Water-Data Report 2012

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, 41,700 ft^3/s (estimated), Nov. 23, gage height, 36.34 ft (backwater from Ohio River); minimum discharge, 23 ft^3/s, Aug. 31, Sept. 1, gage height, 13.55 ft.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 03155000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/03155000.2012.pdf

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	923	2,610	4,830	2,320	1,930	e15,700	1,890	1,370	242	37	575	26
2	912	1,760	2,990	1,660	1,710	e14,800	1,860	5,330	456	35	374	29
3	1,240	1,400	2,240	1,460	2,900	e9,700	1,770	11,200	566	34	250	31
4	1,300	1,100	1,720	1,820	3,010	e9,000	1,450	7,310	465	38	237	83
5	1,410	827	1,420	1,230	2,190	6,060	1,210	11,100	350	64	195	490
6	1,390	747	1,650	1,070	1,880	3,720	1,050	20,200	247	101	228	550
7	1,100	761	9,220	997	1,570	2,430	914	10,800	190	88	251	340
8	766	678	e22,000	919	1,340	1,910	791	5,020	161	80	411	221
9	554	568	e14,200	855	1,210	2,700	702	e9,100	145	67	418	166
10	445	544	6,750	892	1,140	3,760	636	7,320	131	55	337	126
11	380	575	4,550	767	1,330	3,000	581	4,550	119	48	281	122
12	381	585	2,520	1,080	1,150	2,340	527	2,610	119	43	211	127
13	905	535	2,090	3,640	976	2,530	479	1,670	121	51	157	120
14	6,280	480	1,550	3,590	926	3,520	439	1,390	128	78	149	103
15	6,830	719	1,270	2,560	1,000	2,990	432	2,280	116	257	137	86
16	3,130	3,000	1,240	1,870	1,170	2,610	421	2,670	105	298	123	72
17	1,860	10,400	1,180	2,720	1,680	2,260	401	1,880	97	403	115	62
18	1,170	8,520	1,080	e7,400	2,190	2,470	374	1,690	93	453	112	182
19	862	3,950	985	e7,300	2,140	9,430	348	1,160	93	348	106	396
20	1,880	2,700	947	4,500	1,750	16,600	328	852	93	1,120	103	480
21	1,610	6,330	909	3,020	1,430	7,620	324	687	92	1,180	97	564
22	1,390	18,800	885	2,520	1,250	4,220	323	548	93	975	93	380
23	1,170	e39,100	1,470	2,310	1,200	2,700	329	449	86	683	90	245
24	1,050	e34,100	1,790	2,400	1,170	2,130	379	395	82	428	78	171
25	820	e12,600	1,620	1,970	1,650	2,010	454	366	91	269	62	128
26	651	5,560	1,370	1,650	2,000	1,790	584	334	106	189	48	104
27	1,750	4,300	3,530	2,860	1,720	1,550	915	289	93	639	39	166
28	6,570	3,600	e14,300	e5,900	1,430	1,370	1,180	223	76	2,710	35	583
29	6,120	5,850	e10,000	e5,000	3,620	1,320	1,220	181	65	2,340	31	316
30	5,670	e8,300	5,220	3,470	---	1,680	1,690	173	44	1,260	28	354
31	4,480	---	3,680	2,390	---	1,520	---	160	---	819	24	---
Total	64,999	180,999	129,206	82,140	48,662	145,440	24,001	113,307	4,865	15,190	5,395	6,823
Mean	2,097	6,033	4,168	2,650	1,678	4,692	800	3,655	162	490	174	227
Max	6,830	39,100	22,000	7,400	3,620	16,600	1,890	20,200	566	2,710	575	583
Min	380	480	885	767	926	1,320	323	160	44	34	24	26

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)

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV—Continued

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	

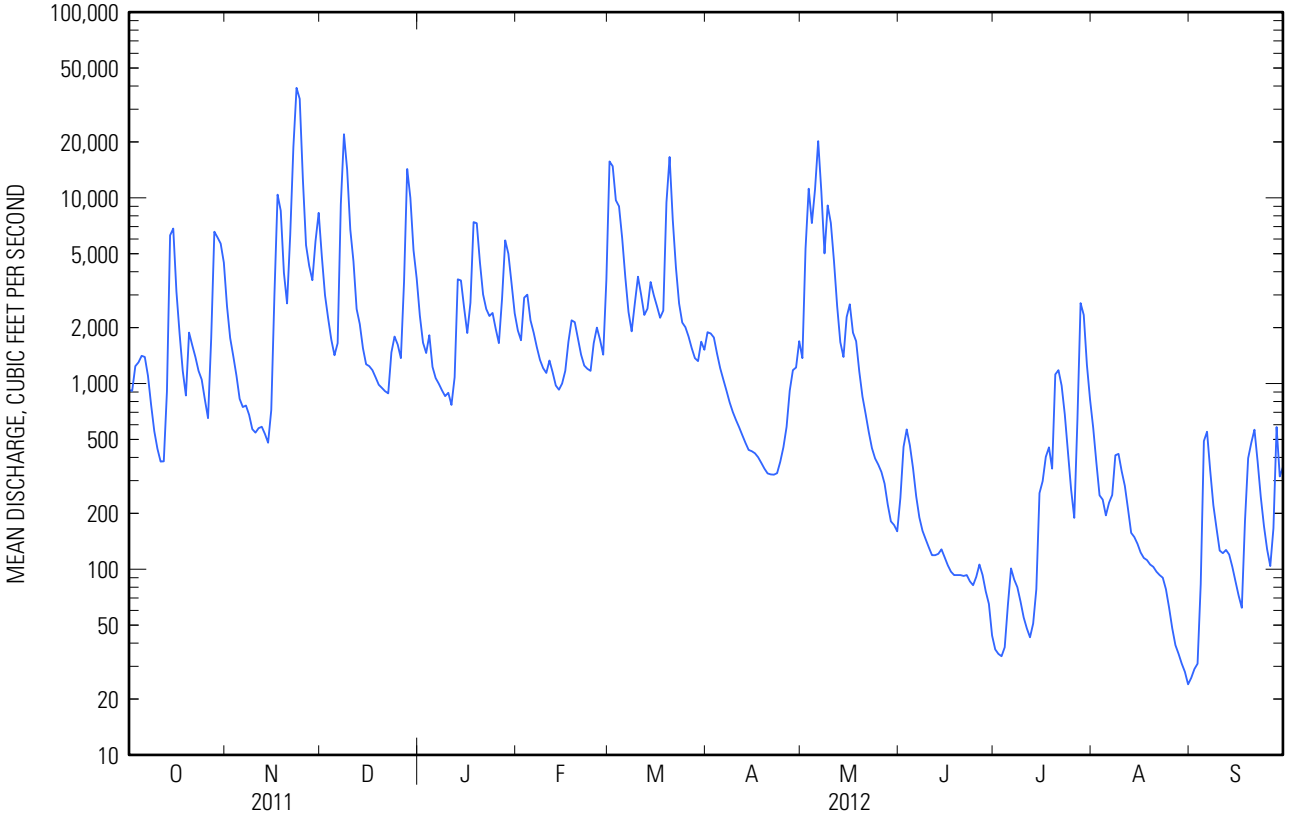
[a] From rating curve extended above 39,000 ft³/s.
[b] Backwater.
[c] Filling pool above old lock 3.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	746	1,912	2,942	3,412	3,989	4,216	3,189	2,727	1,301	795	714	570
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 2011		Water Year 2012		Water Years 1968 - 2012	
Annual total	1,083,477		821,027			
Annual mean	2,968		2,243		2,201	
Highest annual mean					3,628	1994
Lowest annual mean					1,119	1969
Highest daily mean	[a]39,100	Nov 23	[a]39,100	Nov 23	[b]45,200	Mar 3, 1997
Lowest daily mean	49	Sep 3	24	Aug 31	15	Aug 21, 1987
Annual seven-day minimum	60	Aug 29	29	Aug 28	18	Jul 6, 1988
Maximum peak flow			[a]41,700	Nov 23	[b]48,100	Mar 2, 1997
Maximum peak stage			[c]36.34	Nov 23	[c]40.04	Mar 2, 1997
Instantaneous low flow			23	Aug 31[d]	14	Aug 21, 1987
10 percent exceeds	7,570		5,860		5,600	
50 percent exceeds	1,200		998		917	
90 percent exceeds	133		93		110	

[a] Estimated.
[b] Adjusted for backwater.
[c] Backwater.
[d] Also Sept. 1.

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV—Continued