Water-Data Report 2013

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV

Upper Ohio-Little Kanawha Basin
Little Kanawha Subbasin

LOCATION.--Lat 39°03′32″, long 81°23′23″ referenced to North American Datum of 1927, Wirt County, WV, Hydrologic Unit 05030203, on left bank at end of Washington Street in Elizabeth, 1.0 mi upstream from Tucker Creek, 2.3 mi northeast of Palestine, 2.4 mi upstream from old lock 3, and at mile 28.4.

DRAINAGE AREA.--1,516 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1915 to September 1922 (annual maximum gage height), July to September 1939 (fragmentary), October 1939 to September 1975 (daily discharge and peaks, monthly discharge only, October 1939 to September 1941, published in WSP 1305), October 1975 to current year (daily discharge and annual maxima).

REVISED RECORDS.--WSP 953: 1940(M). WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 584.94 ft above NAVD 88 (585.51 ft above NGVD 29). Prior to Feb. 17, 1950, water-stage recorders or nonrecording gages at old locks 3 and 4 at various datums. Auxiliary water-stage recorder 3.0 mi upstream from base gage at old lock 4 at datum 595.51 ft above NAVD 88 (596.08 ft above NGVD 29).

REMARKS.--Records good except those for periods of estimated daily discharges, which are poor. Prior to 1968, flow partially regulated by old dams 3, 4, and 5 that leak at variable rates. Flow partially regulated since 1968 by five floodwater-detention reservoirs affecting 49.5 mi^2. Flow regulated since March 1979 by Burnsville Reservoir at mile 124.2. Unregulated statistics of monthly mean data and summary statistics for water years 1940-1967 are also published.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 17, 1939, reached a stage of 32.25 ft, from floodmarks at old lock 4 at datum 602.6 ft above COE 12; discharge, about 53,000 ft^3/s. Flood of 1897 reached a stage of about 24.4 ft, at old lock 4 at datum 602.6 ft above COE 12.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25,900 ft^3/s, Jan. 31, gage height, 26.75 ft; minimum discharge, 54 ft^3/s, Oct. 21, 22, 23, gage height, 13.75 ft.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 03155000, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/03155000.2013.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	289	e11,300	230	3,640	e20,100	3,150	1,940	572	321	1,330	1,070	841
2	232	9,550	233	3,030	e8,800	2,840	1,860	447	265	1,720	840	618
3	204	5,330	368	2,600	5,650	2,430	1,310	374	253	5,810	741	543
4	235	3,020	763	2,200	4,220	1,970	1,040	333	292	2,810	556	406
5	466	1,830	766	1,650	2,290	1,610	924	300	303	1,750	472	302
6	385	1,300	766	1,280	3,070	3,520	857	270	462	1,560	440	249
7	262	1,250	1,180	1,150	5,180	8,030	797	267	847	1,820	409	197
8	188	996	3,600	1,050	4,900	6,440	729	517	961	4,220	383	159
9	149	803	4,550	897	4,360	4,000	679	1,340	693	2,580	491	138
10	122	699	8,960	791	3,370	2,670	632	958	577	2,030	932	125
11	105	650	e13,100	789	2,520	2,100	595	1,550	1,100	e4,160	1,540	113
12	94	618	e10,200	1,120	2,100	1,950	571	4,910	1,300	e5,920	1,590	161
13	87	619	5,220	1,500	1,690	1,820	580	3,930	5,680	3,520	1,430	499
14	80	804	3,350	2,860	1,370	1,790	727	2,160	21,100	2,220	1,660	581
15	77	1,030	1,910	4,110	1,260	1,640	723	1,250	8,730	1,520	2,530	376
16	72	790	1,270	8,180	1,200	1,460	615	960	2,660	1,130	2,100	274
17	65	607	1,280	e17,100	1,180	1,520	639	841	1,470	892	1,410	220
18	64	568	2,820	e10,200	1,140	5,370	747	746	1,160	694	1,400	177
19	63	495	2,920	6,250	1,040	18,300	948	872	3,170	671	3,730	147
20	58	404	2,520	4,580	1,020	12,700	852	956	1,310	1,100	1,820	134
21	55	354	2,950	2,510	992	5,910	858	796	954	1,290	1,100	276
22	54	325	5,860	1,700	980	3,520	771	e644	703	1,250	624	2,430
23	58	283	3,680	1,220	926	2,270	657	2,210	519	1,680	744	1,990
24	73	247	2,660	987	884	1,760	642	4,350	405	2,010	1,150	1,210
25	96	237	2,840	705	828	4,780	692	2,410	332	1,660	1,100	797
26	86	228	5,160	738	791	9,850	681	1,390	284	1,520	784	514
27	77	226	10,500	800	2,230	7,950	627	897	261	1,220	570	364
28	76	226	10,100	897	3,730	5,770	561	690	1,640	1,120	418	264
29	149	227	5,650	3,270	---	3,870	484	570	2,580	2,260	648	206
30	2,860	230	6,100	6,750	---	2,640	502	466	1,620	2,120	1,350	173
31	e9,370	---	5,400	e17,800	---	2,010	---	386	---	1,320	1,060	---
Total	16,251	45,246	126,906	112,354	87,821	135,640	24,240	38,362	61,952	64,907	35,092	14,484
Mean	524	1,508	4,094	3,624	3,136	4,375	808	1,237	2,065	2,094	1,132	483
Max	9,370	11,300	13,100	17,800	20,100	18,300	1,940	4,910	21,100	5,920	3,730	2,430
Min	54	226	230	705	791	1,460	484	267	253	671	383	113

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1967, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	422	1,145	2,631	3,242	4,141	4,875	3,259	1,951	1,193	855	785	390
Max	3,010	4,401	6,366	7,468	8,437	10,940	7,233	7,573	4,820	5,069	3,756	2,401
(WY)	(1955)	(1963)	(1943)	(1952)	(1956)	(1963)	(1948)	(1967)	(1950)	(1958)	(1958)	(1950)
Min	6.14	2.41	84.8	552	499	1,428	677	323	50.5	14.7	9.85	14.4
(WY)	(1954)	(1954)	(1966)	(1967)	(1941)	(1966)	(1947)	(1962)	(1965)	(1966)	(1965)	(1953)

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SUMMARY STATISTICS

	Water Years 1940 - 1967	
Annual mean	2,065	
Highest annual mean	3,216	1950
Lowest annual mean	1,068	1966
Highest daily mean	48,600	Mar 8, 1967
Lowest daily mean	0.90	Jul 15, 1959
Annual seven-day minimum	1.3	Aug 30, 1965
Maximum peak flow	[a]50,700	Mar 7, 1967
Maximum peak stage	[b]39.14	Mar 7, 1967
Instantaneous low flow	[c]0.60	Jul 14, 1959
10 percent exceeds	5,440	
50 percent exceeds	694	
90 percent exceeds	56	

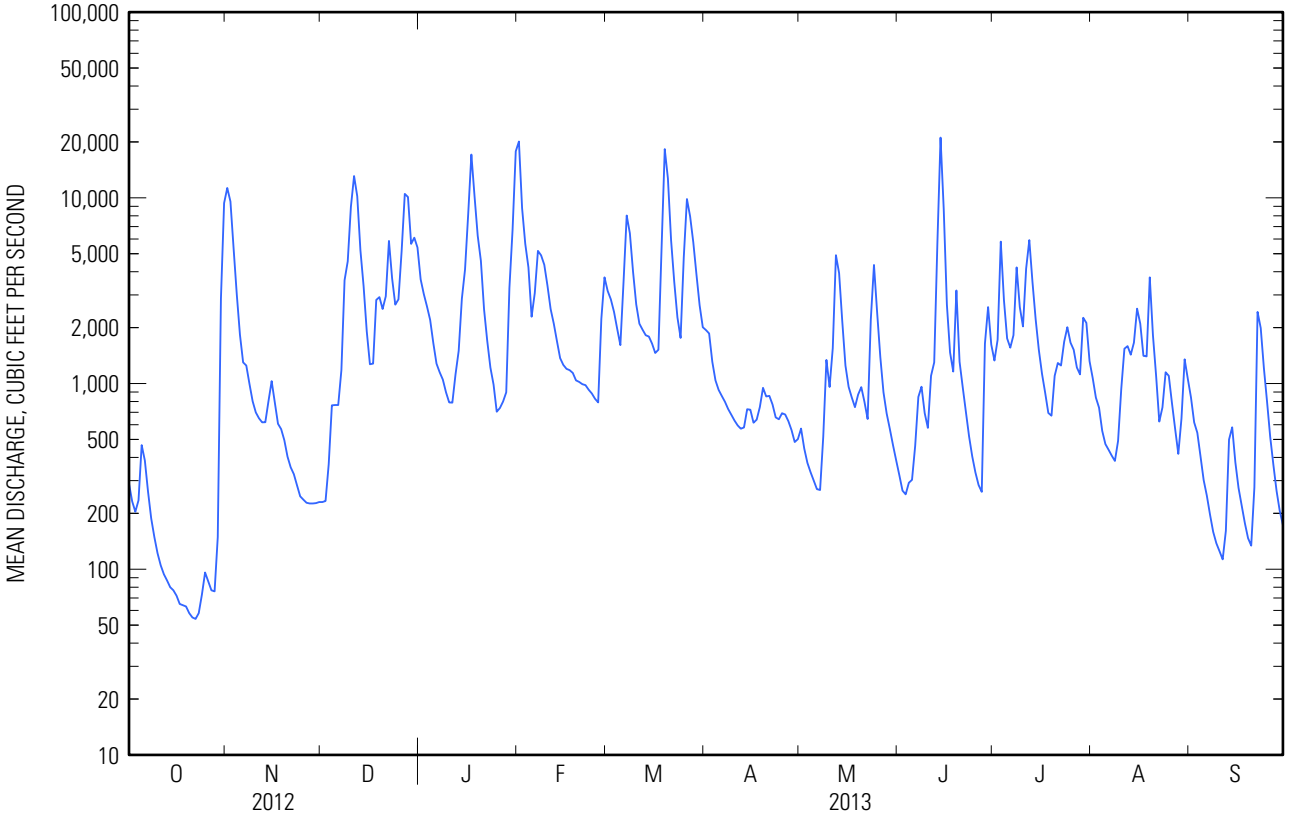
[a] From rating curve extended above 39,000 ft³/s.
[b] Backwater.
[c] Filling pool above old lock 3.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	741	1,903	2,967	3,417	3,971	4,219	3,138	2,695	1,317	823	723	568
Max	3,933	8,281	9,517	8,946	8,985	9,934	7,210	7,490	5,710	2,450	2,778	2,941
(WY)	(1977)	(1986)	(1979)	(1994)	(1994)	(1997)	(1972)	(1996)	(1981)	(1990)	(1996)	(1971)
Min	74.0	137	309	444	827	873	774	243	81.3	51.1	28.5	29.2
(WY)	(2009)	(1999)	(1999)	(2000)	(2002)	(1969)	(1999)	(1982)	(1991)	(1999)	(1988)	(1999)

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1968 - 2013	
Annual total	634,226		763,255			
Annual mean	1,733		2,091		2,199	
Highest annual mean					3,628	1994
Lowest annual mean					1,119	1969
Highest daily mean	20,200	May 6	21,100	Jun 14	[a]45,200	Mar 3, 1997
Lowest daily mean	24	Aug 31	54	Oct 22	15	Aug 21, 1987
Annual seven-day minimum	29	Aug 28	60	Oct 17	18	Jul 6, 1988
Maximum peak flow			[b]23,200	Jan 31	[a]48,100	Mar 2, 1997
Maximum peak stage			[c]26.75	Jan 31	[c]40.04	Mar 2, 1997
Instantaneous low flow			54	Oct 21[d]	14	Aug 21, 1987
10 percent exceeds	4,680		5,260		5,580	
50 percent exceeds	584		1,040		920	
90 percent exceeds	77		226		111	

[a] Adjusted for backwater.
[b] Estimated.
[c] Backwater.
[d] Also Oct. 22, 23.

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