03357000 WHITE RIVER AT SPENCER, IN

LOCATION.--Lat 39°16'51", long 86°45'44", in NE¼NE¼ 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 1971 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, 22.86 ft, May 15; minimum gage height, 2.91 ft, Sept. 13, 14, 15.

GAGE HEIGHT, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.79	7.37	13.35	5.50	14.98	6.65	15.52	16.56	7.39	6.20	3.63	3.14
2	3.67	7.04	12.95	5.28	17.34	6.87	15.02	12.16	6.98	5.60	3.54	3.10
3	3.51	6.90	10.49	5.18	16.97	9.85	12.00	11.28	6.58	5.22	3.47	3.06
4	3.32	6.52	8.54	5.16	16.52	10.33	12.28	9.64	6.21	4.96	3.42	3.06
5	3.27	6.16	7.57	5.09	12.18	10.32	11.97	8.58	6.28	4.73	3.38	3.05
6	5.04	5.86	7.14	5.05	9.27	8.42	10.06	8.87	7.87	4.58	3.36	3.05
7	5.78	5.64	6.81	5.04	8.25	7.44	8.98	15.43	7.04	4.43	3.28	3.03
8	6.09	5.44	6.37	4.89	7.61	6.98	8.32	19.81	6.55	4.29	3.25	2.99
9	5.58	5.37	6.05	4.84	7.12	8.85	9.23	20.27	6.25	4.68	3.29	2.99
10	5.09	5.25	5.75	4.88	6.83	11.91	9.29	18.59	6.22	5.02	3.25	2.96
11	6.66	5.10	5.45	4.90	6.67	11.28	9.67	15.48	6.05	5.02	3.21	2.94
12	12.14	4.95	5.45	4.77	6.51	9.69	11.02	14.72	5.97	4.60	3.21	2.92
13	13.46	4.78	5.99	4.67	6.36	8.39	13.24	19.50	7.09	4.47	3.26	2.91
14	14.38	4.65	10.12	4.63	6.18	7.69	12.72	22.75	8.23	4.25	3.30	2.91
15	15.84	4.64	12.79	4.54	5.85	7.31	13.33	22.57	7.46	4.10	3.32	2.95
16	15.96	4.58	12.60	4.48	5.61	8.54	12.99	21.84	7.11	3.97	3.34	3.05
17	15.50	4.45	15.80	4.40	5.52	8.90	11.42	20.85	6.35	3.86	3.30	2.98
18	15.25	4.39	18.28	4.34	5.34	8.44	9.37	17.65	5.86	4.19	3.23	2.99
19	13.78	4.42	18.94	4.31	5.29	7.98	8.22	11.97	5.56	4.08	3.24	3.03
20	10.32	4.27	17.85	4.35	6.36	8.10	7.64	10.37	5.35	4.03	5.04	4.17
21	8.78	4.23	15.73	4.40	7.72	8.03	11.43	9.45	5.13	4.01	4.45	6.80
22	7.87	4.19	10.69	4.26	7.78	7.31	14.08	8.71	4.95	4.14	3.95	5.08
23	7.40	4.08	9.67	4.22	7.20	6.85	11.03	8.22	4.81	4.08	3.66	4.32
24	14.37	4.52	8.72	4.40	6.58	6.55	10.86	8.14	4.70	3.94	3.54	3.84
25	15.85	5.35	8.03	4.44	6.27	10.94	12.58	8.32	4.82	3.81	3.83	3.57
26	16.88	5.02	7.42	4.34	7.30	13.47	10.50	8.30	6.92	3.71	3.71	3.44
27	16.75	5.92	7.07	4.31	7.39	12.23	11.16	8.05	7.85	3.64	3.56	3.53
28	15.99	6.41	6.65	4.30	6.83	11.80	15.11	7.76	10.27	3.59	3.43	4.39
29	10.97	10.02	6.34	4.27	---	12.42	17.62	9.25	8.46	3.68	3.32	3.91
30	8.77	12.76	6.20	4.56	---	14.11	17.53	8.30	7.24	3.79	3.22	3.68
31	7.92	---	5.79	9.02	---	14.93	---	7.68	---	3.80	3.14	---
MEAN	10.00	5.68	9.70	4.80	8.35	9.44	11.81	13.26	6.58	4.34	3.49	3.46
MAX	16.88	12.76	18.94	9.02	17.34	14.93	17.62	22.75	10.27	6.20	5.04	6.80
MIN	3.27	4.08	5.45	4.22	5.29	6.55	7.64	7.68	4.70	3.59	3.14	2.91

CAL YR 2001 MEAN 6.01 MAX 18.94 MIN 2.74
WTR YR 2002 MEAN 7.58 MAX 22.75 MIN 2.91

03357330 BIG WALNUT CREEK NEAR ROACHDALE, IN

LOCATION.--Lat 39°48'58", long 86°45'12", in SE¼NW¼ 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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	139	544	e73	1740	161	e400	415	111	81	19	e12
2	---	127	324	e70	671	254	e300	549	102	68	29	e11
3	---	111	240	e67	394	462	e420	417	93	58	31	e9.8
4	---	102	185	e65	252	265	327	310	88	53	19	8.6
5	---	94	154	e63	155	191	255	254	514	48	17	8.1
6	---	87	137	e63	121	168	202	287	321	42	16	7.6
7	---	80	122	e60	102	151	184	3420	194	39	14	7.4
8	---	76	107	e62	82	134	196	1460	143	37	13	7.2
9	---	70	94	35	71	642	264	909	118	44	12	7.3
10	---	69	85	30	69	644	238	584	104	321	12	6.8
11	---	68	78	27	72	343	203	408	99	120	12	6.0
12	---	59	77	24	77	266	190	1370	201	67	12	5.2
13	---	58	120	25	65	222	200	4890	473	51	16	5.4
14	---	59	614	23	56	e180	290	1810	763	43	26	5.4
15	---	53	762	21	57	e170	332	764	371	38	20	5.5
16	---	51	508	18	e52	482	238	504	e250	33	14	5.8
17	---	48	1850	18	e49	345	198	384	e160	31	11	5.7
18	---	47	1090	18	e48	247	e150	302	122	32	10	5.8
19	---	48	604	18	e70	199	e130	245	98	31	235	8.7
20	---	45	382	18	e400	192	116	210	84	28	267	158
21	---	43	279	17	562	172	614	180	73	e23	76	220
22	---	42	229	16	330	144	574	161	68	e21	39	64
23	---	41	220	17	235	135	306	149	64	e22	67	32
24	---	63	182	19	187	125	332	141	59	e19	91	21
25	---	124	150	16	161	600	736	171	108	e17	e51	18
26	623	83	137	14	218	545	317	267	562	19	e31	15
27	388	75	129	14	211	455	506	187	314	24	e23	45
28	278	67	112	14	177	812	e2450	154	288	20	e19	65
29	217	139	97	16	---	e920	939	164	156	22	e16	36
30	177	868	e80	55	---	1010	561	143	104	30	e15	26
31	155	---	e76	472	---	e620	---	123	---	21	e13	---
TOTAL	1838	3036	9768	1468	6684	11256	12168	21332	6205	1503	1246	839.3
MEAN	306.3	101.2	315.1	47.35	238.7	363.1	405.6	688.1	206.8	48.48	40.19	27.98
MAX	623	868	1850	472	1740	1010	2450	4890	763	321	267	220
MIN	155	41	76	14	48	125	116	123	59	17	10	5.2
CFSM	2.34	0.77	2.41	0.36	1.82	2.77	3.10	5.25	1.58	0.37	0.31	0.21
IN.	0.52	0.86	2.77	0.42	1.90	3.20	3.46	6.06	1.76	0.43	0.35	0.24

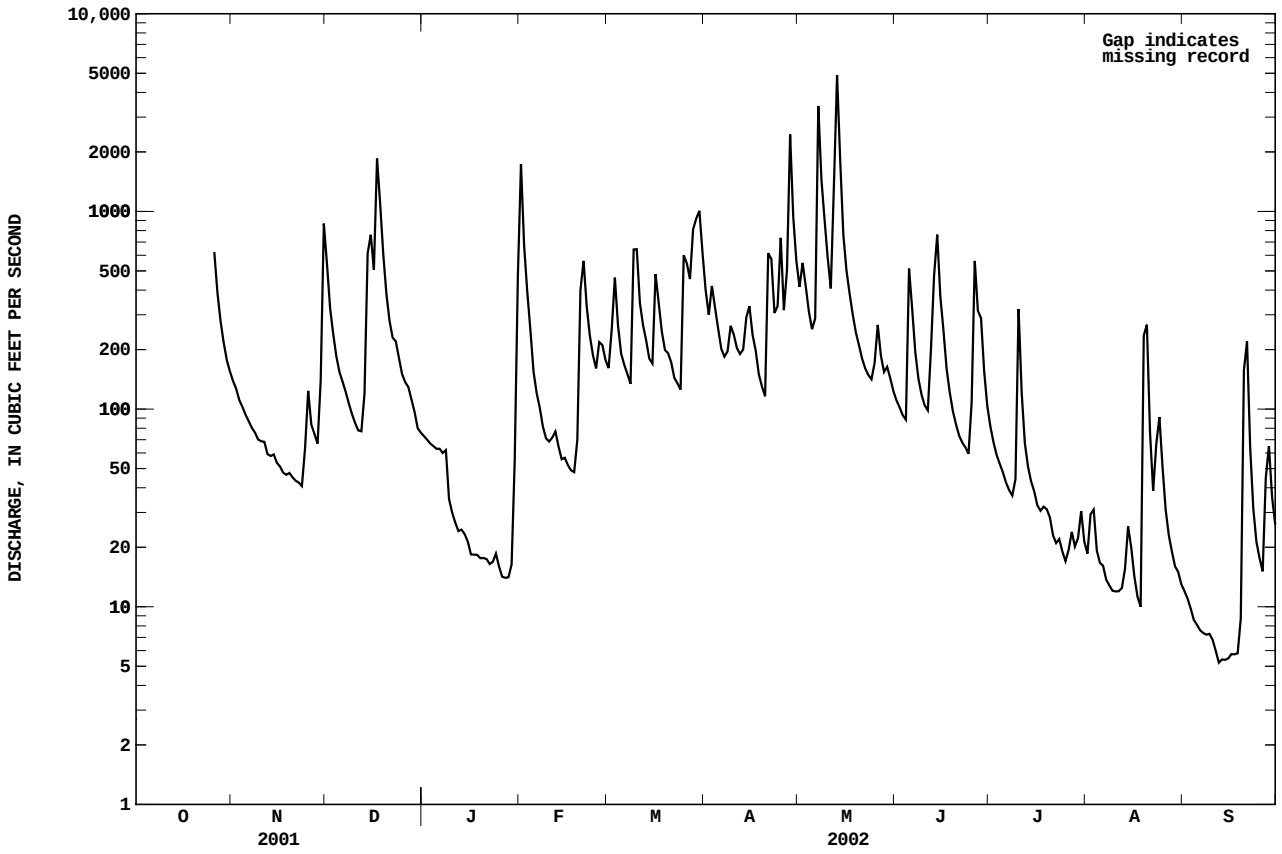
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, BY WATER YEAR (WY)

MEAN	306.3	101.2	315.1	47.35	238.7	363.1	405.6	688.1	206.8	48.48	40.19	27.98
MAX	306	101	315	47.4	239	363	406	688	207	48.5	40.2	28.0
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	306	101	315	47.4	239	363	406	688	207	48.5	40.2	28.0
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 WATER YEAR	
ANNUAL TOTAL	77343.3	
ANNUAL MEAN	227.5	
HIGHEST DAILY MEAN	4890	May 13
LOWEST DAILY MEAN	5.2	Sep 12
ANNUAL SEVEN-DAY MINIMUM	5.5	Sep 12
MAXIMUM PEAK FLOW	6360	May 13
MAXIMUM PEAK STAGE	15.58	May 13
ANNUAL RUNOFF (CFSM)	1.74	
ANNUAL RUNOFF (INCHES)	21.96	
10 PERCENT EXCEEDS	549	
50 PERCENT EXCEEDS	103	
90 PERCENT EXCEEDS	15	

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, WH, FIELD, in (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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

03357330 BIG WALNUT CREEK NR ROACHDALE, IN--Continued

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

OXYGEN DISSOLVED, in (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	9.0	7.4	7.4
2	---	---	---	---	---	---	---	---	---	9.3	7.1	7.5
3	---	---	---	---	---	---	---	---	---	9.5	7.5	8.4
4	---	---	---	---	---	---	---	---	---	9.6	7.2	8.0
5	---	---	---	---	---	---	---	---	---	9.2	7.1	8.2
6	---	---	---	---	---	---	---	---	---	9.3	7.5	8.1
7	---	---	---	---	---	---	---	---	---	9.3	---	8.4
8	---	---	---	---	---	---	---	---	---	9.1	10.2	7.9
9	---	---	---	---	---	---	---	---	---	7.5	9.7	8.4
10	---	---	---	---	---	---	---	---	---	6.7	8.6	8.7
11	---	---	---	---	---	---	---	---	---	7.7	7.6	8.1
12	---	---	---	---	---	---	---	---	---	8.3	7.6	9.1
13	---	---	---	---	---	---	---	---	---	8.5	6.7	10.3
14	---	---	---	---	---	---	---	---	---	8.6	7.2	9.3
15	---	---	---	---	---	---	---	---	---	8.5	7.5	8.3
16	---	---	---	---	---	---	---	---	---	8.6	7.4	8.2
17	---	---	---	---	---	---	---	---	---	8.1	7.0	9.9
18	---	---	---	---	---	---	---	---	---	7.8	7.1	8.9
19	---	---	---	---	---	---	---	---	---	7.8	7.0	7.9
20	---	---	---	---	---	---	---	---	10.4	7.6	5.8	7.3
21	---	---	---	---	---	---	---	---	10.5	7.3	6.9	---
22	---	---	---	---	---	---	---	---	10.3	6.9	6.7	---
23	---	---	---	---	---	---	---	---	9.9	6.5	6.5	---
24	---	---	---	---	---	---	---	---	9.6	7.9	6.7	---
25	---	---	---	---	---	---	---	---	9.3	8.0	7.2	---
26	---	---	---	---	---	---	---	---	8.0	7.4	7.2	---
27	---	---	---	---	---	---	---	---	8.4	8.1	7.3	---
28	---	---	---	---	---	---	---	---	8.6	7.7	7.5	3.8
29	---	---	---	---	---	---	---	---	8.8	7.0	7.7	9.2
30	---	---	---	---	---	---	---	---	8.9	7.6	7.8	10.9
31	---	---	---	---	---	---	---	---	---	7.4	7.9	---

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	26.7	29.4	26.0
2	---	---	---	---	---	---	---	---	---	27.5	28.8	26.5
3	---	---	---	---	---	---	---	---	---	27.9	29.1	26.6
4	---	---	---	---	---	---	---	---	---	28.3	30.0	24.9
5	---	---	---	---	---	---	---	---	---	28.7	29.8	24.3
6	---	---	---	---	---	---	---	---	---	27.2	28.3	24.6
7	---	---	---	---	---	---	---	---	---	26.9	---	24.8
8	---	---	---	---	---	---	---	---	---	27.3	25.2	25.9
9	---	---	---	---	---	---	---	---	---	27.2	25.6	26.4
10	---	---	---	---	---	---	---	---	---	24.8	26.2	26.3
11	---	---	---	---	---	---	---	---	---	24.3	26.1	24.3
12	---	---	---	---	---	---	---	---	---	23.4	26.8	22.1
13	---	---	---	---	---	---	---	---	---	23.8	26.3	21.6
14	---	---	---	---	---	---	---	---	---	24.9	25.3	23.3
15	---	---	---	---	---	---	---	---	---	25.9	25.9	24.1
16	---	---	---	---	---	---	---	---	---	26.0	27.1	23.1
17	---	---	---	---	---	---	---	---	---	26.2	27.5	21.5
18	---	---	---	---	---	---	---	---	---	26.4	26.5	23.6
19	---	---	---	---	---	---	---	---	---	27.0	23.9	24.7
20	---	---	---	---	---	---	---	---	24.4	28.0	23.2	23.0
21	---	---	---	---	---	---	---	---	25.7	29.4	24.5	21.5
22	---	---	---	---	---	---	---	---	26.3	30.2	26.8	---
23	---	---	---	---	---	---	---	---	26.4	28.1	26.7	---
24	---	---	---	---	---	---	---	---	26.4	27.0	25.9	---
25	---	---	---	---	---	---	---	---	26.1	26.7	25.4	---
26	---	---	---	---	---	---	---	---	23.6	26.2	25.2	---
27	---	---	---	---	---	---	---	---	23.9	27.3	25.5	---
28	---	---	---	---	---	---	---	---	23.6	28.9	25.5	19.7
29	---	---	---	---	---	---	---	---	24.4	28.4	25.3	20.2
30	---	---	---	---	---	---	---	---	25.5	28.5	25.2	20.8
31	---	---	---	---	---	---	---	---	---	28.9	25.5	---

03357330 BIG WALNUT CREEK NR ROACHDALE, IN--Continued

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

SPECIFIC CONDUCTANCE, in US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	636	---
2	---	---	---	---	---	---	---	---	---	---	622	---
3	---	---	---	---	---	---	---	---	---	---	600	---
4	---	---	---	---	---	---	---	---	---	---	593	492
5	---	---	---	---	---	---	---	---	---	---	617	537
6	---	---	---	---	---	---	---	---	---	---	621	561
7	---	---	---	---	---	---	---	---	---	---	---	582
8	---	---	---	---	---	---	---	---	---	---	514	590
9	---	---	---	---	---	---	---	---	---	---	523	594
10	---	---	---	---	---	---	---	---	---	---	541	596
11	---	---	---	---	---	---	---	---	---	---	571	685
12	---	---	---	---	---	---	---	---	---	---	599	747
13	---	---	---	---	---	---	---	---	---	---	593	737
14	---	---	---	---	---	---	---	---	---	---	597	729
15	---	---	---	---	---	---	---	---	---	---	617	716
16	---	---	---	---	---	---	---	---	---	---	622	711
17	---	---	---	---	---	---	---	---	---	---	623	692
18	---	---	---	---	---	---	---	---	---	---	623	683
19	---	---	---	---	---	---	---	---	---	---	---	653
20	---	---	---	---	---	---	---	---	---	---	---	526
21	---	---	---	---	---	---	---	---	---	---	419	486
22	---	---	---	---	---	---	---	---	---	---	489	---
23	---	---	---	---	---	---	---	---	---	---	535	---
24	---	---	---	---	---	---	---	---	---	---	480	---
25	---	---	---	---	---	---	---	---	---	---	552	---
26	---	---	---	---	---	---	---	---	---	627	601	---
27	---	---	---	---	---	---	---	---	---	645	637	---
28	---	---	---	---	---	---	---	---	---	642	667	659
29	---	---	---	---	---	---	---	---	---	624	---	669
30	---	---	---	---	---	---	---	---	---	620	---	692
31	---	---	---	---	---	---	---	---	---	630	---	---

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT													
31...	1140	155	743	10.6	8.1	693	18.0	11.5	270	272	328	2	30.4
NOV													
13...	1230	59	747	14.1	8.2	686	15.0	7.0	260	257	309	2	31.8
DEC													
11...	1020	79	740	14.8	8.2	716	8.0	3.0	270	270	326	2	31.2
JAN													
08...	1020	88	735	14.7	8.1	749	-1.0	.1	260	264	320	1	30.0
FEB													
05...	0940	155	748	13.6	8.1	636	-2.0	.8	230	230	E278	E1	28.0
MAR													
05...	1100	191	739	7.0	8.2	675	1.0	1.7	260	255	308	2	28.9
APR													
05...	1230	253	742	15.0	8.2	617	10.0	6.8	280	276	333	2	25.9
MAY													
13...	1120	6140	725	9.6	7.7	163	2.0	12.1	92	90	E110	E0	4.03
JUN													
05...	1010	705	729	7.3	7.7	328	25.0	20.6	110	107	E129	E0	14.8
JUL													
09...	1230	36	735	8.8	8.1	627	31.0	25.3	250	257	308	2	26.7
AUG													
07...	1230	13	743	10.0	8.3	563	30.0	25.5	200	201	242	1	28.6
SEP													
11...	1130	6.0	739	9.8	8.0	594	21.0	23.2	220	211	E254	E2	31.9

03357330 BIG WALNUT CREEK NR ROACHDALE, IN--Continued

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN,PAR TICULTE WAT FLT SUSP (MG/L AS N) (49570)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L AS C) (00694)	CARBON, INOR-GANIC, PARTIC. TOTAL (MG/L AS C) (00688)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC-ULATE TOTAL (MG/L AS C) (00689)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)
OCT													
31...	46.3	<.04	.33	4.99	.012	.16	.03	.058	1.1	<.1	3.5	1.0	<.002
NOV													
13...	52.1	<.04	.24	3.25	.008	.05	<.02	.013	.7	<.1	3.5	.7	<.002
DEC													
11...	48.9	<.04	.21	4.57	.009	.04	<.02	.018	.7	<.1	2.4	.7	<.002
JAN													
08...	55.7	E.03	.18	4.50	.010	<.02	E.01	.025	.3	<.1	2.1	.3	<.006
FEB													
05...	39.9	<.04	.47	6.20	.021	<.02	.02	.078	.8	<.1	2.8	.8	<.006
MAR													
05...	41.5	<.04	.28	6.81	.009	.09	<.02	.025	.5	<.1	2.2	.5	<.006
APR													
05...	39.5	<.04	.30	6.23	.011	.05	E.02	.031	.4	<.1	2.9	.4	--
MAY													
13...	6.3	<.04	1.8	1.69	.052	.39	.08	.64	7.5	<.1	6.6	7.5	<.006
JUN													
05...	20.1	E.03	6.4	5.06	.061	3.48	.05	1.74	32.8	1.1	6.8	31.6	<.006
JUL													
09...	46.6	<.04	.36	2.14	.025	.12	<.02	.028	.6	<.1	2.9	.6	<.006
AUG													
07...	43.4	<.04	.45	.49	.008	.13	E.02	.065	.7	<.1	4.1	.7	<.006
SEP													
11...	52.1	<.04	.34	.39	.021	.13	<.02	.038	.6	<.1	3.6	.6	<.006

Date	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)
OCT													
31...	<.004	<.002	<.005	.089	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.050	<.005
NOV													
13...	<.004	<.002	<.005	.063	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.028	<.005
DEC													
11...	<.004	<.002	<.005	.054	<.010	<.002	<.041	<.020	<.005	E.003	<.003	E.031	<.005
JAN													
08...	<.006	<.004	<.005	.033	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.015	<.005
FEB													
05...	<.006	<.004	<.005	.058	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.039	<.005
MAR													
05...	<.006	<.004	<.005	.050	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.025	<.005
APR													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
13...	.134	.005	<.005	3.16	<.010	<.002	E.009	E.046	E.004	<.018	<.003	E.275	.014
JUN													
05...	7.42	.027	<.005	E36.6	<.010	<.002	<.041	<.020	.045	<.018	<.003	E1.14	<.005
JUL													
09...	.061	<.004	<.005	.754	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.099	<.005
AUG													
07...	.051	<.004	<.005	.370	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.057	E.003
SEP													
11...	.022	<.004	<.005	.212	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.024	<.005

03357330 BIG WALNUT CREEK NR ROACHDALE, IN--Continued

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)
OCT													
31...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.028	<.006
NOV													
13...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.023	<.006
DEC													
11...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.015	E.003
JAN													
08...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	E.009	<.006
FEB													
05...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.030	<.006
MAR													
05...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.018	<.006
APR													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
13...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.842	.020
JUN													
05...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	4.44	1.23
JUL													
09...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	E.011	<.050	<.006	.099	<.006
AUG													
07...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.097	<.006
SEP													
11...	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.053	<.006

Date	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)
OCT													
31...	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M	<.004	<.010	<.011	<.02
NOV													
13...	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M	<.004	<.010	<.011	<.02
DEC													
11...	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M	<.004	<.010	<.011	<.02
JAN													
08...	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02
FEB													
05...	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02
MAR													
05...	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02
APR													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
13...	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02
JUN													
05...	<.002	<.007	<.003	<.010	<.004	E.021	<.006	<.011	<.01	<.004	<.010	<.011	<.02
JUL													
09...	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011	<.02
AUG													
07...	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	.02	<.004	<.010	<.011	<.02
SEP													
11...	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02

03357330 BIG WALNUT CREEK NR ROACHDALE, IN--Continued

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT									
31...	.073	M	<.034	<.02	<.005	<.002	<.009	30	22
NOV									
13...	.028	<.02	<.034	<.02	<.005	<.002	<.009	52	9.0
DEC									
11...	.051	<.02	<.034	<.02	<.005	<.002	<.009	44	10
JAN									
08...	.041	<.02	<.034	<.02	<.005	<.002	<.009	7	69
FEB									
05...	.096	<.02	<.034	<.02	<.005	<.002	<.009	63	36
MAR									
05...	.062	<.02	<.034	<.02	<.005	<.002	<.009	39	29
APR									
05...	--	--	--	--	--	--	--	97	16
MAY									
13...	.426	<.02	<.034	<.02	<.005	<.002	<.009	94	405
JUN									
05...	6.88	<.02	<.034	<.02	<.005	<.002	<.009	98	1490
JUL									
09...	.051	<.02	<.034	<.02	<.005	<.002	<.009	64	24
AUG									
07...	.036	<.02	<.034	<.02	<.005	<.002	<.009	83	8.0
SEP									
11...	.022	<.02	<.034	<.02	<.005	<.002	<.009	64	13

03357350 PLUM CREEK NEAR BAINBRIDGE, IN

LOCATION.--Lat 39°45'42", long 86°43'46", in SW¼SE¼ 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 for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.56	2.8	8.7	e1.3	43	4.6	6.2	6.2	1.3	0.34	0.12	0.08
2	0.51	2.5	6.0	e1.2	10	6.9	7.0	6.1	1.0	0.29	0.17	0.08
3	0.46	2.0	5.0	e1.2	7.5	8.5	8.2	4.8	0.88	0.26	0.10	0.08
4	0.43	1.9	4.1	e1.1	5.3	5.3	6.0	4.1	0.91	0.23	0.09	0.08
5	10	1.6	3.6	e1.1	4.1	4.3	5.0	3.6	6.6	0.16	0.09	0.08
6	8.7	1.5	3.5	e1.1	3.7	3.9	4.3	4.9	3.6	0.14	0.09	0.07
7	3.6	1.4	3.2	e1.0	3.5	3.5	4.0	196	2.5	0.13	0.09	0.07
8	1.7	1.4	2.9	e1.0	3.1	3.3	4.6	20	1.7	0.13	0.08	0.07
9	1.2	1.1	2.3	e1.1	2.8	26	5.6	14	1.2	0.35	0.08	0.06
10	2.1	1.2	2.1	1.2	2.8	10	4.6	8.5	0.98	0.56	0.08	0.04
11	30	1.00	1.8	1.0	2.7	7.1	3.9	6.5	0.93	0.25	0.08	0.00
12	58	0.92	2.2	1.1	2.5	5.7	4.2	51	1.8	0.18	0.08	0.00
13	16	0.92	3.9	1.00	1.9	5.0	4.3	120	2.6	0.13	0.17	0.00
14	78	0.91	27	1.0	1.8	4.2	6.5	13	3.4	0.12	0.10	0.00
15	12	0.86	12	0.87	1.9	5.5	5.3	8.3	2.6	0.11	0.09	0.00
16	27	0.83	13	0.85	1.7	12	4.1	6.6	1.7	0.11	0.08	0.00
17	12	0.77	59	e0.78	1.4	6.9	3.4	5.4	1.0	0.12	0.08	0.00
18	7.9	0.77	14	e0.74	1.3	5.3	3.0	4.6	0.77	0.12	0.09	0.00
19	5.9	0.82	8.7	e0.72	2.5	4.7	2.6	4.0	0.61	0.12	0.29	0.10
20	4.8	0.70	6.2	e0.74	20	4.8	2.2	3.6	0.52	0.12	0.21	4.5
21	3.9	0.71	5.1	0.82	12	4.2	59	3.3	0.46	0.12	0.17	1.2
22	3.6	0.69	4.8	0.70	7.4	3.5	14	3.1	0.44	0.13	0.14	0.24
23	12	0.66	4.7	0.85	5.6	3.4	7.9	2.9	0.42	0.14	0.18	0.23
24	44	3.6	3.9	0.89	4.7	3.4	35	2.8	0.38	0.10	0.19	0.21
25	16	3.5	3.4	0.72	4.2	28	21	3.0	0.44	0.10	0.16	0.20
26	7.9	2.1	3.3	0.70	6.6	11	8.4	2.6	0.66	0.10	0.15	0.20
27	5.5	2.0	3.0	0.69	5.3	19	42	2.2	1.2	0.11	0.13	0.45
28	4.5	2.0	2.8	0.70	4.6	19	63	2.0	0.82	0.11	0.11	0.27
29	3.8	6.5	2.2	0.84	---	20	10	1.8	0.44	0.12	0.09	0.23
30	3.4	25	e1.6	3.0	---	14	7.5	1.6	0.37	0.13	0.08	0.22
31	3.2	---	e1.4	25	---	8.2	---	1.4	---	0.12	0.08	---
TOTAL	388.66	72.66	225.4	55.01	173.9	271.2	362.8	517.9	42.23	5.25	3.74	8.76
MEAN	12.54	2.422	7.271	1.775	6.211	8.748	12.09	16.71	1.408	0.169	0.121	0.292
MAX	78	25	59	25	43	28	63	196	6.6	0.56	0.29	4.5
MIN	0.43	0.66	1.4	0.69	1.3	3.3	2.2	1.4	0.37	0.10	0.08	0.00
CFSM	4.18	0.81	2.42	0.59	2.07	2.92	4.03	5.57	0.47	0.06	0.04	0.10
IN.	4.82	0.90	2.79	0.68	2.16	3.36	4.50	6.42	0.52	0.07	0.05	0.11

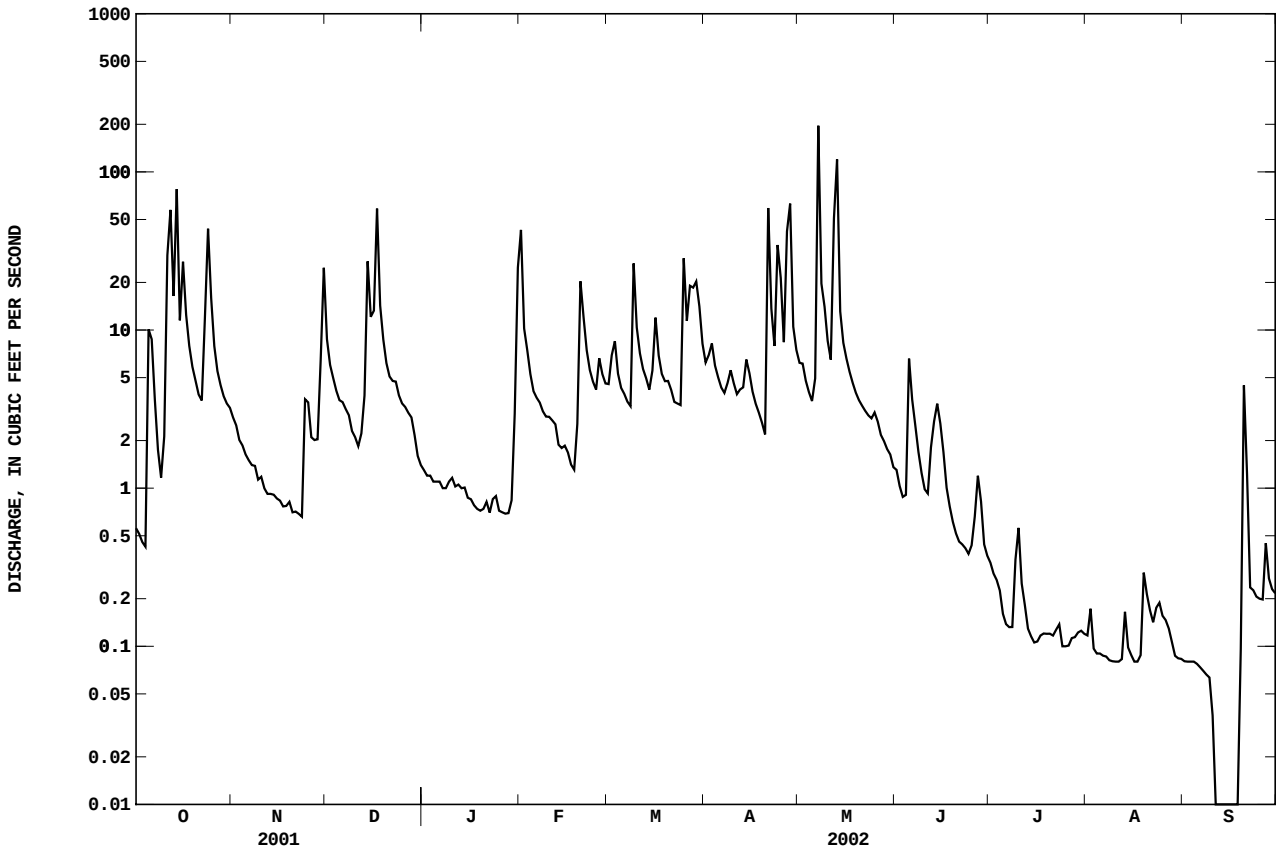
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2002, BY WATER YEAR (WY)

MEAN	1.469	3.648	4.551	3.743	5.625	6.496	5.572	4.364	2.819	2.139	1.109	1.048
MAX	12.5	20.6	18.4	13.5	17.1	19.1	12.7	16.7	13.7	12.9	7.90	12.8
(WY)	2002	1986	1991	1974	1971	1978	1996	2002	1998	1979	1979	1989
MIN	0.000	0.000	0.000	0.000	0.55	1.46	0.92	0.14	0.007	0.019	0.001	0.000
(WY)	1997	1998	1998	1977	1998	1981	1971	1976	1988	1988	1991	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1969 - 2002	
ANNUAL TOTAL	1579.41		2127.51			
ANNUAL MEAN	4.327		5.829		3.528	
HIGHEST ANNUAL MEAN					5.83	2002
LOWEST ANNUAL MEAN					1.49	2000
HIGHEST DAILY MEAN	203	Jun 6	196	May 7	218	Nov 19 1985
LOWEST DAILY MEAN	0.03	Aug 17	0.00	Sep 11	0.00	Aug 18 1970
ANNUAL SEVEN-DAY MINIMUM	0.05	Aug 11	0.00	Sep 11	0.00	Aug 26 1970
MAXIMUM PEAK FLOW			735	May 7	940	Sep 14 1989
MAXIMUM PEAK STAGE			5.77	May 7	6.50	Sep 14 1989
ANNUAL RUNOFF (CFSM)	1.44		1.94		1.18	
ANNUAL RUNOFF (INCHES)	19.58		26.38		15.98	
10 PERCENT EXCEEDS	8.6		12		7.2	
50 PERCENT EXCEEDS	1.4		2.0		0.97	
90 PERCENT EXCEEDS	0.24		0.10		0.01	

e Estimated

03357350 PLUM CREEK NEAR BAINBRIDGE, IN--Continued



03357500 BIG WALNUT CREEK NEAR REELSVILLE, IN

LOCATION.--Lat 39°32'11", long 86°58'35", in NW¼SW¼ 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 current year. 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.--Records good except those for May 07-16 and estimated daily discharges, which are poor. Flow partly regulated by Soil Conservation Service control structures on tributaries to Little Walnut Creek beginning in 1971.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	342	1210	e276	4010	527	1050	1140	374	213	53	30
2	25	316	710	e254	1880	571	874	1080	447	182	51	27
3	25	295	524	e220	1150	982	1110	960	275	159	64	25
4	23	263	449	e192	845	752	962	741	232	143	61	23
5	65	243	382	199	651	602	777	623	292	131	51	21
6	304	224	346	197	557	530	677	580	537	120	46	19
7	300	209	362	191	507	485	604	5510	351	109	42	19
8	201	197	339	172	466	448	615	7130	266	102	39	18
9	147	187	314	182	433	1410	776	3050	225	109	36	17
10	121	175	292	178	416	1770	712	1920	200	323	34	15
11	271	166	276	173	421	1020	624	1150	187	285	33	13
12	3470	158	274	162	404	790	619	2440	301	175	32	12
13	2010	149	362	161	390	681	757	8000	372	134	36	12
14	4980	145	1090	160	365	602	694	7120	788	115	47	11
15	2410	142	1700	154	356	552	818	2440	635	102	44	13
16	1920	137	1040	147	347	959	690	1390	496	93	41	11
17	1780	132	3390	141	333	935	584	990	381	86	35	11
18	1060	127	2880	135	317	734	520	775	303	81	32	11
19	758	125	1380	134	325	621	479	633	254	79	39	12
20	582	122	961	133	886	607	444	548	221	79	226	92
21	466	118	745	134	1390	569	2390	477	196	73	179	351
22	391	114	634	131	903	500	2320	425	178	70	102	178
23	365	112	600	131	673	470	1190	386	164	80	72	96
24	2900	185	537	136	570	447	828	356	156	69	85	65
25	2630	304	477	133	507	1650	1640	359	151	63	100	51
26	1430	246	435	126	642	1690	971	414	510	59	76	43
27	904	216	410	121	625	1250	1090	396	597	57	59	62
28	662	199	391	120	543	1670	6270	346	528	57	48	65
29	527	296	367	122	---	1790	3710	309	374	60	42	85
30	442	1700	e320	177	---	2060	1670	306	267	63	37	65
31	387	---	e300	715	---	1410	---	321	---	60	33	---
TOTAL	31582	7344	23497	5607	20912	29084	36465	52315	10258	3531	1875	1473
MEAN	1019	244.8	758.0	180.9	746.9	938.2	1216	1688	341.9	113.9	60.48	49.10
MAX	4980	1700	3390	715	4010	2060	6270	8000	788	323	226	351
MIN	23	112	274	120	317	447	444	306	151	57	32	11
CFSM	3.13	0.75	2.33	0.55	2.29	2.88	3.73	5.18	1.05	0.35	0.19	0.15
IN.	3.60	0.84	2.68	0.64	2.39	3.32	4.16	5.97	1.17	0.40	0.21	0.17

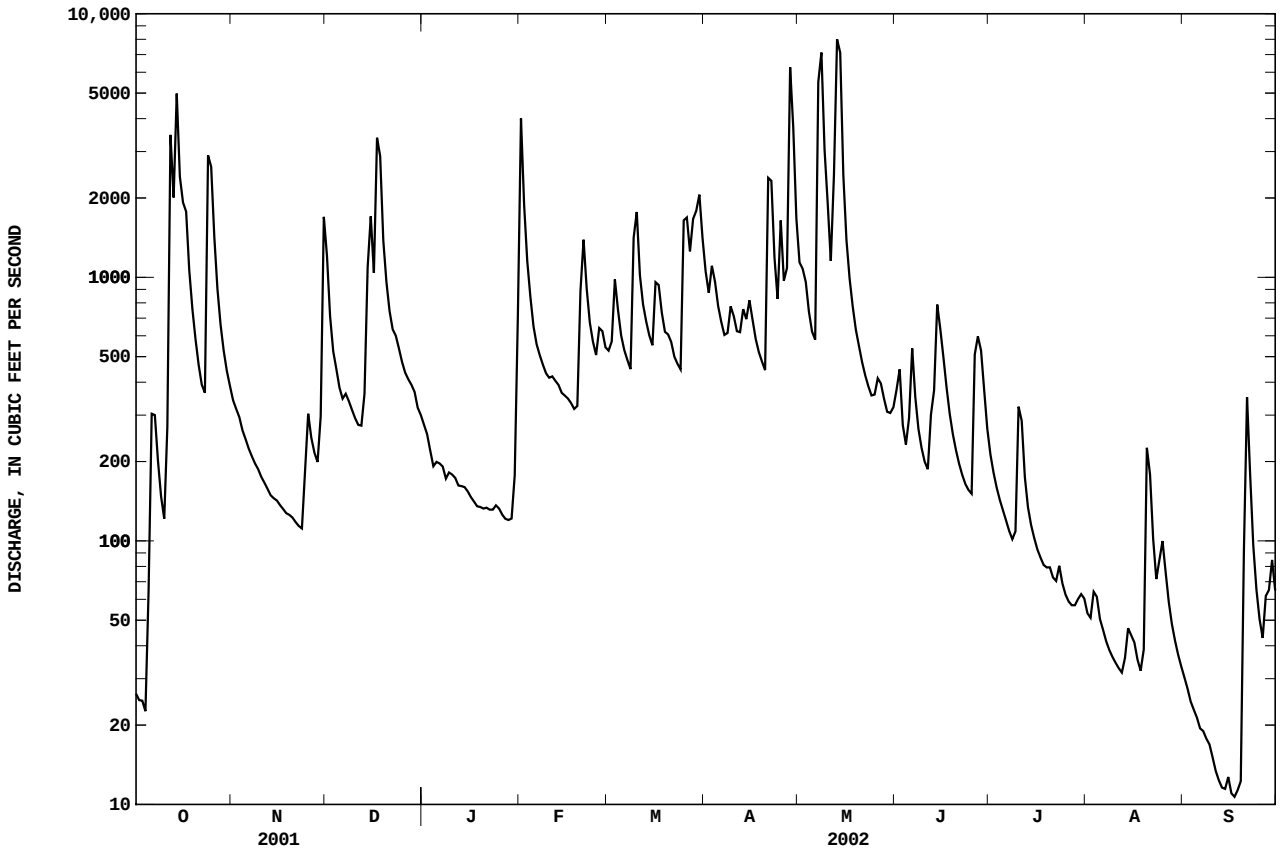
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2002, BY WATER YEAR (WY)

MEAN	119.1	266.3	394.4	455.3	525.1	633.4	595.7	477.2	338.5	217.4	122.7	112.5
MAX	1019	1655	1602	2947	1402	1636	1459	1848	2183	1221	1047	1248
(WY)	2002	1986	1991	1950	1950	1978	1957	1996	1957	1979	1979	1989
MIN	4.79	11.2	9.71	13.6	65.1	151	142	69.5	26.7	19.4	9.49	4.76
(WY)	1965	2000	1964	1977	1964	1966	1971	1976	1988	1954	1966	1954

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1950 - 2002	
ANNUAL TOTAL	148414		223943			
ANNUAL MEAN	406.6		613.5		353.8	
HIGHEST ANNUAL MEAN					640	1950
LOWEST ANNUAL MEAN					76.0	1954
HIGHEST DAILY MEAN	5100	Jun 7	8000	May 13	18600	Jun 29 1957
LOWEST DAILY MEAN	23	Aug 17	11	Sep 14	1.4	Sep 8 1954
ANNUAL SEVEN-DAY MINIMUM	28	Sep 28	12	Sep 12	2.3	Oct 6 1988
MAXIMUM PEAK FLOW			10000	May 8	30700	Jun 28 1957
MAXIMUM PEAK STAGE			15.97	May 8	18.63	Jun 28 1957
ANNUAL RUNOFF (CFSM)	1.25		1.88		1.09	
ANNUAL RUNOFF (INCHES)	16.94		25.55		14.75	
10 PERCENT EXCEEDS	938		1410		768	
50 PERCENT EXCEEDS	194		316		149	
90 PERCENT EXCEEDS	50		42		21	

e Estimated

03357500 BIG WALNUT CREEK NEAR REELSVILLE, IN--Continued



03358000 MILL CREEK NEAR CATARACT, IN

LOCATION.--Lat 39°26'00", long 86°45'48", in NE¼SE¼ 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 good 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	204	1710	e123	3030	278	385	526	410	74	22	5.9
2	25	186	619	e115	2760	308	318	568	271	60	17	5.5
3	23	178	425	e108	858	952	417	381	155	51	17	5.3
4	21	157	331	e101	446	400	314	291	125	44	20	4.9
5	24	146	274	e93	295	284	253	242	118	38	15	4.7
6	219	134	262	e88	247	242	219	297	e122	32	13	4.6
7	166	126	267	e84	219	213	196	2810	e106	28	12	4.6
8	99	119	231	e76	191	188	207	5100	e90	26	11	4.5
9	73	111	198	e75	169	920	311	4960	e80	51	10	4.4
10	76	106	174	e75	162	1610	276	2760	e75	217	9.8	4.3
11	654	103	160	e76	160	542	225	936	93	77	9.3	4.3
12	2760	91	156	e76	149	392	206	1340	262	42	9.2	3.8
13	2760	86	403	e75	133	325	392	5060	162	33	12	3.8
14	2720	86	1480	e75	117	268	343	6050	170	28	38	4.0
15	2730	84	2620	e75	118	239	321	3720	139	25	20	4.3
16	1750	81	1210	e74	114	776	236	1220	187	22	13	4.4
17	1250	76	2530	e73	104	471	197	534	113	21	11	4.5
18	645	74	3440	e72	93	330	171	365	85	25	10	4.8
19	448	76	1950	e71	99	266	158	288	70	21	11	5.4
20	336	75	666	e72	609	371	144	250	60	21	14	384
21	271	69	445	e73	804	370	974	214	54	22	15	417
22	229	69	362	e72	381	259	2480	188	50	25	11	60
23	211	66	389	e73	270	225	1000	172	47	308	9.3	24
24	2320	128	318	96	224	202	531	158	44	122	8.0	15
25	3290	435	255	95	195	1150	1220	284	43	49	12	12
26	2230	211	227	80	463	1980	505	365	368	31	10	10
27	668	310	204	78	415	1270	696	207	256	26	8.2	37
28	407	336	190	76	296	1220	3190	170	404	23	7.3	63
29	313	1020	171	78	---	750	3730	246	157	21	6.8	30
30	258	2310	e137	137	---	1030	1520	184	96	46	6.4	19
31	226	---	e131	1050	---	539	---	180	---	35	6.1	---
TOTAL	27228	7253	21935	3585	13121	18370	21135	40066	4412	1644	394.4	1159.0
MEAN	878.3	241.8	707.6	115.6	468.6	592.6	704.5	1292	147.1	53.03	12.72	38.63
MAX	3290	2310	3440	1050	3030	1980	3730	6050	410	308	38	417
MIN	21	66	131	71	93	188	144	158	43	21	6.1	3.8
CFSM	3.58	0.99	2.89	0.47	1.91	2.42	2.88	5.28	0.60	0.22	0.05	0.16
IN.	4.13	1.10	3.33	0.54	1.99	2.79	3.21	6.08	0.67	0.25	0.06	0.18

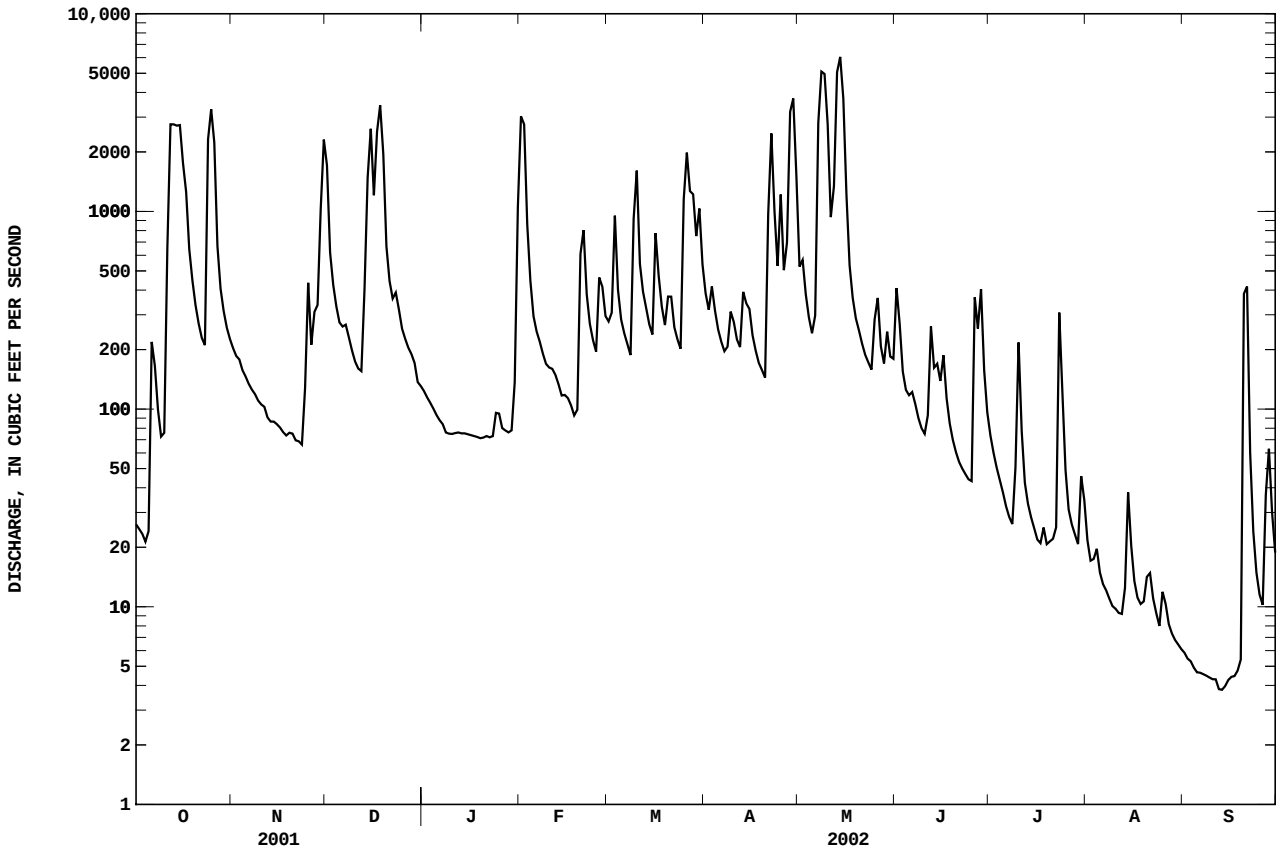
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2002, BY WATER YEAR (WY)

MEAN	81.32	227.8	309.7	343.9	409.7	492.3	423.4	347.3	243.1	181.2	103.8	80.62
MAX	878	1576	1135	2214	1088	1425	1064	1522	1120	1694	1092	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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1950 - 2002	
ANNUAL TOTAL	106707.8		160302.4			
ANNUAL MEAN	292.4		439.2		269.6	
HIGHEST ANNUAL MEAN					528	1979
LOWEST ANNUAL MEAN					37.3	1954
HIGHEST DAILY MEAN	3440	Dec 18	6050	May 14	11500	Dec 30 1990
LOWEST DAILY MEAN	9.2	Aug 15	3.8	Sep 12	0.10	Sep 7 1954
ANNUAL SEVEN-DAY MINIMUM	11	Aug 11	4.1	Sep 9	0.20	Sep 2 1954
MAXIMUM PEAK FLOW			6340	May 14	12200	Dec 30 1990
MAXIMUM PEAK STAGE			18.12	May 14	22.58	Jun 24 1960
ANNUAL RUNOFF (CFSM)	1.19		1.79		1.10	
ANNUAL RUNOFF (INCHES)	16.20		24.34		14.95	
10 PERCENT EXCEEDS	649		1210		579	
50 PERCENT EXCEEDS	115		160		82	
90 PERCENT EXCEEDS	27		11		7.8	

e Estimated

03358000 MILL CREEK NEAR CATARACT, IN--Continued



03359000 MILL CREEK NEAR MANHATTAN, IN

LOCATION.--Lat 39°29'16", long 86°55'30", in SE¼SE¼ 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.

DRAINAGE AREA.--294 mi².

PERIOD OF RECORD.--May to September 1931 (fragmentary), October 1938 to September 2001 (discharge) October 2001 to September 2002 (stage-only). Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1335: 1940-41. WSP 2109: Drainage area.

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.

REMARKS.--Flow regulated by U.S. Army Corps of Engineers from Cagles Mill Lake since July 1953.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 13.46 ft, May 7, 2002, minimum gage height, 8.14 ft, Oct. 30, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 13.46 ft, May 7; minimum gage height, 8.14 ft, Oct. 30.

GAGE HEIGHT, in FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.43	10.51	8.67	10.35	8.70	9.82	9.00	8.79	10.97	10.89	8.42	8.26
2	8.44	10.51	8.67	10.63	8.71	9.83	9.00	8.79	10.96	10.87	8.42	8.26
3	8.44	10.50	8.67	10.62	8.72	9.83	9.00	8.79	10.95	10.84	8.32	8.26
4	8.44	10.49	9.50	10.58	8.72	9.83	9.55	8.80	10.94	10.82	8.32	8.26
5	8.44	10.48	9.94	10.57	8.71	9.82	9.97	9.09	10.93	10.79	8.32	8.26
6	8.44	10.75	9.93	10.56	8.71	9.82	9.97	9.10	10.92	10.76	8.34	8.26
7	8.43	10.74	10.24	10.54	9.53	9.81	10.27	11.63	10.92	10.73	8.34	8.27
8	8.44	10.73	10.23	10.52	10.28	9.80	9.52	8.82	10.90	10.12	8.34	8.27
9	8.93	10.71	10.22	10.50	10.53	8.46	8.77	8.80	10.90	9.77	8.29	8.28
10	8.62	10.70	10.21	10.48	10.50	8.46	10.27	8.80	11.09	9.76	8.29	8.28
11	9.06	10.98	10.20	10.47	10.49	8.46	10.25	8.80	11.08	8.92	8.30	8.28
12	8.62	10.96	10.19	10.45	10.47	8.96	10.50	10.40	11.07	8.44	8.30	8.29
13	8.85	10.94	10.18	10.43	10.46	9.88	10.49	10.90	11.06	8.44	8.30	8.28
14	8.65	10.92	8.94	10.41	10.44	10.18	10.48	8.83	11.04	8.44	8.30	8.30
15	8.65	10.90	8.95	9.76	10.42	10.18	8.68	8.82	11.03	8.44	8.28	8.29
16	8.66	10.88	8.70	8.90	10.40	10.17	8.68	8.82	11.02	8.44	8.26	8.28
17	8.66	10.86	8.72	8.30	10.38	10.17	8.69	9.81	11.00	8.44	8.26	8.30
18	8.66	10.84	8.71	8.30	10.09	10.16	9.91	9.81	10.99	8.37	8.27	8.29
19	8.66	10.81	8.72	8.78	9.75	9.44	10.21	9.81	10.98	8.38	8.27	8.33
20	8.67	10.79	8.72	8.78	9.38	9.45	8.70	10.31	10.96	8.32	8.26	8.27
21	8.67	10.76	8.72	8.77	8.35	9.45	8.72	10.70	11.07	8.32	8.26	9.83
22	9.30	10.74	8.72	8.39	9.42	10.15	8.72	11.02	11.05	8.37	8.27	9.08
23	9.31	10.14	8.73	8.39	9.42	10.14	8.73	11.02	11.04	8.52	8.26	8.31
24	8.70	10.13	9.59	8.40	9.81	10.13	8.77	11.02	11.02	9.42	8.26	8.23
25	8.69	10.13	10.11	8.72	8.57	9.45	8.75	11.01	11.05	8.54	8.26	8.24
26	8.70	10.12	10.11	8.72	9.42	8.60	8.75	11.00	10.99	8.54	8.26	8.25
27	8.70	9.78	10.10	8.72	9.83	8.61	8.87	11.00	10.97	8.54	8.26	8.24
28	8.70	9.78	10.39	8.67	9.83	9.52	8.94	10.99	10.96	8.41	8.26	8.24
29	8.70	9.88	10.38	8.67	---	8.98	8.78	10.98	10.93	8.42	8.27	8.25
30	8.77	8.66	10.37	8.68	---	8.99	8.79	10.97	10.92	8.42	8.26	8.26
31	10.17	---	10.36	8.77	---	9.00	---	10.97	---	8.42	8.26	---
MEAN	8.73	10.50	9.54	9.51	9.64	9.53	9.32	9.95	10.99	9.16	8.29	8.35
MAX	10.17	10.98	10.39	10.63	10.53	10.18	10.50	11.63	11.09	10.89	8.42	9.83
MIN	8.43	8.66	8.67	8.30	8.35	8.46	8.68	8.79	10.90	8.32	8.26	8.23

WTR YR 2002 MEAN 9.46 MAX 11.63 MIN 8.23

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, 28.4°C, Aug. 6, minimum, 2.5°C, Jan. 19.

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.5	19.0	19.5	13.6	13.5	13.6	10.3	9.9	10.1	4.7	4.4	4.5
2	20.5	19.0	19.5	13.6	13.2	13.4	10.0	9.6	9.8	4.4	3.9	4.3
3	20.5	19.0	19.5	13.2	12.9	13.1	10.0	9.4	9.7	3.9	3.6	3.8
4	20.6	19.1	19.6	13.0	12.8	12.9	10.1	9.8	10.0	3.9	3.7	3.9
5	19.3	18.7	19.0	12.9	12.7	12.8	10.4	10.1	10.1	3.7	3.6	3.6
6	19.0	18.1	18.6	12.8	12.6	12.7	10.4	10.1	10.3	3.6	3.4	3.5
7	18.6	17.6	18.0	12.7	12.6	12.6	10.1	9.9	10.0	3.5	3.3	3.4
8	18.5	17.7	18.0	12.7	12.4	12.6	10.1	9.6	9.9	3.3	3.2	3.3
9	18.2	17.6	17.9	12.6	12.4	12.5	9.7	9.4	9.5	3.2	3.0	3.1
10	18.1	17.8	17.9	12.4	12.3	12.4	9.4	9.2	9.3	3.2	3.1	3.1
11	17.8	17.5	17.8	12.4	12.2	12.3	9.2	9.0	9.1	3.1	3.0	3.1
12	18.0	17.5	17.7	12.3	12.1	12.2	9.1	9.0	9.1	3.1	3.0	3.1
13	17.8	17.5	17.7	12.2	12.0	12.1	9.1	9.0	9.1	3.1	2.9	3.0
14	17.7	16.6	17.1	12.2	12.0	12.1	9.0	8.7	8.9	3.1	2.9	3.0
15	16.9	16.3	16.7	12.3	12.1	12.1	8.9	8.7	8.8	3.1	2.9	3.0
16	16.3	16.0	16.1	12.2	12.2	12.2	8.7	8.6	8.6	3.0	2.8	2.9
17	16.2	15.7	15.9	12.5	12.1	12.2	8.7	8.5	8.6	3.1	2.8	2.9
18	16.1	15.5	15.7	12.7	12.2	12.3	8.5	8.1	8.3	3.1	2.6	2.9
19	15.9	15.1	15.6	12.5	11.9	12.2	8.2	7.9	8.1	3.0	2.5	2.8
20	15.2	14.6	14.9	11.9	11.6	11.7	8.0	7.7	7.9	2.9	2.7	2.8
21	14.8	14.2	14.6	11.6	11.3	11.4	7.8	7.5	7.6	3.2	2.8	2.9
22	14.8	14.0	14.3	11.4	11.1	11.2	7.8	7.5	7.7	3.3	2.8	3.0
23	14.7	14.3	14.5	11.2	11.0	11.1	7.8	7.2	7.5	4.0	3.1	3.6
24	14.6	13.5	14.2	11.4	11.1	11.2	7.2	6.9	7.0	3.7	3.3	3.5
25	13.7	13.0	13.4	11.3	11.0	11.2	6.9	6.6	6.7	3.5	2.9	3.2
26	13.3	13.1	13.2	11.1	10.9	11.0	6.6	6.3	6.5	3.7	3.1	3.3
27	13.8	13.2	13.4	11.1	10.9	11.0	6.3	6.0	6.1	3.8	3.2	3.5
28	13.7	13.2	13.3	10.9	10.6	10.7	6.0	5.9	6.0	4.1	3.4	3.7
29	13.8	13.3	13.5	10.6	10.5	10.5	5.9	5.4	5.6	4.2	3.7	4.0
30	13.9	13.4	13.5	10.6	10.2	10.4	5.4	5.0	5.1	4.5	4.1	4.2
31	13.7	13.2	13.5	---	---	---	5.0	4.7	4.8	5.0	4.5	4.6
MONTH	20.6	13.0	16.3	13.6	10.2	12.0	10.4	4.7	8.3	5.0	2.5	3.4

03359000 MILL CREEK NEAR MANHATTAN, IN--Continued

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.2	4.3	4.6	5.2	4.6	4.8	6.6	5.9	6.3	11.2	10.0	10.5
2	4.6	4.1	4.3	5.0	4.7	4.8	7.6	6.4	7.0	11.3	10.0	10.6
3	4.8	4.2	4.4	4.8	4.2	4.5	6.9	6.3	6.6	11.1	10.2	10.7
4	4.7	4.2	4.3	4.2	3.9	4.0	7.0	6.3	6.6	11.9	10.3	11.0
5	4.4	3.9	4.1	4.1	3.8	3.9	6.9	6.4	6.6	12.0	10.6	11.3
6	4.3	4.0	4.1	4.3	4.0	4.1	7.9	6.7	7.3	12.5	11.2	11.7
7	4.3	3.9	4.1	4.8	4.2	4.4	8.1	7.6	7.8	12.9	11.3	11.9
8	4.4	4.1	4.2	5.7	4.8	5.1	8.2	7.8	8.0	12.8	10.9	11.5
9	4.7	4.3	4.5	6.7	4.7	5.8	8.3	7.7	8.2	12.6	10.7	11.7
10	4.8	4.6	4.7	5.8	4.4	4.9	9.3	7.3	8.3	12.5	10.7	11.7
11	4.8	4.6	4.7	5.9	4.5	5.1	9.6	8.5	8.9	12.2	11.0	11.6
12	4.8	4.7	4.8	5.8	5.3	5.6	10.2	9.4	9.9	12.4	11.5	12.0
13	4.8	4.6	4.7	6.0	5.3	5.6	9.9	9.4	9.6	12.3	11.5	11.9
14	4.7	4.5	4.6	6.6	5.6	6.1	10.8	9.7	10.0	12.5	11.3	11.9
15	4.7	4.6	4.7	6.4	6.2	6.3	11.2	8.9	10.1	12.9	11.4	12.1
16	4.7	4.6	4.6	6.6	6.2	6.4	10.6	8.1	9.3	12.6	11.6	12.1
17	4.9	4.6	4.7	6.4	6.2	6.3	9.6	8.3	9.0	13.0	11.8	12.5
18	5.0	4.6	4.8	6.9	6.4	6.6	11.7	8.3	9.7	13.4	12.8	13.0
19	5.0	4.8	4.9	7.3	6.9	7.2	12.9	9.6	10.8	13.4	12.6	13.0
20	5.3	5.0	5.1	7.3	6.8	7.0	12.0	8.7	10.1	13.5	12.9	13.2
21	5.3	5.0	5.2	6.8	6.3	6.6	9.3	8.7	9.0	13.7	13.2	13.4
22	5.3	4.8	5.0	6.3	6.0	6.2	9.2	8.7	8.9	14.0	13.4	13.6
23	5.4	4.9	5.1	6.5	6.1	6.2	9.8	8.7	9.2	14.3	13.4	13.8
24	5.8	5.0	5.4	6.7	6.5	6.6	10.5	8.9	9.7	13.9	13.4	13.8
25	6.0	5.3	5.6	6.6	6.1	6.3	10.8	8.5	9.4	14.0	13.7	13.8
26	5.3	5.0	5.2	6.1	5.6	5.9	10.2	9.2	9.8	14.1	13.6	13.9
27	5.0	4.6	4.8	6.7	5.5	6.0	11.2	9.6	10.0	14.1	13.8	14.0
28	4.7	4.5	4.6	6.2	5.7	5.9	11.1	9.4	9.9	14.1	13.8	14.0
29	---	---	---	6.6	6.0	6.2	10.7	9.9	10.2	14.3	13.9	14.0
30	---	---	---	6.5	6.1	6.2	10.9	10.0	10.5	14.3	13.8	14.1
31	---	---	---	6.9	6.1	6.4	---	---	---	14.4	14.0	14.2
MONTH	6.0	3.9	4.7	7.3	3.8	5.7	12.9	5.9	8.9	14.4	10.0	12.5

WATER TEMPERATURE, in (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	14.6	13.9	14.2	20.2	19.7	19.9	28.2	26.6	27.3	26.2	24.6	25.4
2	14.6	14.1	14.3	20.8	20.1	20.4	28.0	26.7	27.3	26.6	24.9	25.7
3	14.5	14.3	14.4	21.3	20.6	20.9	28.3	26.6	27.4	26.4	25.1	25.8
4	14.7	14.2	14.5	21.5	21.0	21.3	28.3	26.7	27.5	26.5	24.6	25.5
5	14.7	14.3	14.5	22.1	21.5	21.8	28.3	26.8	27.5	26.2	24.1	25.1
6	14.7	14.4	14.5	22.8	22.0	22.3	28.4	26.7	27.4	26.1	24.2	25.1
7	14.9	14.5	14.6	23.3	22.6	23.0	28.0	25.9	27.0	26.0	24.3	25.1
8	14.8	14.5	14.7	23.5	22.1	22.9	27.9	25.8	26.8	26.1	24.8	25.5
9	14.9	14.6	14.8	22.9	21.1	22.1	27.7	25.7	26.6	26.3	24.9	25.6
10	15.1	14.7	14.9	22.3	21.4	22.0	27.2	25.3	26.3	26.4	24.8	25.5
11	15.5	14.7	15.1	23.2	20.2	21.8	26.9	25.6	26.3	25.8	24.2	24.9
12	15.2	14.7	15.1	25.4	20.2	21.9	27.0	25.7	26.2	25.0	23.5	24.2
13	15.4	15.0	15.2	26.8	25.0	25.8	26.4	25.9	26.1	25.1	23.4	24.1
14	15.5	15.0	15.3	26.9	25.4	26.0	26.2	25.8	26.0	24.9	23.9	24.3
15	15.9	15.2	15.4	26.8	25.2	25.9	26.5	25.6	26.0	25.2	24.1	24.5
16	15.9	15.2	15.6	26.8	25.4	26.0	27.7	25.4	26.3	25.1	23.6	24.2
17	15.8	15.5	15.7	26.7	25.7	26.1	26.8	25.6	26.2	24.0	23.1	23.5
18	16.0	15.6	15.8	26.9	25.8	26.3	26.4	25.5	25.8	24.7	23.5	24.0
19	16.1	15.7	15.9	27.1	25.7	26.3	26.0	25.0	25.4	24.8	23.8	24.3
20	16.3	15.9	16.1	27.2	25.9	26.5	26.0	24.8	25.3	24.3	22.7	23.6
21	16.6	16.0	16.4	27.7	25.8	26.7	26.5	24.6	25.5	23.6	22.7	23.2
22	17.1	16.5	16.7	27.9	25.9	26.9	26.4	25.2	25.9	23.4	21.8	22.7
23	17.4	16.7	17.0	27.0	25.5	26.3	26.9	25.4	26.1	22.6	21.8	22.3
24	17.6	17.0	17.3	26.1	21.8	23.7	26.3	25.4	25.8	22.7	21.6	22.0
25	18.3	17.5	17.7	27.2	22.0	24.5	26.5	25.0	25.8	22.2	20.9	21.5
26	18.6	17.2	18.0	27.1	26.2	26.5	26.6	24.6	25.6	22.1	21.1	21.6
27	19.1	17.8	18.6	27.5	26.2	26.7	26.9	24.7	25.7	22.4	21.2	21.7
28	19.1	18.2	18.8	28.0	26.5	27.2	26.5	24.8	25.6	22.0	20.9	21.4
29	19.4	19.0	19.2	28.0	26.8	27.2	26.5	24.7	25.5	22.5	21.1	21.7
30	19.8	19.4	19.6	27.8	26.4	27.0	26.3	24.7	25.4	22.6	21.3	21.9
31	---	---	---	28.1	26.3	27.0	26.2	24.8	25.5	---	---	---
MONTH	19.8	13.9	16.0	28.1	19.7	24.5	28.4	24.6	26.2	26.6	20.9	23.9
YEAR	28.4	2.5	13.6									

03360000 EEL RIVER AT BOWLING GREEN, IN

LOCATION.--Lat 39°22'58", long 87°01'14", in NE¼NE¼ 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 good. 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

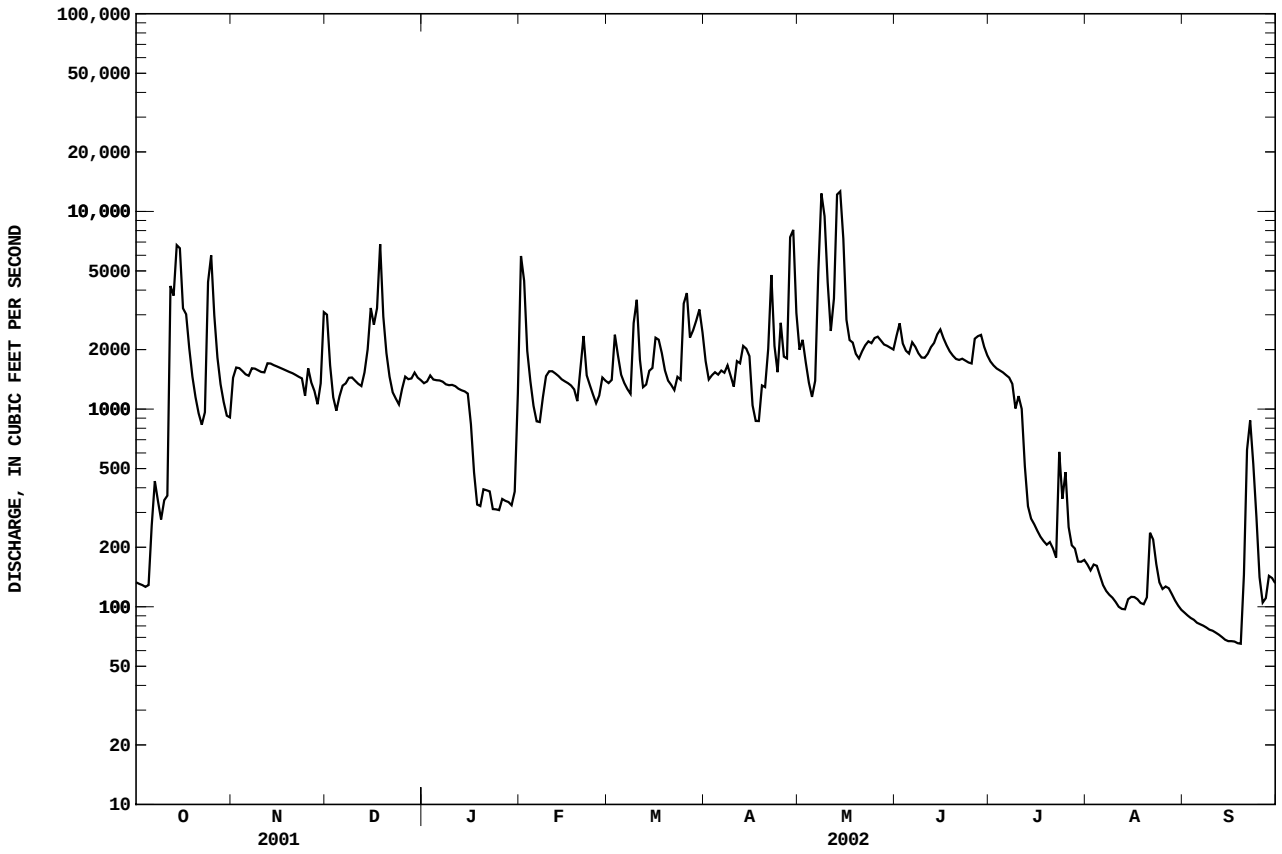
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	1440	3000	1350	5950	1350	1750	2000	2350	1740	163	93
2	131	1620	1670	1380	4460	1410	1410	2240	2710	1660	153	90
3	129	1610	1150	1480	1970	2380	1480	1720	2150	1610	164	88
4	126	1560	981	1410	1380	1860	1540	1360	1970	1570	161	86
5	129	1500	1160	1400	1040	1490	1490	1150	1910	1530	144	83
6	257	1470	1310	1400	867	1360	1570	1390	2180	1490	129	82
7	432	1610	1350	1380	860	1260	1530	4910	2070	1440	120	80
8	342	1600	1440	1330	1150	1190	1660	12300	1920	1340	115	79
9	276	1570	1450	1320	1470	2720	1470	9460	1820	1010	111	77
10	346	1540	1390	1330	1550	3570	1300	4380	1820	1160	106	76
11	365	1530	1340	1310	1550	1780	1750	2480	1910	1000	100	74
12	4200	1700	1310	1270	1510	1290	1700	3630	2060	514	98	72
13	3750	1700	1530	1250	1470	1330	2090	12200	2160	323	97	70
14	6750	1670	2010	1230	1410	1560	2020	12600	2390	279	109	68
15	6510	1640	3250	1200	1380	1610	1850	7270	2530	261	112	67
16	3230	1620	2670	837	1350	2300	1050	2830	2280	242	112	67
17	3020	1590	3240	478	1320	2240	871	2230	2100	226	109	67
18	2030	1570	6830	329	1260	1920	870	2170	1960	215	104	65
19	1460	1540	2940	323	1100	1570	1320	1900	1860	206	103	65
20	1150	1520	1920	393	1610	1390	1290	1800	1790	212	112	145
21	952	1490	1460	388	2340	1320	2020	1960	1770	197	237	622
22	833	1460	1220	383	1480	1250	4770	2100	1800	177	219	877
23	964	1430	1130	312	1320	1460	2090	2200	1760	607	164	528
24	4400	1170	1060	311	1190	1410	1540	2160	1720	352	133	285
25	6000	1610	1260	308	1070	3420	2730	2290	1700	480	123	141
26	2980	1360	1460	351	1170	3860	1840	2320	2270	253	127	105
27	1820	1230	1420	344	1440	2300	1800	2220	2340	205	124	111
28	1340	1060	1430	339	1390	2510	7410	2120	2370	197	116	143
29	1090	1350	1530	326	---	2800	8060	2090	2070	169	108	140
30	926	3100	1440	383	---	3190	3070	2040	1870	169	101	132
31	908	---	1400	1200	---	2440	---	2000	---	173	97	---
TOTAL	56979	46860	56751	27045	46057	61540	65341	113520	61610	21007	3971	4678
MEAN	1838	1562	1831	872.4	1645	1985	2178	3662	2054	677.6	128.1	155.9
MAX	6750	3100	6830	1480	5950	3860	8060	12600	2710	1740	237	877
MIN	126	1060	981	308	860	1190	870	1150	1700	169	97	65
CFSM	2.21	1.88	2.21	1.05	1.98	2.39	2.62	4.41	2.47	0.82	0.15	0.19
IN.	2.55	2.10	2.54	1.21	2.06	2.76	2.93	5.09	2.76	0.94	0.18	0.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2002, BY WATER YEAR (WY)

MEAN	303.7	587.8	898.5	1217	1303	1544	1607	1242	892.8	594.8	320.5	297.3
MAX	1838	3076	2960	7212	3249	3843	4120	5090	4077	2746	2656	2488
(WY)	2002	1986	1991	1950	1950	1938	1944	1943	1957	1987	1979	1989
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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1931 - 2002	
ANNUAL TOTAL	347554		565359			
ANNUAL MEAN	952.2		1549		901.5	
HIGHEST ANNUAL MEAN					1551	1950
LOWEST ANNUAL MEAN					161	1954
HIGHEST DAILY MEAN	6830	Dec 18	12600	May 14	28700	Jun 29 1957
LOWEST DAILY MEAN	125	Aug 22	65	Sep 18	11	Oct 7 1954
ANNUAL SEVEN-DAY MINIMUM	132	Sep 29	67	Sep 13	12	Oct 2 1954
MAXIMUM PEAK FLOW			15400	May 13	34000	Jan 4 1950
MAXIMUM PEAK STAGE			20.71	May 13	23.53	Jan 4 1950
ANNUAL RUNOFF (CFSM)	1.15		1.87		1.09	
ANNUAL RUNOFF (INCHES)	15.58		25.34		14.76	
10 PERCENT EXCEEDS	1710		2720		2200	
50 PERCENT EXCEEDS	537		1400		369	
90 PERCENT EXCEEDS	172		114		56	

03360000 EEL RIVER AT BOWLING GREEN, IN--Continued



03360500 WHITE RIVER AT NEWBERRY, IN

LOCATION.--Lat 38°55'39", long 87°00'41", in NE¼NW¼ 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. 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.

REVISIONS.--The peak discharges and annual maximum(*) reported for water years 1998 and 1999 has been revised as shown in the following table:

Water Year	Date	Discharges (ft³/s)	Gage Height (ft)
1998	June 19, 1998	49,100	22.70
1999	Jan. 26, 1999	54,200	23.51

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1530	7540	18000	5440	15100	6350	17800	24100	7860	6460	1210	752
2	1400	7020	18100	5020	20200	6000	17700	26700	7580	5240	1150	749
3	1300	6700	16400	4740	21900	8320	17900	23800	7660	4400	1060	719
4	1210	6400	13000	4710	23300	10200	15700	16500	6490	3870	1020	691
5	1130	5940	9410	4580	22200	10600	13400	11400	5850	3540	997	665
6	1060	5500	7710	4550	19200	10400	12800	12000	6370	3280	947	632
7	1220	5150	7340	4450	11500	8720	11200	18800	7210	3080	904	620
8	2520	5000	6840	4360	7860	6950	9240	23000	6920	2930	871	612
9	3050	4770	6250	4270	6880	7520	9150	27300	5870	2770	839	601
10	2970	4610	5710	4200	6490	13400	9360	31200	5370	2810	813	590
11	2780	4490	5260	4180	6170	14900	9130	35900	5250	3200	810	578
12	5500	4320	4920	4170	5880	13900	9650	33400	6140	3050	791	556
13	11500	4330	5570	4070	5630	11100	16200	34400	6120	2450	785	545
14	16300	4190	9120	3940	5350	8740	17800	42800	6590	2060	814	537
15	18900	4050	15900	3850	5130	7660	17200	44400	7510	1820	860	621
16	20000	3950	17500	3730	4850	8420	15600	54600	7520	1670	846	621
17	21300	3890	21400	3430	4530	9620	14500	58600	6670	1560	836	624
18	21600	3780	26300	3050	4320	9850	12700	49700	5820	1490	841	600
19	20100	3690	26900	2750	4150	9020	9710	37900	5000	1500	823	591
20	17600	3640	27500	2620	4570	9820	8050	27300	4510	1670	818	1680
21	13000	3540	28200	2640	7210	10200	8270	17200	4190	1480	976	2980
22	8800	3450	25800	2720	8010	8530	15400	11800	3950	1440	1550	3270
23	6980	3370	20300	2630	7220	7170	17800	10000	3780	1500	1360	3290
24	11500	3370	12300	2820	6580	6540	16800	9000	3600	2370	1130	2220
25	20300	4280	9670	2990	5640	8430	13600	8510	3490	1750	980	1670
26	22400	4630	8430	2850	5460	16100	14900	8950	3570	1580	977	1310
27	22900	5340	7700	2730	6260	19300	14100	8740	4870	1420	1030	1270
28	22700	6040	7090	2660	6870	18900	17600	8450	6440	1270	966	1270
29	21200	9910	6570	2620	---	16100	19900	8050	8170	1210	899	1440
30	17600	15500	6160	2660	---	15900	21600	9160	8300	1180	839	1490
31	10300	---	5800	3790	---	17200	---	8530	---	1180	793	---
TOTAL	350650	158390	407150	113220	258460	335860	424760	742190	178670	75230	29535	33794
MEAN	11310	5280	13130	3652	9231	10830	14160	23940	5956	2427	952.7	1126
MAX	22900	15500	28200	5440	23300	19300	21600	58600	8300	6460	1550	3290
MIN	1060	3370	4920	2620	4150	6000	8050	8050	3490	1180	785	537
CFSM	2.41	1.13	2.80	0.78	1.97	2.31	3.02	5.11	1.27	0.52	0.20	0.24
IN.	2.78	1.26	3.23	0.90	2.05	2.67	3.37	5.89	1.42	0.60	0.23	0.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2002, BY WATER YEAR (WY)

MEAN	1635	3069	4622	6701	6995	8618	8881	7056	4724	3240	1957	1596
MAX	11310	24180	16780	36920	21870	19150	20340	25090	19350	13270	15900	13510
(WY)	2002	1994	1958	1950	1950	1963	1944	1943	1998	1979	1979	1989
MIN	259	408	386	405	705	686	1539	677	771	536	308	317
(WY)	1941	1945	1945	1945	1931	1941	1941	1941	1988	1936	1941	1940

03360500 WHITE RIVER AT NEWBERRY, IN--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1929 - 2002	
ANNUAL TOTAL	1969338		3107909			
ANNUAL MEAN	5395		8515		4913	
HIGHEST ANNUAL MEAN					8752	1950
LOWEST ANNUAL MEAN					958	1941
HIGHEST DAILY MEAN	28200	Dec 21	58600	May 17	103000	Nov 18 1993
LOWEST DAILY MEAN	813	Aug 18	537	Sep 14	200	Oct 1 1941
ANNUAL SEVEN-DAY MINIMUM	885	Aug 12	574	Sep 8	211	Sep 26 1941
MAXIMUM PEAK FLOW			60200	May 17	105000	Nov 18 1993
MAXIMUM PEAK STAGE			24.22	May 17	25.87	Nov 18 1993
ANNUAL RUNOFF (CFSM)	1.15		1.82		1.05	
ANNUAL RUNOFF (INCHES)	15.63		24.66		14.24	
10 PERCENT EXCEEDS	12200		20000		11600	
50 PERCENT EXCEEDS	3370		5820		2560	
90 PERCENT EXCEEDS	1360		930		629