06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK

Upper Yellowstone Basin
Yellowstone Headwaters Subbasin

LOCATION.--Lat 44°55′40″, long 110°23′35″ referenced to North American Datum of 1927, Park County, WY, Hydrologic Unit 10070001, Yellowstone National Park, on left bank 0.5 mi north of the Cooke City highway, 1.6 mi northeast of Tower Falls Ranger Station, 2.7 mi downstream from Slough Creek, and at river mile 0.5.

DRAINAGE AREA.--660 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1922, April 1923 to September 1969, May 1985 to September 1986 (seasonal records only), October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,000 ft, referenced to the National Geodetic Vertical Datum of 1929. Prior to Sept. 16, 1925, nonrecording gage and Sept. 16, 1925 to July 29, 1927, water-stage recorder at same site at elevation 1.00 ft higher. July 29, 1927 to Sept. 30, 1969, water-stage recorder at same site and elevation. May 1985 to September 1986, nonrecording gage at same site and elevation.

REMARKS.--Records are good except those for estimated daily discharges, which are poor. No regulation or diversion occurs upstream from station. U.S. Geological Survey satellite telemeter is located at the station. Several unpublished observations of water temperature and specific conductance were made during the year.

06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	175	180	e140	e170	e120	e130	145	2,430	2,810	1,270	275	134
2	177	190	e130	e170	e100	e100	147	2,450	3,510	1,190	297	134
3	235	225	e120	e190	e95	e120	155	2,100	4,330	1,120	271	133
4	258	209	e120	e160	e110	e140	185	2,150	4,830	1,080	261	129
5	233	194	e120	e130	e120	e130	235	2,240	5,590	1,000	274	126
6	235	195	e90	e140	e110	e120	323	2,690	5,220	1,310	260	125
7	233	244	e70	e160	e90	e130	366	2,970	5,030	1,020	252	128
8	240	264	e70	e150	e90	e110	356	2,740	5,620	934	238	130
9	256	204	e90	e130	e80	e100	399	2,320	5,590	824	229	131
10	248	250	e110	e150	e70	e90	428	1,890	5,350	820	211	132
11	227	243	e130	e140	e60	e80	388	1,830	4,340	760	199	130
12	223	249	e130	e140	e70	e90	397	2,210	3,930	703	190	123
13	223	177	e170	e150	e80	e85	553	3,130	4,010	845	190	119
14	216	e150	e150	e150	e100	e110	725	4,180	3,920	691	186	117
15	217	e120	e130	e150	e90	e130	753	5,140	3,260	611	182	135
16	214	e170	e140	e130	e75	e120	839	5,950	2,720	556	194	172
17	205	e150	e120	e150	e60	e120	1,070	7,010	2,480	526	185	173
18	198	e130	e90	e130	e50	e130	789	7,960	2,350	495	174	156
19	195	e130	e130	e110	e55	e140	639	8,570	2,230	466	165	154
20	191	e130	e160	e130	e70	e130	621	8,020	2,100	438	160	152
21	190	e130	e180	e130	e90	e120	751	8,330	1,950	418	155	197
22	184	e130	e200	e120	e120	e140	1,070	7,530	1,790	394	152	263
23	177	e130	e170	e110	e140	e130	1,520	7,010	1,700	374	147	213
24	174	e120	e170	e90	e150	e130	1,170	6,060	1,640	389	143	192
25	171	e140	e170	e95	e130	e140	1,020	6,450	1,570	391	143	193
26	170	e130	e170	e100	e110	e160	967	6,650	1,510	369	146	183
27	170	e140	e180	e110	e140	e150	1,270	5,960	1,440	346	175	171
28	196	e140	e190	e100	e160	e140	1,210	5,140	1,380	318	163	163
29	219	e140	e160	e110	---	e150	1,670	3,780	1,310	298	148	156
30	204	e140	e170	e110	---	151	2,310	3,060	1,270	283	139	150
31	182	---	e180	e110	---	137	---	2,670	---	274	132	---
Total	6,436	5,144	4,350	4,115	2,735	3,853	22,471	140,620	94,780	20,513	6,036	4,614
Mean	208	171	140	133	97.7	124	749	4,536	3,159	662	195	154
Max	258	264	200	190	160	160	2,310	8,570	5,620	1,310	297	263
Min	170	120	70	90	50	80	145	1,830	1,270	274	132	117
Ac-ft	12,770	10,200	8,630	8,160	5,420	7,640	44,570	278,900	188,000	40,690	11,970	9,150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2006, BY WATER YEAR (WY)*

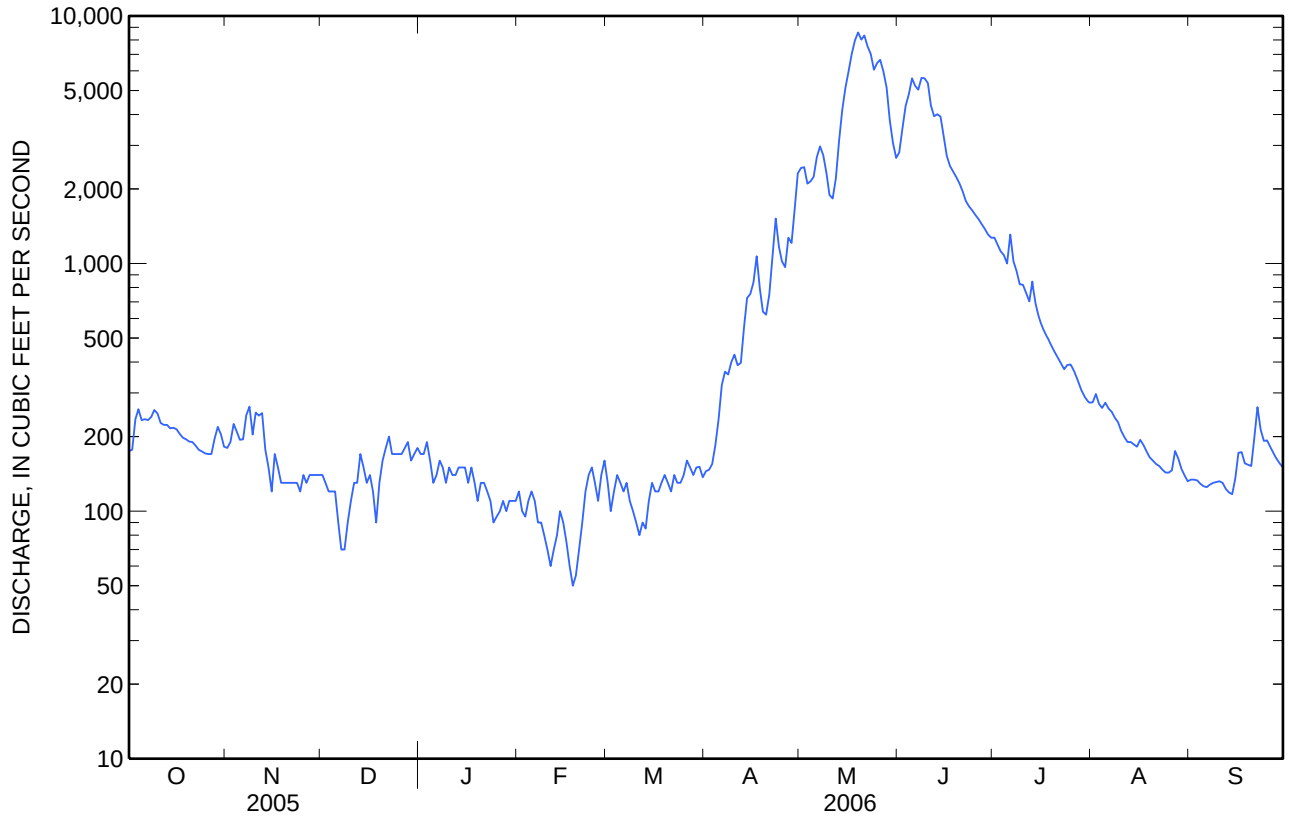
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	213	157	120	107	102	114	482	2,893	4,197	1,325	348	229
Max	485	330	202	200	171	204	1,684	6,885	9,044	3,256	886	518
(WY)	(1942)	(1928)	(1951)	(1969)	(1969)	(1999)	(1990)	(1928)	(1996)	(1943)	(1968)	(1968)
Min	109	88.1	75.5	71.8	70.0	67.9	106	969	1,408	344	173	115
(WY)	(1989)	(1937)	(1953)	(1989)	(1942)	(1964)	(1945)	(1933)	(1934)	(1931)	(1940)	(1988)

* During periods of record [September 1922, April 1923 to September 1969, May 1985 to September 1986 (seasonal records only), October 1988 to current year].

06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS

	Calendar Year 2005		Water Year 2006		Water Years 1923 – 2006*	
Annual total	286,582		315,667			
Annual mean	785		865		863	
Highest annual mean					1,531	1997
Lowest annual mean					525	1934
Highest daily mean	8,580	May 21	8,570	May 19	15,600	Jun 10, 1996
Lowest daily mean	70	Feb 16	50	Feb 18	45	Mar 23, 1964
Annual seven-day minimum	91	Feb 5	70	Feb 15	57	Mar 5, 1964
Maximum peak flow			10,400	May 19	19,500	Jun 10, 1996
Maximum peak stage			8.91	May 19	12.15	Jun 10, 1996
Instantaneous low flow					[a]40	Mar 16, 1945
Annual runoff (ac-ft)	568,400		626,100		625,300	
10 percent exceeds	2,790		2,700		2,900	
50 percent exceeds	195		180		183	
90 percent exceeds	100		110		90	

* During periods of record [September 1922, April 1923 to September 1969, May 1985 to September 1986 (seasonal records only), October 1988 to current year].

[a] Observed, but may have been lower during periods of no gage-height record in the winter.