

Water-Data Report 2013

15291000 SUSITNA RIVER NEAR DENALI AK

Susitna River Basin
Upper Susitna River Subbasin

LOCATION.--Lat 63°06'14", long 147°30'57" referenced to North American Datum of 1927, in NE ¼ SW ¼ SE ¼ sec.10, T.21 S., R.1 E., Matanuska-Susitna Borough, AK, Hydrologic Unit 19020501.

DRAINAGE AREA.--950.00 mi², approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1957 to September 1966; May 1968 to July 1986; May 2012 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2440 feet above sea level, from topographic map. From June 1957 to September 1963, 2.0 mi downstream at different datum.

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

15291000 SUSITNA RIVER NEAR DENALI 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	2,940	e980	e600	e500	e420	e320	e280	e300	e21,500	13,800	12,300	5,520
2	e2,790	e960	e590	e500	e410	e320	e280	e300	15,300	12,100	12,500	5,780
3	e2,700	e940	e590	e500	e410	e310	e280	e310	10,800	10,700	12,300	8,100
4	e2,800	e920	e580	e500	e410	e310	e280	e310	10,600	9,180	11,100	10,100
5	e3,100	e900	e580	e500	e400	e310	e280	e320	9,330	8,820	9,700	9,080
6	e4,200	e880	e570	e490	e400	e300	e280	e340	7,220	8,170	9,140	7,070
7	e4,100	e860	e570	e490	e400	e300	e280	e360	7,130	7,830	9,050	10,400
8	e4,000	e840	e560	e490	e390	e300	e280	e380	8,310	10,600	11,000	8,970
9	e3,300	e820	e560	e490	e390	e300	e280	e390	9,210	10,200	9,660	8,350
10	e2,700	e800	e560	e490	e390	e300	e270	e400	9,640	9,430	8,980	7,600
11	e2,380	e780	e550	e490	e380	e300	e280	e420	9,800	8,550	11,200	7,510
12	e2,300	e760	e550	e490	e380	e300	e280	e440	9,010	8,340	9,970	8,900
13	e2,200	e740	e540	e480	e380	e300	e280	e480	7,790	10,100	11,200	6,580
14	e2,100	e730	e540	e480	e370	e300	e280	e520	8,550	10,900	11,900	5,110
15	e2,000	e720	e530	e480	e370	e300	e280	e560	9,040	11,600	10,800	4,650
16	e2,000	e720	e530	e480	e370	e290	e280	e650	10,900	10,500	10,400	4,100
17	e1,900	e700	e530	e470	e360	e290	e280	e710	13,300	11,700	10,300	3,820
18	e1,850	e700	e520	e470	e360	e290	e280	e830	16,400	11,600	10,700	3,520
19	e1,750	e680	e520	e470	e360	e290	e290	e1,000	14,200	11,500	10,700	3,320
20	e1,700	e680	e520	e470	e350	e290	e290	e1,500	14,300	12,500	12,600	2,850
21	e1,600	e670	e510	e460	e350	e290	e290	e1,800	13,900	11,500	16,200	2,490
22	e1,550	e660	e510	e460	e350	e290	e290	e2,500	12,300	10,800	10,200	2,310
23	e1,450	e650	e510	e460	e340	e290	e290	e3,300	9,530	11,300	10,300	2,150
24	e1,400	e630	e500	e460	e340	e290	e290	e4,600	10,600	12,000	9,160	2,140
25	e1,300	e620	e500	e450	e330	e290	e290	e5,800	11,100	11,700	6,870	2,300
26	e1,250	e620	e500	e450	e330	e285	e290	e6,800	12,800	10,800	5,320	3,040
27	e1,200	e620	e500	e440	e330	e285	e290	e9,000	14,000	10,400	4,810	2,970
28	e1,150	e610	e500	e440	e320	e280	e290	e11,500	15,100	9,830	5,610	2,670
29	e1,100	e610	e500	e430	---	e280	e290	e15,000	15,300	12,700	8,500	2,370
30	e1,050	e600	e500	e430	---	e280	e295	e19,500	14,600	13,100	7,280	2,170
31	e1,000	---	e500	e420	---	e280	---	e22,000	---	12,900	6,620	---
Total	66,860	22,400	16,620	14,630	10,390	9,160	8,515	112,320	351,560	335,150	306,370	155,940
Mean	2,157	747	536	472	371	295	284	3,623	11,720	10,810	9,883	5,198
Max	4,200	980	600	500	420	320	295	22,000	21,500	13,800	16,200	10,400
Min	1,000	600	500	420	320	280	270	300	7,130	7,830	4,810	2,140
Ac-ft	132,600	44,430	32,970	29,020	20,610	18,170	16,890	222,800	697,300	664,800	607,700	309,300
Cfsm	2.27	0.79	0.56	0.50	0.39	0.31	0.30	3.81	12.3	11.4	10.4	5.47
In.	2.62	0.88	0.65	0.57	0.41	0.36	0.33	4.40	13.77	13.12	12.00	6.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2013, BY WATER YEAR (WY)#

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,216	533	346	270	225	203	235	2,189	7,456	9,843	8,187	3,455
Max	2,165	878	575	472	371	295	415	3,623	12,200	13,240	12,010	6,955
(WY)	(1980)	(1980)	(1960)	(2013)	(2013)	(2013)	(1961)	(2013)	(1957)	(1986)	(1981)	(1965)
Min	528	290	169	112	81.0	41.7	43.0	629	4,647	6,756	3,919	1,822
(WY)	(1971)	(1964)	(1976)	(1976)	(1959)	(1959)	(1959)	(1971)	(1965)	(1965)	(1969)	(1976)

15291000 SUSITNA RIVER NEAR DENALI AK—Continued

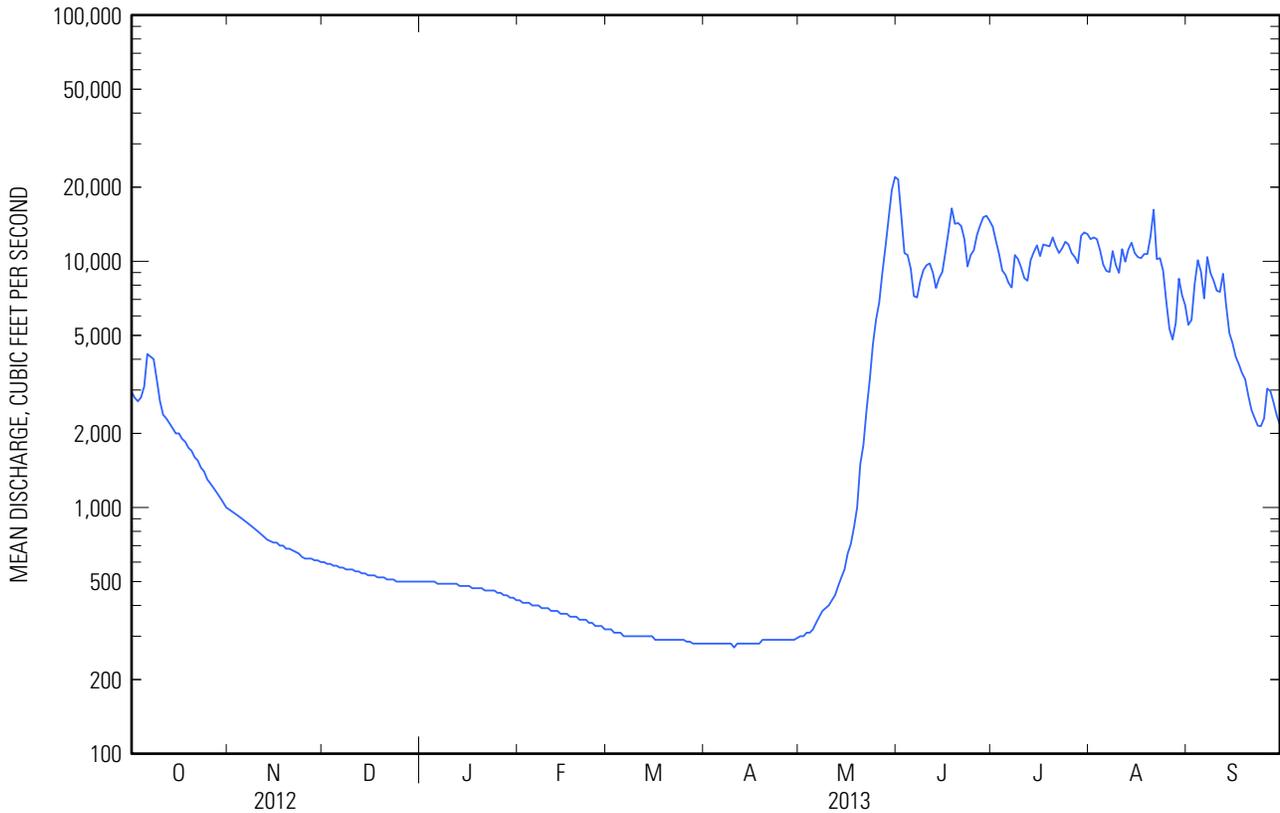
SUMMARY STATISTICS

	Water Year 2013		Water Years 1957 - 2013 [#]	
Annual total	1,409,915			
Annual mean	3,863		2,815	
Highest annual mean			3,863	2013
Lowest annual mean			2,242	1973
Highest daily mean	22,000	May 31	33,400	Aug 10, 1971
Lowest daily mean	270	Apr 10	34	Mar 16, 1959
Annual seven-day minimum	279	Apr 4	34	Mar 16, 1959
Maximum peak flow	a		38,200	Aug 10, 1971
Maximum peak stage			13.32	Aug 10, 1971
Maximum peak stage	b13.86May 30		b13.86	May 30, 2013
Annual runoff (ac-ft)	2,797,000		2,040,000	
Annual runoff (cfsm)	4.07		2.96	
Annual runoff (inches)	54.21		40.27	
10 percent exceeds	11,400		9,100	
50 percent exceeds	720		650	
90 percent exceeds	290		190	

[#] See Period of Record; partial years used in monthly statistics and break in record

a Not determined, see highest daily mean

b Backwater from ice



15291000 SUSITNA RIVER NEAR DENALI AK—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1957-66, 1968-69, 1974-1986, and May 2012 to current year.

PERIOD OF DAILY RECORD.--Water temperature: Water years 1974-1982 (open water seasonal), and May 2012 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 at the sensor was compared with the average for the stream by cross-section on June 21. Variations in cross-sectional temperature was 1.9°C or less. The variation between the mean stream temperature and sensor temperature is less than 1.0°C. Heavy shore ice will occur near the gage.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum recorded, 12.0°C, July 12, 2013; minimum, 0.0°C, many days during winter.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 12.0°C, July 12; minimum, 0.0°C 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, m, ft (72103)	Discharge, instantaneous, ft ³ /s (00061)	Sampling method (82398)	Temperature, water, °C (00010)
June 21, 2013	1055	957	50.0	12,900	EWI	4.8
June 21, 2013	1056	957	145.0	12,900	EWI	4.9
June 21, 2013	1058	957	240.0	12,900	EWI	4.9
June 21, 2013	1059	957	335.0	12,900	EWI	5.1
June 21, 2013	1100	957	430.0	12,900	EWI	6.2
June 21, 2013	1101	957	525.0	12,900	EWI	6.3
June 21, 2013	1103	957	620.0	12,900	EWI	6.5
June 21, 2013	1105	957	715.0	12,900	EWI	6.4
June 21, 2013	1106	957	810.0	12,900	EWI	6.6
June 21, 2013	1108	957	905.0	12,900	EWI	6.7

15291000 SUSITNA RIVER NEAR DENALI 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	1.5	0.0	0.5	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	---	---	---	---	---	---
5	---	---	---	0.0	0.0	0.0	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
13	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
14	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
15	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
16	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
17	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
18	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
19	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
20	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
21	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
22	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
23	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
24	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
25	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
26	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
27	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
28	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
29	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
30	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
31	0.0	0.0	0.0	---	---	---	---	---	---	---	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---

15291000 SUSITNA RIVER NEAR DENALI 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	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---

15291000 SUSITNA RIVER NEAR DENALI 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	---	---	---	5.0	2.5	3.5	8.5	2.5	5.0	5.5	3.5	4.5
2	---	---	---	6.0	2.5	4.0	8.0	2.0	5.0	5.5	4.5	5.0
3	---	---	---	5.5	2.5	4.0	7.0	2.5	5.0	7.0	4.5	5.5
4	2.0	0.0	1.0	5.0	3.0	4.0	6.0	2.5	4.5	6.0	3.5	4.5
5	3.5	0.5	1.5	6.0	2.5	4.0	7.0	2.5	4.5	4.5	3.0	4.0
6	5.5	0.5	3.0	6.0	3.5	5.0	8.5	2.5	5.5	4.0	2.0	3.0
7	6.5	1.5	4.0	5.5	3.5	4.5	8.0	2.5	5.5	4.5	3.0	3.5
8	7.5	2.0	4.5	5.5	3.0	4.0	7.5	3.0	5.5	4.5	3.0	3.5
9	8.0	2.0	5.0	8.0	3.5	5.0	6.0	3.0	4.0	4.0	2.5	3.5
10	8.0	3.5	5.5	7.0	4.5	6.0	4.5	3.0	3.5	4.5	3.0	4.0
11	8.5	3.0	5.5	9.0	3.5	6.0	5.0	2.0	3.5	4.0	3.0	3.5
12	8.5	3.0	6.0	12.0	5.5	8.0	8.0	2.5	5.0	6.0	2.5	4.0
13	9.5	3.0	6.0	10.0	4.5	7.0	8.0	2.5	5.0	5.0	3.5	4.0
14	9.5	3.0	6.5	10.0	4.0	7.0	6.0	2.5	4.5	6.5	3.0	4.5
15	9.5	3.5	7.0	8.0	3.5	6.0	5.0	2.5	3.5	5.5	2.0	3.5
16	10.0	3.0	7.0	9.5	3.5	6.5	6.0	2.5	4.0	5.0	1.5	3.5
17	9.5	4.0	6.5	8.0	3.0	5.5	6.5	3.0	4.5	4.5	3.0	3.5
18	8.0	2.0	5.0	7.5	2.5	5.0	5.5	2.5	4.0	3.5	2.0	3.0
19	8.5	2.5	5.5	7.0	3.5	5.0	4.0	2.5	3.5	3.5	1.0	2.0
20	8.5	2.5	5.5	8.5	3.5	5.5	4.0	2.5	3.5	2.0	0.0	1.0
21	8.5	3.0	6.0	9.0	2.5	5.5	4.0	2.0	3.0	2.0	0.0	1.0
22	8.0	3.0	5.5	8.5	2.5	5.5	5.5	3.5	4.5	1.5	0.0	0.5
23	8.5	2.5	5.5	8.5	3.0	6.0	6.0	4.0	5.0	1.5	0.0	0.5
24	8.5	2.5	6.0	7.5	2.5	5.0	7.0	4.5	5.5	1.5	0.0	0.5
25	9.5	3.5	6.0	6.0	3.0	4.5	7.0	2.5	4.5	4.0	1.0	2.5
26	8.0	4.0	6.0	8.0	2.5	5.0	7.5	3.0	5.0	4.0	2.0	3.0
27	9.0	3.0	6.0	8.0	3.0	5.5	7.0	3.0	5.5	4.0	2.5	3.0
28	8.0	3.0	4.5	9.0	3.0	6.0	6.5	4.0	5.5	3.0	1.0	2.0
29	7.0	2.5	4.5	7.5	3.0	5.0	6.0	3.0	4.5	3.0	1.5	2.0
30	6.5	3.0	4.0	8.0	2.5	5.0	5.0	3.5	4.0	2.0	1.0	1.5
31	---	---	---	7.0	2.0	4.5	4.5	3.0	4.0	---	---	---
Month	---	---	---	12.0	2.0	5.3	8.5	2.0	4.5	7.0	0.0	3.0