

Water-Data Report 2010

## 034315005 CUMBERLAND RIVER AT WOODLAND STREET AT NASHVILLE, TN

Lower Cumberland Basin  
Lower Cumberland-Sycamore Subbasin

LOCATION.--Lat 36°10'02", long 86°46'35" referenced to North American Datum of 1927, Davidson County, TN, Hydrologic Unit 05130202, on left bank at northwest corner of Woodland Street Bridge, at Nashville, 3.5 mi downstream from Mill Creek, and at mile 190.9.

Stage gage: Lat 36°09'41.19", long 86°46'21.64" referenced to North American Datum of 1927, Davidson County, Hydrologic Unit 05130202, at left bank pier of Shelby Avenue Bridge, 3.3 miles downstream from Mill Creek, and at mile 191.1.

DRAINAGE AREA.--12,860 mi<sup>2</sup>, approximately.

### SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1992 to current year. October 1892 to September 1954, monthly and yearly discharges published in WSP 1306 and 1726, October 1986 to September 1991, gage height, published as "at Nashville." Gage height record collected in this vicinity since 1873 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--Datum revised to 367.83 NGVD of 1929, datum 368.17 is based on Sandy Hook datum.

GAGE.--Data collection platform and acoustic velocity meter. Datum of gage is 367.83 ft above NGVD of 1929. Prior to fall of 1922 inclined and vertical staff gage at site 350 ft downstream and from fall of 1922 to Apr. 9, 1940, staff gage at site 400 ft downstream, both gages at same datum. Nov. 1, 1930, to Sept. 30, 1954, upper staff gage at former lock 1, 2.7 mi downstream was used as auxiliary gage. Prior to May 1992 at site 0.2 mi upstream at same datum.

REMARKS.--Records fair except for estimated daily discharges which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 203,000 ft<sup>3</sup>/s, Jan. 1, 1927, gage height 56.2 ft; minimum gage height observed after first filling of pool at dam 1, 6.1 ft, Oct. 19, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 188,000 ft<sup>3</sup>/s, May 3, maximum gage height, 52.55 ft, May 3, minimum daily discharge, 4,760 ft<sup>3</sup>/s, July 9; minimum gage height, 16.61, Sept. 30.

## 034315005 CUMBERLAND RIVER AT WOODLAND STREET AT NASHVILLE, TN—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	21,000	32,500	7,430	35,400	51,500	30,800	25,500	38,800	11,500	6,680	7,960	10,100
2	22,500	32,800	7,820	34,000	50,500	29,300	23,900	124,000	11,200	5,860	6,940	11,500
3	23,200	31,800	8,370	33,900	50,200	30,600	19,100	175,000	12,800	5,570	6,010	11,200
4	23,100	28,900	16,300	29,700	50,700	30,400	17,900	155,000	13,400	5,610	5,400	12,200
5	21,400	24,500	21,200	20,200	55,400	30,100	18,300	145,000	13,600	5,510	5,500	11,500
6	21,100	23,500	22,000	19,000	72,200	23,100	17,900	93,700	12,400	5,260	5,620	11,000
7	20,600	23,800	23,700	15,400	81,000	19,400	17,700	67,100	12,300	5,250	5,730	11,400
8	20,000	23,600	27,500	10,600	81,800	17,100	15,300	58,500	12,500	5,020	5,850	10,200
9	19,400	22,000	51,300	9,920	77,800	12,300	9,160	55,400	12,600	4,760	5,530	9,610
10	19,800	17,700	66,100	9,120	75,600	12,000	8,060	55,600	12,600	5,020	5,190	8,770
11	20,100	15,000	61,300	9,000	72,900	10,900	7,050	54,100	11,800	4,810	5,150	7,690
12	19,500	14,400	50,400	8,980	71,100	8,850	6,680	52,700	12,700	5,350	5,340	5,790
13	18,500	13,100	48,100	e8,100	65,800	10,300	6,330	52,500	12,100	6,170	5,660	5,290
14	17,500	12,700	48,600	7,680	e66,000	9,640	6,310	52,000	11,100	7,300	5,500	5,120
15	21,700	13,000	48,200	7,260	e61,400	11,600	6,580	47,800	7,330	8,050	6,020	6,300
16	30,200	13,700	46,200	5,880	e57,300	13,700	5,450	47,200	6,110	7,420	5,860	7,480
17	36,800	12,400	43,000	12,900	53,600	14,900	5,560	46,700	5,670	7,160	6,650	7,210
18	33,000	10,200	44,300	26,700	50,700	15,000	5,550	48,000	5,380	6,530	22,700	7,390
19	30,700	8,520	40,800	31,200	47,100	15,300	5,290	47,700	5,700	6,490	76,400	7,380
20	27,100	7,730	41,000	29,400	42,700	14,700	5,640	46,200	5,420	6,740	68,900	7,890
21	29,100	7,900	47,100	33,000	42,700	12,900	5,020	38,300	5,460	8,090	25,700	7,490
22	25,100	8,340	50,200	50,600	38,800	13,200	4,980	30,200	5,680	9,580	14,000	6,260
23	23,700	8,090	46,500	57,900	37,100	14,100	5,050	27,700	5,450	10,000	12,600	5,110
24	22,000	8,220	43,900	e64,400	35,400	17,000	8,410	28,400	5,670	9,990	14,700	6,350
25	22,200	7,850	40,200	e66,500	36,000	21,700	19,400	31,500	5,480	9,340	14,100	6,330
26	22,200	7,880	e41,900	71,800	36,100	26,800	18,900	25,300	5,860	9,910	13,100	6,200
27	20,500	7,810	40,800	74,000	34,700	27,700	18,700	23,200	6,860	10,400	13,400	6,330
28	17,900	8,010	40,500	68,000	34,100	25,800	15,900	18,800	5,550	10,200	13,000	6,440
29	24,800	7,930	41,200	60,000	---	20,900	19,900	17,300	6,310	8,820	12,900	6,800
30	26,300	7,700	41,000	59,500	---	22,900	22,300	15,900	7,090	7,360	11,100	5,570
31	30,700	---	39,300	59,600	---	25,200	---	15,600	---	7,770	9,820	---
<b>Total</b>	731,700	461,580	1,196,220	1,029,640	1,530,200	588,190	371,820	1,735,200	267,620	222,020	422,330	237,900
<b>Mean</b>	23,600	15,390	38,590	33,210	54,650	18,970	12,390	55,970	8,921	7,162	13,620	7,930
<b>Max</b>	36,800	32,800	66,100	74,000	81,800	30,800	25,500	175,000	13,600	10,400	76,400	12,200
<b>Min</b>	17,500	7,700	7,430	5,880	34,100	8,850	4,980	15,600	5,380	4,760	5,150	5,110

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2010, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	10,800	12,620	22,700	28,940	33,170	33,720	30,860	25,600	16,290	12,210	12,940	10,740
<b>Max</b>	23,600	24,640	65,180	53,450	71,760	82,050	92,860	60,530	50,810	20,780	22,190	18,820
<b>(WY)</b>	(2010)	(2005)	(2005)	(2005)	(1994)	(1994)	(1994)	(2003)	(1997)	(2004)	(2003)	(1992)
<b>Min</b>	2,490	2,714	7,084	6,978	9,320	12,660	10,680	6,530	2,352	3,011	3,703	2,713
<b>(WY)</b>	(2008)	(2009)	(2000)	(2000)	(2007)	(2006)	(1995)	(2001)	(2007)	(2007)	(2008)	(2007)

034315005 CUMBERLAND RIVER AT WOODLAND STREET AT NASHVILLE, TN—Continued

SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		<sup>a</sup> Water Years 1992 - 2010	
<b>Annual total</b>	9,369,630		8,794,420			
<b>Annual mean</b>	25,670		24,090		20,820	
<b>Highest annual mean</b>					34,940	1994
<b>Lowest annual mean</b>					11,150	2000
<b>Highest daily mean</b>	95,500	May 11	175,000	May 3	175,000	May 3, 2010
<b>Lowest daily mean</b>	2,620	Jun 8	4,760	Jul 9	1,750	Apr 2, 2007
<b>Annual seven-day minimum</b>	2,960	Jun 2	5,070	Jul 6	2,080	Nov 6, 2007
<b>Maximum peak flow</b>			188,000	May 3	188,000	May 3, 2010
<b>Maximum peak stage</b>			52.55	May 3	52.55	May 3, 2010
<b>10 percent exceeds</b>	50,000		53,100		44,400	
<b>50 percent exceeds</b>	21,200		15,300		14,100	
<b>90 percent exceeds</b>	5,500		5,650		5,680	

<sup>a</sup> Period of daily discharge only.

