

03357000 WHITE RIVER AT SPENCER, IN

LOCATION.--Lat 39°16'52", long 86°45'44", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.29, T.10 N., R. 3 W., Owen County, Hydrologic Unit 05120202, (SPENCER, IN quadrangle), on right bank at upstream side of county road bridge at the south edge of Spencer, 3.3 mi upstream from McBrides Creek, 14 mi northwest of Bloomington, and at mile 165.9.

DRAINAGE AREA.--2,988 mi².

PERIOD OF RECORD.--July 1925 to September 1971 (discharge), October 1987 to current year (gage heights only).

REVISED RECORDS.--WDR IN-95-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 526.04 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 26, 1940, nonrecording gage at same site and datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 23.99 ft Jan. 1, 1991; minimum gage height, 0.88 ft Sept. 25, 30, and Oct. 1, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 28.5 ft Mar. 26, 1913, from flood marks.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 22.24 ft, Jan. 6; minimum gage height, 2.92 ft, Sept. 27 - 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.84	5.25	9.83	9.73	5.28	6.48	12.34	4.71	15.87	4.97	4.49	3.95
2	7.76	5.49	8.65	11.32	5.51	7.80	11.16	5.04	13.85	5.07	4.25	3.79
3	6.92	5.83	7.69	11.57	5.89	8.71	9.15	5.41	10.12	4.78	4.10	3.61
4	6.46	5.73	7.18	17.69	5.96	8.64	8.13	5.09	8.09	5.40	4.08	3.57
5	6.24	5.56	7.09	21.75	5.85	9.59	7.36	5.10	7.00	5.69	5.27	3.91
6	5.98	5.39	7.61	21.66	6.33	11.32	6.84	4.92	6.34	5.28	4.50	3.63
7	5.78	5.29	7.58	20.33	6.46	11.60	6.53	4.74	5.87	4.92	4.12	3.49
8	5.55	5.16	7.81	19.30	6.21	9.29	6.31	4.61	5.52	4.71	3.88	3.47
9	5.29	5.00	7.32	15.58	6.19	8.04	6.09	4.44	5.25	5.78	3.73	3.43
10	5.16	4.90	7.76	10.55	5.98	7.35	5.90	4.26	5.08	7.43	3.65	3.37
11	5.03	4.81	8.44	9.40	5.90	6.83	5.71	4.22	5.12	5.95	3.55	3.30
12	4.92	4.89	8.49	8.76	5.96	6.48	5.54	4.14	10.40	6.56	3.50	3.32
13	4.85	5.12	8.21	8.41	5.94	6.24	5.45	4.10	13.65	5.86	3.42	3.22
14	6.27	5.99	7.49	7.89	5.82	6.07	5.29	4.28	15.65	5.71	3.45	3.22
15	8.41	5.91	7.10	7.55	5.88	5.91	5.11	5.91	16.79	5.08	3.42	3.19
16	7.45	---	7.03	7.27	5.68	5.94	4.99	5.37	16.65	4.78	3.39	3.16
17	8.04	---	---	7.26	5.61	6.07	4.88	5.09	18.44	4.49	3.38	3.19
18	7.18	---	7.00	8.71	5.61	5.94	4.80	4.94	18.58	4.40	3.49	3.15
19	6.50	---	---	8.08	6.04	5.90	4.73	6.88	16.54	4.24	3.43	3.10
20	6.03	8.53	---	7.46	7.23	5.86	4.73	7.32	12.14	4.10	3.94	3.08
21	5.68	9.42	---	7.07	9.27	5.91	4.95	6.92	9.29	3.97	5.02	3.04
22	5.44	8.28	6.21	6.74	10.45	6.04	5.06	6.09	8.25	8.42	4.36	3.03
23	5.28	7.43	9.77	6.37	9.13	6.04	5.97	5.54	7.54	6.97	4.08	3.02
24	5.13	9.76	14.69	6.19	8.05	5.81	5.62	5.44	6.91	5.46	4.05	2.99
25	5.07	10.37	15.73	---	7.64	5.63	5.51	5.53	6.41	4.88	5.30	2.99
26	5.57	10.03	15.52	6.02	7.25	6.16	5.61	6.05	6.02	4.61	5.59	2.95
27	5.74	10.34	11.46	6.03	6.82	10.89	5.23	6.27	5.71	4.32	5.40	2.93
28	5.44	11.19	9.47	5.89	6.48	10.76	4.99	6.69	5.48	4.16	4.67	2.92
29	5.37	11.39	8.93	5.73	6.29	10.33	4.81	7.94	5.32	4.01	4.62	2.92
30	5.26	11.57	10.12	---	---	9.35	4.66	11.25	5.14	4.00	4.25	---
31	5.17	---	10.05	---	---	9.90	---	14.57	---	4.27	4.03	---
MEAN	6.06	---	---	---	6.58	7.64	6.12	5.90	9.77	5.17	4.14	---
MAX	8.84	---	---	---	10.45	11.60	12.34	14.57	18.58	8.42	5.59	---
MIN	4.85	---	---	---	5.28	5.63	4.66	4.10	5.08	3.97	3.38	---

03357330 BIG WALNUT CREEK NEAR ROACHDALE, IN

LOCATION.--Lat 39°48'58", long 86°45'12", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.21, T.16 N., R.3 W., Putnam County, Hydrologic Unit 05120203, (ROACHDALE, IN quadrangle), on right upstream bank at County Road 1100 South bridge, 3.4 mi southeast of Roachdale, 9.06 mi upstream from confluence with Plum Creek, and at mile 29.16.

DRAINAGE AREA.--131 mi².

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 800 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	249	72	167	201	e50	280	490	54	237	34	33	9.6
2	225	185	135	208	e50	363	281	69	139	32	28	9.1
3	213	165	118	227	e49	225	202	67	101	32	26	8.9
4	213	133	108	2,380	e48	308	159	60	80	128	83	8.2
5	e195	116	124	2,200	e48	780	136	60	71	81	71	7.7
6	e182	100	141	703	e47	416	126	57	64	51	35	7.7
7	e176	90	131	391	e47	253	117	53	56	45	30	9.0
8	e172	78	123	280	e46	191	112	49	50	35	26	8.3
9	e166	71	116	232	e46	e160	97	49	46	537	24	7.3
10	e166	69	208	198	e45	e140	88	49	47	708	23	7.2
11	e166	79	330	183	e45	122	85	49	267	486	22	7.5
12	e162	96	206	177	e44	108	80	48	527	625	21	7.6
13	e162	91	157	166	e44	97	77	54	411	304	20	7.6
14	e320	88	138	160	e44	96	72	61	201	211	20	7.5
15	e270	78	118	157	e43	87	66	87	231	132	18	7.0
16	225	75	108	141	e42	90	61	74	711	94	17	7.3
17	172	70	110	145	e42	88	57	e66	603	74	17	12
18	143	201	108	210	e49	86	55	66	324	60	15	8.9
19	127	640	92	e160	e228	83	52	158	268	51	15	7.1
20	112	397	81	e138	e387	82	57	174	184	45	26	6.5
21	104	278	82	e115	e285	79	63	135	134	43	36	6.2
22	96	225	80	e103	e180	71	60	125	110	e226	20	6.1
23	90	198	1,900	e95	e150	68	74	147	87	101	16	6.1
24	82	677	1,110	e84	e159	67	63	265	73	62	14	5.5
25	79	430	526	e76	e148	69	63	317	64	48	22	6.0
26	80	291	327	e69	e127	181	57	117	57	41	35	5.8
27	74	246	245	e64	e106	738	53	89	50	43	28	5.9
28	76	259	214	e59	97	355	49	111	46	39	16	6.1
29	75	263	276	e55	99	231	46	88	42	35	14	6.4
30	67	213	379	e52	---	187	46	77	38	36	12	7.2
31	63	---	250	e51	---	745	---	555	---	41	11	---
TOTAL	4,702	5,974	8,208	9,480	2,795	6,846	3,044	3,430	5,319	4,480	794	223.3
MEAN	152	199	265	306	96.4	221	101	111	177	145	25.6	7.44
MAX	320	677	1,900	2,380	387	780	490	555	711	708	83	12
MIN	63	69	80	51	42	67	46	48	38	32	11	5.5
CFSM	1.16	1.52	2.02	2.33	0.74	1.69	0.77	0.84	1.35	1.10	0.20	0.06
IN.	1.34	1.70	2.33	2.69	0.79	1.94	0.86	0.97	1.51	1.27	0.23	0.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

MEAN	85.9	124	224	166	149	288	191	387	145	185	36.2	216
MAX	152	199	315	306	239	363	406	688	207	363	42.8	612
(WY)	(2004)	(2004)	(2002)	(2004)	(2002)	(2002)	(2002)	(2002)	(2002)	(2003)	(2003)	(2003)
MIN	20.2	71.1	92.7	47.4	96.4	221	67.4	111	50.5	48.5	25.6	7.44
(WY)	(2003)	(2003)	(2003)	(2002)	(2004)	(2004)	(2003)	(2004)	(2003)	(2002)	(2004)	(2004)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

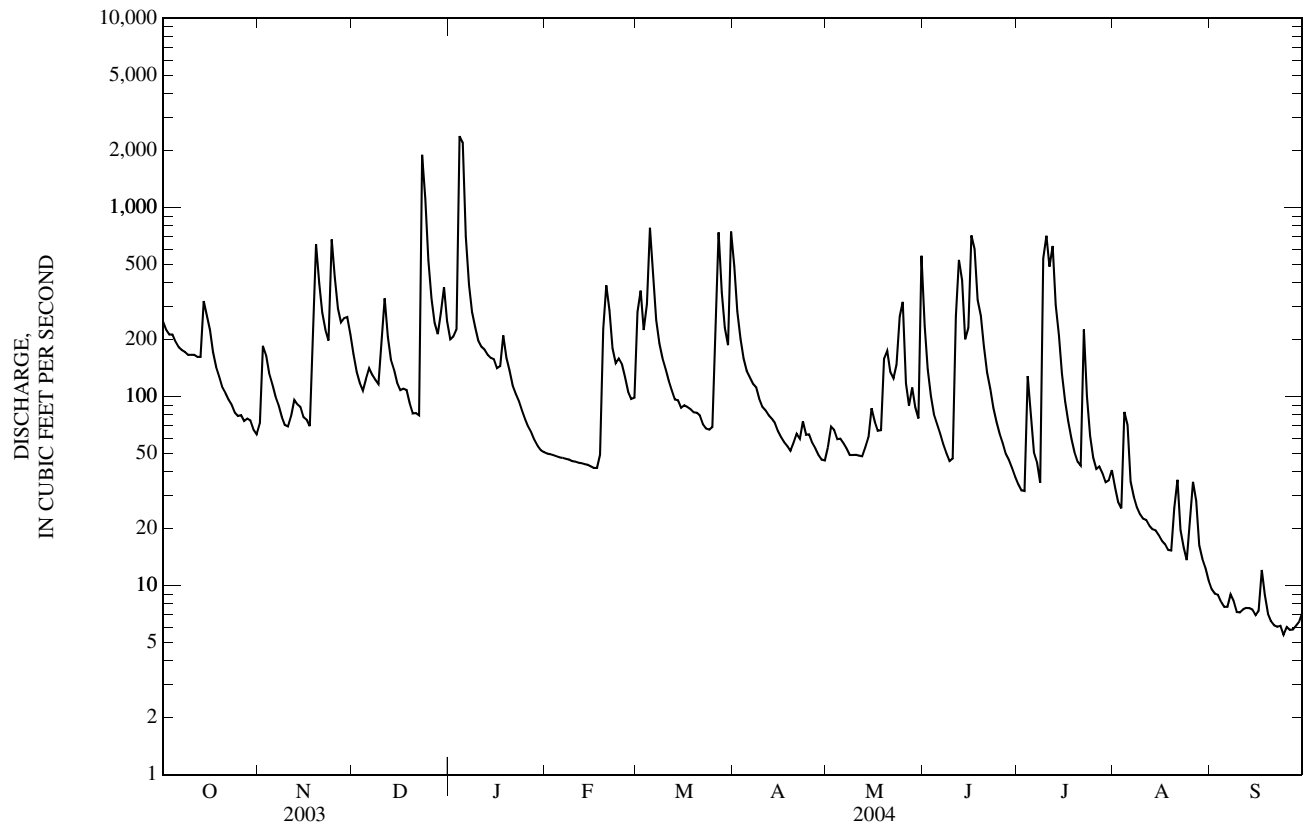
FOR 2004 WATER YEAR

WATER YEARS 2002 - 2004

ANNUAL TOTAL	80,979	55,295.3	
ANNUAL MEAN	222	151	168
HIGHEST ANNUAL MEAN			186
LOWEST ANNUAL MEAN			151
HIGHEST DAILY MEAN	6,490	2,380	6,490
LOWEST DAILY MEAN	19	5.5	5.2
ANNUAL SEVEN-DAY MINIMUM	20	5.9	5.5
MAXIMUM PEAK FLOW		4,320	11,300
MAXIMUM PEAK STAGE		13.40	19.86
ANNUAL RUNOFF (CFSM)	1.69	1.15	1.28
ANNUAL RUNOFF (INCHES)	23.00	15.70	17.45
10 PERCENT EXCEEDS	426	295	329
50 PERCENT EXCEEDS	100	84	76
90 PERCENT EXCEEDS	35	16	20

e Estimated

03357330 BIG WALNUT CREEK NEAR ROACHDALE, IN—Continued



03357330 BIG WALNUT CREEK NR ROACHDALE, IN—Continued

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]

WATER-QUALITY RECORDS

The data described in the following table were collected and analyzed as part of the National Water Quality Assessment Program (NAWQA) in the White River Basin, Miami River Basin (WHMI) study units. The objectives of the NAWQA program are to broadly characterize the water-quality of the Nation's streams and aquifers in relation to human and natural factors. This project is one of 42 river basin and aquifer assessment projects being implemented across the nation on a staggered timeline. During the second decade of sampling, 14 of these projects will be actively collecting data. The period of high-intensity data collection for the WHMI project is in water years 2001-2004.

Water quality data from four stream sites in Indiana and two stream sites in Ohio are being reported as part of the NAWQA study: Big Walnut Creek nr Roachdale, IN (03357330), Little Buck Creek nr Indianapolis, IN (03353637), Sugar Creek at Co. Rd. 400S at New Palestine, IN (394340085524601), White River at Hazleton, IN (03374100), Holes Creek at Huffman Park at Kettering, OH (393944084120700), Mad River at St. Paris Pike near Eagle City, OH (03267900). Additionally, continuous monitor data, water temperature, dissolved oxygen, specific conductance, and pH were collected for all sites except Sugar Creek at Co. Rd. 400S at New Palestine, IN (394340085524601), which were instead collected at Sugar Creek at New Palestine, IN (03361650).

These data can also be obtained electronically at <http://in.water.usgs.gov> or at <http://oh.water.usgs.gov>.

(---, no data; <, concentration or value reported is less than that indicated; E, estimated value;
K, value is estimated from a non-ideal colony count; M, presence verified, not quantified).

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	8.1	8.1	8.3	8.0	e7.9	8.0	8.0	8.0	7.0
2	---	---	---	8.1	8.1	8.1	8.2	8.1	8.1	7.9	7.9	7.0
3	---	---	---	8.1	8.2	8.2	8.2	8.2	8.2	7.8	7.9	6.9
4	---	---	8.3	7.8	8.2	8.2	8.3	8.2	8.3	7.9	7.8	6.9
5	---	---	8.3	7.6	8.2	7.9	8.3	8.1	8.3	8.0	7.7	6.9
6	---	---	8.3	7.7	8.2	8.0	8.3	8.0	8.3	8.0	7.8	6.9
7	---	---	8.3	7.8	8.2	8.1	8.2	7.9	8.2	8.0	7.9	7.8
8	---	---	8.3	7.9	8.2	8.2	8.3	7.9	8.1	8.0	7.8	7.9
9	---	---	8.3	8.0	8.3	---	8.3	7.9	8.1	8.0	7.8	8.0
10	---	---	8.3	8.0	8.3	---	8.3	7.9	8.2	7.7	7.8	8.0
11	---	---	8.2	8.0	8.3	8.3	8.3	e8.0	8.1	7.9	7.8	7.9
12	---	---	8.3	8.1	8.3	8.4	8.3	---	7.9	7.7	7.9	8.0
13	---	---	8.3	8.1	8.3	8.3	8.3	e7.9	7.8	8.0	7.9	7.9
14	---	---	8.3	8.3	8.3	8.3	8.3	7.9	8.1	8.1	7.9	7.9
15	---	---	8.3	8.3	8.4	8.4	8.2	8.0	8.1	8.2	7.9	7.9
16	---	---	8.3	8.3	8.3	8.4	8.2	8.1	7.9	8.3	7.8	7.8
17	---	---	8.3	8.3	8.3	8.4	8.1	---	7.8	8.4	7.7	7.9
18	---	---	8.3	8.3	8.4	8.4	8.0	e8.0	e7.8	8.4	7.6	8.0
19	---	---	8.3	8.3	---	8.4	8.0	8.0	7.8	8.4	7.6	8.0
20	---	---	8.3	8.3	---	8.3	8.0	8.1	8.0	8.0	7.5	8.0
21	---	---	8.3	8.3	---	8.3	8.1	8.1	8.0	7.8	7.5	8.0
22	---	---	8.3	8.3	---	8.3	8.1	8.0	8.0	e7.7	7.4	7.9
23	---	---	7.8	8.3	---	8.3	8.2	8.1	8.0	8.0	7.2	7.9
24	---	---	7.8	8.3	---	8.3	8.1	8.1	8.0	8.1	7.1	7.8
25	---	---	8.0	8.3	---	---	8.1	8.1	8.0	8.1	7.0	7.8
26	---	---	8.1	8.3	---	8.1	8.1	8.1	8.0	8.2	7.0	7.8
27	---	---	8.1	8.2	e8.5	7.9	8.1	8.1	8.0	8.1	6.9	7.9
28	---	---	8.1	8.2	8.4	8.0	8.1	8.2	7.9	8.0	6.9	7.9
29	---	---	8.1	8.2	8.5	8.1	8.1	8.2	7.9	8.0	7.0	8.0
30	---	---	8.0	8.2	---	8.1	7.9	8.1	7.9	8.0	7.0	8.0
31	---	---	8.1	8.1	---	7.9	---	7.7	---	8.1	7.0	---

e Estimated

03357330 BIG WALNUT CREEK NR ROACHDALE, IN—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	13.0	---	12.0	11.0	---	7.7	---	---	---
2	---	---	---	11.6	---	12.2	11.4	10.9	9.0	---	---	---
3	---	---	---	10.7	---	13.0	11.5	11.6	10.4	---	---	---
4	---	---	10.9	12.2	---	12.1	11.8	11.5	10.5	---	---	---
5	---	---	11.0	12.7	---	11.0	12.4	11.7	10.4	---	---	---
6	---	---	11.7	14.2	---	11.4	12.6	10.4	10.7	---	---	---
7	---	---	11.7	14.9	---	12.2	12.4	9.3	10.4	---	---	---
8	---	---	11.5	14.2	---	12.7	12.0	9.6	9.8	8.8	---	7.9
9	---	---	10.8	14.0	---	---	12.4	8.5	9.3	8.3	---	7.8
10	---	---	10.2	14.8	---	---	12.4	7.4	8.5	7.3	---	7.9
11	---	---	11.0	14.5	---	12.6	12.1	e7.5	6.6	7.5	---	8.1
12	---	---	12.7	13.7	---	13.6	12.4	e7.0	3.8	7.1	---	8.0
13	---	---	13.2	13.9	---	13.9	13.2	e6.5	---	7.1	---	7.8
14	---	---	13.1	13.0	---	13.1	13.5	6.6	---	7.3	---	7.5
15	---	---	13.1	12.7	---	13.7	12.2	7.9	---	7.9	---	7.3
16	---	---	12.5	13.0	---	13.7	11.1	8.7	---	8.1	---	6.2
17	---	---	13.4	12.9	---	14.0	10.0	---	---	8.3	---	7.5
18	---	---	13.9	12.8	---	14.3	9.2	e7.8	---	8.6	---	8.1
19	---	---	13.8	14.1	---	14.5	9.0	7.5	---	9.1	---	8.2
20	---	---	14.6	14.5	---	13.0	8.8	7.8	---	9.4	---	8.2
21	---	---	14.8	14.3	---	14.0	9.5	7.8	---	9.1	---	8.2
22	---	---	13.5	14.3	---	14.8	9.5	7.5	---	---	---	8.1
23	---	---	12.0	14.1	---	14.7	10.9	7.2	---	8.0	---	8.0
24	---	---	12.3	---	---	13.5	10.4	7.8	---	9.0	---	7.4
25	---	---	13.0	---	---	---	10.2	7.8	---	7.6	---	7.4
26	---	---	13.3	---	---	10.4	10.4	8.0	---	9.9	---	7.5
27	---	---	13.1	---	e14.5	10.6	10.7	8.0	---	9.9	---	8.0
28	---	---	12.5	---	14.6	10.8	10.8	8.1	---	9.0	---	7.8
29	---	---	11.6	---	14.3	11.1	10.3	8.7	---	7.9	---	8.0
30	---	---	12.5	---	---	11.5	9.1	8.1	---	---	---	8.2
31	---	---	13.0	---	---	10.8	---	6.5	---	---	---	---

e Estimated

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	6.4	1.6	9.3	9.7	e18.2	20.2	23.9	25.2	23.9
2	---	---	---	9.5	1.6	8.7	10.3	15.1	20.2	24.7	26.1	24.4
3	---	---	---	11.5	1.6	7.8	11.4	14.9	20.0	25.7	27.2	25.4
4	---	---	6.2	7.4	1.6	8.7	10.7	14.3	20.2	24.7	26.1	25.7
5	---	---	6.5	5.6	1.6	10.8	10.6	16.6	20.3	24.3	24.1	25.7
6	---	---	5.9	3.2	1.6	9.9	11.5	20.1	21.3	25.7	23.0	25.9
7	---	---	6.4	2.5	1.6	8.3	14.0	21.3	23.3	25.6	22.4	25.6
8	---	---	6.8	3.7	1.6	7.2	15.6	21.3	25.4	23.7	22.8	23.3
9	---	---	8.6	4.2	1.7	---	14.5	22.9	26.2	24.1	23.9	22.7
10	---	---	9.9	2.9	1.6	---	14.7	23.5	25.0	22.6	24.7	22.4
11	---	---	7.7	3.5	1.6	7.9	14.4	e24.0	23.6	23.5	22.9	22.5
12	---	---	4.6	4.8	1.6	5.8	11.3	e23.6	22.3	23.6	20.2	22.5
13	---	---	3.6	4.5	1.6	5.8	8.8	e23.0	22.6	23.9	19.8	23.3
14	---	---	4.0	4.4	1.7	7.8	9.9	21.9	23.7	23.3	19.8	23.8
15	---	---	4.3	4.0	1.6	7.8	13.6	18.5	23.8	23.3	21.0	24.0
16	---	---	5.2	3.8	1.6	6.8	16.8	18.9	22.3	23.8	21.7	23.8
17	---	---	3.9	3.9	1.7	5.9	19.6	---	22.7	24.5	22.6	22.3
18	---	---	3.4	4.2	1.7	5.8	21.0	e22.5	e22.6	24.0	24.0	20.8
19	---	---	3.6	1.8	e1.7	7.7	19.9	22.1	22.4	24.2	24.8	20.4
20	---	---	2.1	1.6	---	9.7	17.8	21.7	20.5	25.2	22.9	20.1
21	---	---	2.1	1.7	---	7.8	18.1	23.6	21.0	26.1	21.9	20.1
22	---	---	4.5	1.6	---	6.4	16.2	24.8	21.6	e25.7	23.0	20.6
23	---	---	6.2	1.7	---	7.5	15.5	24.0	21.2	25.6	24.0	21.2
24	---	---	5.4	1.7	---	10.6	16.2	22.9	22.3	23.5	25.2	21.5
25	---	---	4.9	1.6	---	e12.1	17.4	22.4	21.6	21.4	25.1	21.6
26	---	---	4.9	1.6	---	13.1	17.1	22.2	20.7	20.9	24.7	20.2
27	---	---	5.5	1.6	e6.0	12.1	15.8	22.0	21.7	21.1	25.8	19.4
28	---	---	7.2	1.6	6.2	13.6	15.7	22.3	22.7	22.2	26.6	18.6
29	---	---	8.8	1.6	7.5	14.0	17.9	21.5	22.4	22.8	24.7	17.4
30	---	---	6.7	1.6	---	12.1	19.8	21.9	22.9	22.5	23.6	16.8
31	---	---	6.2	1.6	---	10.3	---	20.7	---	23.8	23.5	---

e Estimated

03357330 BIG WALNUT CREEK NR ROACHDALE, IN—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	618	676	625	445	e595	578	594	584	647
2	---	---	---	622	648	564	497	597	616	595	587	649
3	---	---	---	624	625	589	530	608	630	588	588	650
4	---	---	718	375	637	601	546	619	630	550	531	653
5	---	---	721	282	648	528	556	613	628	515	446	653
6	---	---	714	410	623	532	560	602	620	543	549	650
7	---	---	714	496	620	574	559	606	608	571	576	633
8	---	---	716	557	648	611	555	605	605	587	581	631
9	---	---	717	593	642	---	557	609	606	504	579	630
10	---	---	685	619	623	---	562	609	607	332	578	630
11	---	---	585	638	621	626	570	e614	512	426	581	630
12	---	---	636	650	608	631	582	---	432	344	584	628
13	---	---	670	657	628	634	601	e622	432	434	594	628
14	---	---	684	655	625	630	605	625	514	484	604	625
15	---	---	691	648	603	626	587	612	541	538	609	621
16	---	---	691	647	610	616	572	635	453	568	608	615
17	---	---	693	640	613	631	568	---	464	593	609	622
18	---	---	691	610	601	644	570	e648	e502	609	610	619
19	---	---	692	624	---	639	578	623	544	608	612	600
20	---	---	702	640	---	633	582	625	561	582	584	599
21	---	---	709	639	---	640	592	640	588	546	563	604
22	---	---	698	644	---	641	595	651	598	---	595	607
23	---	---	373	672	---	642	591	644	603	483	612	609
24	---	---	369	656	---	637	603	612	616	543	614	609
25	---	---	466	657	---	e630	606	608	605	564	594	611
26	---	---	523	659	---	622	601	619	598	568	574	606
27	---	---	562	642	e655	521	603	634	588	567	573	606
28	---	---	589	637	665	560	604	631	589	564	606	606
29	---	---	585	650	669	596	602	633	588	560	626	607
30	---	---	560	658	---	616	600	652	599	569	636	604
31	---	---	592	672	---	478	---	509	---	585	642	---

e Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf μ S/cm 25 deg C (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt fxd end field, mg/L as CaCO ₃ (39036)	Alkalinity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)
NOV 24...	1040	915	743	10.5	8.1	450	-1.0	8.1	170	170	E206	<1	21.5
JAN 14...	1240	117	742	13.8	8.4	656	8.0	2.5	270	265	321	1	23.7
MAR 31...	1130	972	740	11.2	7.9	425	18.0	8.1	140	140	E169	E1	29.7
APR 14...	1050	64	751	14.7	8.5	751	21.0	6.5	240	235	232	<1	27.7
MAY 10...	1140	43	732	9.0	7.9	610	26.0	22.5	240	237	E282	E3	29.7
JUN 02...	1140	122	730	8.6	8.2	624	23.0	18.8	230	228	275	1	24.9
JUL 20...	0930	40	729	10.5	8.2	620	31.0	21.7	250	248	295	3	26.8
SEP 07...	1100	8.2	735	7.9	8.1	633	32.0	23.4	250	248	299	2	31.6

03357330 BIG WALNUT CREEK NR ROACHDALE, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Sus- pended sedi- ment concen- tration mg/L (80154)
NOV 24...	19.0	0.05	3.72	0.018	0.79	0.199	0.630	8.5	0.2	8.3	6.0	238
JAN 14...	39.4	<.04	3.77	.053	.02	.006	.041	0.2	<.1	0.2	2.9	26
MAR 31...	24.5	<.04	4.25	.042	.28	<.006	.178	2.1	<.1	2.1	3.7	544
APR 14...	39.6	<.04	2.81	.014	.07	<.006	.010	.4	<.1	.4	2.3	14
MAY 10...	41.4	<.04	0.89	.046	.04	<.006	.024	.5	<.1	.4	3.3	42
JUN 02...	27.1	<.04	8.61	.108	.09	.046	.080	.5	<.1	.5	2.7	32
JUL 20...	36.3	<.04	1.72	.012	.06	E.004	.019	.3	<.1	.2	2.4	60
SEP 07...	36.9	<.04	.44	.010	.11	.019	.064	.7	<.1	.7	3.0	19

03357350 PLUM CREEK NEAR BAINBRIDGE, IN

LOCATION.--Lat 39°45'42", long 86°43'46", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.15 N., R.3 W., Putnam County, Hydrologic Unit 05120203, (NORTH SALEM, IN quadrangle), on right upstream wingwall of bridge on U.S. Highway 36, 0.5 mi west of Groveland, and 4.5 mi east of Bainbridge.

DRAINAGE AREA.--3.00 mi².

PERIOD OF RECORD.--July 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 828.44 ft above National Geodetic Vertical Datum of 1929 (Indiana Department of Highways bench mark).

REMARKS.--Records fair except those for Jan. 19 to Feb. 2, and Feb. 16-18, and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.83	1.0	2.7	4.1	1.3	7.4	6.6	0.64	3.9	0.39	0.23	0.23
2	0.70	5.3	2.3	5.4	1.4	6.6	4.9	0.91	2.0	0.36	0.18	0.21
3	0.69	2.4	2.1	6.5	e1.3	4.7	4.0	0.68	1.3	0.56	0.18	0.20
4	0.68	1.5	2.0	119	e1.3	8.9	3.3	0.63	1.1	1.5	4.7	0.20
5	0.56	1.1	3.3	20	e1.2	12	2.7	0.60	1.00	0.57	1.3	0.19
6	0.50	1.1	3.2	8.5	e1.2	7.2	3.1	0.52	0.86	0.47	0.62	0.18
7	0.46	0.91	2.7	6.0	e1.2	5.2	2.5	0.45	0.72	0.48	0.42	0.20
8	0.47	0.81	2.5	5.1	e1.2	4.1	1.6	0.42	0.64	0.37	0.32	0.17
9	0.50	0.74	2.2	4.3	e1.2	3.4	1.3	0.40	0.56	0.70	0.26	0.17
10	0.51	0.77	5.3	3.6	e1.2	2.6	1.2	0.36	0.58	2.5	0.22	0.17
11	0.49	0.91	5.0	3.5	e1.1	2.3	1.2	0.36	2.3	2.6	0.19	0.16
12	0.46	1.2	3.6	3.0	e1.1	1.8	1.1	0.44	1.4	2.0	0.19	0.16
13	0.46	0.81	3.0	2.7	e1.1	1.6	1.0	0.68	1.0	0.99	0.19	0.17
14	8.8	0.76	2.7	2.6	e1.1	1.7	0.93	0.96	0.76	1.4	0.19	0.17
15	6.8	0.77	2.2	2.2	e1.0	1.5	0.87	0.92	18	0.69	0.18	0.17
16	3.8	0.74	2.4	2.0	0.97	1.7	0.84	0.72	38	0.52	0.18	0.30
17	2.1	0.67	2.1	3.4	1.0	1.7	0.81	0.68	11	0.42	0.17	0.30
18	1.4	14	1.9	5.7	3.0	1.6	0.75	0.67	6.4	0.35	0.19	0.20
19	1.1	17	1.7	3.5	6.2	1.4	0.70	2.0	3.9	0.29	0.18	0.19
20	0.85	8.4	1.4	2.7	7.0	1.4	0.94	1.1	2.5	0.25	0.49	0.19
21	0.79	5.7	1.5	2.4	4.4	1.3	0.92	0.81	1.8	0.51	0.43	0.18
22	0.70	4.4	1.7	2.0	2.9	1.2	0.91	0.63	1.5	3.7	0.19	0.17
23	0.66	4.0	71	1.9	3.0	1.2	1.1	0.57	1.1	0.79	0.17	0.16
24	0.59	20	13	1.7	2.9	1.1	0.79	0.97	0.95	0.48	0.22	0.17
25	0.60	7.1	7.6	1.6	2.1	1.2	0.85	2.9	0.84	0.45	0.93	0.16
26	0.63	4.9	5.2	1.6	1.8	15	0.70	1.3	0.74	0.42	2.3	0.15
27	0.60	4.3	4.3	1.5	1.6	18	0.64	1.1	0.64	0.36	0.73	0.15
28	0.62	4.8	3.9	1.4	1.5	8.4	0.58	2.8	0.59	0.29	0.47	0.14
29	0.57	4.1	7.3	1.4	1.6	5.7	0.53	1.1	0.51	0.25	0.41	0.16
30	0.55	3.7	7.0	1.3	---	5.0	0.53	4.4	0.45	0.31	0.35	0.16
31	0.59	---	5.0	1.2	---	9.6	---	12	---	0.38	0.26	---
TOTAL	39.06	123.89	181.8	231.8	57.87	146.5	47.89	42.72	107.04	25.35	17.04	5.53
MEAN	1.26	4.13	5.86	7.48	2.00	4.73	1.60	1.38	3.57	0.82	0.55	0.18
MAX	8.8	20	71	119	7.0	18	6.6	12	38	3.7	4.7	0.30
MIN	0.46	0.67	1.4	1.2	0.97	1.1	0.53	0.36	0.45	0.25	0.17	0.14
CFSM	0.42	1.38	1.95	2.49	0.67	1.58	0.53	0.46	1.19	0.27	0.18	0.06
IN.	0.48	1.54	2.25	2.87	0.72	1.82	0.59	0.53	1.33	0.31	0.21	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2004, BY WATER YEAR (WY)

MEAN	1.43	3.61	4.56	3.83	5.47	6.44	5.35	4.34	2.82	2.43	1.07	1.32
MAX	12.5	20.6	18.4	13.5	17.1	19.1	12.7	16.7	13.7	14.1	7.90	12.8
(WY)	(2002)	(1986)	(1991)	(1974)	(1971)	(1978)	(1996)	(2002)	(1998)	(2003)	(1979)	(1989)
MIN	0.00	0.00	0.00	0.00	0.55	1.46	0.92	0.14	0.01	0.02	0.00	0.00
(WY)	(1997)	(1998)	(1998)	(1977)	(1998)	(1981)	(1971)	(1976)	(1988)	(1988)	(1991)	(1988)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

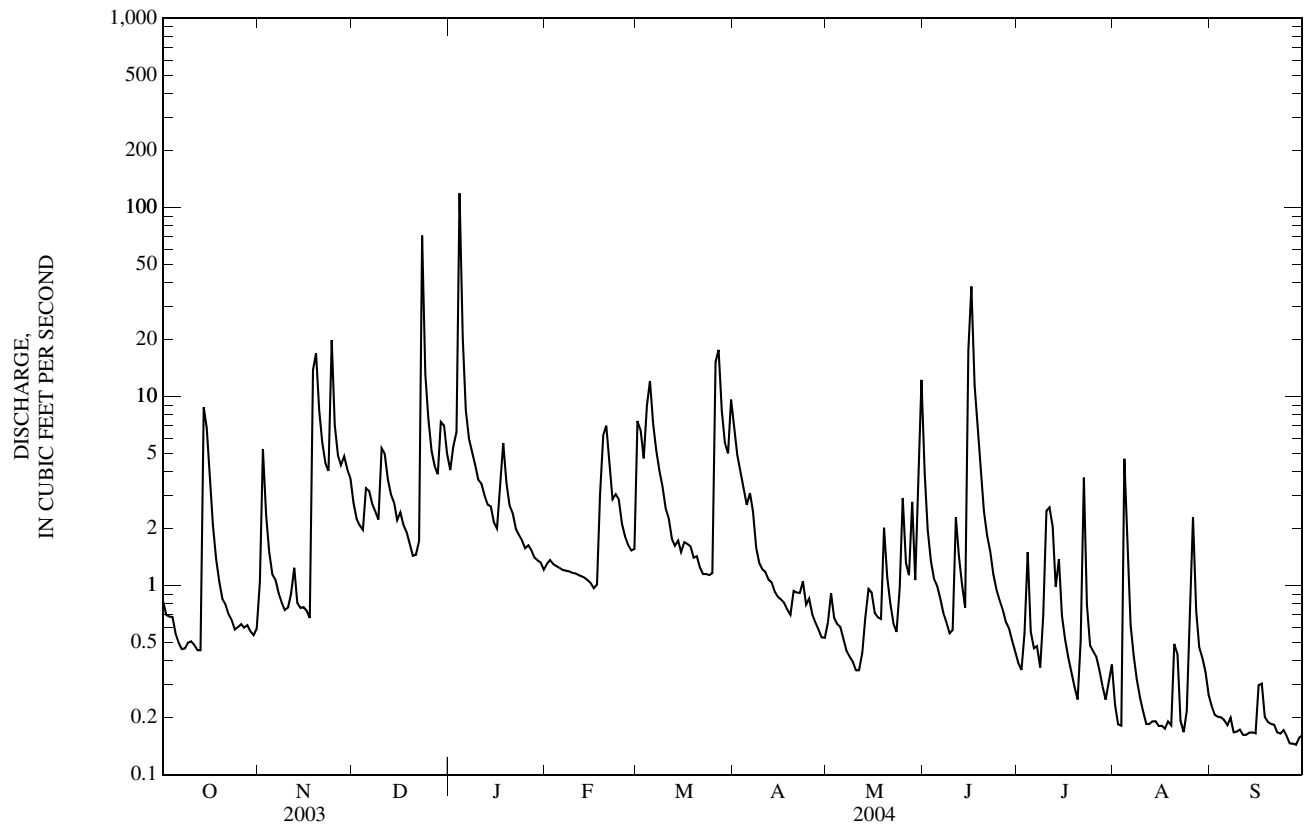
FOR 2004 WATER YEAR

WATER YEARS 1969 - 2004

ANNUAL TOTAL	1,852.35	1,026.49	
ANNUAL MEAN	5.07	2.80	
HIGHEST ANNUAL MEAN			3.54
LOWEST ANNUAL MEAN			5.83
HIGHEST DAILY MEAN	279	Sep 1	1.49
LOWEST DAILY MEAN	0.00	Aug 27	0.00
ANNUAL SEVEN-DAY MINIMUM	0.03	Aug 24	0.00
MAXIMUM PEAK FLOW			940
MAXIMUM PEAK STAGE			6.50
ANNUAL RUNOFF (CFSM)	1.69	0.935	1.18
ANNUAL RUNOFF (INCHES)	22.97	12.73	16.02
10 PERCENT EXCEEDS	8.2	5.7	7.2
50 PERCENT EXCEEDS	1.5	1.1	0.98
90 PERCENT EXCEEDS	0.28	0.20	0.01

e Estimated

03357350 PLUM CREEK NEAR BAINBRIDGE, IN—Continued



03357500 BIG WALNUT CREEK NEAR REELSVILLE, IN

LOCATION.--Lat 39°32'09", long 86°58'34", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.13 N., R.5 W., Putnam County, Hydrologic Unit 05120203, (REELSVILLE, IN quadrangle), on left bank at downstream side of county highway bridge, 1.5 mi southwest of Reelsville, 3.8 mi southwest of Manhattan, and 4.1 mi upstream from Mill Creek.

DRAINAGE AREA.--326 mi².

PERIOD OF RECORD.--July 1949 to September 2002 (discharge). October 2002 to current year (stage only). Published as Eel River near Reelsville, October 1952 to September 1956.

REVISED RECORDS.--WSP 1335: 1950. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 588.24 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Dec. 10, 1949, nonrecording gage at same site and datum.

REMARKS.--Flow partly regulated by Soil Conservation Service control structures on tributaries to Little Walnut Creek beginning in 1971.

EXTREMES FOR PERIOD OF RECORD.--(October 2002 to current year) maximum gage height, 18.63 ft, June 28, 1957; minimum gage height unknown prior to 1988; (since 1988), minimum gage height, 1.62 ft, Oct. 5, 1991. (July 1949 to September 2002) maximum discharge, 30,700 ft³/s, June 28, 1957, gage height, 18.63 ft; minimum discharge, 1.4 ft³/s, Sept. 8, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 14.77 ft, Jan. 5; minimum gage height, 2.52 ft, Sept. 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.46	3.99	4.65	5.07	4.23	5.51	6.18	3.60	5.25	3.27	3.15	2.86
2	4.34	4.62	4.50	5.22	4.15	5.52	5.43	3.67	4.57	3.26	3.10	2.83
3	4.28	4.64	4.42	5.47	4.19	4.97	5.02	3.60	4.18	4.10	3.05	2.82
4	4.26	4.45	4.39	14.65	4.19	6.08	4.70	3.53	3.94	3.68	3.29	2.80
5	4.18	4.33	4.54	10.90	4.08	7.24	4.50	3.50	3.81	3.67	3.62	2.76
6	4.10	4.26	4.58	7.58	4.07	5.93	4.36	3.47	3.71	3.45	3.27	2.74
7	4.05	4.16	4.50	6.28	3.97	5.26	4.28	3.42	3.63	3.35	3.12	2.99
8	4.00	4.08	---	5.68	3.94	4.88	4.18	3.39	3.54	3.27	3.03	3.47
9	3.97	4.02	---	5.30	3.85	4.65	4.08	3.35	3.48	3.25	2.97	3.49
10	3.94	3.99	5.30	5.02	3.87	4.46	3.99	3.33	3.46	5.12	2.93	3.49
11	3.92	4.04	5.51	4.87	3.93	4.33	3.94	3.31	3.79	6.96	2.89	3.49
12	3.88	4.10	4.99	4.76	3.90	4.23	3.89	3.29	4.78	5.64	2.87	3.49
13	3.86	4.08	4.74	4.63	3.84	4.13	3.85	3.37	4.96	4.96	2.85	3.47
14	5.62	4.03	4.64	4.57	3.89	4.12	3.81	3.47	4.29	5.01	2.83	2.82
15	5.57	4.02	4.51	4.49	3.92	4.05	3.76	3.57	4.87	4.29	2.81	2.72
16	5.03	4.01	4.49	4.40	3.83	4.13	3.72	3.50	8.55	3.95	2.79	2.72
17	4.70	3.98	4.45	5.03	3.82	4.09	3.69	3.45	7.38	3.75	2.78	2.71
18	4.51	6.23	4.41	5.13	3.90	4.04	3.65	4.55	5.64	3.60	2.77	2.69
19	4.40	7.00	4.33	4.72	4.89	3.99	3.62	4.89	5.03	3.49	2.76	2.66
20	4.31	5.80	4.22	4.54	5.71	3.98	3.76	4.42	4.61	3.41	3.11	2.63
21	4.22	5.24	4.17	4.38	5.16	3.93	3.75	4.04	4.28	3.39	3.09	2.61
22	4.18	4.94	4.26	4.27	4.66	3.87	3.84	3.82	4.07	4.21	2.99	2.60
23	4.12	4.88	12.41	4.17	4.58	3.83	3.84	3.72	3.88	3.72	2.87	2.59
24	4.07	7.43	8.12	4.20	4.54	3.83	3.73	3.76	3.74	3.45	2.85	2.58
25	4.06	5.94	6.48	4.09	4.39	3.86	3.77	4.16	3.63	3.36	3.00	2.57
26	4.06	5.35	5.66	4.16	4.27	7.47	3.67	4.02	3.55	3.29	3.61	2.55
27	4.02	5.09	5.24	4.10	4.17	7.30	3.59	3.97	3.47	3.23	3.32	2.55
28	4.02	5.02	5.03	4.10	4.08	5.92	3.55	3.99	3.41	3.19	3.16	2.54
29	4.01	5.03	6.10	4.10	4.06	5.32	3.51	3.79	3.36	3.15	3.04	2.53
30	3.98	4.85	5.80	4.16	---	6.12	3.49	7.38	3.31	3.15	2.97	2.53
31	3.93	---	5.23	4.40	---	7.65	---	6.71	---	3.18	2.90	---
MEAN	4.26	---	---	5.30	4.21	4.99	4.04	3.94	4.34	3.83	3.03	2.84
MAX	5.62	---	---	14.65	5.71	7.65	6.18	7.38	8.55	6.96	3.62	3.49
MIN	3.86	---	---	4.09	3.82	3.83	3.49	3.29	3.31	3.15	2.76	2.53

03358000 MILL CREEK NEAR CATARACT, IN

LOCATION.--Lat 39°26'00", long 86°45'48", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.32, T.12 N., R.3 W., Owen County, Hydrologic Unit 05120203, (CATARACT, IN quadrangle), on right bank at downstream side of bridge on U.S. Highway 231, 3 mi east of Cataract, 5.7 mi south of Cloverdale, and at mile 17.5.

DRAINAGE AREA.--245 mi².

PERIOD OF RECORD.--July 1949 to current year.

REVISED RECORDS.--WSP 1505: 1956(P). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 706.40 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 8, 1949, nonrecording gage, and Nov. 8, 1949, to Sept. 22, 1968, water-stage recorder at site 100 ft upstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum instantaneous gage height may have occurred Dec. 30, 1990, during period of no gage height record.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	117	341	333	e105	406	581	77	3,270	62	34	9.8
2	134	226	267	1,180	e103	632	377	102	1,500	59	25	8.5
3	115	210	237	1,040	e100	357	292	104	407	58	21	7.9
4	119	171	218	2,650	e98	384	240	83	270	99	23	7.4
5	103	151	283	5,430	e97	984	202	79	213	85	61	7.5
6	88	128	415	4,610	e95	605	184	74	180	63	35	7.1
7	79	120	308	1,680	e94	385	176	66	153	61	24	6.9
8	72	106	265	605	e92	297	168	61	131	57	20	7.1
9	69	97	241	399	e91	254	147	58	115	50	18	6.2
10	67	93	735	311	e90	214	133	55	105	69	16	6.0
11	64	100	1,110	278	e88	198	128	54	137	68	15	5.6
12	60	111	492	280	e87	179	120	51	169	141	13	5.4
13	59	107	343	252	e86	160	116	58	250	94	13	5.2
14	657	88	296	234	e85	159	111	101	551	397	13	5.3
15	1,080	88	253	230	e84	158	100	397	242	190	13	5.2
16	459	96	272	198	e84	159	95	212	1,730	93	12	5.3
17	298	89	372	206	e83	180	93	146	3,220	66	12	5.3
18	228	304	280	706	e100	177	89	137	1,910	52	12	5.3
19	192	1,350	244	414	429	166	83	1,760	678	45	12	4.8
20	160	625	206	e260	838	153	88	1,120	332	39	14	4.5
21	146	377	184	e205	783	153	114	461	236	36	23	4.4
22	129	283	202	e180	413	131	99	290	195	174	21	4.6
23	117	238	1,560	e160	399	126	137	210	156	100	14	4.5
24	106	1,510	2,770	e142	406	124	121	294	131	50	15	4.6
25	110	906	1,120	e133	330	122	116	235	116	37	37	4.6
26	255	479	507	e123	268	284	119	337	104	36	55	4.6
27	232	573	387	e120	230	1,530	97	400	92	33	61	4.5
28	176	909	333	e117	202	663	84	384	82	29	25	4.3
29	153	700	361	e113	189	419	77	233	74	26	15	4.6
30	128	457	625	e110	---	355	72	240	67	26	13	4.9
31	114	---	418	e107	---	564	---	2,730	---	34	11	---
TOTAL	5,936	10,809	15,645	22,806	6,149	10,678	4,559	10,609	16,816	2,429	696	171.9
MEAN	191	360	505	736	212	344	152	342	561	78.4	22.5	5.73
MAX	1,080	1,510	2,770	5,430	838	1,530	581	2,730	3,270	397	61	9.8
MIN	59	88	184	107	83	122	72	51	67	26	11	4.3
CFSM	0.78	1.47	2.06	3.00	0.87	1.41	0.62	1.40	2.29	0.32	0.09	0.02
IN.	0.90	1.64	2.38	3.46	0.93	1.62	0.69	1.61	2.55	0.37	0.11	0.03

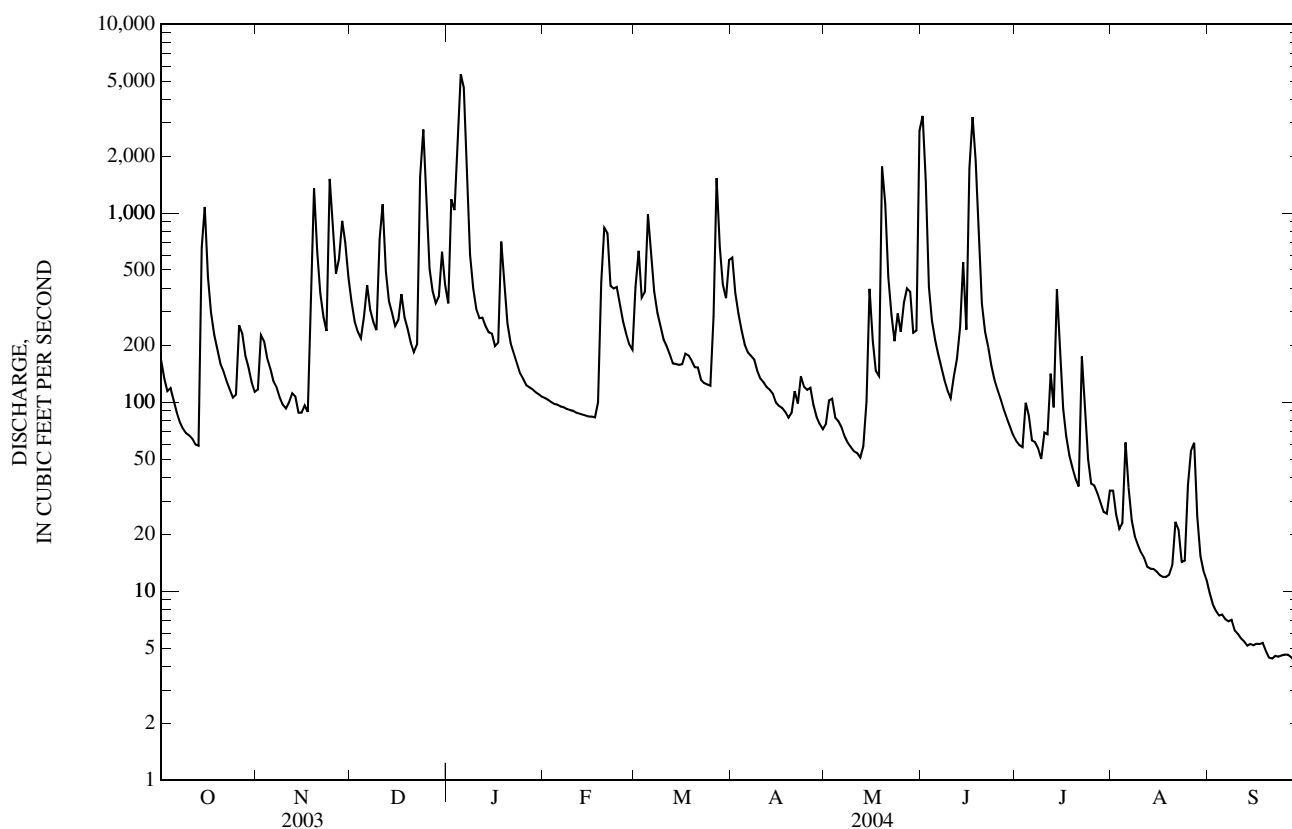
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2004, BY WATER YEAR (WY)

MEAN	82.6	230	311	349	405	491	415	351	247	192	101	92.8
MAX	878	1,576	1,135	2,214	1,088	1,425	1,064	1,522	1,120	1,694	1,092	918
(WY)	(2002)	(1994)	(1958)	(1950)	(1971)	(1963)	(1964)	(1981)	(1957)	(1979)	(1993)	(1989)
MIN	2.88	4.19	4.05	6.55	41.1	108	74.5	35.1	11.2	6.84	3.72	0.91
(WY)	(1965)	(2000)	(1964)	(1977)	(1954)	(1994)	(1971)	(1954)	(1988)	(1954)	(1954)	(1954)

03358000 MILL CREEK NEAR CATARACT, IN—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1950 - 2004	
ANNUAL TOTAL	147,532.7		107,303.9		272	
ANNUAL MEAN	404		293		528	1979
HIGHEST ANNUAL MEAN					37.3	1954
LOWEST ANNUAL MEAN					e 11,500	Dec 30, 1990
HIGHEST DAILY MEAN	5,830	Sep 3	5,430	Jan 5	0.10	Sep 7, 1954
LOWEST DAILY MEAN	9.7	Aug 29	4.3	Sep 28	0.20	Sep 2, 1954
ANNUAL SEVEN-DAY MINIMUM	11	Aug 24	4.5	Sep 22	e 12,200	Dec 30, 1990
MAXIMUM PEAK FLOW			5,680	Jan 5	22.58	Jun 24, 1960
MAXIMUM PEAK STAGE			17.27	Jan 5	1.11	
ANNUAL RUNOFF (CFSM)	1.65		1.20		15.06	
ANNUAL RUNOFF (INCHES)	22.40		16.29		587	
10 PERCENT EXCEEDS	990		611		84	
50 PERCENT EXCEEDS	171		128		8.0	
90 PERCENT EXCEEDS	45		13			

e Estimated



LOCATION.--Lat 39°29'15", long 86°55'29", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.12 N., R.5 W., Putnam County, Hydrologic Unit 05120203, (POLAND, IN quadrangle), on left bank 0.3 mi upstream from Cagles Mill Dam, 0.4 mi downstream from Cagles Mill Lake, 1.3 mi upstream from Deer Creek, 5.0 mi south of Manhattan, and at mile 2.3.

PERIOD OF RECORD.--May to September 1931 (fragmentary). October 1938 to September 1976 (discharge). October 1976 to September 2001 (discharge provided by U.S. Army Corps of Engineers). October 2001 to current year (stage-only). Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 581.83 ft above National Geodetic Vertical Datum of 1929. May 12, 1941 to Sept. 30, 1974, water-stage recorder at site 0.3 mi downstream. See WSP 1725 for history of changes prior to May 12, 1941.

COOPERATION.--Records of daily discharge provided by U.S. Army Corps of Engineers September 1976 to September 2001.

EXTREMES FOR PERIOD OF RECORD.--(October 2001 to current year) maximum gage height, 14.30 ft, Sept. 2, 2003, minimum gage height, 8.14 ft, Oct. 30, 2001. (October 1938 to September 1976) maximum discharge, 8,960 ft³/s, Jan. 5, 1950, gage height 18.38 ft; no flow Aug. 7, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 12.65 ft, Jan. 5; minimum gage height, 8.19 ft, Aug. 13-17, Sept 2, 4-7, and 10-13.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.79	8.68	9.87	9.44	10.80	8.93	8.75	8.46	8.66	8.86	8.30	8.25
2	8.88	8.77	10.47	8.69	10.77	9.81	9.48	8.46	8.66	8.60	8.30	8.20
3	8.61	9.04	10.45	8.69	10.75	9.80	9.48	8.36	8.67	8.63	8.30	8.20
4	8.71	9.04	10.43	12.53	10.43	9.42	10.21	8.36	9.51	8.60	8.31	8.19
5	8.71	8.68	10.41	8.77	10.13	8.96	10.45	8.36	10.28	8.60	8.30	8.19
6	8.71	8.97	8.89	8.75	9.78	8.96	10.43	8.35	10.85	8.61	8.30	8.19
7	8.71	8.97	9.42	8.75	9.38	8.97	10.42	8.36	10.83	8.44	8.30	8.20
8	9.00	8.96	9.01	8.75	9.38	8.96	10.39	8.28	10.80	8.37	8.30	8.20
9	9.00	8.67	9.01	8.75	8.92	9.88	10.37	8.28	10.78	8.38	8.30	8.20
10	9.00	8.67	9.44	8.75	8.45	9.87	8.89	8.28	10.75	8.51	8.30	8.19
11	9.00	8.67	9.87	8.74	8.75	9.86	8.65	8.29	10.73	8.69	8.25	8.19
12	9.01	8.67	10.17	9.68	8.75	9.85	8.65	8.29	10.10	8.68	8.25	8.19
13	8.73	8.76	10.16	10.52	9.00	9.42	8.65	8.29	9.37	8.69	8.19	8.20
14	8.74	8.76	10.15	10.81	9.00	8.93	8.65	8.30	8.66	8.69	8.19	8.20
15	9.47	8.76	8.91	11.12	9.00	8.93	8.65	8.30	8.66	9.01	8.19	8.20
16	9.89	8.76	8.97	11.10	9.16	8.93	8.65	8.30	8.67	9.01	8.19	8.21
17	9.88	8.76	9.43	11.09	8.88	8.93	8.65	8.30	8.69	9.01	8.20	8.20
18	9.46	8.78	9.43	10.43	8.71	8.93	8.65	8.31	8.70	8.38	8.21	8.20
19	9.45	8.78	9.84	10.43	8.72	8.93	8.65	8.59	8.71	8.38	8.20	8.21
20	9.45	9.46	8.63	11.05	9.43	8.65	8.65	9.17	8.71	8.38	8.43	8.21
21	9.45	10.18	8.63	11.03	9.43	8.65	8.65	10.18	8.72	8.35	8.30	8.21
22	8.94	10.17	8.93	11.02	10.14	8.94	8.65	10.17	9.51	8.32	8.30	8.22
23	8.94	10.17	8.96	11.00	10.13	8.93	8.65	10.18	10.25	8.98	8.30	8.22
24	8.94	8.91	8.97	10.97	10.12	8.64	8.65	10.16	10.52	8.36	8.31	8.21
25	8.94	8.91	8.97	10.96	10.11	8.64	8.66	10.14	10.79	8.31	8.30	8.21
26	8.94	9.86	8.98	10.93	9.10	8.73	8.66	9.80	10.77	8.31	8.64	8.21
27	9.02	9.87	8.98	10.91	9.10	8.73	8.65	9.44	10.75	8.30	8.63	8.21
28	9.02	9.88	9.42	10.89	8.92	8.73	8.46	9.42	10.73	8.30	8.97	8.21
29	9.02	9.87	9.43	10.87	8.92	8.73	8.46	8.91	10.70	8.30	8.25	8.21
30	8.68	9.87	9.42	10.85	---	8.75	8.46	9.10	9.77	8.31	8.25	8.21
31	8.68	---	9.43	10.82	---	8.75	---	8.65	---	8.30	8.25	---
MEAN	9.06	9.14	9.45	10.23	9.45	9.07	9.04	8.83	9.78	8.54	8.32	8.20
MAX	9.89	10.18	10.47	12.53	10.80	9.88	10.45	10.18	10.85	9.01	8.97	8.25
MIN	8.61	8.67	8.63	8.69								

03359000 MILL CREEK NEAR MANHATTAN, IN—Continued

WATER-QUALITY RECORDS

INSTRUMENTATION.--Temperature recorder.

PERIOD OF RECORD.--

WATER TEMPERATURE.--May 1993 to February 1996, July 1999 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 30.1°C, July 31, 1999; minimum, 1.1°C, Feb. 1-10, 12-14, 1994 and Dec. 10, 1995.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 27.7°C, July 21, minimum, 2.1°C, Jan. 30.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	19.7	19.0	19.4	15.2	14.9	15.0	9.2	8.7	9.0	4.3	3.9	4.1
2	19.0	18.3	18.6	15.2	14.7	14.9	8.7	8.4	8.5	5.0	4.3	4.6
3	18.3	18.0	18.2	15.3	14.8	15.0	8.4	7.9	8.2	5.2	4.8	4.9
4	18.1	17.6	17.9	16.1	14.8	15.3	7.9	7.7	7.8	5.6	5.2	5.4
5	18.1	17.6	17.8	16.0	14.5	15.0	7.7	7.3	7.5	5.4	4.7	4.9
6	18.1	17.5	17.7	14.7	14.3	14.6	7.3	6.8	7.0	4.7	4.3	4.4
7	18.0	17.5	17.7	14.3	13.9	14.2	7.1	6.8	6.9	4.4	4.2	4.3
8	17.9	17.4	17.6	13.9	13.4	13.7	6.9	6.8	6.9	4.5	4.3	4.3
9	17.9	17.5	17.6	13.4	13.0	13.2	7.1	6.9	7.0	4.3	3.7	3.9
10	18.0	17.5	17.7	13.4	12.8	13.1	7.2	6.9	7.1	3.9	3.5	3.7
11	18.1	17.4	17.7	13.4	13.2	13.3	6.9	6.5	6.8	3.9	3.7	3.8
12	17.6	17.3	17.5	13.5	12.3	13.2	6.5	6.2	6.3	3.8	3.6	3.7
13	17.9	17.4	17.7	12.3	11.9	12.1	6.2	5.7	5.9	3.9	3.6	3.8
14	17.5	16.9	17.2	12.0	11.7	11.8	5.7	5.4	5.6	3.9	3.8	3.9
15	17.4	16.9	17.1	11.8	11.6	11.7	5.4	5.1	5.3	3.8	3.7	3.8
16	17.7	17.1	17.4	11.9	11.5	11.7	5.2	4.9	5.1	3.8	3.6	3.7
17	17.5	16.9	17.2	11.9	11.5	11.7	4.9	4.6	4.8	3.9	3.8	3.8
18	16.9	16.6	16.7	12.3	11.9	12.1	4.6	4.5	4.6	3.9	3.9	3.9
19	16.7	16.4	16.6	12.1	11.7	11.9	4.5	4.2	4.4	3.9	3.8	3.8
20	17.3	16.4	16.7	11.9	11.4	11.7	4.2	3.9	4.1	3.8	3.6	3.7
21	17.3	16.2	16.6	11.9	11.8	11.9	4.3	3.8	4.0	3.7	3.7	3.7
22	16.6	15.8	16.3	12.3	11.8	12.0	4.2	4.0	4.1	3.7	3.5	3.6
23	16.7	15.8	16.2	12.4	12.2	12.2	4.5	4.1	4.3	3.5	3.4	3.5
24	16.5	15.8	16.1	12.2	11.3	11.7	4.1	3.9	4.0	3.4	3.2	3.2
25	16.2	15.9	16.1	11.3	11.0	11.1	3.9	3.7	3.8	3.2	2.5	2.8
26	16.0	15.5	15.8	11.0	10.9	10.9	3.9	3.6	3.7	2.7	2.4	2.6
27	15.5	15.2	15.4	11.0	10.8	10.9	4.1	3.8	3.9	2.8	2.4	2.7
28	15.2	15.0	15.2	10.8	9.9	10.4	4.2	3.9	4.0	2.6	2.4	2.5
29	15.0	14.6	14.8	9.9	9.4	9.7	4.2	4.0	4.1	2.4	2.2	2.3
30	15.2	14.5	14.8	9.4	9.2	9.3	4.1	3.9	4.0	2.2	2.1	2.2
31	15.2	14.9	15.1	---	---	---	4.2	4.0	4.0	2.3	2.2	2.2
MONTH	19.7	14.5	16.9	16.1	9.2	12.5	9.2	3.6	5.6	5.6	2.1	3.7

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.4	2.2	2.3	5.8	4.8	5.3	10.0	9.2	9.6	17.4	15.8	16.8
2	2.4	2.3	2.3	5.7	5.1	5.4	10.3	9.2	9.7	16.6	15.2	15.8
3	2.4	2.3	2.3	5.9	5.5	5.7	10.7	9.7	10.1	17.1	15.5	16.1
4	2.4	2.3	2.4	6.5	5.9	6.3	10.6	9.8	10.2	16.8	14.9	15.8
5	2.5	2.4	2.5	7.2	6.5	6.9	11.7	10.5	10.9	17.8	15.5	16.5
6	2.6	2.5	2.5	7.2	6.9	7.1	12.0	11.0	11.4	19.8	16.0	17.1
7	2.7	2.5	2.6	7.4	6.9	7.1	12.1	11.5	11.8	18.7	17.5	18.1
8	2.8	2.5	2.6	7.5	6.9	7.1	12.7	11.0	11.7	20.2	17.4	18.7
9	2.9	2.6	2.7	7.4	7.0	7.2	13.0	11.1	12.1	20.5	18.5	19.5
10	3.2	2.6	2.8	7.8	7.1	7.4	13.5	11.4	12.6	20.5	19.2	19.9
11	3.2	2.5	2.8	7.8	7.7	7.7	12.2	11.3	11.7	21.0	19.2	20.3
12	3.2	2.7	2.9	7.7	7.5	7.6	11.9	11.0	11.5	22.5	19.7	21.0
13	3.0	2.7	2.8	8.3	7.5	7.8	11.4	10.6	11.0	22.2	20.9	21.4
14	3.3	2.8	3.0	8.4	7.8	8.0	11.9	10.6	11.1	21.5	20.1	21.0
15	3.3	2.8	3.0	8.9	7.7	8.2	12.6	10.8	11.7	20.1	18.3	18.8
16	3.4	2.9	3.1	8.6	8.1	8.3	13.6	12.2	12.8	20.0	18.3	19.0
17	3.6	3.1	3.3	8.1	7.8	8.0	13.4	12.2	12.9	21.4	19.4	20.2
18	3.9	3.1	3.4	8.3	7.7	7.9	15.0	12.3	13.4	21.0	20.0	20.5
19	4.1	3.3	3.6	9.0	7.5	8.2	15.2	13.1	13.5	20.3	19.1	19.7
20	3.8	3.6	3.7	9.0	8.4	8.8	14.0	12.5	13.3	19.5	17.4	18.4
21	3.7	3.5	3.6	8.4	7.8	8.0	14.3	13.0	13.7	18.9	17.4	18.1
22	3.9	3.5	3.7	8.6	7.5	7.9	13.5	12.7	13.1	19.7	18.2	18.8
23	4.0	3.8	3.9	8.3	7.7	7.9	13.7	12.6	13.2	20.5	18.4	19.3
24	4.0	3.7	3.8	9.2	8.0	8.6	14.6	12.7	13.4	20.0	18.7	19.6
25	4.2	3.6	3.8	9.6	8.5	8.9	14.3	13.0	13.7	20.6	19.6	20.0
26	4.5	3.7	4.0	9.8	9.0	9.4	14.5	12.8	13.5	20.4	19.7	20.1
27	4.6	3.7	4.1	10.4	9.5	9.9	14.1	13.1	13.5	20.6	19.1	19.9
28	5.0	4.3	4.6	11.2	9.5	10.3	16.0	13.5	14.9	19.9	18.7	19.3
29	5.2	4.6	4.8	11.0	9.7	10.2	18.0	15.7	16.5	20.3	18.8	19.4
30	---	---	---	10.6	9.4	10.1	17.7	16.3	16.9	20.5	18.4	19.1
31	---	---	---	10.6	9.1	9.7	---	---	---	20.1	18.2	19.0
MONTH	5.2	2.2	3.2	11.2	4.8	8.0	18.0	9.2	12.5	22.5	14.9	18.9
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.3	17.7	18.6	24.1	22.8	23.4	26.2	24.5	25.3	25.7	23.9	24.7
2	19.6	18.0	18.7	23.3	22.1	22.8	26.1	24.6	25.4	25.6	23.9	24.8
3	19.8	18.4	18.9	23.2	21.9	22.6	26.2	24.8	25.5	25.3	24.5	24.9
4	20.9	18.4	19.7	23.1	22.2	22.7	26.0	25.1	25.5	25.6	24.3	24.9
5	21.7	20.4	21.0	23.5	22.3	22.7	26.3	24.3	25.2	25.8	24.4	25.1
6	22.5	21.4	21.9	23.4	22.3	22.8	26.1	23.9	24.8	26.2	24.7	25.4
7	22.6	21.9	22.3	25.7	22.2	23.7	26.1	24.2	24.9	26.1	24.9	25.4
8	22.8	22.0	22.4	25.7	24.7	25.1	26.1	24.3	25.1	25.1	23.5	24.3
9	22.6	22.0	22.3	26.4	25.2	25.7	26.7	24.5	25.4	25.0	23.3	24.0
10	23.0	22.3	22.6	26.5	25.6	25.9	26.5	25.0	25.6	24.8	23.0	23.9
11	23.2	22.5	22.8	26.2	22.7	24.7	25.4	24.1	24.6	24.8	23.2	24.0
12	24.2	21.9	23.0	23.4	22.7	23.1	24.4	23.1	23.7	24.9	23.3	24.1
13	23.9	21.0	22.5	23.9	22.6	23.3	24.3	23.0	23.5	25.3	23.7	24.4
14	22.1	20.6	21.5	23.9	22.9	23.5	23.9	22.3	23.1	25.3	24.2	24.6
15	21.4	20.5	20.8	24.6	22.9	23.9	24.2	22.3	23.2	25.7	24.2	24.8
16	21.3	20.4	20.9	24.8	24.0	24.4	24.6	22.4	23.4	25.2	24.7	24.9
17	21.8	20.5	20.9	24.8	24.2	24.5	24.7	22.6	23.6	25.1	23.5	24.3
18	21.5	20.5	21.1	27.1	24.3	25.3	25.5	23.5	24.3	24.6	22.7	23.5
19	21.7	20.8	21.2	27.1	25.5	26.1	25.2	23.7	24.4	24.4	22.5	23.2
20	22.0	20.5	21.2	27.4	25.8	26.6	25.0	23.7	24.3	24.2	22.4	23.1
21	21.9	20.7	21.2	27.7	26.4	27.0	25.1	23.7	24.3	24.2	22.4	23.2
22	22.8	20.9	22.0	27.4	26.5	27.0	25.4	23.4	24.3	24.0	22.5	23.2
23	23.8	22.3	23.1	26.6	24.5	25.5	25.4	24.0	24.6	24.1	22.6	23.3
24	24.0	23.5	23.8	26.4	24.2	25.0	26.0	24.2	24.9	23.7	23.0	23.3
25	24.2	23.6	24.0	26.1	25.3	25.5	25.9	24.9	25.4	24.4	23.0	23.4
26	24.1	23.8	24.0	25.5	24.9	25.2	25.7	23.5	24.5	23.6	22.0	22.7
27	24.3	23.9	24.1	26.0	24.3	25.0	24.5	23.4	23.9	23.6	21.7	22.5
28	24.6	24.2	24.4	25.9	24.1	24.9	24.8	23.4	24.1	22.7	21.6	22.2
29	24.6	24.1	24.4	25.5	24.4	24.9	24.5	24.1	24.3	22.7	21.0	21.7
30	24.5	23.9	24.3	25.1	24.6	24.9	25.7	24.0	24.6	22.3	21.0	21.5
31	---	---	---	25.7	24.8	25.2	25.5	23.7	24.5	---	---	---
MONTH	24.6	17.7	22.0	27.7	21.9	24.6	26.7	22.3	24.5	26.2	21.0	23.8
YEAR	27.7	2.1	14.7									

03360000 EEL RIVER AT BOWLING GREEN, IN

LOCATION.--Lat 39°22'58", long 87°01'14", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.24, T.11 N., R.6 W., Clay County, Hydrologic Unit 05120203.(CENTER POINT, IN quadrangle), on left bank 500 ft downstream from bridge on State Highway 46 at Bowling Green, 0.2 mi downstream from Jordan Creek, 15 mi northwest of Spencer, and at mile 38.4.

DRAINAGE AREA.--830 mi².

PERIOD OF RECORD.--January 1931 to current year. Prior to October 1934, published as "near Centerpoint".

REVISED RECORDS.--WSP 893: 1935, 1937-39. WSP 973: 1937-38, 1939(M). WSP 1335: 1931(M). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 548.02 ft above National Geodetic Vertical Datum of 1929, (levels by U.S. Army Corps of Engineers). See WSP 1725 for history of changes prior to Dec. 1, 1949.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by Cagles Mill Lake.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 30.0 ft in 1875, present datum, from information by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,300	299	1,300	1,420	e1,560	997	2,480	290	2,940	697	174	146
2	943	340	1,290	2,150	e1,520	1,720	1,690	337	1,260	377	160	137
3	523	500	1,540	1,770	e1,520	1,710	1,550	339	886	332	149	130
4	440	594	1,490	4,620	e1,500	1,500	1,450	291	775	871	149	125
5	437	516	1,490	11,300	e1,370	2,370	1,610	274	1,000	469	179	118
6	402	376	1,430	7,630	e1,210	2,350	1,670	261	1,370	410	233	114
7	374	447	809	2,680	e1,020	1,550	1,620	247	1,680	332	178	110
8	372	435	880	1,790	e817	1,170	1,640	232	1,630	264	151	127
9	424	395	701	1,440	e734	1,080	1,530	212	1,590	238	137	190
10	412	311	929	1,200	e584	1,300	1,320	201	1,550	773	128	200
11	401	305	1,660	1,050	e475	1,220	665	193	1,550	1,010	122	202
12	391	311	1,710	1,010	e557	1,150	541	188	1,730	1,810	114	203
13	380	324	1,560	1,390	e558	1,080	513	195	1,720	1,240	108	202
14	625	337	1,430	1,760	e588	844	489	327	1,550	1,050	101	186
15	1,290	331	1,180	1,930	e606	657	465	575	729	927	97	126
16	1,300	329	691	2,090	e585	651	444	362	1,260	696	94	116
17	1,240	322	732	2,120	e608	678	427	294	2,970	572	92	109
18	1,030	493	856	2,800	e516	649	413	264	2,010	471	90	106
19	786	2,130	905	2,060	586	620	396	2,320	1,230	292	94	101
20	740	1,990	869	1,820	1,140	574	401	1,390	908	258	98	98
21	704	1,630	472	2,120	1,810	500	430	1,110	732	235	173	95
22	624	1,650	476	2,050	1,400	473	420	1,320	690	234	148	93
23	447	1,490	3,060	1,930	1,520	526	460	1,210	997	311	126	91
24	423	2,950	6,090	e1,900	1,500	513	447	1,200	1,260	451	e140	91
25	412	2,320	3,040	e1,800	1,430	439	446	1,220	1,450	251	173	90
26	411	1,580	1,870	e1,750	1,250	844	440	1,350	1,570	213	570	89
27	413	1,690	1,410	e1,700	774	3,380	392	1,150	1,530	194	471	88
28	425	1,590	1,210	e1,680	705	2,350	364	1,210	1,490	179	336	87
29	420	1,530	1,520	e1,600	621	1,510	309	888	1,460	167	355	86
30	398	1,430	2,140	e1,580	---	1,380	293	633	1,290	164	184	85
31	305	---	1,760	e1,570	---	2,190	---	4,850	---	183	158	---
TOTAL	18,792	28,945	46,500	73,710	29,064	37,975	25,315	24,933	42,807	15,671	5,482	3,741
MEAN	606	965	1,500	2,378	1,002	1,225	844	804	1,427	506	177	125
MAX	1,300	2,950	6,090	11,300	1,810	3,380	2,480	4,850	2,970	1,810	570	203
MIN	305	299	472	1,010	475	439	293	188	690	164	90	85
CFSM	0.73	1.16	1.81	2.86	1.21	1.48	1.02	0.97	1.72	0.61	0.21	0.15
IN.	0.84	1.30	2.08	3.30	1.30	1.70	1.13	1.12	1.92	0.70	0.25	0.17

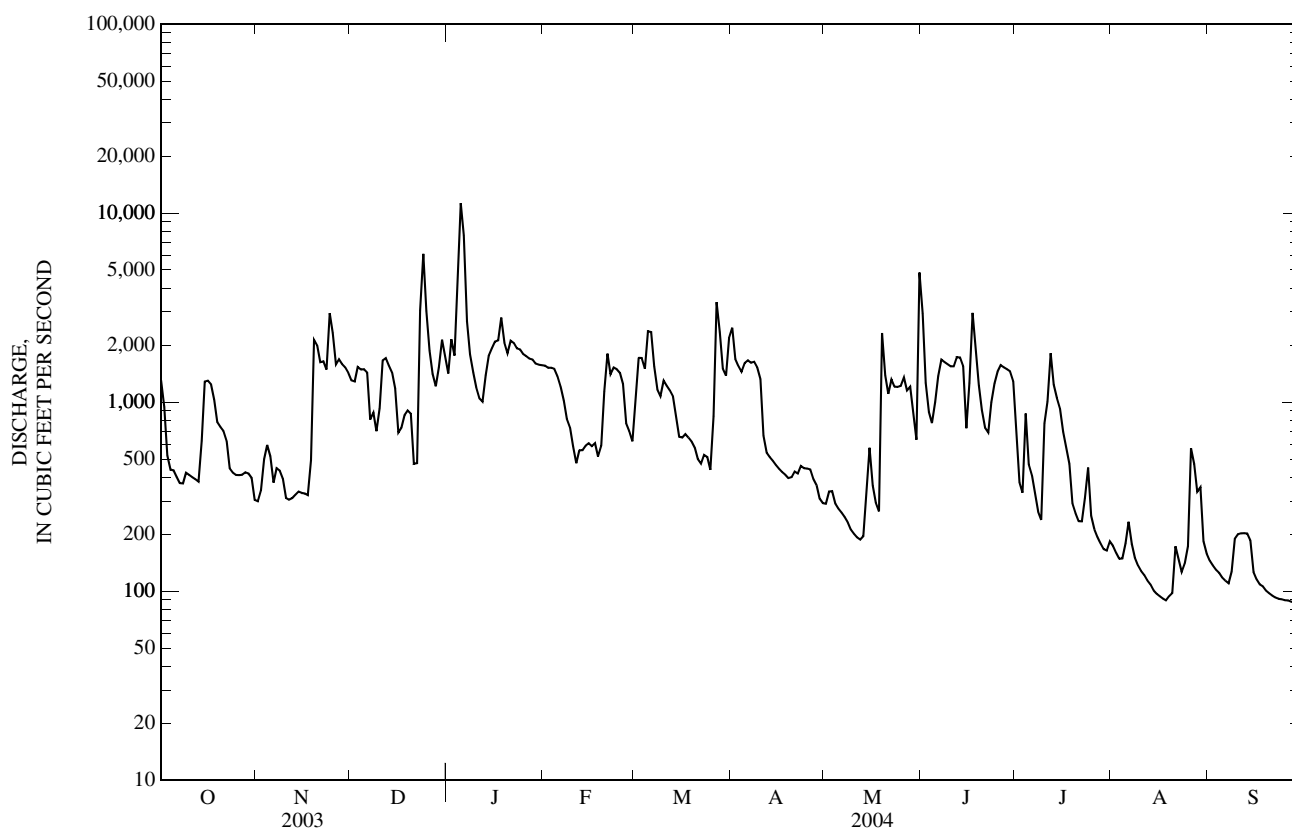
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2004, BY WATER YEAR (WY)

MEAN	306	594	902	1,229	1,295	1,542	1,587	1,244	896	610	326	327
MAX	1,838	3,076	2,960	7,212	3,249	3,843	4,120	5,090	4,077	2,746	2,656	2,682
(WY)	(2002)	(1986)	(1991)	(1950)	(1950)	(1938)	(1944)	(1943)	(1957)	(1987)	(1979)	(2003)
MIN	22.5	29.7	29.0	27.5	107	125	285	129	66.9	39.4	24.1	13.9
(WY)	(1941)	(1965)	(1964)	(1977)	(1934)	(1941)	(1971)	(1934)	(1988)	(1954)	(1936)	(1954)

03360000 EEL RIVER AT BOWLING GREEN, IN—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1931 - 2004	
ANNUAL TOTAL	471,361		352,935		906	
ANNUAL MEAN	1,291		964		1,551	
HIGHEST ANNUAL MEAN					161	
LOWEST ANNUAL MEAN					28,700	
HIGHEST DAILY MEAN	13,500	Sep 3	11,300	Jan 5	11	Jun 29, 1957
LOWEST DAILY MEAN	142	Jul 5	85	Sep 30	12	Oct 7, 1954
ANNUAL SEVEN-DAY MINIMUM	153	Aug 24	88	Sep 24	34,000	Jan 4, 1950
MAXIMUM PEAK FLOW			12,100	Jan 5	23.53	Jan 4, 1950
MAXIMUM PEAK STAGE			19.87	Jan 5	1.09	
ANNUAL RUNOFF (CFSM)	1.56		1.16		14.83	
ANNUAL RUNOFF (INCHES)	21.13		15.82		2,180	
10 PERCENT EXCEEDS	2,000		1,810		376	
50 PERCENT EXCEEDS	1,150		654		58	
90 PERCENT EXCEEDS	309		139			

e Estimated



03360500 WHITE RIVER AT NEWBERRY, IN

LOCATION.--Lat 38°55'39", long 87°00'41", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.6 N., R.5 W., Greene County, Hydrologic Unit 05120202, (LYONS, IN quadrangle), on left bank, 0.4 mi upstream from bridge on State Highway 57 at Newberry, 2.0 mi downstream from Doans Creek, and at mile 112.4.

DRAINAGE AREA.--4,688 mi².

PERIOD OF RECORD.--September 1928 to current year. Prior to October 1948, published as West Fork White River at Newberry.

REVISED RECORDS.--WSP 873: 1937(M). WSP 2109: Drainage area. WDR IN-02-1: 1998, 1999 (P).

GAGE.--Water-stage recorder. Datum of gage is 465.59 ft above National Geodetic Vertical Datum of 1929. Nonrecording gage prior to Oct. 21, 1928. Prior to Aug. 5, 1982, recording gage 0.3 mi downstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by upstream reservoirs.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 27.5 ft Mar. 27, 1913, from floodmarks by Indiana Department of Highways, discharge, 130,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11,100	2,730	11,500	10,200	e4,190	4,610	10,600	2,490	16,100	3,920	2,360	1,850
2	8,380	2,760	10,100	11,300	e4,070	6,260	12,600	2,940	18,200	3,400	2,220	1,690
3	6,390	2,910	8,110	13,400	e4,360	6,970	12,200	2,840	17,800	2,940	2,080	1,610
4	5,130	3,130	7,100	19,700	e4,700	8,350	9,510	2,940	12,500	2,940	1,920	1,510
5	4,270	3,340	6,310	30,600	e4,450	9,910	7,590	2,810	7,400	3,560	1,860	1,430
6	3,920	3,200	6,110	36,400	e4,980	10,700	6,700	2,620	5,360	3,740	2,290	1,490
7	3,640	2,970	6,330	43,700	e4,910	11,500	6,050	2,510	4,700	3,380	2,300	1,470
8	3,390	2,830	5,900	46,900	e4,770	11,500	5,650	2,340	4,440	2,950	1,990	1,350
9	3,160	2,750	5,980	39,100	e4,620	9,500	5,350	2,190	4,110	2,710	1,770	1,290
10	2,990	2,610	5,950	30,800	e4,480	7,250	4,990	2,070	3,790	3,420	1,640	1,280
11	2,840	2,490	7,300	21,000	e4,400	6,360	4,650	1,940	3,590	6,350	1,540	1,300
12	2,710	3,140	7,850	11,400	e4,290	5,620	3,990	1,840	3,700	5,920	1,480	1,270
13	2,570	2,740	7,720	8,730	e4,160	5,080	3,580	1,830	6,220	5,700	1,430	1,250
14	2,670	2,620	7,500	8,010	e4,000	4,710	3,370	1,830	10,500	6,310	1,380	1,240
15	3,770	2,920	6,650	7,680	e3,830	4,330	3,210	2,140	13,400	4,990	1,350	1,230
16	6,180	3,360	6,030	7,210	e3,690	4,020	3,030	2,920	15,600	3,990	1,330	1,210
17	5,810	3,160	5,730	7,030	e3,550	4,000	2,880	3,130	17,100	3,330	1,310	1,160
18	5,910	3,260	5,580	9,230	e3,490	4,080	2,750	2,900	18,600	2,900	1,290	1,140
19	5,470	7,690	5,480	10,800	e3,610	3,940	2,640	2,600	20,500	2,590	1,290	1,110
20	4,560	9,200	5,300	9,090	4,380	3,800	2,580	3,950	21,600	2,330	1,400	1,100
21	4,000	8,750	5,050	e7,470	6,310	3,720	2,610	5,470	18,800	e2,120	1,560	1,080
22	3,600	8,400	4,440	e6,840	8,070	3,580	2,660	4,850	10,500	2,010	1,820	1,050
23	3,300	7,650	5,120	e6,230	9,260	3,580	2,810	4,420	6,870	3,500	2,030	1,070
24	3,000	9,990	10,900	e5,710	9,130	3,670	3,010	3,820	5,990	5,380	1,760	1,070
25	2,810	12,300	15,700	e5,280	7,630	3,550	3,410	3,540	5,540	3,720	1,700	1,060
26	2,770	12,000	18,500	e5,160	6,740	3,420	3,240	3,700	5,150	2,930	2,090	1,040
27	2,920	12,300	18,800	e4,920	6,110	7,050	3,250	6,720	4,880	2,490	3,390	1,020
28	3,270	13,000	16,100	e5,020	5,220	10,900	2,980	15,700	4,570	2,240	3,500	1,010
29	3,110	12,500	10,500	e4,860	4,670	11,700	2,720	9,160	4,320	2,040	2,760	981
30	2,930	11,900	10,100	e4,630	---	10,500	2,520	6,220	4,120	1,950	2,470	965
31	2,840	---	10,500	e4,450	---	10,700	---	11,800	---	2,560	2,170	---
TOTAL	129,410	178,600	264,240	442,850	148,070	204,860	143,130	126,230	295,950	108,310	59,480	37,326
MEAN	4,175	5,953	8,524	14,290	5,106	6,608	4,771	4,072	9,865	3,494	1,919	1,244
MAX	11,100	13,000	18,800	46,900	9,260	11,700	12,600	15,700	21,600	6,350	3,500	1,850
MIN	2,570	2,490	4,440	4,450	3,490	3,420	2,520	1,830	3,590	1,950	1,290	965
CFSM	0.89	1.27	1.82	3.05	1.09	1.41	1.02	0.87	2.10	0.75	0.41	0.27
IN.	1.03	1.42	2.10	3.51	1.17	1.63	1.14	1.00	2.35	0.86	0.47	0.30

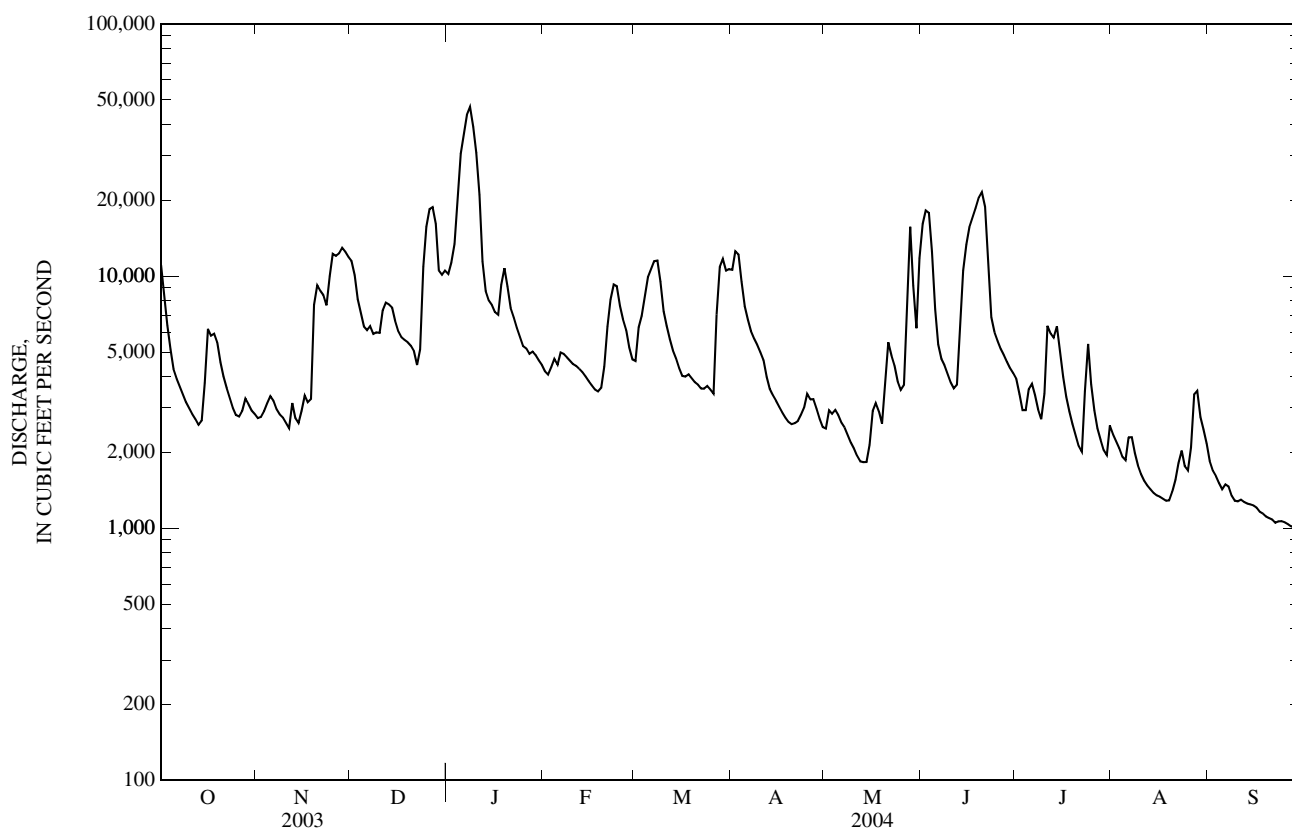
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2004, BY WATER YEAR (WY)

	MEAN	1,661	3,097	4,647	6,773	6,941	8,608	8,777	7,072	4,775	3,359	1,970	1,734
MAX	11,310	24,180	16,780	36,920	21,870	19,150	20,340	25,090	19,350	13,270	15,900	13,510	13,510
(WY)	(2002)	(1994)	(1958)	(1950)	(1950)	(1963)	(1944)	(1943)	(1998)	(1979)	(1979)	(1989)	(1989)
MIN	259	408	386	405	705	686	1,539	677	771	536	308	317	317
(WY)	(1941)	(1945)	(1945)	(1945)	(1931)	(1941)	(1941)	(1941)	(1988)	(1936)	(1941)	(1940)	(1940)

03360500 WHITE RIVER AT NEWBERRY, IN—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1929 - 2004	
ANNUAL TOTAL	2,602,510		2,138,456		4,940	
ANNUAL MEAN	7,130		5,843		8,752	
HIGHEST ANNUAL MEAN					958	
LOWEST ANNUAL MEAN					103,000	
HIGHEST DAILY MEAN	47,500	Sep 6	46,900	Jan 8	103,000	Nov 18, 1993
LOWEST DAILY MEAN	1,350	Jan 28	965	Sep 30	200	Oct 1, 1941
ANNUAL SEVEN-DAY MINIMUM	1,490	Jan 24	1,020	Sep 24	211	Sep 26, 1941
MAXIMUM PEAK FLOW			48,600	Jan 8	105,000	Nov 18, 1993
MAXIMUM PEAK STAGE			22.82	Jan 8	25.87	Nov 18, 1993
ANNUAL RUNOFF (CFSM)	1.52		1.25		1.05	
ANNUAL RUNOFF (INCHES)	20.65		16.97		14.32	
10 PERCENT EXCEEDS	13,900		11,500		11,600	
50 PERCENT EXCEEDS	4,970		4,000		2,600	
90 PERCENT EXCEEDS	2,020		1,530		638	

e Estimated



03361000 BIG BLUE RIVER AT CARTHAGE, IN

LOCATION.--Lat 39°44'38", long 85°34'33", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.18, T.15 N., R.9 E., Rush County, Hydrologic Unit 05120204, (CARTHAGE, IN quadrangle), on right bank 300 ft upstream from highway bridge, 0.5 mi northwest of Carthage, 2.2 mi downstream from Three Mile Creek, and at mile 50.7.

DRAINAGE AREA.--184 mi².

PERIOD OF RECORD.--October 1950 to April 2004 (discontinued). Prior to October 1961, published as Blue River at Carthage.

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 859.33 ft above National Geodetic Vertical Datum of 1929. Prior to July 19, 1951, nonrecording gage at site 300 ft downstream at same datum.

REMARKS.--Records good. Flow partly regulated by Big Blue River Conservancy District control structures on tributaries to Big Blue River beginning in 1969.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

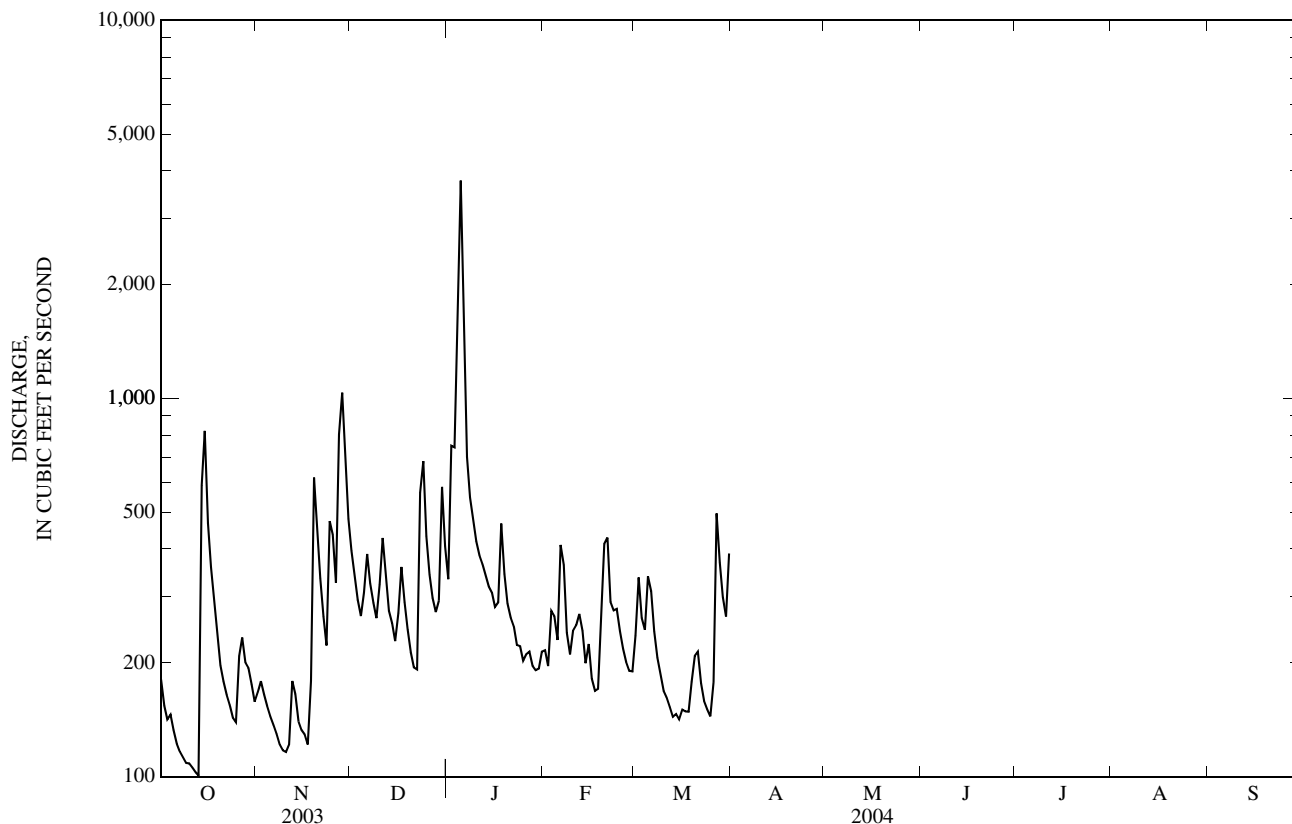
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	167	395	333	216	236	---	---	---	---	---	---
2	154	179	337	751	196	336	---	---	---	---	---	---
3	142	165	294	743	274	263	---	---	---	---	---	---
4	146	154	266	1,750	266	244	---	---	---	---	---	---
5	133	144	306	3,770	230	339	---	---	---	---	---	---
6	122	137	388	1,410	410	309	---	---	---	---	---	---
7	116	130	324	702	363	242	---	---	---	---	---	---
8	112	122	288	547	240	206	---	---	---	---	---	---
9	109	117	263	475	211	187	---	---	---	---	---	---
10	108	116	322	419	243	169	---	---	---	---	---	---
11	106	121	428	385	252	162	---	---	---	---	---	---
12	103	179	335	365	269	153	---	---	---	---	---	---
13	101	166	275	340	243	144	---	---	---	---	---	---
14	590	140	255	318	200	146	---	---	---	---	---	---
15	821	133	228	307	224	142	---	---	---	---	---	---
16	469	129	271	281	182	150	---	---	---	---	---	---
17	358	122	359	289	169	149	---	---	---	---	---	---
18	289	179	289	467	171	149	---	---	---	---	---	---
19	238	618	245	343	265	178	---	---	---	---	---	---
20	197	469	213	287	412	209	---	---	---	---	---	---
21	179	335	195	264	429	214	---	---	---	---	---	---
22	165	265	192	249	290	176	---	---	---	---	---	---
23	155	222	564	223	275	159	---	---	---	---	---	---
24	143	474	683	221	278	151	---	---	---	---	---	---
25	139	437	433	203	242	144	---	---	---	---	---	---
26	208	325	342	211	219	178	---	---	---	---	---	---
27	233	804	297	214	201	496	---	---	---	---	---	---
28	200	1,040	272	196	191	368	---	---	---	---	---	---
29	194	693	292	191	190	298	---	---	---	---	---	---
30	175	480	584	193	---	265	---	---	---	---	---	---
31	158	---	407	214	---	389	---	---	---	---	---	---
TOTAL	6,544	8,762	10,342	16,661	7,351	6,951	---	---	---	---	---	---
MEAN	211	292	334	537	253	224	---	---	---	---	---	---
MAX	821	1,040	683	3,770	429	496	---	---	---	---	---	---
MIN	101	116	192	191	169	142	---	---	---	---	---	---
CFSM	1.15	1.59	1.81	2.92	1.38	1.22	---	---	---	---	---	---
IN.	1.32	1.77	2.09	3.37	1.49	1.41	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

MEAN	100	165	213	233	281	324	326	265	213	157	102	84.0
MAX	579	925	702	619	741	967	829	916	848	581	649	448
(WY)	(1987)	(1994)	(1991)	(1959)	(1951)	(1963)	(1964)	(1996)	(1958)	(1979)	(1979)	(2003)
MIN	34.2	38.6	33.2	27.9	59.6	84.2	97.8	81.5	48.1	32.5	30.5	24.4
(WY)	(1964)	(1977)	(1977)	(1977)	(1964)	(1981)	(1971)	(1976)	(1988)	(1977)	(1988)	(1954)

03361000 BIG BLUE RIVER AT CARTHAGE, IN—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1951 - 2004	
ANNUAL TOTAL	97,390		56,611		205	
ANNUAL MEAN	267		309		324	
HIGHEST ANNUAL MEAN					78.8	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	3,870	Sep 2	3,770	Jan 5	6,900	Mar 5, 1963
LOWEST DAILY MEAN	66	Aug 26	101	Oct 13	17	Jan 18, 1977
ANNUAL SEVEN-DAY MINIMUM	72	Aug 20	108	Oct 7	19	Jul 31, 1977
MAXIMUM PEAK FLOW			4,830	Jan 5	12,900	Mar 4, 1963
MAXIMUM PEAK STAGE			10.32	Jan 5	14.62	Mar 4, 1963
INSTANTANEOUS LOW FLOW			70	Aug 16		
ANNUAL RUNOFF (CFSM)	1.45		1.68		1.11	
ANNUAL RUNOFF (INCHES)	19.69		11.45		15.13	
10 PERCENT EXCEEDS	484		478		408	
50 PERCENT EXCEEDS	160		240		118	
90 PERCENT EXCEEDS	89		138		51	



03361500 BIG BLUE RIVER AT SHELBYVILLE, IN

LOCATION.--Lat 39°31'45", long 85°46'55", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.31, T.13 N., R.7 E., Shelby County, Hydrologic Unit 05120204, (SHELBYVILLE, IN quadrangle), on left bank 0.2 mi downstream from bridge on State Highway 9 in Shelbyville, 0.6 mi downstream from Little Blue River, and at mile 23.9.

DRAINAGE AREA.--421 mi².

PERIOD OF RECORD.--September 1943 to current year. Prior to October 1961, published as Blue River at Shelbyville.

REVISED RECORDS.--WSP 1505: 1944. WSP 1909: 1959(M). WSP 2109: Drainage area. WDR IN-79-1: 1975.

GAGE.--Water-stage recorder. Datum of gage is 737.67 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1953, nonrecording gage at bridge 0.2 mi upstream at datum 3.5 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of about 20.2 ft from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	379	367	1,050	778	e280	411	1,090	343	1,760	272	560	152
2	324	472	821	1,250	e310	652	787	670	1,010	258	363	144
3	292	446	691	1,690	e340	587	619	741	684	251	268	139
4	280	396	612	3,870	e380	514	513	549	511	291	271	145
5	268	358	616	7,640	441	581	438	446	426	275	376	153
6	245	324	841	7,440	717	658	396	382	377	244	279	135
7	229	301	763	2,530	936	532	377	341	340	230	219	128
8	220	279	654	1,420	560	458	361	309	308	216	190	123
9	210	262	595	1,100	436	411	340	291	285	206	174	118
10	206	251	608	893	488	375	315	276	271	216	165	115
11	203	255	897	780	581	354	302	261	473	213	154	110
12	196	282	799	720	634	340	292	249	2,570	209	146	108
13	189	317	638	661	604	319	291	244	4,110	206	144	106
14	449	281	577	611	464	312	289	259	1,660	189	140	103
15	1,940	265	524	589	492	310	270	315	1,030	175	134	102
16	1,140	258	594	534	404	316	258	336	1,780	164	129	100
17	773	248	876	522	355	324	253	301	4,600	178	124	102
18	586	285	730	1,020	350	315	245	284	2,960	171	126	103
19	482	1,090	601	840	448	359	235	803	1,650	165	122	98
20	406	1,260	519	613	716	401	241	1,080	1,060	156	156	95
21	361	839	466	533	915	447	250	757	797	161	320	94
22	333	630	451	e440	657	399	250	548	728	533	266	93
23	309	520	848	e400	557	359	342	433	627	934	192	93
24	288	922	1,860	e360	559	341	350	429	512	427	167	91
25	280	1,240	1,150	e350	523	323	325	384	457	283	159	93
26	422	828	822	e340	462	328	334	376	409	241	202	89
27	578	1,840	666	e320	423	952	296	364	365	233	227	88
28	496	3,080	600	e310	391	913	268	414	338	221	186	87
29	443	2,370	591	e280	381	686	251	528	314	196	204	85
30	403	1,450	1,190	e260	---	626	267	421	289	191	192	85
31	361	---	1,020	e260	---	955	---	2,040	---	582	169	---
TOTAL	13,291	21,716	23,670	39,354	14,804	14,858	10,845	15,174	32,701	8,287	6,524	3,277
MEAN	429	724	764	1,269	510	479	362	489	1,090	267	210	109
MAX	1,940	3,080	1,860	7,640	936	955	1,090	2,040	4,600	934	560	153
MIN	189	248	451	260	280	310	235	244	271	156	122	85
CFSM	1.02	1.72	1.81	3.02	1.21	1.14	0.86	1.16	2.59	0.63	0.50	0.26
IN.	1.17	1.92	2.09	3.48	1.31	1.31	0.96	1.34	2.89	0.73	0.58	0.29

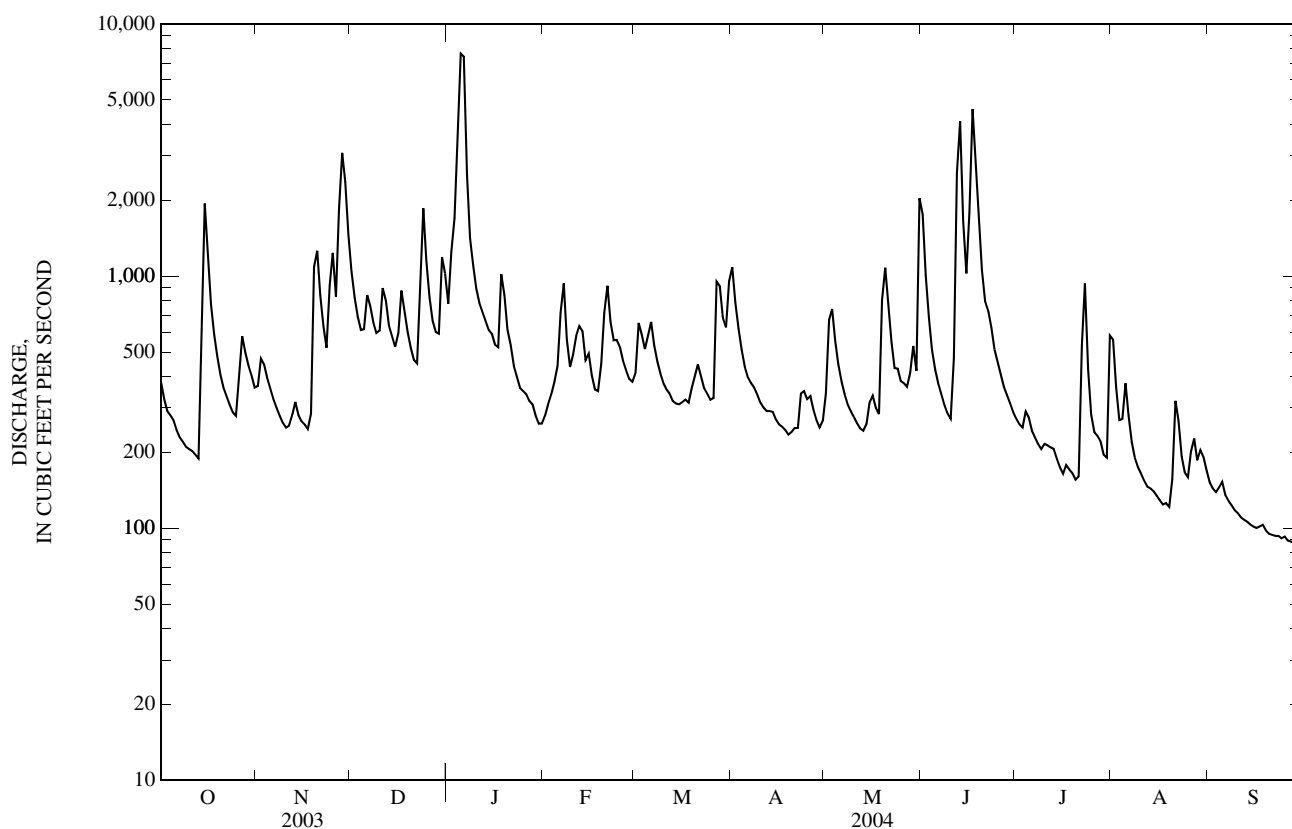
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2004, BY WATER YEAR (WY)

MEAN	184	351	482	630	691	788	775	618	484	330	195	155
MAX	1,199	2,114	1,575	4,319	2,208	1,970	1,973	2,605	1,729	1,363	1,404	953
(WY)	(1987)	(1994)	(1967)	(1950)	(1950)	(1963)	(1964)	(1996)	(1998)	(1979)	(1979)	(1989)
MIN	41.7	52.5	52.3	38.3	92.0	204	183	149	81.2	56.1	46.4	43.1
(WY)	(1964)	(1954)	(1964)	(1977)	(1964)	(1957)	(1971)	(1976)	(1988)	(1954)	(1988)	(1999)

03361500 BIG BLUE RIVER AT SHELBYVILLE, IN—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1944 - 2004	
ANNUAL TOTAL	229,285		204,501		472	
ANNUAL MEAN	628		559		908	
HIGHEST ANNUAL MEAN					166	
LOWEST ANNUAL MEAN					13,800	
HIGHEST DAILY MEAN	6,270	Sep 3	7,640	Jan 5	13,800	Mar 5, 1963
LOWEST DAILY MEAN	128	Aug 26	85	Sep 29	27	Jan 18, 1977
ANNUAL SEVEN-DAY MINIMUM	136	Aug 23	88	Sep 24	32	Jan 16, 1977
MAXIMUM PEAK FLOW			8,770	Jan 6	13,800	Nov 15, 1993
MAXIMUM PEAK STAGE			15.82	Jan 6	18.41	Nov 15, 1993
ANNUAL RUNOFF (CFSM)	1.49		1.33		1.12	
ANNUAL RUNOFF (INCHES)	20.26		18.07		15.24	
10 PERCENT EXCEEDS	1,200		1,010		1,010	
50 PERCENT EXCEEDS	383		360		244	
90 PERCENT EXCEEDS	197		150		75	

e Estimated



03361638 LEARY-WEBER DITCH AT MOHAWK, IN

LOCATION.--Lat 39°50'33", long 85°49'30", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.16 N., R.6 E., Hancock County, Hydrologic Unit 05120204, (ACTON, IN quadrangle), 60 ft upstream of bridge on County Road 400N, 0.33 mi upstream of Sugar Creek, 0.70 mi east of Mohawk, and 3.06 mi southwest of Maxwell.

DRAINAGE AREA.--2.4 mi².

PERIOD OF RECORD.--July 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is 841.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.84	1.1	3.0	3.4	e0.26	5.9	9.5	0.51	13	0.47	0.00	0.00
2	0.63	1.5	2.2	24	e0.29	4.8	5.1	0.73	5.5	0.42	0.00	0.00
3	0.65	1.6	1.9	16	e0.34	2.8	3.2	0.59	2.8	0.52	0.00	0.00
4	0.62	1.8	1.8	70	e0.38	4.7	2.1	0.53	1.9	0.77	0.00	0.00
5	0.40	1.6	3.6	53	e0.52	9.1	1.5	0.46	1.6	0.45	0.00	0.00
6	0.31	1.3	4.5	20	e1.4	4.4	1.4	0.39	1.3	0.37	0.00	0.00
7	0.28	1.0	3.1	6.8	e0.75	2.8	1.3	0.34	1.1	0.33	0.00	0.00
8	0.27	0.81	2.5	3.7	e0.40	1.9	1.2	0.31	0.89	0.25	0.00	0.00
9	0.31	0.72	2.1	2.5	e0.45	1.6	0.82	0.33	0.81	0.23	0.00	0.00
10	0.46	0.84	3.9	1.8	e0.69	1.2	0.74	0.31	0.86	0.21	0.00	0.00
11	0.79	1.1	4.4	e1.4	1.3	1.2	0.71	e0.34	60	0.25	0.00	0.00
12	1.2	1.9	2.8	e1.2	1.9	0.91	0.73	0.27	45	0.46	0.00	0.00
13	1.3	1.3	2.1	e1.1	e1.2	0.76	0.74	0.31	25	0.25	0.00	0.00
14	21	1.1	1.9	e1.0	e1.0	0.86	0.54	0.72	11	0.20	0.00	0.00
15	16	1.3	1.5	e0.95	e1.3	0.68	0.46	1.4	21	0.12	0.00	0.00
16	6.7	1.2	2.5	0.89	0.63	0.86	0.45	0.81	50	0.07	0.00	0.00
17	3.7	0.99	2.7	1.6	0.62	0.78	0.44	e0.56	e46	0.04	0.00	0.00
18	2.5	7.1	2.1	4.0	1.8	0.82	0.40	e0.59	15	0.01	0.00	0.00
19	1.9	17	1.6	1.6	4.7	1.4	0.42	8.8	7.7	0.00	0.00	0.00
20	1.5	6.7	1.1	1.1	7.9	1.6	0.49	4.9	e4.5	0.00	0.00	0.00
21	1.5	3.8	1.1	e0.91	5.2	1.3	0.57	2.7	e2.9	0.00	0.00	0.00
22	1.1	2.7	1.1	e0.76	2.7	1.0	0.62	1.9	2.1	0.00	0.00	0.00
23	0.96	2.2	32	e0.65	3.1	0.93	2.7	1.5	1.5	0.00	0.00	0.00
24	0.69	19	19	e0.57	3.3	0.89	1.3	e1.3	1.3	0.00	0.00	0.00
25	0.71	7.7	8.3	e0.50	e2.0	0.76	1.2	e1.2	1.1	0.00	0.00	0.00
26	3.4	4.1	4.4	e0.43	e1.6	7.4	0.85	0.95	0.91	0.00	0.00	0.00
27	2.8	12	3.2	e0.36	1.4	14	0.66	0.91	0.76	0.00	0.00	0.00
28	2.1	20	2.7	0.31	1.3	6.6	0.53	0.77	0.70	0.00	0.00	0.00
29	1.4	8.5	7.0	e0.28	1.3	3.7	0.45	0.59	0.59	0.00	0.05	0.00
30	1.2	4.8	9.4	e0.27	---	5.5	0.48	2.7	0.52	0.00	0.00	0.00
31	1.0	---	4.5	e0.26	---	21	---	42	---	0.00	0.00	---
TOTAL	78.22	136.76	144.0	221.34	49.73	112.15	41.60	79.72	327.34	5.42	0.05	0.00
MEAN	2.52	4.56	4.65	7.14	1.71	3.62	1.39	2.57	10.9	0.17	0.00	0.00
MAX	21	20	32	70	7.9	21	9.5	42	60	0.77	0.05	0.00
MIN	0.27	0.72	1.1	0.26	0.26	0.68	0.40	0.27	0.52	0.00	0.00	0.00
CFSM	0.90	1.63	1.66	2.56	0.61	1.30	0.50	0.92	3.91	0.06	0.00	0.00
IN.	1.04	1.82	1.92	2.95	0.66	1.50	0.55	1.06	4.36	0.07	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

MEAN	1.26	2.47	3.45	5.24	1.82	5.66	1.54	3.73	5.92	4.82	0.01	1.29
MAX	2.52	4.56	4.65	7.14	1.92	7.71	1.69	4.89	10.9	12.6	0.04	3.86
(WY)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)	(2003)	(2004)	(2003)	(2003)	(2003)
MIN	0.00	0.39	2.25	3.34	1.71	3.62	1.39	2.57	0.93	0.17	0.00	0.00
(WY)	(2003)	(2003)	(2003)	(2003)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

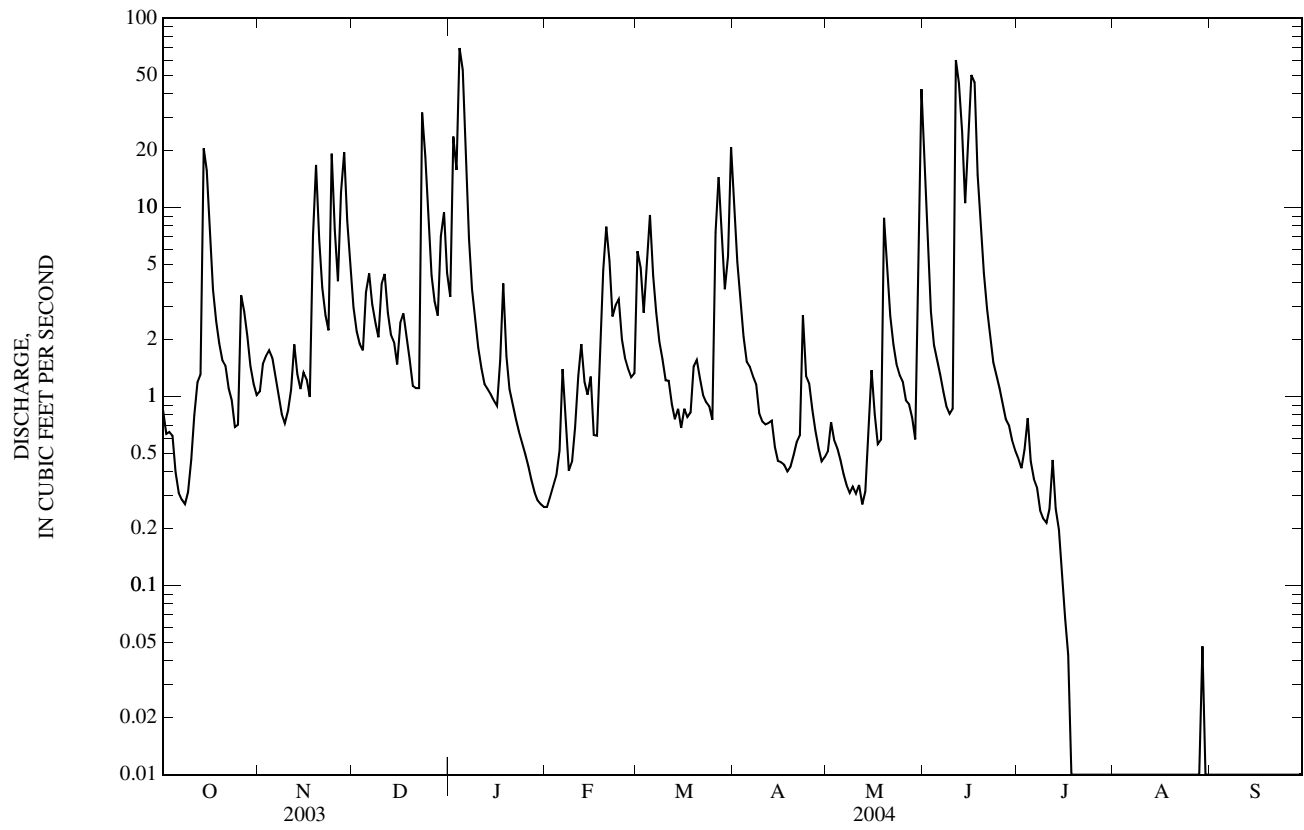
FOR 2004 WATER YEAR

WATER YEARS 2002 - 2004

ANNUAL TOTAL	1,492.24	1,196.33	
ANNUAL MEAN	4.09	3.27	3.30
HIGHEST ANNUAL MEAN			3.33
LOWEST ANNUAL MEAN			3.27
HIGHEST DAILY MEAN	109	Jul 5	109
LOWEST DAILY MEAN	0.00	Aug 10	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 10	0.00
MAXIMUM PEAK FLOW			167
MAXIMUM PEAK STAGE			6.58
ANNUAL RUNOFF (CFSM)	1.47	1.17	1.18
ANNUAL RUNOFF (INCHES)	19.90	15.95	16.06
10 PERCENT EXCEEDS	10	7.0	7.7
50 PERCENT EXCEEDS	1.2	0.90	0.74
90 PERCENT EXCEEDS	0.05	0.00	0.00

e Estimated

03361638 LEARY-WEBER DITCH AT MOHAWK, IN—Continued



[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]

WATER-QUALITY RECORDS

The data described in the following table were collected and analyzed as part of the National Water Quality Assessment Program (NAWQA) in the White River Basin, Miami River Basin (WHMI) study units. The objectives of the NAWQA program are to broadly characterize the water-quality of the Nation's streams and aquifers in relation to human and natural factors. This project is one of 42 river basin and aquifer assessment projects being implemented across the nation on a staggered timeline. During the second decade of sampling, 14 of these projects will be actively collecting data. The period of high-intensity data collection for the WHMI project is in water years 2001-2004.

Water quality data from Leary Weber Ditch at Mohawk, IN are being reported as part of the NAWQA Agricultural Chemical Transport topical study. The key aspect of this study is the investigation of the sources, transport, and fate of selected agricultural chemicals in a variety of agricultural settings across the Nation. The final objective is to interpret study results as to the implications for managing the water and water-quality impacts of agricultural systems. Beginning in October 2002, the WHMI is one of five NAWQA study units engaged in research of selected agricultural settings.

(- - -, no data: <, concentration or value reported is less than that indicated: E, estimated value:
K, value is estimated from a non-ideal colony count: M, presence verified, not quantified)

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	7.5	7.6	8.0	7.4	8.0	---	---
2	---	---	---	---	---	7.7	7.7	8.1	7.6	8.0	---	---
3	---	---	---	---	---	7.8	7.9	8.2	7.8	7.9	---	---
4	---	---	---	---	---	7.6	8.0	8.2	7.9	8.0	---	---
5	---	---	---	---	---	7.3	8.0	8.1	7.9	8.0	---	---
6	---	---	---	---	---	7.3	8.0	8.1	8.0	7.9	---	---
7	---	---	---	---	---	7.4	8.1	8.1	8.0	8.0	---	---
8	---	---	---	---	---	7.8	8.1	8.1	8.0	---	---	---
9	---	---	---	---	---	8.0	8.1	8.0	8.1	---	---	---
10	---	---	---	---	---	8.0	8.2	8.0	8.0	---	---	---
11	---	---	---	---	---	8.1	8.1	e8.0	7.2	---	---	---
12	---	---	---	---	---	8.2	8.2	8.0	7.2	---	---	---
13	---	---	---	---	---	8.2	8.2	8.0	7.3	---	---	---
14	---	---	---	---	---	8.1	8.2	8.0	7.5	---	---	---
15	---	---	---	---	---	8.2	8.2	8.0	7.5	---	---	---
16	---	---	---	---	---	8.2	8.0	8.1	7.2	---	---	---
17	---	---	---	---	---	8.2	7.9	e8.1	---	---	---	---
18	---	---	---	---	---	8.1	8.0	e8.1	7.3	---	---	---
19	---	---	---	---	---	8.1	8.0	e7.6	7.5	---	---	---
20	---	---	---	---	---	8.0	8.0	---	---	---	---	---
21	---	---	---	---	---	8.2	8.1	---	---	---	---	---
22	---	---	---	---	---	8.2	8.0	---	7.8	---	---	---
23	---	---	---	---	---	8.1	8.0	---	7.9	---	---	---
24	---	---	---	---	---	8.1	8.1	---	7.9	---	---	---
25	---	---	---	---	---	8.0	8.1	---	8.0	---	---	---
26	---	---	---	---	8.0	7.8	8.2	8.1	8.0	---	---	---
27	---	---	---	---	8.0	7.4	8.2	8.1	8.0	---	---	---
28	---	---	---	---	8.0	7.6	8.2	8.2	8.0	---	---	---
29	---	---	---	---	8.1	7.8	8.1	8.1	8.0	---	---	---
30	---	---	---	---	---	7.7	8.0	8.1	8.0	---	---	---
31	---	---	---	---	---	7.3	---	7.2	---	---	---	---

e Estimated

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	11.0	10	8.3	7.1	8.6	---	---
2	---	---	---	---	---	12.5	10.7	10.1	8.6	8.0	---	---
3	---	---	---	---	---	13.2	11.0	10.4	9.3	7.2	---	---
4	---	---	---	---	---	11.6	11.5	10.1	9.3	7.3	---	---
5	---	---	---	---	---	10.6	11.9	9.2	9.3	7.0	---	---
6	---	---	---	---	---	12.1	11.9	8.5	9.2	6.6	---	---
7	---	---	---	---	---	12.4	11.6	8.2	8.8	5.5	---	---
8	---	---	---	---	---	13.3	---	8.3	10.4	---	---	---
9	---	---	---	---	---	13.5	---	7.5	12.3	---	---	---
10	---	---	---	---	---	13.9	---	7.1	12.2	---	---	---
11	---	---	---	---	---	13.3	---	e6.9	e8.5	---	---	---
12	---	---	---	---	---	15.3	---	6.7	---	---	---	---
13	---	---	---	---	---	14.9	---	6.5	---	---	---	---
14	---	---	---	---	---	13.1	---	6.7	---	---	---	---
15	---	---	---	---	---	14.3	---	9.4	---	---	---	---
16	---	---	---	---	---	14.1	---	9.1	---	---	---	---
17	---	---	---	---	---	14.0	---	e8.5	---	---	---	---
18	---	---	---	---	---	14.0	---	e7.8	---	---	---	---
19	---	---	---	---	---	13.7	10.3	e8.3	---	---	---	---
20	---	---	---	---	---	12.5	9.3	---	---	---	---	---
21	---	---	---	---	---	14.7	9.3	---	---	---	---	---
22	---	---	---	---	---	15.4	9.5	---	11.6	---	---	---
23	---	---	---	---	---	15.1	10.6	---	11.7	---	---	---
24	---	---	---	---	---	13.9	10.6	---	11.2	---	---	---
25	---	---	---	---	---	12.6	10.0	---	11.5	---	---	---
26	---	---	---	---	14.2	9.2	10.4	8.2	11.5	---	---	---
27	---	---	---	---	14.1	9.6	11.0	8.3	10.8	---	---	---
28	---	---	---	---	14.4	10.6	10.6	8.4	9.9	---	---	---
29	---	---	---	---	14.2	11.2	9.6	8.7	10.1	---	---	---
30	---	---	---	---	---	10.8	8.6	8.0	9.4	---	---	---
31	---	---	---	---	---	8.5	---	5.5	---	---	---	---

e Estimated

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	5.6	7.4	14.0	16.4	20.1	---	---
2	---	---	---	---	---	5.5	8.0	11.2	15.9	20.9	---	---
3	---	---	---	---	---	5.2	8.4	11.2	16.0	21.8	---	---
4	---	---	---	---	---	5.7	7.4	11.3	16.3	21.4	---	---
5	---	---	---	---	---	7.2	7.8	14.1	16.4	21.7	---	---
6	---	---	---	---	---	5.8	8.6	16.6	17.2	22.3	---	---
7	---	---	---	---	---	5.7	10.5	16.2	18.4	21.4	---	---
8	---	---	---	---	---	4.8	11.0	16.6	19.9	---	---	---
9	---	---	---	---	---	4.7	10.2	18.3	20.1	---	---	---
10	---	---	---	---	---	5.1	11.0	18.4	19.2	---	---	---
11	---	---	---	---	---	5.8	9.8	e19.0	20.6	---	---	---
12	---	---	---	---	---	2.9	7.0	19.6	19.4	---	---	---
13	---	---	---	---	---	4.0	5.8	18.9	19.0	---	---	---
14	---	---	---	---	---	5.5	8.3	17.8	18.9	---	---	---
15	---	---	---	---	---	5.5	11.1	13.3	18.8	---	---	---
16	---	---	---	---	---	4.2	13.8	14.8	20.1	---	---	---
17	---	---	---	---	---	3.8	16.0	e16.0	---	---	---	---
18	---	---	---	---	---	3.7	16.8	e17.8	19.7	---	---	---
19	---	---	---	---	---	5.6	15.8	e14.5	19.1	---	---	---
20	---	---	---	---	---	7.3	13.6	---	---	---	---	---
21	---	---	---	---	---	4.3	14.3	---	---	---	---	---
22	---	---	---	---	---	4.0	12.0	---	19.0	---	---	---
23	---	---	---	---	---	5.6	11.5	---	18.6	---	---	---
24	---	---	---	---	---	8.2	12.0	---	19.1	---	---	---
25	---	---	---	---	---	9.8	13.5	---	17.7	---	---	---
26	---	---	---	---	3.8	9.1	12.6	16.9	17.5	---	---	---
27	---	---	---	---	4.3	7.2	10.9	17.1	18.4	---	---	---
28	---	---	---	---	4.5	8.8	12.0	17.4	19.4	---	---	---
29	---	---	---	---	5.3	8.2	14.3	16.8	18.4	---	---	---
30	---	---	---	---	---	7.6	15.2	17.8	18.9	---	---	---
31	---	---	---	---	---	7.3	---	17.3	---	---	---	---

e Estimated

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	517	476	572	469	571	---	---
2	---	---	---	---	---	---	509	561	539	576	---	---
3	---	---	---	---	---	---	526	568	561	568	---	---
4	---	---	---	---	---	531	536	566	574	557	---	---
5	---	---	---	---	---	512	545	570	577	569	---	---
6	---	---	---	---	---	541	540	564	579	578	---	---
7	---	---	---	---	---	552	533	569	577	581	---	---
8	---	---	---	---	---	551	522	567	575	---	---	---
9	---	---	---	---	---	551	522	577	580	---	---	---
10	---	---	---	---	---	551	520	577	586	---	---	---
11	---	---	---	---	---	542	530	e571	301	---	---	---
12	---	---	---	---	---	546	543	565	306	---	---	---
13	---	---	---	---	---	550	559	574	408	---	---	---
14	---	---	---	---	---	551	528	546	475	---	---	---
15	---	---	---	---	---	536	510	553	420	---	---	---
16	---	---	---	---	---	530	516	572	297	---	---	---
17	---	---	---	---	---	556	527	e575	---	---	---	---
18	---	---	---	---	---	565	529	e575	424	---	---	---
19	---	---	---	---	---	533	---	e505	484	---	---	---
20	---	---	---	---	---	538	---	---	---	---	---	---
21	---	---	---	---	---	545	---	---	---	---	---	---
22	---	---	---	---	---	552	545	---	555	---	---	---
23	---	---	---	---	---	549	529	---	566	---	---	---
24	---	---	---	---	---	540	552	---	564	---	---	---
25	---	---	---	---	---	541	549	---	568	---	---	---
26	---	---	---	---	535	509	554	585	571	---	---	---
27	---	---	---	---	529	469	561	583	573	---	---	---
28	---	---	---	---	525	517	541	578	578	---	---	---
29	---	---	---	---	513	536	547	579	578	---	---	---
30	---	---	---	---	---	513	555	545	584	---	---	---
31	---	---	---	---	---	407	---	318	---	---	---	---

e Estimated

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

[illegible]

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

[illegible]

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

[illegible]

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

[illegible]

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

[illegible]

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sima- zine, water, fltrd, µg/L (04035)	Tebu- thiuron water fltrd 0.7µm GF µg/L (82670)	Ter- bufos oxon sulfone water, fltrd, µg/L (61674)	Terbu- fos, water, fltrd 0.7µm GF µg/L (82675)	Ter- buthyl- azine, water, fltrd, µg/L (04022)	Tri- flur- alin, water, fltrd 0.7µm GF µg/L (82661)	Di- chlor- vos, water fltrd, µg/L (38775)	Sus- pended sediment concentration mg/L (80154)
MAR								
22...	E0.001	E0.01	<0.07	<0.02	<0.01	<0.009	<0.01	18
30...	<.005	E.01	<.07	<.02	<.01	<.009	<.01	38
MAY								
07...	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--
14...	.025	<.02	<.07	<.02	<.01	E.004	<.01	86
18...	--	--	--	--	--	--	--	--
19...	.027	<.02	<.07	<.02	E.01	<.009	<.01	183
MAY								
19-20	.015	<.02	<.07	<.02	<.01	<.009	<.01	30
19...	.033	<.02	<.07	<.02	M	<.009	<.01	78
19...	.012	<.02	<.07	<.02	<.01	<.009	<.01	46
20...	.011	<.02	<.07	<.02	<.01	<.009	<.01	43
20...	.008	<.02	<.07	<.02	<.01	<.009	<.01	73
25...	--	--	--	--	--	--	--	--
30...	.011	<.02	<.07	<.02	<.01	<.009	<.01	384
MAY 30-								
JUN 02	.018	<.02	<.07	<.02	E.01	<.009	<.01	184
MAY								
31...	.040	<.02	<.07	<.02	.01	<.009	<.01	384
31...	.029	<.02	<.07	<.02	E.01	<.009	<.01	146
31...	.021	<.02	<.07	<.02	E.01	<.009	<.01	58
JUN								
01...	.019	<.02	<.07	<.02	<.01	<.009	<.01	30
08...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--
30...	.007	<.02	<.07	<.02	<.01	<.009	<.01	--
JUL								
06...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--
AUG								
03...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--