

SOUTH-CENTRAL ALASKA

15281000 KNIK RIVER NEAR PALMER

LOCATION.--Lat 61°30'18", long 149°01'50", in NE¹/₄ SE¹/₄ sec. 2, T.16 N., R.2 E. (Anchorage C-6 quad), Matanuska-Susitna Borough, Hydrologic Unit 19020402, near the right bank on downstream side of bridge on Old Glenn Highway, 7 mi south of Palmer, 7 mi upstream from Alaska Railroad bridge, 9 mi downstream from Friday Creek, and about 17 mi downstream from Knik Glacier.

DRAINAGE AREA.--1,180 mi², approximately.

PERIOD OF RECORD.--October 1959 to January 1988, annual maximum, water year 1989, October 1991 to September 1992, April 2001 to September 2003, and current year (no winter record).

REVISED RECORDS.--WRD-AK-77-1: 1974-75 (M).

GAGE.--Water-stage recorder. Datum of gage is 33.68 ft above North American Vertical Datum of 1988. Prior to June 27, 1960, nonrecording gage, and June 27, 1960 to Apr. 25, 1974, water-stage recorder at old bridge 100 ft upstream at original 1929 datum. Apr. 26, 1974 to Apr. 18, 1976, recording gage at site 0.4 mi upstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flood peaks due to outbreak of glacier-dammed Lake George, 1948-62, 1964, 1965, published in WSP 1936. Streamflow augmented by glaciers, which cover 54 percent of the basin.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1948, 359,000 ft³/s, July 18, 1958, gage height, 25.30 ft, at site in use beginning 1959, from outbreak of glacier-dammed Lake George.

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	23300	---	---	---	---	---	e1100	3240	11500	27400	25700	e20000
2	40500	---	---	---	---	---	e1100	4070	e12000	26600	e24000	e20000
3	50900	---	---	---	---	---	e1100	4400	e11000	26200	24600	e22000
4	52600	---	---	---	---	---	e1100	4470	11700	e26000	25100	e20000
5	37100	---	---	---	---	---	e1200	4770	12300	e26000	24700	e16000
6	32600	---	---	---	---	---	e1200	5120	e13000	e24000	23700	e12000
7	29900	---	---	---	---	---	e1200	5660	e14000	26500	e24000	e11000
8	25100	---	---	---	---	---	e1300	6300	e16000	28700	e24000	e11000
9	20100	---	---	---	---	---	e1300	6780	e15000	29400	e26000	e10000
10	17100	---	---	---	---	---	e1300	6890	e15000	27800	25200	9770
11	14400	---	---	---	---	---	e1400	6560	e15000	27900	25900	9470
12	e12000	---	---	---	---	---	e1400	6600	e16000	29700	27400	8940
13	e11000	---	---	---	---	---	e1500	6780	e15000	30800	26100	8530
14	9660	---	---	---	---	---	e1500	7090	e16000	29700	24700	7910
15	9310	---	---	---	---	---	e1600	7320	17300	28500	24000	6920
16	e9200	---	---	---	---	---	e1600	7640	17100	27800	24200	6060
17	e8600	---	---	---	---	---	e1700	7920	19500	28300	25800	5370
18	e8200	---	---	---	---	---	e1700	7970	24200	27600	28000	4810
19	7900	---	---	---	---	---	e1750	8080	28500	28000	27800	4310
20	e7400	---	---	---	---	---	e1800	8170	30700	28800	e28000	4230
21	e6600	---	---	---	---	---	e1900	8910	31400	28000	e28000	4790
22	e5700	---	---	---	---	---	2160	10000	30500	28100	e28000	5000
23	5020	---	---	---	---	---	2250	e11000	30800	29300	e28000	5250
24	5460	---	---	---	---	---	2310	e12000	33100	e30000	26200	5160
25	5890	---	---	---	---	---	2360	11300	e33000	e30000	e24000	4850
26	6120	---	---	---	---	---	2460	11000	32500	e28000	e26000	6060
27	6090	---	---	---	---	---	2570	10700	32900	30900	e26000	7860
28	5530	---	---	---	---	---	2800	11500	e32000	33800	e24000	7140
29	e4800	---	---	---	---	---	2910	11200	e30000	31800	e22000	6760
30	4820	---	---	---	---	---	3120	11000	e28000	29000	e20000	7100
31	4710	---	---	---	---	---	---	11300	---	27100	e20000	---
TOTAL	487610	---	---	---	---	---	52690	245740	645000	881700	781100	278290
MEAN	15730	---	---	---	---	---	1756	7927	21500	28440	25200	9276
MAX	52600	---	---	---	---	---	3120	12000	33100	33800	28000	22000
MIN	4710	---	---	---	---	---	1100	3240	11000	24000	20000	4230
AC-FT	967200	---	---	---	---	---	104500	487400	1279000	1749000	1549000	552000
CFSM	13.3	---	---	---	---	---	1.49	6.72	18.2	24.1	21.4	7.86
IN.	15.37	---	---	---	---	---	1.66	7.75	20.33	27.80	24.62	8.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY)#

MEAN	4834	1906	1022	909	790	658	947	3932	13160	23850	21580	11120
MAX	15730	5950	2677	3781	2566	1314	1756	7927	21500	37450	28300	16960
(WY)	2004	2003	2003	1981	2003	1977	2004	2004	2004	1960	1979	1974
MIN	1782	637	500	460	338	260	348	1039	2598	17440	15260	6594
(WY)	1982	1969	1974	1976	1962	1962	1972	1965	1965	1970	1969	1992

See Period of Record; partial years used in monthly statistics
e Estimated

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SUMMARY STATISTICS	FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004#	
ANNUAL MEAN			7004	
HIGHEST ANNUAL MEAN			8889	2003
LOWEST ANNUAL MEAN			5590	1973
HIGHEST DAILY MEAN	52600	Oct 4	341000	Jul 26 1961
LOWEST DAILY MEAN			a260	Mar 1 1962
ANNUAL SEVEN-DAY MINIMUM			260	Mar 1 1962
MAXIMUM PEAK FLOW	60400	Oct 3	bc355000	Jul 26 1961
MAXIMUM PEAK STAGE	14.70	Oct 3	b24.35	Jul 17 1960
ANNUAL RUNOFF (AC-FT)			5074000	
ANNUAL RUNOFF (CFSM)			5.94	
ANNUAL RUNOFF (INCHES)			80.65	
10 PERCENT EXCEEDS			21100	
50 PERCENT EXCEEDS			2100	
90 PERCENT EXCEEDS			500	

- # See Period of Record; partial years used in monthly statistics
a Mar. 1-31, 1962
b Site then in use, caused by release of stored water (Lake George) behind Knik Glacier
c Gage height, 24.3 ft