Water-Data Report 2010

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, satellite telemeter, and acoustic-velocity meter. Datum of gage is 309.10 ft above NAVD of 1988 (309.43 ft NGVD 1929).

REMARKS.--Discharge records fair except 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 discharge, 1,030,000 ft^3/s, estimated, Jan. 16, 2005, gage height, 50.57 ft, estimated based on graph; minimum daily discharge, 6,280 ft^3/s, Sept. 26, 2010.

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 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES
[e, estimated; $\times 10^6$, million]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	139,000	258,000	73,500	306,000	484,000	235,000	363,000	204,000	147,000	161,000	56,600	18,000
2	91,100	291,000	75,400	271,000	485,000	220,000	348,000	253,000	133,000	169,000	50,300	23,700
3	95,000	298,000	88,600	225,000	449,000	192,000	331,000	327,000	127,000	163,000	41,500	32,500
4	96,300	271,000	115,000	200,000	397,000	172,000	312,000	381,000	137,000	147,000	48,700	10,600
5	71,000	244,000	141,000	183,000	337,000	164,000	273,000	430,000	151,000	137,000	39,200	14,600
6	64,200	226,000	150,000	157,000	286,000	161,000	228,000	463,000	166,000	123,000	45,600	14,100
7	52,200	198,000	164,000	140,000	274,000	162,000	192,000	495,000	165,000	98,000	56,900	34,900
8	73,200	160,000	168,000	125,000	288,000	161,000	190,000	520,000	164,000	73,900	28,200	19,700
9	149,000	134,000	174,000	119,000	317,000	164,000	219,000	527,000	184,000	57,200	39,800	34,400
10	286,000	118,000	240,000	105,000	346,000	168,000	211,000	501,000	193,000	57,800	53,700	20,200
11	333,000	109,000	309,000	93,700	351,000	177,000	196,000	432,000	204,000	64,400	34,600	15,600
12	284,000	103,000	352,000	92,900	320,000	204,000	187,000	350,000	204,000	77,400	32,100	14,900
13	223,000	92,900	375,000	78,300	272,000	237,000	172,000	286,000	199,000	61,300	44,100	29,900
14	184,000	85,900	e390,000	79,400	241,000	271,000	158,000	280,000	228,000	66,500	46,900	18,400
15	153,000	104,000	402,000	79,000	208,000	314,000	142,000	300,000	256,000	97,400	46,600	30,400
16	169,000	111,000	366,000	80,100	181,000	367,000	130,000	309,000	270,000	107,000	52,900	28,200
17	165,000	109,000	330,000	84,400	163,000	419,000	124,000	309,000	284,000	77,400	57,000	20,100
18	150,000	107,000	289,000	91,500	151,000	437,000	104,000	303,000	286,000	70,200	40,400	18,300
19	145,000	92,500	268,000	127,000	138,000	459,000	101,000	287,000	267,000	83,300	35,000	37,200
20	141,000	93,100	252,000	178,000	144,000	475,000	105,000	287,000	232,000	75,200	42,000	31,100
21	133,000	111,000	238,000	231,000	137,000	479,000	96,800	301,000	191,000	98,300	37,900	8,500
22	105,000	107,000	e230,000	299,000	152,000	466,000	77,700	320,000	127,000	148,000	43,500	16,400
23	92,800	99,700	e220,000	347,000	173,000	447,000	81,000	330,000	131,000	187,000	49,100	36,200
24	110,000	109,000	199,000	369,000	203,000	423,000	95,200	339,000	156,000	186,000	53,600	12,800
25	134,000	106,000	194,000	379,000	228,000	385,000	109,000	331,000	171,000	151,000	35,300	16,400
26	132,000	85,000	204,000	392,000	242,000	362,000	132,000	306,000	155,000	89,500	35,600	6,280
27	126,000	90,000	221,000	405,000	247,000	364,000	134,000	258,000	99,200	71,100	41,600	20,300
28	163,000	89,700	254,000	435,000	245,000	367,000	152,000	222,000	97,800	94,600	34,600	30,000
29	210,000	89,300	290,000	450,000	---	368,000	168,000	188,000	93,700	75,300	24,600	19,000
30	223,000	73,400	311,000	474,000	---	365,000	183,000	164,000	151,000	65,900	23,700	27,100
31	225,000	---	319,000	485,000	---	364,000	---	151,000	---	64,400	25,100	---
Total	4,717,800	4,165,500	7,402,500	7,081,300	7,459,000	9,549,000	5,314,700	10.15×10^6	5,369,700	3,198,100	1,296,700	659,780
Mean	152,200	138,800	238,800	228,400	266,400	308,000	177,200	327,500	179,000	103,200	41,830	21,990
Max	333,000	298,000	402,000	485,000	485,000	479,000	363,000	527,000	286,000	187,000	57,000	37,200
Min	52,200	73,400	73,500	78,300	137,000	161,000	77,700	151,000	93,700	57,200	23,700	6,280
Cfsm	1.08	0.98	1.69	1.62	1.89	2.18	1.26	2.32	1.27	0.73	0.30	0.16
In.	1.24	1.10	1.95	1.87	1.97	2.52	1.40	2.68	1.42	0.84	0.34	0.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	97,680	158,000	227,200	311,500	257,200	311,800	294,300	277,100	178,400	95,550	68,460	86,860
Max	208,100	294,500	302,000	609,600	334,300	547,300	383,300	500,500	325,400	184,800	139,300	218,800
(WY)	(2007)	(2007)	(2004)	(2005)	(2008)	(2008)	(2002)	(2002)	(2004)	(2003)	(2003)	(2004)
Min	19,440	34,090	118,000	183,900	182,000	196,000	177,200	112,600	37,450	34,930	30,240	21,990
(WY)	(2009)	(2009)	(2006)	(2003)	(2007)	(2009)	(2010)	(2007)	(2007)	(2007)	(2002)	(2010)

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SUMMARY STATISTICS

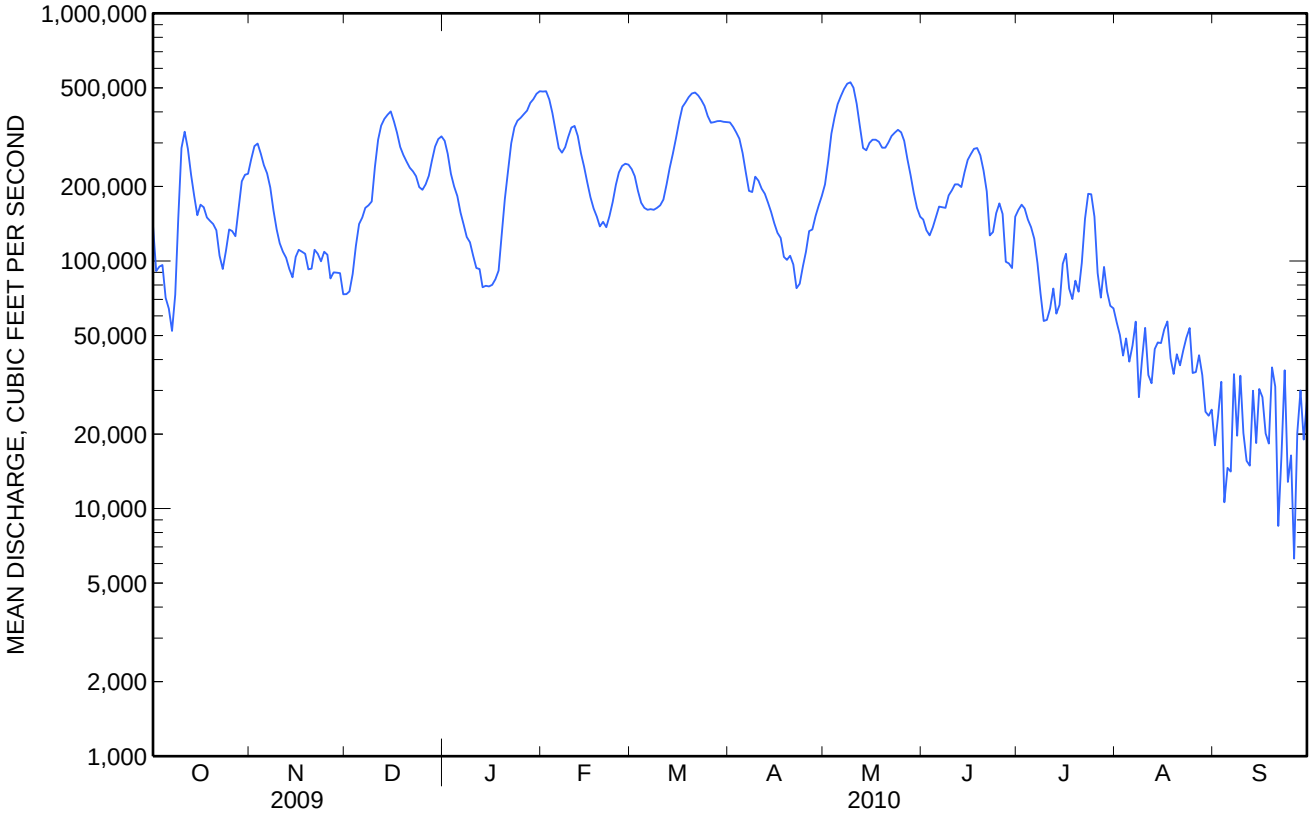
	Calendar Year 2009		Water Year 2010		Water Years 2002 - 2010	
Annual total	72,392,180		66,368,080			
Annual mean	198,300		181,800		195,700	
Highest annual mean					241,200	2004
Lowest annual mean					150,100	2006
Highest daily mean	542,000	May 14	527,000	May 9	[A]955,000	Jan 16, 2005
Lowest daily mean	8,580	Sep 19	6,280	Sep 26	6,280	Sep 26, 2010
Annual seven-day minimum	23,300	Sep 14	16,700	Sep 21	14,300	Oct 11, 2007
Maximum peak flow			[B]574,000	May 8	[A]1,030,000	Jan 16, 2005
Maximum peak stage			[C]39.59	May 10	[D]50.57	Jan 16, 2005
Annual runoff (cfsm)	1.41		1.29		1.39	
Annual runoff (inches)	19.10		17.51		18.86	
10 percent exceeds	349,000		365,000		387,000	
50 percent exceeds	197,000		158,000		171,000	
90 percent exceeds	57,800		35,200		33,900	

[A] Estimated.

[B] Gage height, 38.57 ft.

[C] Discharge, 514,000 ft³/s.

[D] Estimated, based on graph.



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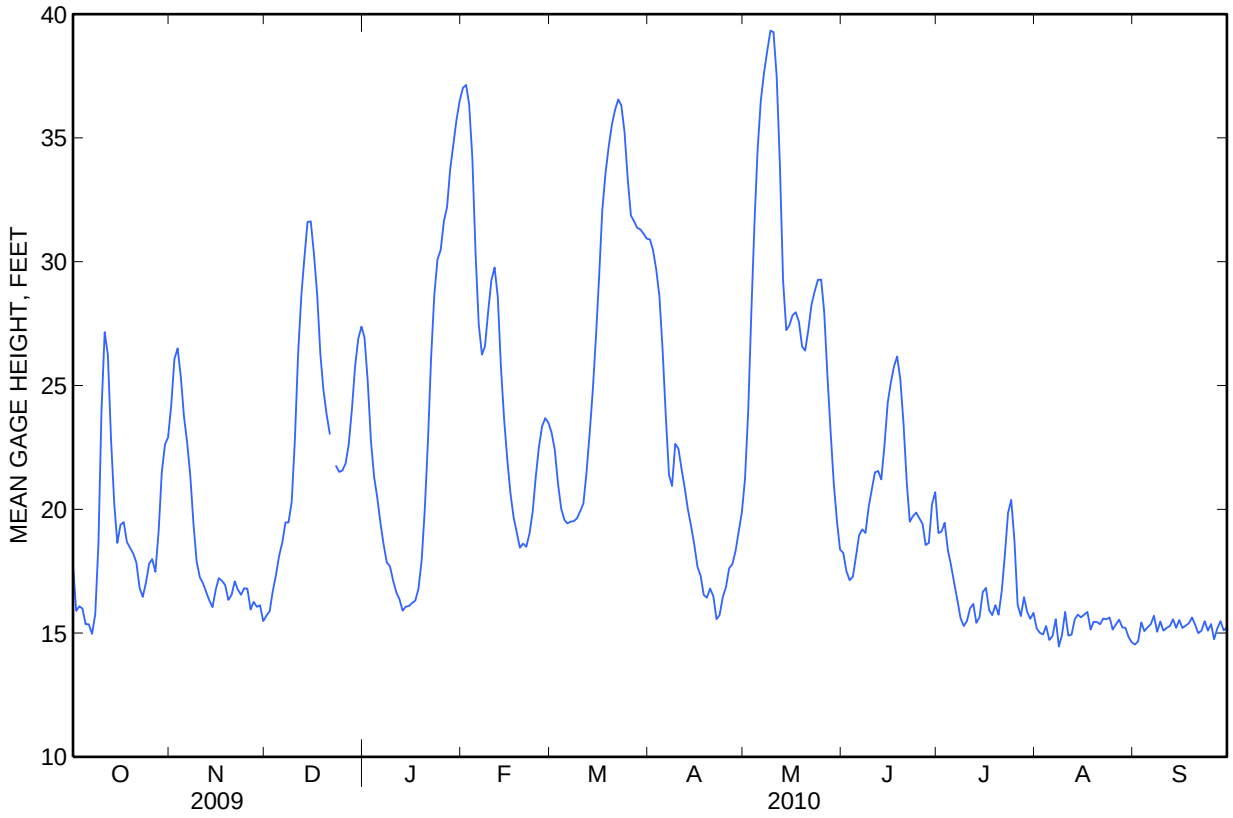
GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	17.74	24.21	15.71	26.93	37.02	23.11	30.90	21.23	18.24	19.04	15.19	14.54
2	15.90	26.07	15.88	25.18	37.14	22.41	30.48	23.95	17.50	19.10	15.01	14.67
3	16.08	26.50	16.67	22.78	36.34	21.06	29.69	28.04	17.14	19.46	14.95	15.43
4	15.99	25.34	17.33	21.31	34.19	20.04	28.62	31.68	17.28	18.36	15.29	15.08
5	15.36	23.72	18.11	20.46	30.35	19.58	26.44	34.55	18.07	17.73	14.73	15.24
6	15.36	22.73	18.66	19.43	27.46	19.43	23.77	36.52	18.95	17.01	14.88	15.36
7	14.97	21.36	19.47	18.60	26.25	19.50	21.40	37.64	19.19	16.31	15.56	15.70
8	15.75	19.41	19.47	17.86	26.59	19.52	20.94	38.51	19.04	15.61	14.46	15.06
9	18.61	17.88	20.31	17.70	28.00	19.64	22.64	39.33	20.10	15.29	14.92	15.47
10	23.97	17.25	22.84	17.12	29.25	19.92	22.45	39.27	20.82	15.49	15.86	15.10
11	27.16	17.02	26.29	16.64	29.76	20.24	21.61	37.49	21.49	16.01	14.90	15.21
12	26.23	16.67	28.61	16.38	28.57	21.45	20.84	33.93	21.55	16.18	14.94	15.28
13	22.78	16.32	30.14	15.91	25.82	23.06	20.00	29.24	21.21	15.42	15.56	15.56
14	20.21	16.05	31.60	16.07	23.69	24.84	19.33	27.24	22.61	15.65	15.75	15.22
15	18.64	16.75	31.63	16.10	22.03	27.02	18.58	27.42	24.31	16.66	15.64	15.53
16	19.38	17.22	30.31	16.22	20.65	29.50	17.68	27.83	25.09	16.83	15.75	15.21
17	19.48	17.11	28.69	16.31	19.67	32.07	17.31	27.96	25.77	15.93	15.86	15.30
18	18.68	16.94	26.27	16.79	19.09	33.56	16.54	27.57	26.17	15.73	15.15	15.40
19	18.44	16.34	24.84	17.93	18.45	34.64	16.43	26.58	25.24	16.13	15.46	15.63
20	18.22	16.54	23.84	20.04	18.62	35.53	16.80	26.41	23.44	15.75	15.45	15.33
21	17.85	17.09	23.05	22.84	18.49	36.13	16.50	27.25	21.08	16.72	15.36	15.00
22	16.83	16.76	---	26.10	19.02	36.55	15.57	28.28	19.50	18.23	15.59	15.10
23	16.46	16.55	21.75	28.64	19.90	36.31	15.73	28.81	19.73	19.86	15.56	15.48
24	17.04	16.81	21.51	30.09	21.29	35.24	16.45	29.27	19.87	20.38	15.63	15.10
25	17.81	16.79	21.57	30.47	22.52	33.34	16.86	29.28	19.64	18.74	15.15	15.37
26	17.99	15.95	21.86	31.63	23.36	31.86	17.62	27.97	19.41	16.15	15.35	14.75
27	17.48	16.26	22.61	32.21	23.68	31.63	17.79	25.42	18.56	15.69	15.55	15.19
28	19.10	16.06	24.02	33.71	23.49	31.37	18.32	23.14	18.64	16.45	15.24	15.48
29	21.50	16.12	25.77	34.72	---	31.30	19.08	21.03	20.21	15.87	15.21	15.11
30	22.62	15.49	26.89	35.74	---	31.13	19.86	19.51	20.69	15.58	14.85	15.24
31	22.90	---	27.38	36.51	---	30.93	---	18.38	---	15.82	14.63	---
Mean	18.92	18.51	---	23.17	25.38	27.48	20.54	29.06	20.68	16.88	15.27	15.24
Max	27.16	26.50	---	36.51	37.14	36.55	30.90	39.33	26.17	20.38	15.86	15.70
Min	14.97	15.49	---	15.91	18.45	19.43	15.57	18.38	17.14	15.29	14.46	14.54

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