

SOUTH-CENTRAL ALASKA

15284000 MATANUSKA RIVER AT PALMER

LOCATION.--Lat 61°36'33", long 149°04'15", in SE¹/₄ NW¹/₄ sec. 34, T. 18 N., R. 2 E. (Anchorage C-6 quad), Matanuska-Susitna Borough, Hydrologic Unit 19020402, on downstream left bank of Old Glenn Highway bike path bridge, and 1 mi east of Palmer.

DRAINAGE AREA.--2,070 mi², approximately.

PERIOD OF RECORD.--April 1949 to September 1973, May 1985 to September 1986, October 1991 to September 1992, and May 2000 to current year. Annual maximum, water year 1974 and 1995.

GAGE.--Water-stage recorder. Datum of gage is 170.92 ft above National Geodetic Vertical Datum of 1929 (Alaska Railroad Commission benchmark, prior to Mar. 27, 1964 earthquake). Prior to Nov. 2, 1950, non-recording gage at bridge 20 ft upstream at same datum. Nov. 2, 1950 to Apr. 30, 1952, non-recording gage at current site and same datum. May 1, 1952 to Sep. 30, 1973, July 19 to Oct. 20, 1987, and Oct. 1, 1991 to Sep. 30, 1992, water-stage recorder at site 100 ft downstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Precipitation gage at station. GOES satellite telemetry at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 21,000 ft³/s and maximums (*).

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
June 8	0530	a26,000	12.21	June 21	0800	*a45,000	13.34

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3170	1170	e1000	e750	e600	467	e445	1120	4210	18900	10500	5700
2	3610	1340	e950	e700	e600	472	445	1500	4150	18300	9900	5530
3	10100	1380	e950	e700	e600	469	436	1780	3380	18600	9950	6380
4	15100	1270	e950	e700	e600	472	468	2210	3120	17900	10300	5940
5	11000	1240	e950	e700	e600	458	467	2490	4250	17500	10400	4310
6	8120	1220	e900	e700	e600	e460	481	3090	5940	16800	10400	3550
7	6140	1200	e900	e700	e600	e460	525	5120	11400	15700	11200	3260
8	5060	1240	e900	e700	e600	e460	526	10300	16600	15600	11100	2940
9	4560	1270	e900	e700	e600	e460	549	8710	10700	14700	10800	2730
10	3900	1160	e850	e700	e600	e460	552	3200	9450	12400	11100	2600
11	3200	1170	e850	e700	e580	e460	545	2220	8300	11500	11600	2470
12	2820	e1100	e850	e700	e560	458	577	2200	6900	12300	11600	2350
13	2520	e1100	e850	e650	562	463	587	2400	7430	13500	11200	2270
14	2370	e1000	e850	e650	539	458	600	2620	9280	14300	10500	2210
15	2310	e900	e850	e650	e540	453	647	2930	11700	13600	10100	2180
16	2130	e800	e850	e650	e540	464	675	2700	8160	13200	10100	2180
17	1970	e750	e850	e650	e540	469	680	2350	8950	13300	10300	2170
18	1820	e700	e800	e650	e540	e465	739	2350	13100	12300	11500	2160
19	1850	e700	e800	e650	e540	465	705	2500	19300	12100	12000	2160
20	1810	e750	e800	e650	545	e470	706	2790	29900	13500	12000	2160
21	1690	e800	e800	e650	538	e475	751	3020	31300	13600	10300	2170
22	1670	e850	e800	e650	543	484	783	3570	28600	12900	9800	2170
23	1620	e850	e800	e650	505	496	797	4710	26200	11400	9810	2170
24	1620	e900	e800	e650	496	487	800	5920	24400	11500	9090	2150
25	1590	e900	e750	e600	494	469	827	4290	23900	12000	8380	2160
26	1580	e950	e750	e600	482	488	836	4590	23900	11800	8560	2190
27	1480	e950	e750	e600	471	444	929	5260	24500	10400	9390	2180
28	1350	e1000	e750	e600	482	e440	791	5630	22900	10100	8540	2170
29	1230	e1000	e750	e600	475	433	797	3870	21500	9580	7270	2180
30	1210	e1000	e750	e600	---	452	951	3170	21500	9950	6720	2360
31	1150	---	e750	e600	---	e450	---	4110	---	10400	6120	---
TOTAL	109750	30660	26050	20450	15972	14381	19617	112720	444920	419630	310530	87150
MEAN	3540	1022	840	660	551	464	654	3636	14830	13540	10020	2905
MAX	15100	1380	1000	750	600	496	951	10300	31300	18900	12000	6380
MIN	1150	700	750	600	471	433	436	1120	3120	9580	6120	2150
AC-FT	217700	60810	51670	40560	31680	28520	38910	223600	882500	832300	615900	172900
CFSM	1.71	0.49	0.41	0.32	0.27	0.22	0.32	1.76	7.16	6.54	4.84	1.40
IN.	1.97	0.55	0.47	0.37	0.29	0.26	0.35	2.03	8.00	7.54	5.58	1.57

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2004, BY WATER YEAR (WY)#

	2005	1005	738	623	527	476	648	2750	10240	13130	9843	4796
MEAN												
MAX	3540	1793	1024	821	708	583	985	6019	17250	18750	15730	8966
(WY)	2004	1972	1972	1961	2003	2001	1964	1960	1964	2000	1971	1951
MIN	1166	568	440	349	381	360	465	1007	5415	9206	4992	2123
(WY)	1992	1959	1969	1959	1971	1971	1972	1966	1965	1973	1969	1969

See Period of Record; partial years used in monthly statistics
a Peak discharge adjusted to exclude surge; peak gage-height not adjusted to exclude surge
e Estimated

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15284000 MATANUSKA RIVER AT PALMER—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1949 - 2004#	
ANNUAL TOTAL	1381553		1611830			
ANNUAL MEAN	3785		4404			
HIGHEST ANNUAL MEAN					3842	
LOWEST ANNUAL MEAN					4815	1957
HIGHEST DAILY MEAN					2562	1969
LOWEST DAILY MEAN	20900	Jul 21	31300	Jun 21	40700	Aug 10 1971
ANNUAL SEVEN-DAY MINIMUM	440	Mar 13	433	Mar 29	234	Apr 25 1956
MAXIMUM PEAK FLOW	457	Mar 9	443	Mar 28	304	Apr 20 1956
MAXIMUM PEAK STAGE			a45000	Jun 21	b82100	Aug 10 1971
ANNUAL RUNOFF (AC-FT)	2740000		a13.56		Jun 20	c13.60
ANNUAL RUNOFF (CFSM)			3197000		2783000	
ANNUAL RUNOFF (INCHES)	1.83		2.13		1.86	
10 PERCENT EXCEEDS	24.83		28.97		25.21	
50 PERCENT EXCEEDS	11500		12000		11700	
90 PERCENT EXCEEDS	1380		1270		1200	
	591		482		480	

- # See Period of Record; partial years used in monthly statistics
a Peak discharge adjusted to exclude surge; peak stage not adjusted to exclude surge
b From rating curve extended above 34,000 ft³/s on basis of velocity-area study, from break-out of natural reservoir on Granite Creek tributary
c Site then in use