Water-Data Report 2007

03381700 OHIO RIVER AT OLD SHAWNEETOWN, IL-KY

Lower Ohio Basin
Lower Ohio-Bay Subbasin

LOCATION.--Lat 37°41′31″, long 88°08′00″ referenced to North American Datum of 1983, in SE ¼ NW ¼ sec.32, T.9 S., R.10 E., Union County, KY, Hydrologic Unit 05140203, on main bridge pier on downstream side of State Highway 13, 9.5 miles upstream from Saline River, and at mile 858.2.

DRAINAGE AREA.--141,000 mi^2, , approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.—
SURFACE-WATER DISCHARGE AND STAGE
DISCHARGE: January 2002 to current year.
STAGE: January 2002 to current year.
SURFACE-WATER QUALITY
TEMPERATURE: October 1975 to October 3, 1977.

GAGE.--Water-stage recorder, phone telemeter, and acoustic-velocity meter. Datum of gage is 309.10 ft above NAVD of 1988 (309.43 ft NGVD 1929).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by locks and dams upstream from station at Uniontown, KY and downstream at Smithland, KY.

EXTREMES FOR PERIOD OF RECORD.--
SURFACE-WATER DISCHARGE AND STAGE: Maximum estimated discharge, 1,030,000 ft^3/s, estimated, Jan. 16, 2005, gage height, 50.57 ft;, estimated, based on graph, minimum daily discharge, 9,440 ft^3/s, Aug. 27, 2006.

EXTREMES OUTSIDE PERIOD OF RECORD.--
SURFACE-WATER DISCHARGE AND STAGE: Flood of Jan. 30, 1937, reached a stage of 65.64 ft, from information by National Weather Service.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated; $\times 10^6$, million]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	150,000	400,000	173,000	320,000	e240,000	e350,000	e370,000	e205,000	47,400	49,600	33,000	42,100
2	153,000	407,000	235,000	318,000	e210,000	e342,000	e355,000	e210,000	23,400	31,500	30,000	25,700
3	136,000	402,000	263,000	322,000	e175,000	e340,000	e350,000	e205,000	63,800	21,200	23,900	23,700
4	128,000	385,000	264,000	307,000	e155,000	e345,000	e345,000	e197,000	37,600	37,900	25,800	28,500
5	129,000	359,000	258,000	291,000	e142,000	e375,000	e340,000	e195,000	38,200	24,300	12,800	23,400
6	130,000	329,000	258,000	296,000	e128,000	e410,000	e325,000	e200,000	58,100	37,900	25,300	19,500
7	153,000	298,000	254,000	310,000	e105,000	e445,000	e310,000	e202,000	49,400	69,900	34,400	19,200
8	177,000	278,000	241,000	331,000	e92,000	e460,000	e290,000	e200,000	54,300	43,400	35,100	10,200
9	168,000	245,000	221,000	352,000	e85,000	e458,000	e270,000	e190,000	50,500	48,700	13,900	20,500
10	131,000	208,000	199,000	382,000	e94,000	e430,000	e255,000	e170,000	36,100	30,100	42,000	17,000
11	118,000	198,000	197,000	415,000	e86,000	e390,000	e240,000	e140,000	48,600	30,000	52,700	23,700
12	105,000	205,000	187,000	438,000	e90,000	e345,000	e233,000	e120,000	41,600	33,500	54,200	25,300
13	90,800	202,000	199,000	450,000	e105,000	e300,000	e230,000	e105,000	20,100	25,600	43,600	24,900
14	96,900	193,000	197,000	e460,000	e170,000	e270,000	e240,000	e90,000	35,000	26,900	29,000	29,400
15	107,000	199,000	179,000	e460,000	e218,000	e250,000	e260,000	e80,000	35,700	33,800	26,800	31,100
16	101,000	248,000	185,000	e462,000	e198,000	e238,000	e290,000	e71,000	31,000	25,600	22,400	35,100
17	127,000	309,000	171,000	e465,000	e180,000	e235,000	e320,000	e68,000	28,100	25,400	17,700	24,000
18	171,000	328,000	166,000	e465,000	e160,000	e255,000	e360,000	e74,000	11,900	30,700	16,300	23,800
19	214,000	338,000	160,000	e468,000	e145,000	e290,000	e390,000	e79,000	27,500	19,000	27,200	24,500
20	255,000	352,000	150,000	e468,000	e137,000	e340,000	e430,000	e70,000	41,100	42,300	18,800	18,000
21	286,000	373,000	140,000	e469,000	e135,000	e390,000	e445,000	e64,000	38,000	45,900	19,100	12,700
22	312,000	387,000	149,000	e475,000	e155,000	e398,000	e450,000	e82,000	36,900	38,400	52,200	22,800
23	339,000	387,000	176,000	e480,000	e200,000	e400,000	e430,000	e68,000	29,100	41,700	86,300	23,300
24	358,000	369,000	203,000	e475,000	e275,000	e395,000	e370,000	e61,000	38,000	40,300	97,500	19,000
25	362,000	337,000	239,000	e470,000	e330,000	e390,000	e300,000	e63,000	31,600	30,400	101,000	14,600
26	339,000	291,000	279,000	e462,000	e360,000	e380,000	e250,000	57,500	26,100	20,700	81,500	18,500
27	288,000	248,000	318,000	e442,000	e367,000	e370,000	e220,000	48,900	40,400	26,700	66,300	27,900
28	285,000	211,000	335,000	e410,000	e360,000	e362,000	e195,000	43,600	31,900	21,500	73,200	27,200
29	316,000	185,000	340,000	e365,000	---	e365,000	e197,000	51,400	35,300	49,900	62,300	30,700
30	347,000	165,000	337,000	e305,000	---	e385,000	e200,000	44,200	36,800	43,100	39,200	29,800
31	377,000	---	329,000	e270,000	---	e410,000	---	35,800	---	37,000	33,900	---
Total	6,449,700	8,836,000	7,002,000	12.40×10^6	5,097,000	11.11×10^6	9,260,000	3,490,400	1,123,500	1,082,900	1,297,400	716,100
Mean	208,100	294,500	225,900	400,100	182,000	358,500	308,700	112,600	37,450	34,930	41,850	23,870
Max	377,000	407,000	340,000	480,000	367,000	460,000	450,000	210,000	63,800	69,900	101,000	42,100
Min	90,800	165,000	140,000	270,000	85,000	235,000	195,000	35,800	11,900	19,000	12,800	10,200
Cfsm	1.48	2.09	1.60	2.84	1.29	2.54	2.19	0.80	0.27	0.25	0.30	0.17
In.	1.70	2.33	1.85	3.27	1.34	2.93	2.44	0.92	0.30	0.29	0.34	0.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	113,400	205,100	227,600	368,400	234,400	292,500	294,700	255,800	163,300	92,470	66,690	112,600
Max	208,100	294,500	302,000	609,600	290,600	358,500	383,300	500,500	325,400	184,800	139,300	218,800
(WY)	(2007)	(2007)	(2004)	(2005)	(2005)	(2007)	(2002)	(2002)	(2004)	(2003)	(2003)	(2004)
Min	44,610	97,620	118,000	183,900	182,000	232,400	239,000	112,600	37,450	34,930	30,240	23,870
(WY)	(2006)	(2006)	(2006)	(2003)	(2007)	(2005)	(2006)	(2007)	(2007)	(2007)	(2002)	(2007)

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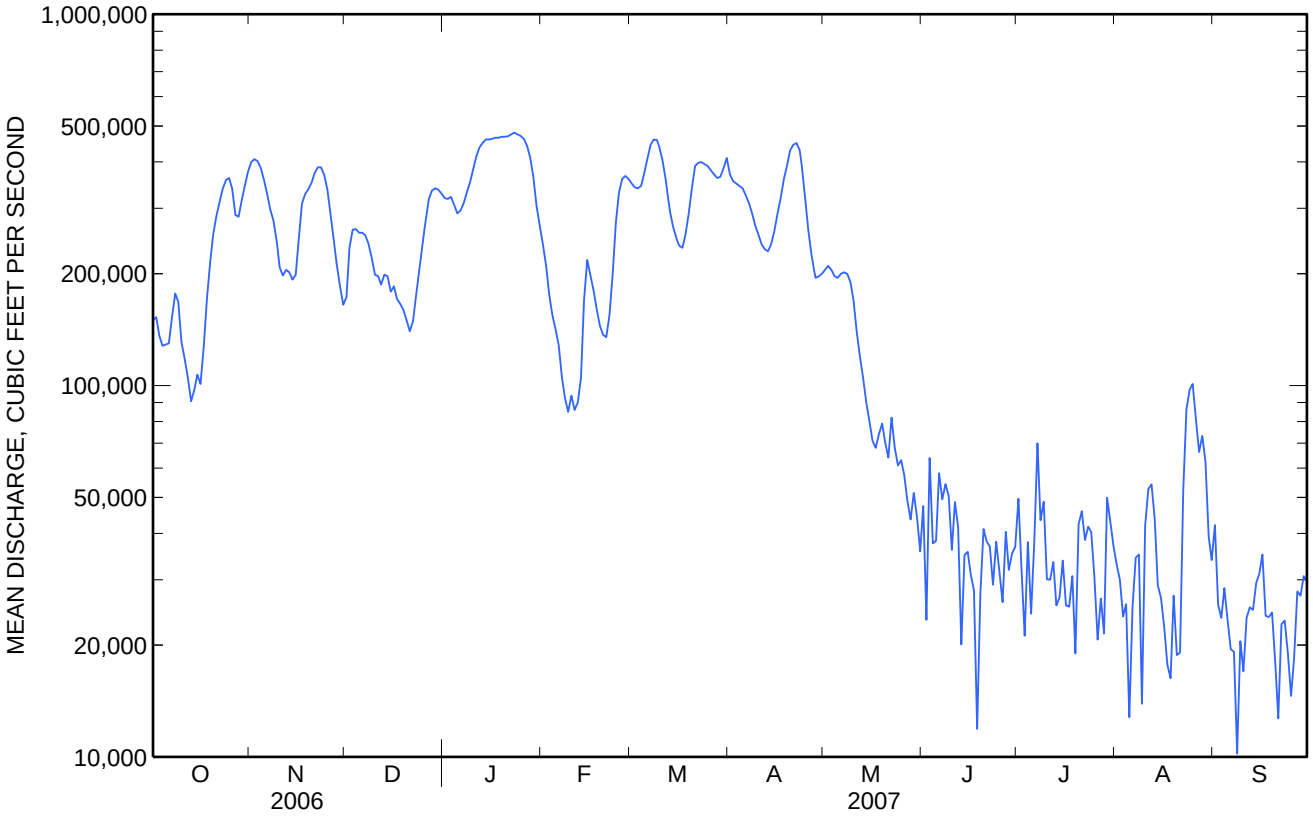
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 2002 - 2007	
Annual total	69,099,440		67,871,000			
Annual mean	189,300		185,900		199,500	
Highest annual mean					241,200	2004
Lowest annual mean					150,100	2006
Highest daily mean	471,000	Mar 17	[A]480,000	Jan 23	[A]955,000	Jan 16, 2005
Lowest daily mean	9,440	Aug 27	10,200	Sep 8	9,440	Aug 27, 2006
Annual seven-day minimum	26,500	Aug 22	18,400	Sep 20	14,400	Sep 9, 2002
Maximum peak flow			[A]490,000	Jan 23	[A]1,030,000	Jan 16, 2005
Maximum peak stage			[B]41.87	Jan 22	[C]50.57	Jan 16, 2005
Instantaneous low flow			2,320	Aug 9		
Annual runoff (cfsm)	1.34		1.32		1.41	
Annual runoff (inches)	18.23		17.91		19.22	
10 percent exceeds	337,000		390,000		387,000	
50 percent exceeds	176,000		171,000		176,000	
90 percent exceeds	66,600		25,300		41,700	

[A] Estimated.
[B] May have been greater during period of missing record Jan. 14 to May 25.
[C] Estimated, based on graph.



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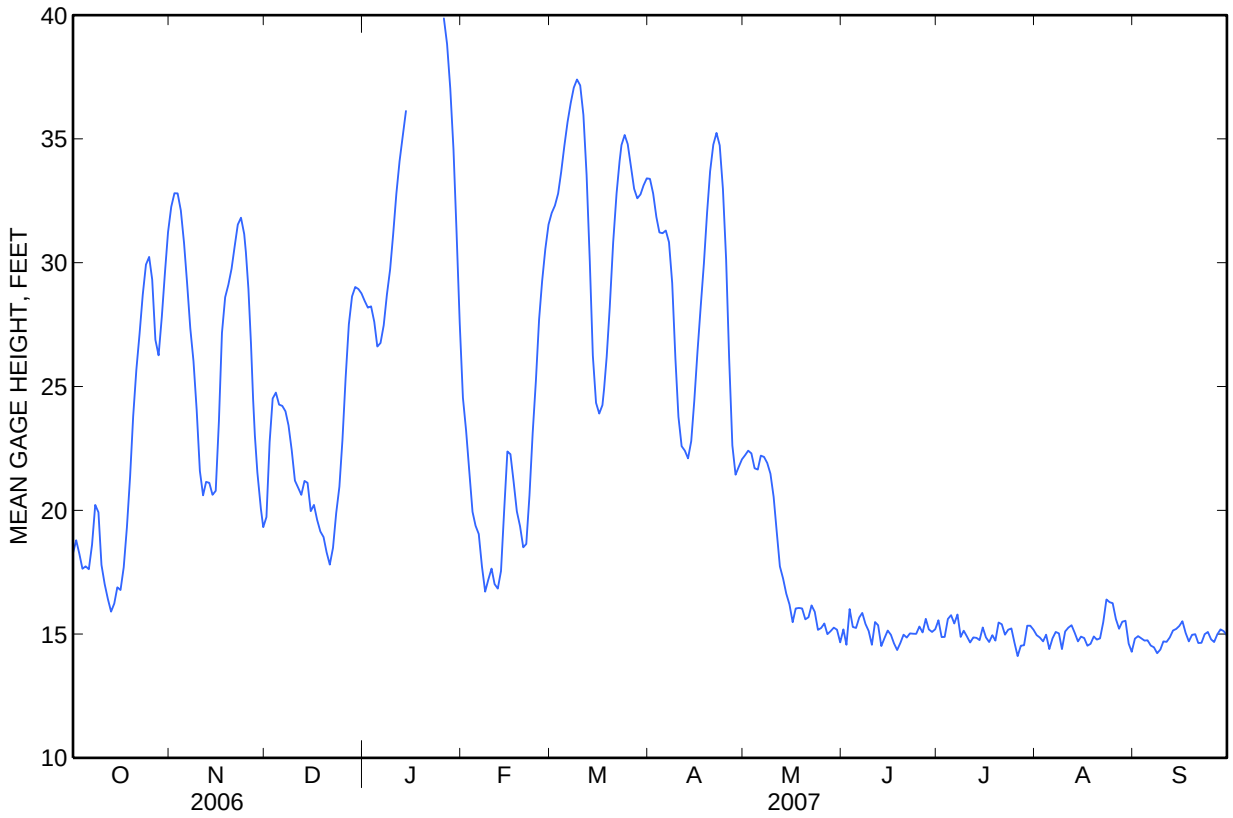
GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	18.27	32.26	19.73	28.46	24.55	32.01	33.39	22.22	15.19	15.56	14.96	14.82
2	18.79	32.81	22.76	28.19	23.21	32.31	32.79	22.41	14.57	14.88	14.86	14.92
3	18.24	32.80	24.52	28.24	21.56	32.79	31.85	22.30	16.01	14.89	14.71	14.83
4	17.64	32.11	24.76	27.61	19.94	33.66	31.22	21.70	15.29	15.61	14.98	14.74
5	17.74	30.80	24.27	26.62	19.38	34.72	31.19	21.65	15.25	15.77	14.40	14.75
6	17.62	29.19	24.22	26.76	19.04	35.68	31.30	22.21	15.67	15.43	14.83	14.54
7	18.61	27.36	24.00	27.48	17.73	36.46	30.83	22.16	15.86	15.79	15.09	14.47
8	20.22	26.03	23.43	28.72	16.72	37.07	29.18	21.91	15.41	14.89	15.03	14.23
9	19.92	24.05	22.43	29.73	17.21	37.40	26.14	21.48	15.13	15.14	14.40	14.38
10	17.80	21.59	21.20	31.15	17.65	37.16	23.78	20.54	14.57	14.91	15.11	14.71
11	17.02	20.61	20.92	32.79	17.02	35.97	22.59	19.16	15.49	14.66	15.26	14.69
12	16.42	21.15	20.63	34.10	16.84	33.54	22.41	17.74	15.36	14.87	15.36	14.87
13	15.91	21.11	21.19	35.12	17.55	30.06	22.10	17.25	14.52	14.85	15.05	15.15
14	16.24	20.63	21.11	36.13	20.02	26.25	22.80	16.63	14.84	14.76	14.71	15.21
15	16.89	20.79	19.97	---	22.38	24.34	24.42	16.20	15.15	15.27	14.90	15.33
16	16.78	23.61	20.22	---	22.27	23.91	26.40	15.48	14.97	14.87	14.84	15.52
17	17.70	27.17	19.61	---	21.15	24.25	28.21	16.04	14.63	14.68	14.53	15.05
18	19.32	28.61	19.15	---	19.96	25.70	29.96	16.06	14.36	14.96	14.61	14.71
19	21.38	29.11	18.92	---	19.36	27.61	32.02	16.04	14.64	14.74	14.91	14.97
20	23.79	29.76	18.31	---	18.51	29.73	33.69	15.60	14.98	15.47	14.78	15.00
21	25.68	30.69	17.81	---	18.64	31.97	34.77	15.68	14.86	15.40	14.83	14.64
22	27.13	31.54	18.49	---	20.61	33.66	35.24	16.16	15.03	14.98	15.48	14.65
23	28.71	31.82	19.89	---	23.12	34.75	34.74	15.90	15.02	15.18	16.40	15.00
24	29.93	31.16	20.96	---	25.22	35.16	32.98	15.17	15.01	15.23	16.29	15.09
25	30.24	29.59	22.84	---	27.70	34.79	30.14	15.25	15.31	14.66	16.25	14.79
26	29.32	26.93	25.36	39.87	29.25	33.89	26.13	15.43	15.07	14.11	15.61	14.68
27	26.89	24.12	27.51	38.83	30.55	32.99	22.62	15.00	15.62	14.53	15.22	14.99
28	26.26	21.80	28.64	37.03	31.54	32.60	21.44	15.12	15.19	14.55	15.50	15.19
29	27.81	20.30	29.02	34.58	---	32.76	21.76	15.26	15.09	15.34	15.54	15.12
30	29.63	19.32	28.94	31.28	---	33.12	22.06	15.18	15.20	15.34	14.62	14.95
31	31.24	---	28.76	27.57	---	33.41	---	14.67	---	15.18	14.29	---
Mean	21.91	26.63	22.57	---	21.38	32.25	28.27	17.86	15.11	15.05	15.08	14.87
Max	31.24	32.81	29.02	---	31.54	37.40	35.24	22.41	16.01	15.79	16.40	15.52
Min	15.91	19.32	17.81	---	16.72	23.91	21.44	14.67	14.36	14.11	14.29	14.23

	Calendar Year 2006
Mean	21.31
Max	37.98
Min	14.37

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