Water-Data Report 2011

03282000 KENTUCKY RIVER AT LOCK 14 AT HEIDELBERG, KY

Kentucky Basin
Upper Kentucky Subbasin

LOCATION.--Lat 37°33′19″, long 83°46′06″ referenced to North American Datum of 1927, Lee County, KY, Hydrologic Unit 05100204, on right bank 200 feet upstream from Lock 14 at Heidelberg, 0.3 miles upstream from Sturgeon Creek, 5.0 miles downstream from Beattyville and at mile 249.2.

DRAINAGE AREA.--2,657 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1925 to September 1931, December 1936 to February 1937, July 1938 to current year. Gage-height records collected in this vicinity since 1902 are published in reports of National Weather Service.

REVISED RECORDS.--WSP 1385: 1926-27, 1928(M), 1929, 1931(M), 1937, 1939(M), drainage area.

GAGE.--Water-stage recorder with telemetry. Datum of gage is 625.77 feet NGVD of 1929, 625.70 feet Ohio River Datum, 626.66 feet Kentucky River Datum. Prior to September 2, 1939, nonrecording gage at Lock 14 at same datum.

COOPERATION.--U.S. Army Corps of Engineers, Louisville District and Kentucky River Authority.

REMARKS.--Records good except for those flows less than 150 ft^3/s, and for those flows between December 16, 2010 to May 13, 2011 which are poor. Flow regulated by Buckhorn Lake beginning December 1960 (station 03280800), and by Carr Fork Lake beginning January 1976 (station 03277446). Small diversions by City of Lexington waterworks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,900 ft^3/s*, April 17, gage height, unknown.

*estimate

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated; &, affected value]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	458	333	20,600	3,250	4,690	e27,500	3,510	7,810	2,590	1,550	1,070	351
2	407	269	15,700	11,800	4,440	e23,100	3,510	6,100	1,920	1,240	980	334
3	361	241	7,260	10,900	4,080	e13,400	3,580	6,140	1,590	1,040	891	322
4	307	462	4,140	7,820	3,470	e9,780	3,420	15,800	1,370	917	773	322
5	280	1,050	2,950	6,190	2,970	e8,350	17,300	12,600	1,210	1,080	733	377
6	271	957	2,520	4,900	2,820	e18,100	21,200	10,200	1,090	2,430	691	1,280
7	276	719	1,900	3,960	&2,760	e27,900	14,100	8,630	1,060	1,940	981	12,300
8	252	637	1,530	e3,400	e2,520	e17,400	10,700	7,340	1,590	1,420	1,030	10,700
9	222	583	1,900	e2,680	e2,300	12,400	10,400	6,450	1,370	1,540	840	6,750
10	198	565	1,570	e2,050	e2,060	12,800	14,300	e5,870	1,140	1,390	1,160	4,320
11	188	531	1,190	e1,560	e1,860	25,400	11,800	e5,120	947	1,120	1,410	2,450
12	182	491	1,430	e1,190	1,680	22,100	e20,100	5,000	921	1,640	1,060	1,620
13	185	473	4,570	e1,050	1,670	15,200	e23,100	4,350	1,010	4,330	749	1,220
14	182	470	4,300	e963	1,660	11,700	e16,500	3,140	928	3,690	1,410	1,010
15	175	467	3,100	e903	1,670	9,480	e13,000	3,210	759	1,990	915	1,050
16	168	552	e2,570	839	1,630	8,710	e25,100	2,750	681	5,580	1,850	966
17	163	1,150	e11,700	780	1,440	8,610	e30,900	2,340	625	4,790	1,590	684
18	155	1,420	11,400	848	1,240	7,680	e20,900	3,460	679	2,420	1,060	666
19	151	1,090	7,650	1,280	1,250	6,970	e13,700	4,230	947	2,690	820	622
20	148	845	5,490	1,550	1,330	6,440	10,400	3,390	7,830	6,810	621	564
21	150	706	3,930	1,730	1,270	5,890	9,190	2,820	16,800	2,810	573	715
22	359	614	2,890	1,800	1,420	5,380	8,480	2,550	11,600	2,960	902	893
23	531	629	2,550	1,770	1,680	4,880	6,600	6,650	6,900	5,630	903	997
24	550	955	2,420	1,730	2,440	5,100	5,410	11,200	3,940	5,110	1,210	1,170
25	585	1,280	2,260	1,720	13,000	5,610	6,650	16,500	2,630	3,050	975	1,110
26	598	1,350	2,110	2,320	17,300	5,710	6,570	17,300	1,770	3,800	761	1,060
27	748	1,760	1,970	7,270	12,400	5,090	6,260	13,300	1,400	4,740	588	1,120
28	1,220	1,760	1,700	8,590	11,500	4,500	21,800	12,300	2,070	3,180	520	955
29	1,330	1,590	1,450	7,990	---	4,010	24,600	8,400	2,500	2,050	450	1,050
30	1,020	3,460	1,460	7,100	---	3,540	13,000	5,440	2,000	1,430	392	1,330
31	540	---	2,150	5,970	---	3,530	---	3,620	---	1,350	363	---
Total	12,360	27,409	138,360	115,903	108,550	346,260	396,080	224,010	81,867	85,717	28,271	58,308
Mean	399	914	4,463	3,739	3,877	11,170	13,200	7,226	2,729	2,765	912	1,944
Max	1,330	3,460	20,600	11,800	17,300	27,900	30,900	17,300	16,800	6,810	1,850	12,300
Min	148	241	1,190	780	1,240	3,530	3,420	2,340	625	917	363	322

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,239	2,473	4,563	5,688	6,729	7,150	6,373	5,015	2,753	1,259	1,001	976
Max	10,380	7,006	14,850	14,010	17,660	18,260	15,260	16,010	10,630	3,320	3,006	6,864
(WY)	(1990)	(1978)	(1991)	(1994)	(2003)	(1994)	(1998)	(1984)	(2003)	(1992)	(1977)	(2004)
Min	232	263	582	362	1,406	1,791	855	910	247	206	154	70.1
(WY)	(2000)	(2002)	(1981)	(1981)	(2007)	(1988)	(1986)	(1986)	(1988)	(1988)	(1988)	(1999)

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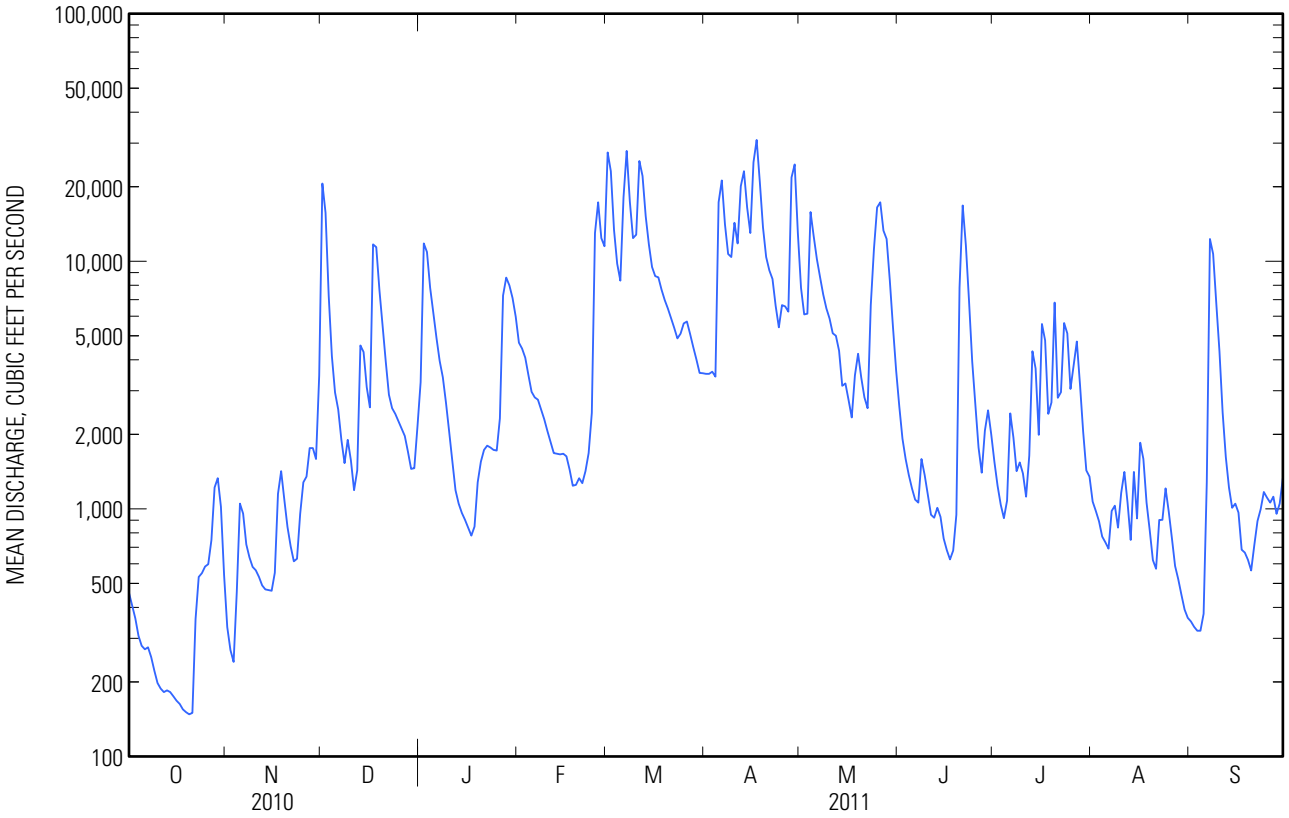
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1977 - 2011	
Annual total	1,097,724		1,623,095			
Annual mean	3,007		4,447		3,753	
Highest annual mean					6,973	1994
Lowest annual mean					1,461	1988
Highest daily mean	37,400	Jan 25	30,900	Apr 17	85,900	May 8, 1984
Lowest daily mean	148	Oct 20	148	Oct 20	45	Jul 10, 1988
Annual seven-day minimum	159	Oct 15	159	Oct 15	51	Sep 11, 1999
Maximum peak flow			30,900	Apr 17	120,000	Feb 4, 1939
Maximum peak stage					35.60	Feb 4, 1939
Instantaneous low flow					4.0	Oct 20, 1930
10 percent exceeds	6,920		12,400		9,320	
50 percent exceeds	1,370		1,900		1,610	
90 percent exceeds	256		472		276