Water-Data Report 2013

15284000 MATANUSKA RIVER AT PALMER, AK

Knik Arm Basin
Matanuska Subbasin

LOCATION.--Lat 61°36′33″, long 149°04′15″ referenced to North American Datum of 1927, in SE ¼ NW ¼ sec.34, T.18 N., R.2 E., Matanuska-Susitna Borough, AK, Hydrologic Unit 19020402, (Anchorage C-6 quad), on downstream left bank of Old Glenn Highway old highway(bike path) bridge, and 1 mile east of Palmer.

DRAINAGE AREA.--2,070 mi^2, approximately.

SURFACE-WATER RECORDS

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^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 31	0645	23,100	9.18
Jun 18	0500	*27,400	*9.83
Jun 27	0545	21,500	8.92

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 15284000, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/15284000.2013.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	8,200	e3,400	e1,700	e1,100	e750	e600	e550	e610	18,100	15,900	16,100	9,970
2	7,520	e3,300	e1,650	e1,050	e750	e600	e550	e620	16,800	11,900	15,500	12,000
3	7,070	e3,200	e1,650	e1,050	e700	e600	e500	e650	11,500	9,470	13,900	14,700
4	6,900	e3,100	e1,600	e1,000	e700	e600	e500	694	10,100	8,460	12,600	13,400
5	7,080	e3,000	e1,600	e1,000	e700	e600	e500	742	8,470	7,730	11,800	12,400
6	12,200	e2,950	e1,600	e1,000	e700	e600	e500	759	7,010	7,850	11,900	10,300
7	11,100	e2,900	e1,550	e950	e700	e600	e500	786	8,050	7,990	12,000	10,200
8	13,700	e2,850	e1,550	e950	e700	e600	e500	848	11,900	8,950	11,000	10,500
9	13,700	e2,800	e1,500	e950	e700	e600	e500	939	15,900	7,870	11,300	9,410
10	12,100	e2,750	e1,500	e900	e700	e600	e500	1,010	16,500	7,600	11,800	8,460
11	10,400	e2,680	e1,500	e900	e650	e550	e500	1,180	17,100	7,630	12,400	8,830
12	8,780	e2,600	e1,450	e900	e650	e550	e500	1,400	16,500	8,660	11,900	8,520
13	7,590	e2,520	e1,450	e900	e650	e550	e500	1,510	15,300	10,100	12,200	6,910
14	7,140	e2,400	e1,400	e900	e650	e550	e500	1,340	15,000	10,900	13,000	6,520
15	6,930	e2,350	e1,400	e900	e650	e550	e500	1,090	17,000	11,800	12,400	6,160
16	6,530	e2,350	e1,400	e900	e650	e550	e500	1,030	19,900	12,300	10,100	5,840
17	6,000	e2,300	e1,350	e900	e650	e550	e500	1,010	21,500	12,600	9,460	5,390
18	5,460	e2,250	e1,350	e900	e650	e550	e500	1,040	22,700	11,900	11,500	5,050
19	5,110	e2,200	e1,300	e850	e650	e550	e500	968	18,700	14,800	12,600	5,020
20	4,760	e2,150	e1,300	e850	e650	e550	e500	979	16,400	15,900	11,700	4,650
21	4,430	e2,100	e1,300	e850	e600	e550	e520	1,070	16,300	15,400	11,900	4,160
22	4,250	e2,050	e1,250	e850	e600	e550	e550	1,260	15,000	13,800	10,700	3,860
23	4,150	e2,000	e1,250	e850	e600	e550	e570	1,540	13,400	13,700	11,800	3,580
24	4,100	e1,950	e1,250	e800	e600	e550	e600	1,710	13,000	14,200	14,200	3,290
25	3,960	e1,900	e1,200	e800	e600	e550	e620	2,970	13,900	14,900	11,400	3,190
26	3,880	e1,850	e1,200	e800	e600	e550	e620	4,210	16,000	15,300	9,060	3,250
27	3,870	e1,850	e1,200	e800	e600	e550	e620	6,560	19,100	15,000	8,850	3,150
28	e3,800	e1,800	e1,150	e750	e600	e550	e640	11,800	18,800	15,300	10,500	3,030
29	e3,700	e1,750	e1,150	e750	---	e550	e610	15,100	16,300	16,700	10,600	2,940
30	e3,600	e1,700	e1,100	e750	---	e550	e600	16,300	17,300	15,900	9,360	2,810
31	e3,500	---	e1,100	e750	---	e550	---	18,400	---	16,300	9,640	---
Total	211,510	73,000	42,950	27,600	18,400	17,550	16,050	100,125	463,530	376,810	363,170	207,490
Mean	6,823	2,433	1,385	890	657	566	535	3,230	15,450	12,160	11,720	6,916
Max	13,700	3,400	1,700	1,100	750	600	640	18,400	22,700	16,700	16,100	14,700
Min	3,500	1,700	1,100	750	600	550	500	610	7,010	7,600	8,850	2,810
Ac-ft	419,500	144,800	85,190	54,740	36,500	34,810	31,840	198,600	919,400	747,400	720,300	411,600
Cfsm	3.30	1.18	0.67	0.43	0.32	0.27	0.26	1.56	7.46	5.87	5.66	3.34
In.	3.80	1.31	0.77	0.50	0.33	0.32	0.29	1.80	8.33	6.77	6.53	3.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2013, BY WATER YEAR (WY)#

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2,171	1,044	755	635	547	496	692	2,984	10,250	12,930	9,831	4,981
Max	6,823	2,433	1,385	890	789	648	1,221	9,199	17,250	18,750	15,730	9,905
(WY)	(2013)	(2013)	(2013)	(2013)	(2007)	(2007)	(2005)	(2005)	(1964)	(2000)	(1971)	(2012)
Min	1,166	568	440	349	381	360	465	1,007	5,415	9,206	4,992	2,123
(WY)	(1992)	(1959)	(1969)	(1959)	(1971)	(1971)	(1972)	(1966)	(1965)	(1973)	(1969)	(1969)

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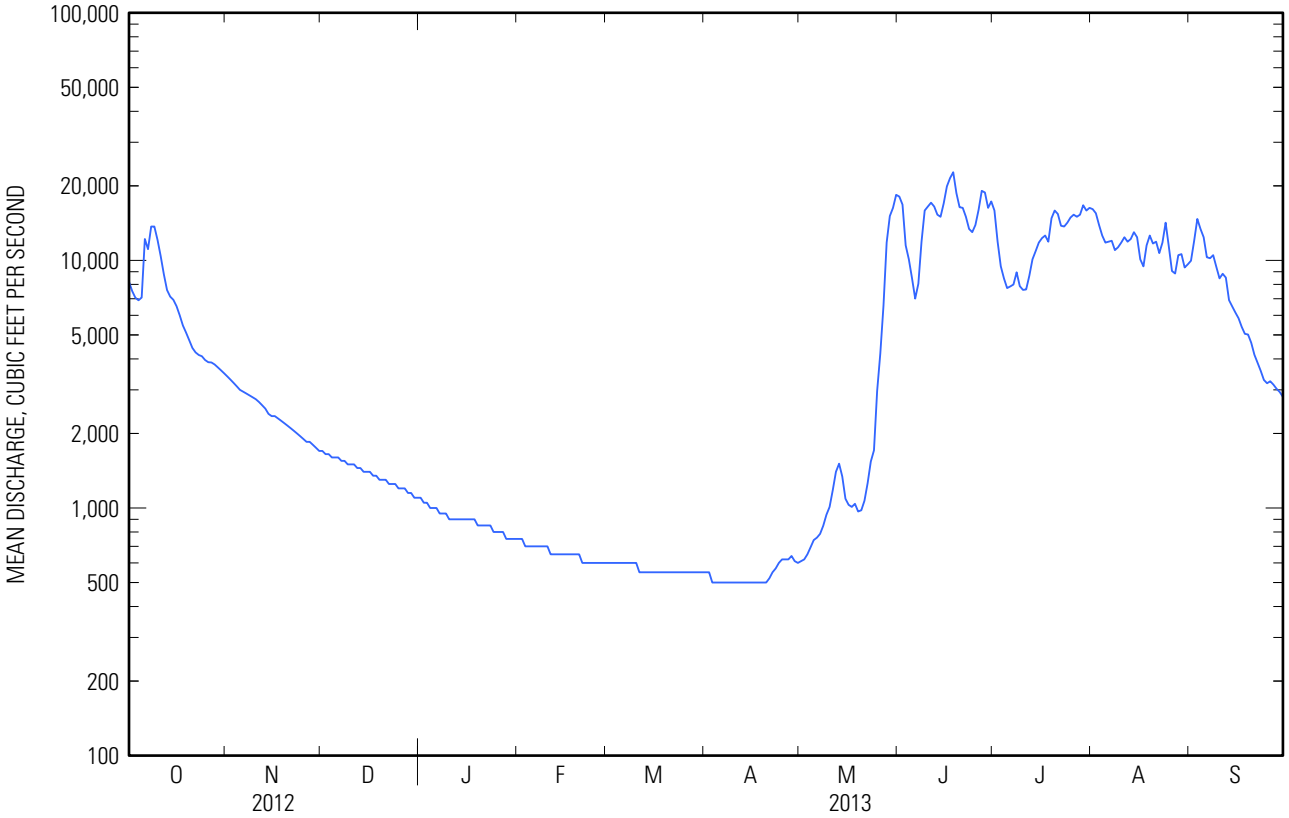
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1949 - 2013#	
Annual total	1,844,951		1,918,185			
Annual mean	5,041		5,255		3,911	
Highest annual mean					5,606	2005
Lowest annual mean					2,562	1969
Highest daily mean	33,200	Sep 21	22,700	Jun 18	40,700	Aug 10, 1971
Lowest daily mean	471	Apr 8	500	Apr 3	234	Apr 25, 1956
Annual seven-day minimum	478	Apr 2	500	Apr 3	304	Apr 20, 1956
Maximum peak flow			27,400	Jun 18	[a]82,100	Aug 10, 1971
Maximum peak stage			9.83	Jun 18	[b]13.60	Aug 10, 1971
Annual runoff (ac-ft)	3,659,000		3,805,000		2,833,000	
Annual runoff (cfsm)	2.44		2.54		1.89	
Annual runoff (inches)	33.16		34.47		25.67	
10 percent exceeds	13,200		14,800		11,700	
50 percent exceeds	2,200		2,000		1,230	
90 percent exceeds	550		550		490	

See Period of Record; partial years were used in monthly statistics.

[a] 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.

[b] Site then in use