d)
07/02/85	1725	3.25	-	126	110	37
07/07/85	1540	2.20	-	124	38	13
07/13/85	0920	1.68	-	100	14	4
07/27/85	1514	1.67	-	116	14	4
08/03/85	0845	3.23	-	346	109	102
08/10/85	1144	6.85	-	470	515	653
08/16/85	1615	11.09	-	600	1219	1975
08/20/85	1545	9.45	-	102	923	254
08/24/85	0945	13.33	-	892	1724	4152
08/31/85	1800	6.27	-	69	436	81
09/05/85	1655	12.66	-	1032	1569	4372
09/14/85	0745	3.05	-	52	95	13
09/18/85	1300	2.17	-	55	37	5
09/24/85	1200	1.84	-	145	20	8

Appendix B. Suspended Sediment Sample Record,
Water Year 1985

SWS ID	No. of Samples Collected* Suspended sediment	Particle size
102	80	26
103	86	29
105	96	32
118	80	25
122	73	22
123	63	15
124	97	41
125	62	28
228	97	23
229	80	17
242	87	20
245	91	22
249	67	29
361	47	15
362	55	5
367	47	4
370	21	10
378	166	12
Totals	1395	375

*Note: Of the total number of samples collected, 1,324 suspended sediment samples and 370 particle size samples were analyzed at the laboratory.

Appendix C. Statistical Parameters for the Annual Regression Equations, Water Year 1985

$$Qs = a\,Qw^{b}$$

Station name	ISWS ID	Coefficient (a)	Slope (b)	Correlation coefficient (r)	Standard error of estimate
Pecatonica R. at Freeport	102	6.74579	0.60359	0.59051	0.47988
Rock R. at Rockton	103	16.64799	0.47828	0.44140	0.63071
Kishwaukee R. near Perryville	105	0.22794	0.99199	0.92957	0.40207
Big Bureau Cr. at Princeton	118	0.04149	1.33948	0.91195	0.88654
Vermilion R. near Leonore	122	0.01218	1.40580	0.92129	0.88891
Mazon R. near Coal City	123	0.03074	1.34173	0.94579	0.85767
Kankakee R. near Wilmington	124	0.01061	1.30164	0.88833	0.90399
Kankakee R. at Momence **	125	0.06806	1.11083	0.74226	0.68451
Henderson Cr. near Oquawka	228	0.01584	1.55455	0.96530	0.67284
Spoon R. at London Mills	229	0.02107	1.48203	0.96024	0.62561
La Moine R. at Colmar	242	0.10586	1.23890	0.91906	0.99236
La Moine R. at Ripley	245	0.11007	1.23635	0.92270	0.89337
Sangamon R. at Monticello	249	0.02899	1.45069	0.94918	0.67277
Kaskaskia R. at Vandalia	361	0.10211	1.27915	0.95281	0.55335
Embarras R. at Ste. Marie	362	0.00484	1.72294	0.95459	0.70555
Silver Cr. near Freeburg	367	0.12652	1.20601	0.95123	0.74841
Little Wabash R. at Carmi **	370	0.00445	1.55664	0.91716	0.99038
Caches R. at Forman	378	0.04372	1.35744	0.88371	0.92194

Note: Q_w in cfs, Q_s in tons/day

** Station not sampled consistently throughout the entire water year. Refer to data sets presented in Appendix A.

Appendix D. Particle Size Analyses,
Water Year 1985

ISWSID	Date	No. bottles*	%<62.5µ **	Cs***
102	10/11/84	8	95.41	108
102	04/30/85	10	66.69	155
102	07/31/85	8	81.36	147
103	11/07/84	11	92.76	56
103	05/01/85	11	77.84	98
103	07/23/85	7	79.86	114
105	11/26/84	13	51.06	30
105	05/01/85	9	85.06	37
105	07/23/85	10	72.33	79
118	10/10/84	7	98.82	18
118	05/03/85	10	51.28	68
118	07/29/85	8	96.58	39
122	10/23/84	8	66.33	71
122	03/07/85	7	93.59	184
122	05/22/85	3	67.32	71
122	08/20/85	4	90.22	8
123	11/02/84	5	98.91	90
123	07/22/85	5	85.03	14
124	10/10/84	14	75.91	37
124	05/02/85	14	80.76	70
124	07/22/85	13	82.00	41
125	10/24/84	10	84.06	44
125	03/21/85	9	56.98	43
125	05/21/85	9	70.25	100
228	10/24/84	6	98.97	50
228	04/23/85	10	74.80	134
228	07/23/85	7	81.07	255
229	10/24/84	8	98.47	61
229	04/23/85	6	55.02	143
229	07/23/85	3	93.17	56

Appendix D. Concluded

ISWS ID	Date	No. bottles*	% < 62.5 μ **	Cs***
242	10/24/85	6	99.31	64
242	04/24/85	8	78.36	227
242	07/24/85	6	74.26	100
245	10/24/84	8	99.86	79
245	04/24/85	8	85.19	291
245	07/24/85	6	71.94	405
249	10/25/84	7	67.03	59
249	03/06/85	3	98.40	399
249	05/22/85	8	65.05	130
249	08/21/85	11	64.46	159
361	10/24/84	5	98.46	84
361	04/09/85	5	95.02	146
361	09/19/85	5	92.68	103
362	04/11/85	5	91.86	167
367	06/04/85	4	98.38	146
370	04/16/85	5	97.45	113
370	09/20/85	5	97.10	48
378	10/16/84	5	99.87	197
378	04/12/85	5	- -	
378	09/18/85	2	97.76	55

* Represents number of bottles composited for each determination of particle size distribution

** Percent finer than 62.5 microns

*** Concentration of suspended sediment in parts per million for the respective number of composited samples