

03532000 POWELL RIVER NEAR ARTHUR, TN

LOCATION.--Lat 36°32'31", long 83°37'49", Claiborne County, Hydrologic Unit 06010206, on left bank, 500 ft upstream from bridge on U.S. Highway 25E, 2.3 mi east of Arthur, 2.4 mi downstream from Indian Creek, and at mile 65.4.

DRAINAGE AREA.--685 mi².

PERIOD OF RECORD.--October 1919 to February 1982, October 1996 to current year. Gage-height records collected at same site December 1892 to August 1893, September 1904 to March 1925 are in reports of U.S. Weather Bureau (published as "near Tazewell").

REVISED RECORDS.--WSP 1336: 1920, 1921(M), 1923.

GAGE.--Water-stage recorder. Datum of gage is 1,043.84 ft above NGVD of 1929, Tennessee River Survey datum. Prior to July 23, 1927, nonrecording gage, and July 23, 1927, to Sept. 30, 1970, water-stage recorder, at same site at datum 2.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Periodic observation of water temperature and specific conductance are published in this report as miscellaneous water-quality data.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1826 reached a stage of 29.5 ft present datum, discharge, 34,000 ft³/s, and flood of Jan. 29, 1918, reached a stage of 29.2 ft present datum, discharge, 33,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 2	1245	*10,300	*14.65				
						No other peak greater than base discharge.	

Minimum discharge, 100 ft³/s, Sept. 25.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	367	596	5,760	745	1,730	1,820	1,710	4,950	387	228	545	178
2	329	494	9,250	709	1,480	2,030	2,930	4,260	386	216	400	171
3	308	430	4,810	682	1,650	1,720	4,910	2,840	390	203	339	167
4	295	1,690	2,770	651	1,760	1,510	5,010	2,130	407	193	305	165
5	288	2,930	1,980	627	1,630	1,420	3,440	1,720	415	247	270	150
6	278	2,600	1,630	644	1,460	1,370	2,550	1,470	380	221	245	140
7	262	1,480	2,780	708	1,310	1,410	2,040	1,270	348	296	241	135
8	251	1,060	5,040	1,210	1,210	1,500	1,750	1,130	334	483	252	131
9	243	838	4,420	2,340	1,130	1,670	1,530	1,010	358	1,180	271	130
10	239	700	6,580	2,400	1,070	1,760	1,320	928	350	717	274	132
11	229	613	7,030	1,980	1,010	1,620	1,150	855	348	462	312	132
12	227	1,880	5,110	3,100	970	1,510	1,090	822	332	348	276	128
13	262	3,170	3,830	3,250	972	1,400	1,470	774	319	308	232	124
14	249	2,400	2,820	3,170	1,700	1,310	2,870	739	304	443	212	125
15	267	1,590	2,140	3,250	2,410	1,260	2,610	699	309	606	204	121
16	323	1,210	1,750	2,800	2,500	1,200	2,110	674	283	468	204	122
17	278	1,010	1,510	2,220	2,100	1,190	1,700	631	260	393	217	122
18	257	879	1,340	1,790	1,760	1,220	1,440	583	253	351	354	114
19	353	787	1,210	1,500	1,510	1,160	1,270	544	236	412	412	118
20	367	727	1,100	1,330	1,360	1,100	1,130	634	229	718	416	120
21	364	671	998	1,220	1,550	1,050	1,030	761	227	868	334	123
22	486	616	914	1,110	1,720	1,000	965	989	232	612	310	124
23	400	597	1,010	1,020	1,580	986	1,020	768	255	516	266	124
24	345	1,410	1,110	943	1,440	965	1,380	674	240	396	229	111
25	345	2,360	1,420	849	1,320	953	1,300	651	217	328	206	108
26	324	2,250	1,220	800	1,200	903	1,200	599	205	292	191	125
27	319	1,740	1,080	776	1,090	888	1,100	549	199	269	180	145
28	323	1,410	970	733	1,240	1,700	1,180	485	202	258	174	144
29	411	1,190	873	735	---	2,010	1,720	447	191	603	178	143
30	773	1,190	817	1,110	---	2,140	3,190	424	199	1,230	190	160
31	693	---	779	1,810	---	1,960	---	405	---	848	192	---
TOTAL	10,455	40,518	84,051	46,212	41,862	43,735	58,115	35,415	8,795	14,713	8,431	4,032
MEAN	337	1,351	2,711	1,491	1,495	1,411	1,937	1,142	293	475	272	134
MAX	773	3,170	9,250	3,250	2,500	2,140	5,010	4,950	415	1,230	545	178
MIN	227	430	779	627	970	888	965	405	191	193	174	108
CFSM	0.49	1.97	3.96	2.18	2.18	2.06	2.83	1.67	0.43	0.69	0.40	0.20
IN.	0.57	2.20	4.56	2.51	2.27	2.38	3.16	1.92	0.48	0.80	0.46	0.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2005, BY WATER YEAR (WY)

MEAN	313	677	1,337	1,955	2,191	2,347	1,736	1,122	696	553	445	253
MAX	1,648	3,045	5,557	5,812	5,309	6,596	5,224	4,220	2,495	1,917	2,030	1,081
(WY)	(1978)	(1974)	(1927)	(1937)	(2003)	(1963)	(1977)	(1929)	(1928)	(1941)	(1942)	(1928)
MIN	75.5	96.4	117	143	268	887	477	268	168	137	117	79.7
(WY)	(1955)	(1940)	(1966)	(1940)	(1941)	(1931)	(1942)	(1941)	(1936)	(1944)	(1925)	(1955)

03532000 POWELL RIVER NEAR ARTHUR, TN—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1920 - 2005	
ANNUAL TOTAL	468,061		396,334		1,128	
ANNUAL MEAN	1,279		1,086		1,858	
HIGHEST ANNUAL MEAN					486	
LOWEST ANNUAL MEAN					50,300	
HIGHEST DAILY MEAN	9,420	Mar 7	9,250	Dec 2	60	Apr 6, 1977
LOWEST DAILY MEAN	156	Sep 6	108	Sep 25	65	Sep 23, 1955
ANNUAL SEVEN-DAY MINIMUM	173	Sep 1	118	Sep 19	59,500	Sep 17, 1955
MAXIMUM PEAK FLOW			10,300	Dec 2	38.96	Apr 6, 1977
MAXIMUM PEAK STAGE			14.65	Dec 2	47	Jan 6, 1940
INSTANTANEOUS LOW FLOW			100	Sep 25	1.65	
ANNUAL RUNOFF (CFSM)	1.87		1.59		22.38	
ANNUAL RUNOFF (INCHES)	25.42		21.52		2,490	
10 PERCENT EXCEEDS	2,630		2,350		584	
50 PERCENT EXCEEDS	914		768		137	
90 PERCENT EXCEEDS	268		192			

