Water-Data Report 2013

15283700 MOOSE CREEK NEAR PALMER, AK

Knik Arm Basin
Matanuska Subbasin

LOCATION.--Lat 61°41′00″, long 149°02′36″ referenced to North American Datum of 1927, in SW ¼ NE ¼ NW ¼ sec.2, T.18 N., R.2 E., Matanuska-Susitna Borough, AK, Hydrologic Unit 19020402, (Anchorage C-6 quad), on right bank 0.2 mi upstream of Glenn Highway bridge over Moose Creek, 0.8 mi upstream from mouth, and 6.5 mi north of Palmer, Alaska.

DRAINAGE AREA.--47.3 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1998 to September 2001, October 2007 to current year.

REVISED RECORDS.--WDR AK-00-1: 1999, drainage area.

REMARKS.--Records fair except estimated daily discharge which is poor. GOES satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 18,000 ft^3/s, August 10, 1971 (at site 0.3 mi. upstream from Buffalo Creek mine and 5 mi. upstream from present gage site), gage height not determined.

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 15283700, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/15283700.2013.pdf

15283700 MOOSE CREEK NEAR PALMER, AK—Continued

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	225	e50	e32	e22	e16	e16	e15	e15	e310	217	123	262
2	206	e50	e32	e22	e16	e16	e15	e16	e300	186	114	320
3	189	e48	e32	e22	e16	e16	e15	e17	e300	154	101	361
4	211	e48	e32	e22	e16	e16	e15	e18	e310	130	93	339
5	224	e48	e30	e20	e16	e16	e15	e18	e300	116	87	320
6	348	e46	e30	e20	e16	e16	e15	e18	e290	111	82	289
7	329	e46	e30	e20	e16	e16	e15	e18	e325	106	79	270
8	369	e46	e30	e20	e16	e16	e15	e19	371	110	74	275
9	324	e44	e28	e20	e16	e16	e15	e20	390	108	78	262
10	282	e44	e28	e20	e16	e16	e15	e25	369	104	137	261
11	256	e44	e28	e20	e16	e16	e15	e30	353	114	144	298
12	238	e42	e28	e20	e16	e16	e15	e50	374	117	117	309
13	214	e40	e28	e22	e16	e16	e15	e65	348	153	106	277
14	188	e40	e26	e28	e16	e16	e15	e45	339	148	99	261
15	162	e40	e26	e26	e16	e16	e15	e40	380	142	91	245
16	140	e40	e26	e24	e16	e16	e15	e40	402	139	84	230
17	123	e38	e26	e24	e16	e16	e15	e35	401	129	81	217
18	113	e38	e26	e22	e16	e16	e15	e35	375	118	93	203
19	100	e38	e26	e22	e16	e16	e15	e32	355	216	111	200
20	89	e38	e24	e20	e16	e16	e15	e40	328	177	168	158
21	e70	e38	e24	e20	e16	e16	e15	e45	317	145	334	130
22	e65	e36	e24	e20	e16	e16	e15	e50	293	123	303	113
23	e63	e36	e24	e20	e16	e16	e15	e60	261	122	345	98
24	e60	e36	e24	e20	e16	e16	e15	e120	254	116	317	88
25	e60	e34	e24	e18	e16	e15	e15	e175	268	145	275	99
26	e55	e34	e24	e17	e16	e15	e15	e195	291	217	254	104
27	e55	e34	e22	e17	e16	e15	e15	e210	294	164	238	96
28	e55	e34	e22	e17	e16	e15	e15	e230	272	153	278	86
29	e55	e34	e22	e17	---	e15	e15	e250	245	149	272	80
30	e55	e32	e22	e16	---	e15	e15	e290	236	141	257	75
31	e50	---	e22	e16	---	e15	---	e350	---	133	256	---
Total	4,973	1,216	822	634	448	489	450	2,571	9,651	4,403	5,191	6,326
Mean	160	40.5	26.5	20.5	16.0	15.8	15.0	82.9	322	142	167	211
Max	369	50	32	28	16	16	15	350	402	217	345	361
Min	50	32	22	16	16	15	15	15	236	104	74	75
Ac-ft	9,860	2,410	1,630	1,260	889	970	893	5,100	19,140	8,730	10,300	12,550
Cfsm	3.39	0.86	0.56	0.43	0.34	0.33	0.32	1.75	6.80	3.00	3.54	4.46
In.	3.91	0.96	0.65	0.50	0.35	0.38	0.35	2.02	7.59	3.46	4.08	4.98

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2013, BY WATER YEAR (WY)#

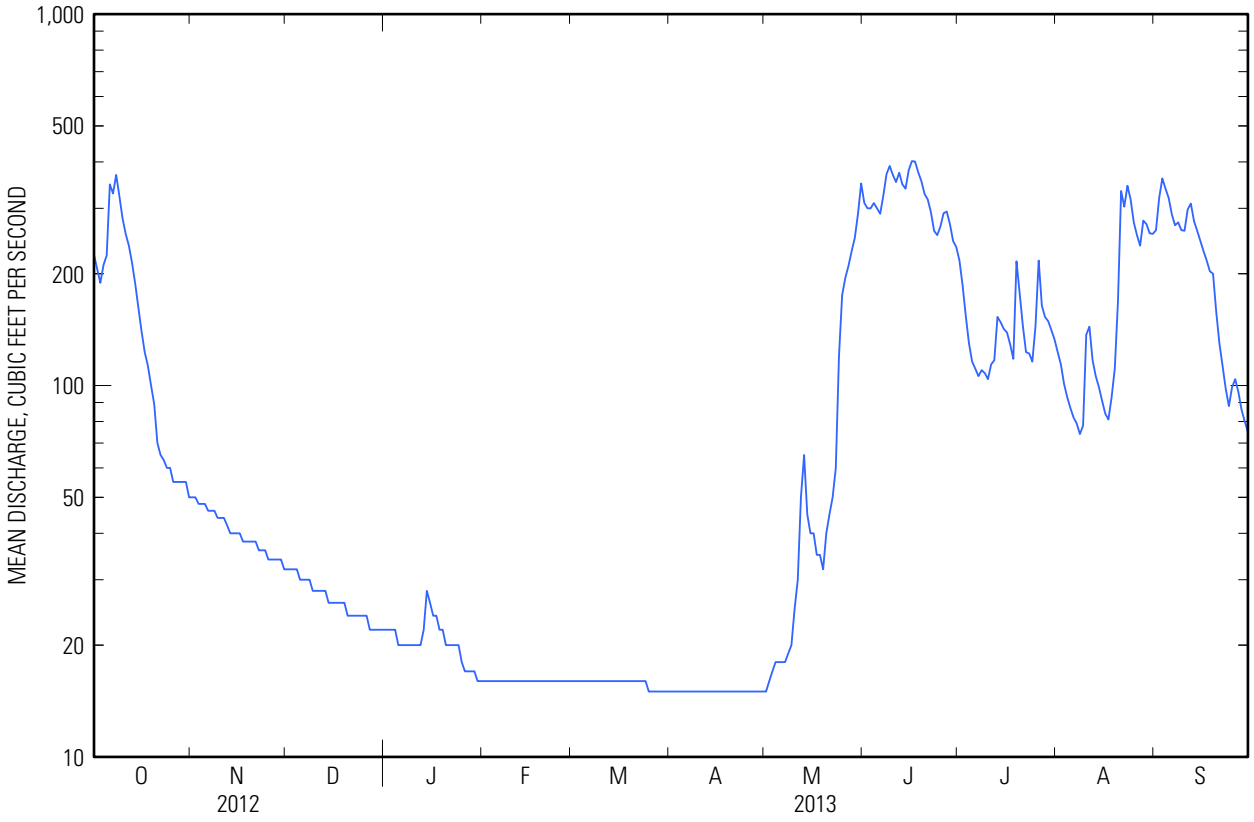
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	86.4	40.5	26.2	20.8	16.8	15.2	29.0	107	266	185	171	146
Max	160	55.4	33.9	24.2	20.8	19.5	47.8	264	385	327	210	310
(WY)	(2013)	(2000)	(2010)	(2001)	(2001)	(2001)	(2009)	(2009)	(2000)	(2000)	(1999)	(2012)
Min	38.5	26.8	17.6	16.1	13.8	12.4	15.0	66.5	155	133	134	70.6
(WY)	(2012)	(2012)	(2009)	(2009)	(2009)	(2009)	(2013)	(1999)	(2010)	(2011)	(2008)	(2011)

15283700 MOOSE CREEK NEAR PALMER, AK—Continued

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1998 - 2013#	
Annual total	42,810		37,174			
Annual mean	117		102		93.1	
Highest annual mean					125	2000
Lowest annual mean					74.1	2011
Highest daily mean	900	Sep 21	402	Jun 16	900	Sep 21, 2012
Lowest daily mean	12	Mar 12	15	Mar 25	12	Mar 13, 2009
Annual seven-day minimum	13	Mar 6	15	Mar 25	12	Mar 13, 2009
Maximum peak flow			440	Jun 16	1,100	Sep 21, 2012
Maximum peak stage			13.42	Jun 16	15.35	Sep 21, 2012
Annual runoff (ac-ft)	84,910		73,730		67,460	
Annual runoff (cfsm)	2.47		2.15		1.97	
Annual runoff (inches)	33.67		29.24		26.75	
10 percent exceeds	274		293		238	
50 percent exceeds	64		40		50	
90 percent exceeds	13		15		15	

See period of record; partial years used in monthly statistics



15283700 MOOSE CREEK NEAR PALMER, AK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949, 1951-52, 1956, 1971, 1998-2002, and 2011 to current year.

PERIOD OF DAILY RECORD.--WATER TEMPERATURE--October 2010 to current year.

INSTRUMENTATION.--Electronic water-temperature recorder set for 15 minute recording interval.

REMARKS.--Records represent water temperature at the sensor within 0.5°C. Temperature was compared with the stream average by cross section on August 12, 2013. No variation was found within the cross section. No variation was found between mean stream temperature and sensor temperature. Missing record October 1-5, May 13 to June 7, and computed record not used October 6 to December 3 due to poor data. Record is fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--Water Temperature: Maximum, 14.5°C, July 28, 2013; Minimum, 0.0°C on many days during winter.

EXTREMES FOR CURRENT YEAR.--Water Temperature: Maximum, 14.5°C, July 28; Minimum, 0.0°C on many days during winter.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
[ft, feet; ft³/s, cubic feet per second; °C, degrees Celsius]

Date	Sample start time	Stream width, ft (00004)	Sample location, relative to right bank, looking downstream, ft (72103)	Discharge, instantaneous, ft³/s (00061)	Sampling method (82398)	Temperature, water, °C (00010)
August 12, 2013	**1418**	40.0	2.0	118	EWI	10.7
August 12, 2013	**1419**	40.0	6.0	118	EWI	10.7
August 12, 2013	**1420**	40.0	10.0	118	EWI	10.7
August 12, 2013	**1421**	40.0	14.0	118	EWI	10.7
August 12, 2013	**1422**	40.0	18.0	118	EWI	10.7
August 12, 2013	**1423**	40.0	22.0	118	EWI	10.7
August 12, 2013	**1424**	40.0	26.0	118	EWI	10.7
August 12, 2013	**1425**	40.0	30.0	118	EWI	10.7
August 12, 2013	**1426**	40.0	34.0	118	EWI	10.7
August 12, 2013	**1427**	40.0	36.0	118	EWI	10.7

15283700 MOOSE CREEK NEAR PALMER, AK—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			November			December			January	
1	---	---	---	---	---	---	---	---	---	0.0	0.0	0.0
2	---	---	---	---	---	---	---	---	---	0.0	0.0	0.0
3	---	---	---	---	---	---	---	---	---	0.0	0.0	0.0
4	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
5	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
6	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
7	---	---	---	---	---	---	0.5	0.0	0.0	0.0	0.0	0.0
8	---	---	---	---	---	---	1.0	0.5	0.5	0.0	0.0	0.0
9	---	---	---	---	---	---	1.0	1.0	1.0	0.0	0.0	0.0
10	---	---	---	---	---	---	1.0	0.5	1.0	0.0	0.0	0.0
11	---	---	---	---	---	---	0.5	0.5	0.5	0.0	0.0	0.0
12	---	---	---	---	---	---	0.5	0.0	0.5	0.0	0.0	0.0
13	---	---	---	---	---	---	0.0	0.0	0.0	1.0	0.0	0.5
14	---	---	---	---	---	---	0.0	0.0	0.0	2.5	1.0	1.5
15	---	---	---	---	---	---	0.0	0.0	0.0	2.0	0.5	0.5
16	---	---	---	---	---	---	0.0	0.0	0.0	0.5	0.5	0.5
17	---	---	---	---	---	---	0.0	0.0	0.0	0.5	0.5	0.5
18	---	---	---	---	---	---	0.0	0.0	0.0	0.5	0.0	0.0
19	---	---	---	---	---	---	0.0	0.0	0.0	0.5	0.0	0.0
20	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
21	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
22	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
23	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
24	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
25	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
26	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
27	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
28	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
29	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
30	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
31	---	---	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
Month	---	---	---	---	---	---	---	---	---	2.5	0.0	0.1

15283700 MOOSE CREEK NEAR PALMER, AK—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.5
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
29	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
30	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
31	---	---	---	0.0	0.0	0.0	---	---	---	---	---	---
Month	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---

15283700 MOOSE CREEK NEAR PALMER, AK—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			September	
1	---	---	---	7.5	6.0	6.5	13.5	9.5	11.5	8.0	6.5	7.0
2	---	---	---	9.0	5.5	7.0	12.5	9.5	11.0	8.0	7.0	7.5
3	---	---	---	8.0	6.5	7.0	11.5	10.0	10.5	8.0	6.5	7.0
4	---	---	---	7.5	6.5	6.5	11.5	9.0	10.0	7.5	6.5	7.0
5	---	---	---	9.0	6.0	7.5	12.0	9.5	10.5	7.5	6.0	6.5
6	---	---	---	8.5	7.0	7.5	11.5	9.0	10.5	6.5	5.0	6.0
7	---	---	---	9.5	6.5	8.0	10.5	9.5	10.0	8.0	6.0	7.0
8	8.5	3.0	5.0	9.0	7.0	8.0	12.0	9.0	10.5	7.5	6.5	7.0
9	8.5	3.0	5.0	10.5	7.0	8.0	11.0	9.5	10.0	7.0	6.0	6.5
10	8.0	3.0	5.0	10.0	7.5	8.5	11.0	8.5	9.5	7.0	6.5	7.0
11	8.0	3.0	5.0	12.0	7.5	9.5	10.0	8.5	9.5	7.0	6.5	6.5
12	8.0	3.5	5.0	13.0	8.0	10.0	12.0	9.0	10.5	7.5	5.5	6.5
13	8.5	3.5	5.5	12.5	9.0	10.5	13.0	10.0	11.5	8.0	6.0	6.5
14	9.0	3.5	6.0	11.5	8.0	9.5	12.0	9.5	10.5	8.0	5.5	6.5
15	9.0	3.5	6.0	10.5	8.5	9.5	11.0	9.0	10.0	8.0	5.0	6.5
16	9.5	4.0	6.5	10.5	8.5	9.5	10.5	8.5	9.5	7.0	5.0	6.0
17	9.5	4.5	6.5	11.0	8.5	10.0	12.5	9.0	10.5	6.5	6.0	6.0
18	9.0	4.5	6.5	11.5	8.5	10.0	11.0	9.5	10.0	6.5	6.0	6.0
19	8.5	4.5	6.5	11.0	9.5	10.0	9.5	9.0	9.0	6.5	5.0	6.0
20	10.0	4.5	7.0	10.5	8.0	9.5	9.0	8.0	8.5	5.0	3.5	4.0
21	9.0	5.0	6.5	11.5	7.5	9.5	8.0	7.5	7.5	5.0	3.0	4.0
22	9.5	4.0	6.5	13.0	8.5	10.5	8.0	7.0	7.5	5.0	4.0	4.5
23	9.5	5.0	7.5	13.5	9.0	11.0	8.5	7.0	7.5	4.5	3.5	4.0
24	10.5	6.0	8.0	14.0	9.5	11.5	9.0	6.0	7.5	5.0	3.0	4.0
25	11.0	6.0	8.5	13.5	10.0	11.5	9.0	5.5	7.0	6.0	4.5	5.0
26	11.5	6.5	8.5	12.5	9.0	10.5	9.5	5.5	7.5	6.0	5.0	5.5
27	11.0	6.5	8.5	11.5	10.0	10.5	9.5	6.5	8.0	6.0	4.5	5.5
28	9.5	7.0	7.5	14.5	9.5	11.5	8.5	7.5	8.0	6.0	3.5	5.0
29	9.0	6.0	7.5	14.0	10.0	12.0	8.0	6.5	7.5	6.0	4.0	5.0
30	8.0	6.5	7.5	13.0	10.0	11.5	7.5	7.0	7.0	5.5	3.5	4.5
31	---	---	---	12.0	10.0	11.0	7.5	6.5	7.0	---	---	---
Month	---	---	---	14.5	5.5	9.5	13.5	5.5	9.2	8.0	3.0	5.9