

# SOUTH-CENTRAL ALASKA

## 15284000 MATANUSKA RIVER AT PALMER

LOCATION.--Lat 61°36'33", long 149°04'15", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, 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 March 27, 1964 earthquake). Prior to November 2, 1950, non-recording gage at bridge 20 ft upstream at same datum. November 2, 1950 to April 30, 1952, non-recording gage at current site and same datum. May 1, 1952 to September 30, 1973, July 19 to October 20, 1987, and October 1, 1991 to September 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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
June 17	1815	*a27,000	*10.54	Aug. 14	0600	24,000	10.14

### 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	3640	e1000	e850	e700	e500	e600	624	5510	11600	17900	9820	9050
2	2510	e1000	e850	e700	e500	e600	628	e4850	9940	17700	8580	8800
3	e2200	e1000	e800	e700	e500	e620	592	e4470	8240	17600	8980	7270
4	e2000	e1000	e750	e750	e500	e620	603	e4300	7290	17600	9960	6310
5	e1900	e950	e750	e800	e500	e620	597	e3960	8400	17400	11600	5930
6	e1900	e900	e750	e850	e500	e620	634	3900	10500	17200	13400	6070
7	e1900	e900	e750	e800	e500	e620	633	4170	10900	16300	13500	7980
8	e1800	e900	e800	e700	e500	e620	632	e5180	11600	15700	13600	7600
9	e1800	e1000	e800	e600	e550	657	653	e6290	11200	15800	13800	7520
10	e1800	e1000	e800	e550	e550	e650	669	e7220	11900	16100	15500	17800
11	e1800	e1000	e800	e500	e500	e650	693	e7840	15800	15300	17000	15900
12	e1800	e1000	e800	e500	e500	664	708	8400	17700	15100	18200	14800
13	e1800	e1000	e800	e500	e500	740	728	8440	19200	13400	18200	13900
14	e1800	e900	e800	e500	e500	743	736	8990	20800	12200	18900	11400
15	e1700	e900	e800	e500	e550	672	757	9690	21600	11200	18900	9810
16	e1700	e900	e800	e500	e550	638	761	e8810	21800	13200	16500	8600
17	e1700	e900	e850	e500	e550	641	765	e7870	24900	11600	14000	7670
18	e1600	e900	e850	e500	e550	618	758	e7470	22400	12700	14000	7210
19	e1600	e900	e850	e500	e550	639	751	7760	19700	15500	14100	6700
20	e1600	e900	e800	e500	e550	629	790	8560	18500	17100	12600	6380
21	e1600	e900	e800	e500	e550	560	847	10300	15800	15200	11400	6020
22	e1500	e900	e850	e550	e580	564	940	12000	16500	12800	9740	5770
23	e1500	e900	e850	e550	e580	647	1050	12000	17100	12300	9980	6430
24	e1500	e900	e800	e550	e580	660	1320	12200	17400	13000	11600	9140
25	e1400	e850	e700	e550	e600	656	e1690	14700	18000	12600	10700	9010
26	e1400	e850	e700	e500	e600	652	1940	14700	17900	11800	10100	7450
27	e1400	e850	e700	e500	e600	658	2280	15200	17700	12900	9610	6300
28	e1300	e850	e700	e500	e600	631	3110	16000	17100	14300	8290	5630
29	e1300	e850	e700	e500	---	617	4530	16600	17600	14700	7810	5010
30	e1200	e850	e700	e500	---	e625	e5200	14800	18100	12600	7880	4960
31	e1100	---	e700	e500	---	597	---	13000	---	11300	8100	---
TOTAL	53750	27650	24250	17850	15090	19728	36619	285180	477170	450100	386350	252420
MEAN	1734	922	782	576	539	636	1221	9199	15910	14520	12460	8414
MAX	3640	1000	850	850	600	743	5200	16600	24900	17900	18900	17800
MIN	1100	850	700	500	500	560	592	3900	7290	11200	7810	4960
AC-FT	106600	54840	48100	35410	29930	39130	72630	565700	946500	892800	766300	500700
CFSM	0.84	0.45	0.38	0.28	0.26	0.31	0.59	4.44	7.68	7.01	6.02	4.06
IN.	0.97	0.50	0.44	0.32	0.27	0.35	0.66	5.12	8.58	8.09	6.94	4.54

#### STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2005, BY WATER YEAR (WY)#

MEAN	1996	1002	739	621	528	481	667	2946	10410	13180	9920	4899
MAX	3540	1793	1024	821	708	636	1221	9199	17250	18750	15730	8966
(WY)	2004	1972	1972	1961	2003	2005	2005	2005	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 were used in monthly statistics.

a Peak discharge adjusted to exclude surge; peak stage not adjusted to exclude surge.

e Estimated

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## 15284000 MATANUSKA RIVER AT PALMER—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1949 - 2005#	
ANNUAL TOTAL	1551020		2046157			
ANNUAL MEAN	4238		5606		3898	
HIGHEST ANNUAL MEAN					5606 2005	
LOWEST ANNUAL MEAN					2562 1969	
HIGHEST DAILY MEAN	31300	Jun 21	24900	Jun 17	40700	Aug 10 1971
LOWEST DAILY MEAN	433	Mar 29	b500	Jan 11	234	Apr 25 1956
ANNUAL SEVEN-DAY MINIMUM	443	Mar 28	500	Jan 11	304	Apr 20 1956
MAXIMUM PEAK FLOW	a45000	Jun 21	a27000	Jun 17	c82100	Aug 10 1971
MAXIMUM PEAK STAGE	a13.56	Jun 20	a10.54	Jun 17	d13.60	Aug 10 1971
ANNUAL RUNOFF (AC-FT)	3076000		4059000		2824000	
ANNUAL RUNOFF (CFSM)	2.05		2.71		1.88	
ANNUAL RUNOFF (INCHES)	27.87		36.77		25.59	
10 PERCENT EXCEEDS	12000		15900		11800	
50 PERCENT EXCEEDS	1110		1500		1200	
90 PERCENT EXCEEDS	482		550		480	

- # See Period of Record; partial years were used in monthly statistics.  
a Peak discharge adjusted to exclude surge; peak stage not adjusted to exclude surge.  
b Jan. 11-21, Jan. 26 - Feb. 8, and Feb. 11-14  
c From rating curve extended above 34,000 ft<sup>3</sup>/s on basis of velocity-area study, from break-out of natural reservoir on Granite Creek tributary.  
d Site then in use