

Water-Data Report 2009

## 03216600 OHIO RIVER AT GREENUP DAM, KY

Middle Ohio-Raccoon Basin  
Little Scioto-Tygarts Subbasin

LOCATION.--Lat 38°38'48", long 82°51'38" referenced to North American Datum of 1927, Greenup County, KY, Hydrologic Unit 05090103, on Ohio River, at left bank at downstream end of lock guidewall in lower pool at Greenup Locks, 1.1 miles upstream from Grays Branch, 4.7 miles downstream from Little Sandy River; 5.0 miles north of Greenup, and at mile 341.5.

DRAINAGE AREA.--62000.0 mi<sup>2</sup>.

### **SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Records of Greenup Dam operations and hydropower releases furnished by the U.S. Army Corps of Engineers are used to determine daily discharge. Water-stage recorder with telemetry in Greenup Dam tailwater for peak stage determination. Datum of gage is 472.43 feet above NGVD of 1929 or 472.97 feet Ohio River Datum. Auxiliary water-stage recorder is located at the waste water treatment plant in Portsmouth, Ohio, 14.1 miles downstream, established October 1, 1981 and used in slope rating computation from October 1, 1981 to September 30, 1983. Datum of gage is 470.43 feet above NGVD of 1929 or 470.99 feet Ohio River Datum. Record of Greenup Dam headwater, tailwater, gate openings and lockages used to determine discharge from October 1, 1968 to September 30, 1981. Slope rating computation from October 1, 1981 to September 30, 1983, and Branch Flow Model, gate and tailwater rating from October 1, 1983 to current year.

COOPERATION.--U.S. Army Corps of Engineers, Huntington, WV District.

REMARKS.--Records good except for those estimated and those below 20,000 ft<sup>3</sup>/s, which are poor. Flow regulated by Ohio River system of locks, dams, and reservoirs upstream from station.

## 03216600 OHIO RIVER AT GREENUP DAM, KY—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	9,920	15,300	25,800	136,000	108,000	98,300	117,000	53,200	111,000	26,400	e168,000	28,000
2	5,170	15,400	31,600	117,000	109,000	120,000	102,000	91,000	83,500	26,200	117,000	20,300
3	17,600	11,800	37,900	106,000	99,300	116,000	88,500	141,000	83,500	20,900	124,000	24,400
4	9,210	15,200	46,200	83,100	89,000	102,000	115,000	162,000	88,700	31,500	100,000	14,600
5	10,600	13,300	23,400	73,500	73,300	81,200	154,000	258,000	98,800	31,400	89,700	14,100
6	14,900	15,900	38,600	66,400	54,700	69,200	163,000	290,000	107,000	40,000	68,600	12,700
7	19,300	16,600	33,900	127,000	54,600	66,500	153,000	306,000	111,000	37,100	42,400	17,900
8	7,120	13,100	31,400	247,000	69,700	56,000	139,000	303,000	87,700	25,100	e39,700	16,000
9	14,800	15,400	22,800	288,000	107,000	69,900	135,000	299,000	67,500	26,400	34,300	19,000
10	14,200	12,000	37,400	264,000	135,000	107,000	121,000	300,000	45,300	24,000	26,200	16,300
11	14,900	15,100	59,300	186,000	166,000	135,000	138,000	288,000	e68,300	18,600	50,200	15,500
12	4,910	9,130	131,000	187,000	237,000	137,000	177,000	229,000	89,900	27,400	53,500	19,000
13	17,900	15,500	183,000	180,000	259,000	120,000	172,000	148,000	112,000	19,000	74,700	15,500
14	9,420	10,200	189,000	148,000	274,000	117,000	163,000	122,000	83,100	19,900	65,700	16,900
15	9,120	24,800	145,000	125,000	246,000	114,000	122,000	99,800	66,000	29,400	53,800	15,600
16	14,600	19,900	114,000	93,300	169,000	116,000	129,000	77,200	53,900	13,100	38,600	14,900
17	10,200	20,600	115,000	66,700	152,000	122,000	123,000	93,400	50,100	16,900	e31,600	14,400
18	7,520	35,300	154,000	41,000	141,000	135,000	116,000	84,600	75,600	17,600	32,800	11,500
19	7,140	29,200	168,000	55,800	131,000	116,000	101,000	75,500	120,000	18,600	30,500	11,400
20	14,800	26,700	182,000	46,800	132,000	102,000	98,600	68,900	116,000	14,700	e40,300	10,100
21	16,800	23,200	201,000	46,600	127,000	87,900	111,000	44,300	93,700	19,600	27,900	15,300
22	6,820	20,800	193,000	40,800	117,000	66,000	133,000	42,100	99,000	19,200	32,200	14,200
23	5,110	23,300	143,000	40,100	104,000	47,200	139,000	41,500	78,500	24,300	47,800	17,600
24	16,100	19,700	125,000	38,800	87,200	47,900	129,000	42,200	54,900	41,100	28,000	13,900
25	16,800	24,500	170,000	39,200	71,100	55,800	119,000	30,700	51,000	21,100	35,800	18,800
26	16,100	37,400	195,000	37,500	73,100	54,700	106,000	45,500	46,900	38,900	27,300	24,900
27	9,520	46,800	186,000	35,100	63,300	97,900	87,500	47,700	38,000	42,700	17,000	39,700
28	13,100	37,400	173,000	78,300	69,000	128,000	77,700	75,300	33,500	45,900	24,800	41,000
29	18,200	36,600	172,000	167,000	---	149,000	73,500	80,300	26,500	44,100	14,200	49,200
30	14,400	39,600	170,000	182,000	---	154,000	65,500	99,700	26,500	54,200	28,000	31,100
31	14,900	---	158,000	142,000	---	149,000	---	105,000	---	117,000	27,200	---
<b>Total</b>	381,180	659,730	3,655,300	3,485,000	3,518,300	3,137,500	3,668,300	4,143,900	2,267,400	952,300	1,591,800	593,800
<b>Mean</b>	12,300	21,990	117,900	112,400	125,700	101,200	122,300	133,700	75,580	30,720	51,350	19,790
<b>Max</b>	19,300	46,800	201,000	288,000	274,000	154,000	177,000	306,000	120,000	117,000	168,000	49,200
<b>Min</b>	4,910	9,130	22,800	35,100	54,600	47,200	65,500	30,700	26,500	13,100	14,200	10,100

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2009, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	39,170	69,750	109,400	121,100	141,100	161,600	141,800	106,300	67,810	45,150	36,740	36,380
<b>Max</b>	118,200	208,600	252,700	246,400	259,100	268,600	258,400	276,700	174,000	100,700	113,600	184,300
<b>(WY)</b>	(2007)	(1986)	(1973)	(2005)	(1994)	(1994)	(1994)	(1996)	(1981)	(1972)	(1980)	(2004)
<b>Min</b>	11,310	14,720	24,080	27,170	66,240	53,550	52,660	36,610	13,440	13,040	11,270	9,706
<b>(WY)</b>	(1992)	(1999)	(1999)	(1977)	(1978)	(1969)	(1986)	(1976)	(1988)	(1999)	(1988)	(1999)

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SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1969 - 2009	
<b>Annual total</b>	32,887,690		28,054,510			
<b>Annual mean</b>	89,860		76,860		89,420	
<b>Highest annual mean</b>					136,300	2004
<b>Lowest annual mean</b>					49,760	1988
<b>Highest daily mean</b>	386,000	Mar 8	306,000	May 7	540,000	Jan 12, 1974
<b>Lowest daily mean</b>	4,910	Oct 12	4,910	Oct 12	2,720	Oct 7, 2007
<b>Annual seven-day minimum</b>	9,770	Oct 17	9,770	Oct 17	7,740	Sep 22, 1999
<b>Maximum peak flow</b>			308,000	May 7	520,000	Mar 4, 1997
<b>Maximum peak stage</b>			42.93	May 7	56.64	Jan 10, 2005
<b>10 percent exceeds</b>	200,000		166,000		200,000	
<b>50 percent exceeds</b>	58,800		54,600		63,200	
<b>90 percent exceeds</b>	11,700		14,800		16,800	

