

15297610 RUSSELL CREEK NEAR COLD BAY

LOCATION.--Lat 55°10'40", long 162°41'15", (Cold Bay A-3 quad), Aleutians East Borough, Hydrologic Unit 19030101, on left bank, at Russell Creek Fish Hatchery, 2.1 mi upstream from mouth, and 2.6 mi southeast of Cold Bay. Prior to February 27, 1997, at site 0.2 mi downstream.

DRAINAGE AREA.--30.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to December 1986, October 1995 to current year.

REVISED RECORDS.-- WRD AK-97-1: 1996, Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 7.65 ft above sea level. Prior to February 27, 1997, elevation 3.55 ft above sea level at site 0.2 mi downstream (levels by private engineering firm).

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180	358	293	e110	124	323	155	178	151	630	159	239
2	158	302	268	e110	128	771	135	240	146	392	178	194
3	166	418	249	e100	161	377	120	221	143	303	203	169
4	187	628	408	e100	162	312	114	217	143	299	231	174
5	412	635	388	e100	144	272	133	177	143	307	263	187
6	308	463	429	e100	150	242	120	162	145	245	322	172
7	255	437	424	e100	460	222	112	187	174	239	345	254
8	203	349	327	e95	320	206	105	214	416	238	386	385
9	306	290	269	e95	371	193	105	178	293	448	480	235
10	815	256	236	e100	261	194	102	155	226	365	434	246
11	430	235	e230	e110	240	178	132	148	211	369	304	199
12	496	227	e220	e110	208	166	265	146	218	312	429	177
13	842	242	e220	e120	186	e160	176	138	269	274	372	175
14	606	204	e210	126	174	e160	150	133	269	277	343	156
15	468	251	e210	160	163	e150	193	124	235	243	333	154
16	343	613	e200	264	158	e150	150	116	235	239	254	396
17	364	382	e190	190	160	e140	140	124	579	295	212	249
18	368	326	e180	191	153	e140	129	121	453	508	201	183
19	331	302	e180	167	190	e130	137	140	303	412	239	162
20	327	259	e170	211	167	e130	173	152	303	295	254	153
21	339	231	e160	286	192	e130	144	141	275	317	322	142
22	394	226	e150	205	161	e120	144	142	242	276	227	140
23	356	207	e150	177	271	e120	138	147	246	328	204	176
24	318	204	e140	162	348	e120	135	136	217	242	194	142
25	405	200	e140	151	310	e110	123	127	229	205	251	132
26	294	188	e130	143	355	e110	118	120	284	179	195	143
27	257	227	e130	138	251	e110	116	224	336	168	203	202
28	394	191	e130	147	379	e110	119	191	294	170	391	299
29	574	196	e120	132	---	106	119	157	371	169	332	333
30	412	179	e120	130	---	110	130	162	369	167	253	288
31	386	---	e110	125	---	155	---	158	---	164	234	---
TOTAL	11694	9226	6781	4455	6347	5917	4132	4976	7918	9075	8748	6256
MEAN	377	308	219	144	227	191	138	161	264	293	282	209
MAX	842	635	429	286	460	771	265	240	579	630	480	396
MIN	158	179	110	95	124	106	102	116	143	164	159	132
AC-FT	23200	18300	13450	8840	12590	11740	8200	9870	15710	18000	17350	12410
CFSM	12.2	9.95	7.08	4.65	7.34	6.18	4.46	5.19	8.54	9.47	9.13	6.75
IN.	14.08	11.11	8.16	5.36	7.64	7.12	4.97	5.99	9.53	10.93	10.53	7.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY)

	282	297	249	163	154	143	141	234	329	338	312	347
MEAN	282	297	249	163	154	143	141	234	329	338	312	347
MAX	516	530	549	318	272	218	261	575	634	528	403	538
(WY)	1986	1986	1984	1982	1982	1996	1998	2002	2000	1982	2000	1998
MIN	172	168	86.8	59.5	71.2	75.8	80.3	133	208	192	256	170
(WY)	1997	2000	2000	2000	2000	1986	1985	2001	1997	1997	1996	2000

See Period of Record
e Estimated

15297610 RUSSELL CREEK NEAR COLD BAY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1982 - 2003#	
ANNUAL TOTAL	98162		85525			
ANNUAL MEAN	269		234		249	
HIGHEST ANNUAL MEAN					302 1982	
LOWEST ANNUAL MEAN					206 1983	
HIGHEST DAILY MEAN	1670	May 24	842	Oct 13	4000	Jun 24 1996
LOWEST DAILY MEAN	a80	Feb 21	b95	Jan 8	c50	Feb 19 1982
ANNUAL SEVEN-DAY MINIMUM	84	Feb 18	99	Jan 3	51	Feb 18 1982
MAXIMUM PEAK FLOW			1490	Oct 10	d6000	Oct 22 1981
MAXIMUM PEAK STAGE			27.49	Oct 10	f11.76	Jun 24 1996
INSTANTANEOUS LOW FLOW					g49	Mar 13 1983
ANNUAL RUNOFF (AC-FT)	194700		169600		180500	
ANNUAL RUNOFF (CFSM)	8.70		7.58		8.06	
ANNUAL RUNOFF (INCHES)	118.18		102.96		109.53	
10 PERCENT EXCEEDS	436		389		430	
50 PERCENT EXCEEDS	229		201		202	
90 PERCENT EXCEEDS	110		120		98	

See Period of Record

a Feb. 21-22

b Jan. 8-9

c Feb. 19-23, 1982

d From rating curve extended above 610 ft³/s on basis of estimateby slope-area measurement of 6,000 ft³/s and gage height of 11.19 ft

f Site and datum then in use; from flood marks

g Mar. 13-14, 1983

15297610 RUSSELL CREEK NEAR COLD BAY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982-83, 1996 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1996 to current year.

INSTRUMENTATION.--Electronic water-temperature recorder set for 1-hour recording interval.

REMARKS.--Records represent water-temperature at the sensor within 0.5°C. Temperature at the sensor was compared with the stream average by cross section on August 25. No variation was found within the cross section. No variation was found between mean stream temperature and sensor temperature.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 15.5°C, August 13-14, 2001, July 31 and August 1, 2002; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 15.0°C, May 29 and July 13; minimum 0.0°C on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Stream width, feet (00004)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Temperature, air, deg C (00020)
AUG							
25...	1630	72.0	72.0	25.92	247	10.5	13.6
25...	1632	72.0	55.0	25.92	247	10.5	13.6
25...	1634	72.0	40.0	25.92	247	10.5	13.6
25...	1636	72.0	25.0	25.92	247	10.5	13.6
25...	1638	72.0	10.0	25.92	247	10.5	13.6
25...	1640	72.0	.00	25.92	247	10.5	13.6

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.0	4.0	6.0	6.0	5.0	5.5	4.0	3.0	3.5	1.0	0.0	0.5
2	8.0	2.0	4.5	5.5	3.5	4.5	4.0	3.0	3.5	1.0	0.0	0.5
3	6.0	5.0	5.5	6.0	4.5	5.5	3.0	2.0	2.5	1.0	0.0	0.5
4	9.5	5.5	7.5	5.5	4.5	5.0	4.0	3.0	3.5	0.0	0.0	0.0
5	8.5	6.5	7.5	5.5	4.0	5.0	4.0	3.5	3.5	0.0	0.0	0.0
6	8.0	5.0	6.5	5.5	3.5	4.5	4.0	3.5	3.5	0.0	0.0	0.0
7	7.0	4.5	5.5	5.5	4.5	5.0	3.5	2.5	3.0	0.0	0.0	0.0
8	8.0	3.5	5.0	6.0	4.5	5.0	3.0	2.0	2.5	0.0	0.0	0.0
9	7.0	3.0	5.0	5.0	3.5	4.5	2.0	1.0	1.5	0.0	0.0	0.0
10	7.5	4.5	6.5	4.5	3.0	3.5	2.0	0.0	1.0	0.0	0.0	0.0
11	6.5	4.5	5.5	4.0	2.5	3.0	1.0	0.0	0.0	1.0	0.0	0.5
12	7.0	5.0	6.0	4.0	2.5	3.5	0.0	0.0	0.0	1.0	0.5	1.0
13	7.0	5.5	6.0	2.5	0.5	1.0	0.0	0.0	0.0	1.5	0.5	1.0
14	6.5	5.0	5.5	2.0	0.0	1.0	0.0	0.0	0.0	2.0	1.0	1.5
15	7.0	4.5	5.5	4.0	1.5	3.0	0.0	0.0	0.0	2.5	1.5	2.0
16	6.5	3.0	4.5	4.0	2.5	3.0	0.0	0.0	0.0	2.0	1.5	1.5
17	8.0	5.0	6.5	3.0	2.0	2.5	0.0	0.0	0.0	3.0	1.5	1.5
18	8.0	6.5	7.0	3.0	2.0	2.5	0.5	0.0	0.0	2.5	1.5	2.0
19	8.0	6.0	6.5	3.0	2.0	2.5	1.5	0.0	0.5	2.5	1.0	2.0
20	6.5	3.5	5.5	3.5	2.0	2.5	1.0	0.0	0.5	3.5	2.0	2.5
21	5.0	2.5	3.5	3.0	1.5	2.0	1.0	0.0	0.5	3.5	2.0	3.0
22	5.5	4.0	4.5	3.0	1.5	2.0	1.0	0.0	0.5	2.0	0.5	1.5
23	4.5	3.0	4.0	2.5	1.5	2.0	0.0	0.0	0.0	3.0	1.0	2.0
24	4.0	2.5	3.5	3.5	1.5	2.5	0.0	0.0	0.0	2.5	1.0	1.5
25	5.5	3.5	4.0	4.0	2.5	3.0	0.0	0.0	0.0	3.5	1.5	2.5
26	4.5	2.5	3.5	4.0	1.0	2.5	0.0	0.0	0.0	3.0	1.0	2.0
27	4.0	2.0	3.0	2.5	1.5	2.0	0.0	0.0	0.0	3.5	2.0	2.5
28	6.0	4.0	5.0	1.5	0.0	1.0	2.0	0.0	1.0	3.0	1.5	2.0
29	6.0	4.0	5.0	2.0	1.0	1.5	2.5	0.5	1.5	3.0	1.5	2.0
30	5.5	4.0	4.5	3.0	1.0	1.5	0.5	0.0	0.0	2.5	1.5	2.0
31	6.0	4.0	4.5	---	---	---	2.0	0.5	1.0	3.0	1.0	1.5
MONTH	9.5	2.0	5.3	6.0	0.0	3.1	4.0	0.0	1.1	3.5	0.0	1.3

15297610 RUSSELL CREEK NEAR COLD BAY—Continued

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	4.0	1.0	2.0	5.5	2.5	4.0	6.0	2.5	4.0	7.0	4.0	5.5
2	2.5	0.0	1.5	5.0	2.0	3.5	6.5	1.5	3.5	9.0	4.0	6.0
3	4.5	2.0	3.0	4.5	1.5	2.5	6.5	1.5	3.5	11.5	4.0	7.0
4	2.5	1.5	2.0	3.5	1.5	2.5	7.5	1.5	4.0	9.0	4.0	6.0
5	1.5	0.0	0.5	2.5	1.0	1.5	4.0	2.0	3.0	7.0	2.5	4.5
6	1.5	0.0	0.0	4.5	0.0	1.5	5.5	1.0	3.0	6.5	4.0	5.0
7	3.5	1.5	2.5	4.5	0.0	1.5	4.5	0.0	1.5	8.5	4.5	6.0
8	3.5	2.5	3.0	4.0	0.5	2.0	6.0	0.0	2.0	6.0	4.0	5.0
9	4.5	2.0	3.0	5.0	0.0	2.0	4.5	0.0	1.5	6.5	2.5	4.5
10	3.5	2.0	2.5	2.0	0.0	1.0	5.0	0.0	2.0	11.5	1.5	6.0
11	3.5	2.0	2.5	4.0	1.0	2.0	3.5	0.5	2.0	8.0	3.5	5.0
12	4.0	2.0	3.0	4.0	0.0	1.5	6.5	3.5	4.5	8.0	2.5	4.5
13	4.0	2.0	3.0	0.0	0.0	0.0	8.0	1.0	4.0	8.5	1.5	4.5
14	3.0	1.0	2.0	0.0	0.0	0.0	6.0	3.0	4.5	8.0	1.5	4.5
15	3.0	1.5	2.0	0.0	0.0	0.0	7.0	1.5	4.0	9.0	1.5	5.0
16	3.0	1.5	2.5	0.0	0.0	0.0	6.5	1.0	3.0	11.5	1.0	6.0
17	3.5	2.0	2.5	0.0	0.0	0.0	4.0	1.5	2.5	8.5	2.5	5.5
18	2.5	1.0	2.0	0.0	0.0	0.0	5.5	0.5	3.0	8.0	5.0	6.5
19	4.0	1.0	2.5	0.0	0.0	0.0	2.5	0.0	1.0	8.5	5.0	6.5
20	3.5	1.5	2.5	0.0	0.0	0.0	7.0	1.0	3.5	7.5	4.5	6.0
21	4.5	2.0	3.0	0.0	0.0	0.0	8.0	1.5	4.0	14.0	3.5	8.0
22	4.0	1.5	2.5	1.0	0.0	0.0	8.5	1.5	4.5	12.0	3.0	7.5
23	4.0	1.5	3.0	1.0	0.0	0.0	6.0	2.0	3.5	7.0	4.0	5.5
24	5.5	2.5	3.5	1.0	0.0	0.0	10.5	2.0	5.5	7.0	2.5	4.5
25	4.0	2.0	3.0	2.5	0.0	0.5	9.5	2.0	5.5	10.5	3.0	6.0
26	4.0	2.0	2.5	3.0	0.0	0.5	11.5	1.0	5.5	7.0	4.0	5.5
27	3.0	1.5	2.0	4.0	0.0	1.0	9.5	2.5	6.0	5.5	4.0	4.5
28	5.0	2.5	3.5	4.5	0.0	1.5	6.0	2.5	4.5	8.0	4.0	5.5
29	---	---	---	4.0	1.0	2.0	7.0	3.5	5.0	15.0	3.5	8.5
30	---	---	---	4.5	0.5	2.0	10.5	3.5	6.0	13.5	4.0	8.0
31	---	---	---	5.5	2.5	3.5	---	---	---	9.5	5.0	7.5
MONTH	5.5	0.0	2.4	5.5	0.0	1.2	11.5	0.0	3.7	15.0	1.0	5.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	11.0	5.0	8.0	8.5	5.0	7.0	14.5	6.5	9.5	10.0	7.0	8.0
2	11.0	4.0	7.5	12.0	4.5	7.5	10.5	7.0	9.0	10.0	5.5	7.5
3	11.5	5.0	7.5	13.0	5.0	8.0	11.5	7.5	9.5	9.5	5.5	7.0
4	10.5	5.0	7.5	8.5	5.5	6.5	13.5	8.0	10.5	10.0	6.0	7.5
5	12.5	5.0	8.0	14.0	4.5	8.5	12.5	8.5	10.0	12.0	7.0	9.0
6	8.5	5.5	7.0	11.5	5.5	8.0	11.5	9.0	10.0	13.0	6.5	9.0
7	7.0	5.0	6.0	12.0	6.0	8.5	10.5	8.5	9.5	9.0	7.0	8.0
8	8.0	4.5	5.5	11.0	5.5	8.0	12.0	8.5	10.0	9.0	6.5	7.0
9	8.0	4.5	5.5	11.5	7.5	9.0	11.0	8.5	9.5	10.5	6.0	8.0
10	11.5	4.5	7.0	10.5	5.0	7.5	12.5	8.5	9.5	9.5	7.5	8.5
11	12.5	4.5	7.5	9.5	5.5	7.5	10.0	7.0	8.0	9.0	6.5	7.5
12	8.0	5.0	6.5	10.0	5.5	7.5	10.0	7.5	8.5	10.0	4.5	7.0
13	9.0	4.5	6.5	15.0	6.0	9.5	9.5	7.0	8.5	9.5	7.0	8.0
14	14.0	4.5	8.0	14.5	5.5	9.0	10.5	7.5	9.0	12.5	4.0	7.5
15	14.5	4.5	8.5	14.0	5.5	9.0	9.5	7.0	8.0	8.0	5.5	6.5
16	8.5	5.5	6.5	10.0	7.0	8.0	10.5	5.0	7.5	7.5	6.5	7.0
17	7.0	5.0	6.0	10.0	6.5	7.5	11.0	6.0	8.0	10.5	5.0	7.5
18	9.0	4.0	6.0	7.5	6.5	7.0	11.0	6.0	8.5	10.0	3.0	6.0
19	7.0	4.0	5.5	8.5	6.5	7.5	11.0	6.0	8.0	9.0	5.0	6.5
20	7.5	5.0	6.0	13.5	5.5	9.0	10.5	6.5	8.5	8.0	4.5	6.0
21	12.0	4.5	7.5	12.0	6.5	9.5	12.0	7.0	9.0	10.5	4.0	6.5
22	7.5	4.0	6.0	13.5	5.5	9.0	12.5	6.0	9.0	8.0	5.5	6.5
23	8.0	5.0	6.5	10.0	7.5	8.5	10.0	6.5	8.5	8.0	5.0	6.0
24	12.0	5.0	8.0	8.0	6.0	7.0	11.0	6.5	8.5	9.0	4.5	6.5
25	8.0	5.5	7.0	8.0	6.0	7.0	11.5	8.0	9.0	9.0	4.5	6.5
26	7.5	5.0	6.0	11.0	5.5	8.0	9.5	6.0	7.5	12.0	6.0	8.0
27	9.5	5.0	7.0	11.0	6.5	8.5	10.5	7.0	8.5	8.0	6.0	7.0
28	11.0	5.0	7.0	9.0	6.5	7.5	9.5	7.5	8.5	9.5	6.5	7.5
29	10.5	5.5	7.5	9.5	6.0	7.5	11.5	7.5	9.0	7.5	6.0	6.5
30	9.0	5.0	7.0	13.0	7.0	9.0	9.5	7.5	8.0	8.0	6.5	7.0
31	---	---	---	11.5	6.5	9.0	9.0	7.0	8.0	---	---	---
MONTH	14.5	4.0	6.9	15.0	4.5	8.1	14.5	5.0	8.8	13.0	3.0	7.2

15300300 ILIAMNA RIVER NEAR PEDRO BAY

LOCATION.--Lat 59°45'31", long 153°50'41", in NE¹/₄ SE¹/₄ sec. 10, T. 5 S., R. 27 W. (Iliamna D-3 quad), Lake and Peninsula Borough, Hydrologic Unit 19030206, on left bank 100 ft downstream from bridge on road between Pile Bay and Williamsport, 9.2 mi east of Pedro Bay, and 37 mi east of Iliamna.

DRAINAGE AREA.--128 mi².

PERIOD OF RECORD.--May 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 80 ft above sea level, from topographic map.

REMARKS.--Records are good except for estimated daily discharges which are poor. GOES satellite telemetry at station. Precipitation gage at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	2940	1350	e310	293	404	134	521	2080	2410	945	931
2	1100	1880	1090	e300	286	413	134	680	1900	2860	879	822
3	902	1540	2420	e310	297	455	123	837	1700	2900	788	777
4	772	2580	2490	e300	1020	418	119	780	1610	2470	728	821
5	718	8000	1960	e290	1870	364	118	678	2200	2060	677	932
6	769	9470	3060	340	1340	378	115	547	3230	1860	649	771
7	1050	3970	2180	369	1120	374	115	470	2500	1770	678	693
8	1230	2100	1630	420	1630	343	113	498	1960	1820	732	635
9	905	1470	1470	496	1230	307	113	1490	2470	1930	745	620
10	772	1170	1360	520	1140	298	114	1960	3400	1810	746	604
11	975	996	1080	538	1120	304	115	1320	3110	1790	878	572
12	939	944	961	500	1040	285	122	1080	2950	1810	1510	540
13	2600	866	821	489	807	262	174	937	3180	1670	1890	523
14	3170	779	738	436	e600	252	166	844	3070	1750	2690	485
15	2470	707	e700	402	e500	259	159	806	2390	1730	1750	454
16	2210	631	e650	365	e450	254	168	796	2120	1550	1620	430
17	1570	636	e600	379	e400	236	154	795	2020	1220	1230	412
18	1370	593	e550	491	e380	216	150	748	1990	1240	952	397
19	1440	643	e500	422	382	205	148	725	1820	1260	995	381
20	2550	844	e480	418	359	197	166	783	1740	1180	1220	375
21	5000	860	e450	413	336	e190	262	862	2150	1110	975	358
22	8970	1680	e420	385	320	e190	311	970	2100	1060	830	341
23	7370	8570	e410	437	341	e180	283	1130	1780	1080	742	327
24	4620	4870	e400	409	390	e180	282	1310	1720	2020	708	321
25	3750	2520	e390	330	364	e180	318	1300	2870	2290	849	313
26	3990	2690	e380	311	406	e170	363	1420	2550	1570	1480	308
27	2350	1910	e370	293	420	e160	390	2030	2540	1170	1370	337
28	1770	1300	e360	283	415	e160	429	2280	2130	1120	1490	489
29	2730	1290	e350	283	---	e150	451	1970	1830	1180	1970	1850
30	2830	1940	e330	277	---	145	470	2010	1950	1050	1400	4610
31	3240	---	e320	287	---	145	---	2060	---	974	1100	---
TOTAL	75592	70389	30270	11803	19256	8074	6279	34637	69060	51714	35216	21429
MEAN	2438	2346	976	381	688	260	209	1117	2302	1668	1136	714
MAX	8970	9470	3060	538	1870	455	470	2280	3400	2900	2690	4610
MIN	718	593	320	277	286	145	113	470	1610	974	649	308
AC-FT	149900	139600	60040	23410	38190	16010	12450	68700	137000	102600	69850	42500
CFSM	19.1	18.3	7.63	2.97	5.37	2.03	1.64	8.73	18.0	13.0	8.88	5.58
IN.	21.97	20.46	8.80	3.43	5.60	2.35	1.82	10.07	20.07	15.03	10.23	6.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)#

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
MEAN	882	684	351	233	206	172	246	1091	2510	1695	1172	1358
MAX	2438	2346	976	410	688	407	500	1594	3790	2931	1631	2178
(WY)	2003	2003	2003	2002	2003	1998	1998	2002	1998	2001	1999	1999
MIN	289	161	84.5	75.2	61.6	60.6	87.8	752	1716	788	692	627
(WY)	1997	1997	1997	1998	1998	1999	1999	2001	1996	1997	1997	1996

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1996 - 2003#

ANNUAL TOTAL	432953	433719		
ANNUAL MEAN	1186	1188		
HIGHEST ANNUAL MEAN			913	
LOWEST ANNUAL MEAN			1188	2003
HIGHEST DAILY MEAN	9470	Nov 6	622	1997
LOWEST DAILY MEAN	a50	Apr 19	12300	Jun 8 1998
ANNUAL SEVEN-DAY MINIMUM	53	Apr 15	c38	Jan 5 1997
MAXIMUM PEAK FLOW			40	Jan 2 1997
MAXIMUM PEAK STAGE			14800	Jun 8 1998
ANNUAL RUNOFF (AC-FT)	858800	860300	71.82	Jun 8 1998
ANNUAL RUNOFF (CFSM)	9.27	9.28	661700	
ANNUAL RUNOFF (INCHES)	125.83	126.05	7.14	
10 PERCENT EXCEEDS	2680	2490	96.96	
50 PERCENT EXCEEDS	807	795	2260	
90 PERCENT EXCEEDS	70	253	498	
			85	

See Period of Record; partial year used in monthly statistics
a From Apr. 19-21
b From Apr. 8-9
c From Jan. 5-6, 1997
e Estimated

15302000 NUYAKUK RIVER NEAR DILLINGHAM

LOCATION.--Lat 59°56'08", long 158°11'16", in NE¹/₄ NE¹/₄ sec. 10, T.3 S., R.52 W. (Dillingham D-6 quad), Hydrologic Unit 19030301, on the left bank 350 ft downstream from outlet of Tikchik Lake, about 0.6 mi upstream from unnamed tributary entering from left bank and 62 mi north of Dillingham.

DRAINAGE AREA.--1,490 mi², approximately.

PERIOD OF RECORD.--May 1953 to September 1996 and July 2002 to September 2003 (discontinued).

REVISED RECORDS.--WRD-Alaska 1972; 1971.

GAGE.--Water-stage recorder. Elevation of gage is 325 ft above sea level from topographic map. Prior to Oct.8, 1983, at site 650 ft downstream at different datum, but datum was 2.00 ft higher from May 1953 to Oct. 1. 1957.

REMARKS.--Records good, except for estimated daily discharges, which are poor. GOES satellite telemetry at station. Discharge affected by storage in Tikchik Lake, Nuyakuk Lake, Lake Chauekuktuli, and other smaller lakes covering over 170 mi² of the basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6090	13600	11000	e7100	e3900	e3900	e2400	e2800	7150	14800	9450	7420
2	6090	13800	10700	e6900	e3900	e3900	e2400	e2900	7510	14800	9240	7320
3	6100	13900	10800	e6700	e3800	e4000	e2400	e3000	7840	14800	9000	7180
4	6100	13600	10900	e6500	e3800	e4000	e2300	e3100	8210	14500	8770	7090
5	6080	14300	11000	e6300	e3900	e4000	e2300	e3200	8620	14300	8570	7040
6	6190	14900	11800	e6100	e4000	e4000	e2300	e3400	9190	14000	8360	6970
7	6240	15700	12700	e6000	e4000	e3900	e2300	e3600	9590	13900	8180	6850
8	6240	15900	13400	e5900	e4100	e3800	e2200	e3800	9910	13600	8030	6710
9	6150	15600	14100	e5800	e4200	e3700	e2200	4110	10700	13200	7880	6560
10	5980	15400	14700	e5800	e4300	e3600	e2200	4310	11600	13100	7650	6480
11	6110	15100	15000	e5800	e4300	e3600	e2200	4390	12200	12900	7570	6310
12	6330	14800	15000	e5800	e4400	e3500	e2200	4430	12700	12600	7630	6180
13	6300	14400	e14500	e5600	e4400	e3500	e2200	4490	13300	12500	7660	6040
14	6840	13900	e14000	e5500	e4400	e3400	e2200	4600	13900	12200	7820	5970
15	7370	13500	e13000	e5400	e4300	e3300	e2200	4600	14300	11900	8070	5780
16	7810	13100	e12500	e5300	e4300	e3200	e2200	4600	14700	11700	8060	5640
17	8080	12700	e12000	e5200	e4200	e3200	e2200	4570	15100	11600	7910	5520
18	8330	12500	e11500	e5100	e4200	e3100	e2300	4570	15300	11200	7800	5440
19	8570	12100	e11000	e5000	e4100	e3100	e2300	4640	15500	11300	7780	5280
20	8620	11800	e10600	e4900	e4100	e3000	e2300	4740	15600	11300	8100	5180
21	8620	11500	e10300	e4800	e4100	e3000	e2300	4850	15800	11000	8060	4990
22	8710	11300	e10000	e4700	e4000	e2900	e2400	4970	15800	10700	7960	4850
23	9410	11200	e9600	e4600	e4000	e2800	e2400	5130	15300	10300	7850	4660
24	9560	11300	e9300	e4500	e4000	e2800	e2400	5280	15500	10200	7780	4600
25	9900	11400	e8900	e4400	e3900	e2700	e2500	5360	15400	10100	7610	4430
26	10700	11600	e8600	e4300	e3900	e2700	e2500	5380	15300	9990	7590	4320
27	11000	11400	e8300	e4200	e3900	e2600	e2600	5560	15400	9770	7540	4290
28	11100	11300	e8000	e4200	e3900	e2600	e2600	5860	15300	9820	7580	4210
29	11300	11500	e7800	e4100	---	e2500	e2700	6120	15200	9800	7600	4180
30	12200	11300	e7600	e4100	---	e2500	e2700	6340	15000	9700	7530	4130
31	13100	---	e7300	e4000	---	e2400	---	6720	---	9600	7460	---
TOTAL	251220	394400	345900	164600	114300	101200	70400	141420	386920	371180	248090	171620
MEAN	8104	13150	11160	5310	4082	3265	2347	4562	12900	11970	8003	5721
MAX	13100	15900	15000	7100	4400	4000	2700	6720	15800	14800	9450	7420
MIN	5980	11200	7300	4000	3800	2400	2200	2800	7150	9600	7460	4130
AC-FT	498300	782300	686100	326500	226700	200700	139600	280500	767500	736200	492100	340400
CFSM	5.44	8.82	7.49	3.56	2.74	2.19	1.57	3.06	8.66	8.04	5.37	3.84
IN.	6.27	9.85	8.64	4.11	2.85	2.53	1.76	3.53	9.66	9.27	6.19	4.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003, BY WATER YEAR (WY)

MEAN	7769	5200	3390	2519	2122	1859	1797	4493	15300	13970	8978	8126
MAX	13350	13150	11160	5310	4082	3265	2692	11320	23290	26220	24190	17070
(WY)	1992	2003	2003	2003	2003	2003	1993	1978	1969	1977	1977	1989
MIN	3816	2570	1848	1397	1252	990	800	1719	10360	6794	3855	4099
(WY)	1969	1969	1964	1964	1964	1976	1960	1964	1954	1954	1957	1984

SUMMARY STATISTICS

FOR 2003 WATER YEAR

WATER YEARS 1953 - 2003#

ANNUAL TOTAL	2761250											
ANNUAL MEAN	7565									6330		
HIGHEST ANNUAL MEAN										9470		1977
LOWEST ANNUAL MEAN										4236		1954
HIGHEST DAILY MEAN					15900		Nov 8			32100	Jul 2	1977
LOWEST DAILY MEAN					a2200		Apr 8			b770	Apr 16	1960
ANNUAL SEVEN-DAY MINIMUM					2200		Apr 8			770	Apr 16	1960
MAXIMUM PEAK FLOW					16000		Nov 8			32200	Jul 2	1977
MAXIMUM PEAK STAGE					9.07		Nov 8			c10.49	Jul 2	1977
INSTANTANEOUS LOW FLOW										770	Apr 16	1960
ANNUAL RUNOFF (AC-FT)	5477000									4586000		
ANNUAL RUNOFF (CFSM)					5.08					4.25		
ANNUAL RUNOFF (INCHES)					68.94					57.72		
10 PERCENT EXCEEDS	14000									14300		
50 PERCENT EXCEEDS	6700									4400		
90 PERCENT EXCEEDS	2700									1700		

- # See Period of Record
- a Apr. 8-17
- b Apr. 16-30, 1960
- c Site and datum then in use
- e Estimated

15303700 TATALINA RIVER NEAR TAKOTNA

LOCATION.--Lat 62°53'06", long 155°56'22", in NW¹/₄ NE¹/₄ sec. 12, T.32 N., R.36 W. (McGrath D-6 quad), Hydrologic Unit 19030405, at downstream side of bridge on right bank, 1.2 mi southeast of Tatalina Airstrip, and 8.1 mi southeast of Takotna.

DRAINAGE AREA.--76.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1987 to current year (no winter record), except May only in 1989, and annual maximum in water year 1991.

GAGE.--Water-stage recorder, non-recording gage, and crest-stage gage. Elevation of gage is 450 ft above sea level, from topographic map. Prior to May 9, 1990 at site 20 ft downstream at same datum.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Precipitation gage and air temperature recorder at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft³/s, July 8, 1998, gage-height 10.97 ft; maximum gage height 11.46 ft, 1996, date and time unknown, backwater from ice, discharge not determined; minimum discharge not determined, occurs during winter.

EXTREMES FOR CURRENT PERIOD.-- May 2003 to September 2003: maximum discharge during period, 902 ft³/s, July 28, gage height 9.60 ft. Minimum discharge not determined, occurs during winter.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e530	189	92	246	98
2	---	---	---	---	---	---	---	e500	470	427	217	109
3	---	---	---	---	---	---	---	e520	309	417	194	95
4	---	---	---	---	---	---	---	e470	225	234	179	116
5	---	---	---	---	---	---	---	e420	193	183	162	129
6	---	---	---	---	---	---	---	e380	176	167	147	105
7	---	---	---	---	---	---	---	e320	167	159	135	92
8	---	---	---	---	---	---	---	e370	154	140	136	86
9	---	---	---	---	---	---	---	e450	143	127	124	81
10	---	---	---	---	---	---	---	e420	153	121	114	77
11	---	---	---	---	---	---	---	e360	173	122	109	74
12	---	---	---	---	---	---	---	e320	198	147	132	74
13	---	---	---	---	---	---	---	e280	166	122	137	74
14	---	---	---	---	---	---	---	e250	139	107	176	69
15	---	---	---	---	---	---	---	e220	124	101	167	e67
16	---	---	---	---	---	---	---	e200	116	101	205	e66
17	---	---	---	---	---	---	---	e180	110	93	165	e65
18	---	---	---	---	---	---	---	e172	105	88	140	e64
19	---	---	---	---	---	---	---	168	106	82	131	e63
20	---	---	---	---	---	---	---	158	117	78	119	e62
21	---	---	---	---	---	---	---	153	127	73	109	e61
22	---	---	---	---	---	---	---	144	114	70	101	e60
23	---	---	---	---	---	---	---	130	102	70	97	e59
24	---	---	---	---	---	---	---	121	97	93	95	e58
25	---	---	---	---	---	---	---	114	92	90	102	e57
26	---	---	---	---	---	---	---	115	91	88	117	56
27	---	---	---	---	---	---	---	219	87	494	108	55
28	---	---	---	---	---	---	---	284	85	751	97	55
29	---	---	---	---	---	---	---	181	82	346	91	70
30	---	---	---	---	---	---	---	158	81	312	89	70
31	---	---	---	---	---	---	---	153	---	329	90	---
TOTAL	---	---	---	---	---	---	---	8460	4491	5824	4231	2267
MEAN	---	---	---	---	---	---	---	273	150	188	136	75.6
MAX	---	---	---	---	---	---	---	530	470	751	246	129
MIN	---	---	---	---	---	---	---	114	81	70	89	55
AC-FT	---	---	---	---	---	---	---	16780	8910	11550	8390	4500
CFSM	---	---	---	---	---	---	---	3.55	1.95	2.44	1.77	0.98
IN.	---	---	---	---	---	---	---	4.09	2.17	2.82	2.05	1.10

e Estimated

SOUTHWEST ALASKA

15303700 TATALINA RIVER NEAR TAKOTNA—Continued

WATER TEMPERATURE (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	6.0	3.0	4.5	9.0	8.5	9.0	6.5	5.5	6.0	7.5	6.5	7.0
2	3.0	2.5	3.0	8.5	7.0	7.5	6.5	5.0	6.0	7.0	6.5	7.0
3	5.5	3.0	4.0	7.0	6.0	6.5	6.5	5.5	6.0	6.5	5.0	5.5
4	6.0	4.0	5.0	8.5	6.5	7.5	6.5	5.0	5.5	6.0	5.0	5.5
5	6.0	5.0	5.5	8.5	7.5	8.0	7.0	5.5	6.0	6.0	5.0	5.5
6	5.5	4.5	5.0	8.5	7.5	8.0	7.5	6.0	6.5	5.5	4.5	5.0
7	6.0	5.0	5.5	9.5	7.0	8.0	7.5	6.5	7.0	5.0	4.0	4.5
8	6.0	5.0	5.5	10.0	8.0	9.0	8.5	7.0	7.5	4.5	3.0	4.0
9	6.0	5.5	6.0	10.5	8.5	9.5	9.0	7.5	8.0	4.5	3.0	3.5
10	6.5	5.5	6.0	10.0	8.5	9.0	9.0	7.0	8.0	4.5	3.0	3.5
11	7.5	6.0	7.0	8.5	8.0	8.0	9.5	8.5	9.0	4.5	3.5	4.0
12	8.0	6.5	7.0	9.0	7.0	8.0	9.0	8.5	8.5	5.0	4.5	5.0
13	8.5	6.5	7.5	10.5	8.0	9.0	8.5	8.0	8.0	5.0	3.5	4.0
14	8.5	6.5	7.5	10.5	9.5	10.0	8.5	7.5	8.0	3.5	2.0	2.5
15	9.0	6.5	8.0	10.0	8.5	9.0	8.5	8.0	8.5	2.0	0.5	1.0
16	9.0	8.0	8.5	8.5	7.5	8.0	8.0	7.0	7.5	2.0	0.5	1.0
17	10.0	7.5	8.5	7.5	6.0	7.0	7.0	6.0	6.5	1.5	0.5	1.0
18	9.0	7.5	8.5	9.5	6.5	8.0	6.0	5.5	6.0	1.0	0.0	0.5
19	9.5	7.5	8.5	11.0	8.0	9.5	6.5	5.5	6.0	0.5	0.0	0.0
20	9.0	8.0	8.5	11.0	8.5	9.5	6.5	5.0	6.0	0.0	0.0	0.0
21	9.0	7.5	8.0	11.5	9.0	10.5	7.5	5.5	6.5	0.5	0.0	0.0
22	9.5	7.5	8.5	11.0	9.0	10.0	7.0	5.5	6.0	0.0	0.0	0.0
23	10.0	8.0	9.0	10.0	9.0	9.5	6.5	6.0	6.0	0.0	0.0	0.0
24	10.0	8.0	9.0	9.0	8.0	8.5	7.0	6.0	6.5	0.0	0.0	0.0
25	9.5	7.5	8.5	10.0	8.0	9.0	7.0	6.5	7.0	0.0	0.0	0.0
26	9.0	7.0	8.0	9.5	8.0	9.0	7.5	6.5	7.0	0.5	0.0	0.0
27	9.0	7.5	8.0	8.0	6.0	7.5	7.5	6.0	7.0	1.0	0.0	0.5
28	9.0	7.0	8.0	6.5	5.5	6.0	7.0	5.5	6.5	1.0	0.0	0.5
29	8.5	8.0	8.5	7.0	5.5	6.5	6.5	5.5	6.0	1.5	0.5	1.0
30	9.5	7.5	8.5	7.0	6.0	6.5	6.5	5.5	6.0	2.5	1.5	2.0
31	---	---	---	6.5	5.5	6.0	7.0	6.0	6.5	---	---	---
MONTH	10.0	2.5	7.1	11.5	5.5	8.3	9.5	5.0	6.8	7.5	0.0	2.5

15303900 KUSKOKWIM RIVER AT LISKYS CROSSING NEAR STONY RIVER

LOCATION.--Lat 62°03'07", long 156°12'38", in SW¹/₄ NE¹/₄ SE¹/₄ sec. 27, T. 23 N., R. 38 W. (Iditarod A-1 quad), Hydrologic Unit 19030405, on the downstream point of the first channel island located 0.25 mi above Lisky's house site (historic, house since destroyed), 22 mi northeast of the village of Stony River.

DRAINAGE AREA.--15,600 mi², approximately.

PERIOD OF RECORD.--May 1996 to current year (no winter record).

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above sea level from topographic map.

REMARKS.-- Rain gage at station. GOES satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed 34.11 ft, August 1, 2003, but may have been higher during a period of missing record. Minimum gage height observed 22.94 ft, October 11, 1997, but may have been lower during a period of missing record.

EXTREMES FOR CURRENT PERIOD.--October 1-19, 2002, June 6 to September 30, 2003; Maximum gage height 34.11 ft, August 1; minimum gage height 24.82 ft, September 28 and 30.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.45	---	---	---	---	---	---	---	---	26.91	34.06	27.20
2	26.84	---	---	---	---	---	---	---	---	27.00	33.88	27.04
3	27.11	---	---	---	---	---	---	---	---	27.35	33.60	26.95
4	27.14	---	---	---	---	---	---	---	---	28.16	33.19	27.10
5	27.04	---	---	---	---	---	---	---	---	29.55	32.57	27.36
6	26.87	---	---	---	---	---	---	---	28.55	30.81	31.74	27.55
7	26.66	---	---	---	---	---	---	---	28.14	30.89	30.92	27.64
8	26.47	---	---	---	---	---	---	---	27.60	30.23	30.27	27.69
9	26.25	---	---	---	---	---	---	---	27.22	29.74	29.69	27.60
10	26.10	---	---	---	---	---	---	---	27.05	29.50	29.25	27.38
11	26.10	---	---	---	---	---	---	---	26.96	29.29	28.96	27.15
12	26.13	---	---	---	---	---	---	---	27.02	29.21	28.91	26.91
13	25.99	---	---	---	---	---	---	---	27.05	29.22	28.88	26.67
14	25.89	---	---	---	---	---	---	---	27.12	29.35	29.02	26.42
15	25.82	---	---	---	---	---	---	---	27.63	29.45	29.45	26.24
16	25.83	---	---	---	---	---	---	---	28.38	29.24	30.09	26.11
17	25.80	---	---	---	---	---	---	---	28.82	28.88	30.32	25.95
18	25.60	---	---	---	---	---	---	---	28.70	28.73	30.20	25.78
19	25.44	---	---	---	---	---	---	---	28.56	29.01	30.19	25.64
20	---	---	---	---	---	---	---	---	28.46	29.74	30.37	25.52
21	---	---	---	---	---	---	---	---	28.28	29.56	30.14	25.50
22	---	---	---	---	---	---	---	---	28.16	28.75	29.51	25.41
23	---	---	---	---	---	---	---	---	28.15	28.23	28.85	25.27
24	---	---	---	---	---	---	---	---	28.12	28.04	28.32	25.11
25	---	---	---	---	---	---	---	---	28.08	27.94	27.96	25.05
26	---	---	---	---	---	---	---	---	27.94	27.90	27.68	24.98
27	---	---	---	---	---	---	---	---	27.77	28.20	27.42	24.91
28	---	---	---	---	---	---	---	---	27.73	29.15	27.29	24.84
29	---	---	---	---	---	---	---	---	27.51	30.50	27.35	24.85
30	---	---	---	---	---	---	---	---	27.18	32.38	27.41	24.85
31	---	---	---	---	---	---	---	---	---	33.81	27.32	---
MEAN	---	---	---	---	---	---	---	---	---	29.25	29.83	26.22
MAX	---	---	---	---	---	---	---	---	---	33.81	34.06	27.69
MIN	---	---	---	---	---	---	---	---	---	26.91	27.29	24.84

15304000 KUSKOKWIM RIVER AT CROOKED CREEK

LOCATION.--Lat 61°52'16", long 158°06'03", in NE¹/₄ NE¹/₄ sec. 32, T. 21 N., R. 48 W. (Sleetmute D-6 quad), Hydrologic Unit 19030501, on right bank at village of Crooked Creek, 0.1 mi upstream from Crooked Creek.

DRAINAGE AREA.--31,100 mi², approximately.

PERIOD OF RECORD.--June 1951 to September 1994, October 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 200 ft above sea level, from topographic map. Prior to August 6, 1977, non-recording gage at site 1,600 ft upstream at same datum. From August 6, 1977, to September 30, 1991, water-stage recorder at site 2,300 ft upstream at same datum. From October 1, 1991 to September 30, 1994, and October 1, 1995 to August 7, 1997 non-recording gage.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67700	68200	e39000	e26000	e20000	e19000	e14000	e64000	52000	55300	127000	67100
2	70700	68700	e38000	e26000	e20000	e19000	e14000	e67000	59800	58600	124000	66400
3	70100	67300	e37000	e26000	e20000	e19000	e14000	e70000	75800	66600	121000	65500
4	68200	65200	e36000	e26000	e19000	e18000	e14000	e75000	80100	80300	115000	64900
5	65500	62900	e35000	e25000	e19000	e18000	e14000	e80000	81600	89500	107000	65300
6	63200	61200	e35000	e25000	e19000	e17000	e15000	e85000	78700	92000	99500	66900
7	61900	57800	e34000	e25000	e19000	e17000	e15000	e90000	76700	92000	92000	67400
8	61300	54400	e34000	e25000	e19000	e17000	e16000	e95000	73300	89200	e86500	65900
9	62000	50200	e33000	e24000	e19000	e16000	e16000	e100000	69800	83500	e83000	64100
10	63300	46500	e33000	e24000	e20000	e16000	e17000	e100000	66700	78500	e80000	62000
11	60700	e43000	e32000	e24000	e21000	e16000	e17000	e100000	65400	76200	e78500	60000
12	58900	e41000	e32000	e24000	e22000	e16000	e18000	e98000	68000	75000	e78000	57700
13	60900	e38000	e31000	e24000	e22000	e15000	e19000	e94000	71300	74600	e78500	55600
14	60100	e36000	e31000	e23000	e22000	e15000	e20000	e90000	70900	74500	e82000	53500
15	58400	e34000	e31000	e23000	e21000	e15000	e21000	e84000	70400	73200	89100	51500
16	57100	e32000	e30000	e23000	e20000	e15000	e23000	e78000	70700	72300	93300	49600
17	56600	e31000	e30000	e23000	e19000	e15000	e24000	e73000	71700	71700	98300	47900
18	57500	e30000	e30000	e23000	e19000	e15000	e25000	e68000	72400	73100	102000	46100
19	57700	e30000	e30000	e22000	e18000	e15000	e27000	63100	72100	73300	98600	44700
20	55500	e30000	e29000	e22000	e18000	e15000	e29000	55400	73100	72200	93800	43400
21	54200	e31000	e29000	e22000	e17000	e15000	e31000	52800	70900	72100	91500	42300
22	50700	e31000	e29000	e22000	e17000	e15000	e33000	51200	69200	70600	87500	41000
23	47500	e32000	e28000	e22000	e17000	e14000	e36000	49100	67700	66500	82200	39900
24	46900	e33000	e28000	e21000	e17000	e14000	e40000	48800	66300	63700	76900	39200
25	52800	e34000	e28000	e21000	e17000	e14000	e45000	48800	65800	62900	72700	38100
26	64800	e35000	e28000	e21000	e18000	e14000	e55000	48600	64200	64100	70000	37300
27	70300	e36000	e27000	e21000	e18000	e14000	e65000	48500	62300	65200	69800	36700
28	72200	e37000	e27000	e21000	e18000	e14000	e62000	49400	60600	73100	70000	36400
29	72100	e38000	e27000	e20000	---	e14000	e60000	49200	58600	90300	69500	36800
30	71400	e39000	e27000	e20000	---	e14000	e62000	49300	57100	108000	69100	38000
31	69600	---	e26000	e20000	---	e14000	---	50500	---	121000	68000	---
TOTAL	1909800	1293400	964000	714000	535000	484000	861000	2175700	2063200	2379100	2754300	1551200
MEAN	61610	43110	31100	23030	19110	15610	28700	70180	68770	76750	88850	51710
MAX	72200	68700	39000	26000	22000	19000	65000	100000	81600	121000	127000	67400
MIN	46900	30000	26000	20000	17000	14000	14000	48500	52000	55300	68000	36400
AC-FT	3788000	2565000	1912000	1416000	1061000	960000	1708000	4316000	4092000	4719000	5463000	3077000
CFSM	1.98	1.39	1.00	0.74	0.61	0.50	0.92	2.26	2.21	2.47	2.86	1.66
IN.	2.28	1.55	1.15	0.85	0.64	0.58	1.03	2.60	2.47	2.85	3.29	1.86

e Estimated

15304000 KUSKOKWIM RIVER AT CROOKED CREEK—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY) #

MEAN	44580	21730	15550	13160	11730	10780	14670	80170	82620	68050	76080	68880
MAX	102000	43110	31100	23030	20710	19550	41000	161700	235100	119500	169800	150900
(WY)	1994	2003	2003	2003	1991	1991	1967	1957	1964	1980	1963	1951
MIN	22650	12730	10000	8400	6900	6100	8600	22130	33880	40910	41840	30550
(WY)	1979	1981	1957	1966	1966	1966	1953	1964	1954	1997	1957	1976

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003#		
ANNUAL TOTAL	16093600		17684700				
ANNUAL MEAN	44090		48450		42350		
HIGHEST ANNUAL MEAN					62120		
LOWEST ANNUAL MEAN					28600		
HIGHEST DAILY MEAN	170000	May 16	127000	Aug 1	391000	Jun 5	1964
LOWEST DAILY MEAN	a8000	Apr 14	b14000	Mar 23	c6100	Mar 1	1966
ANNUAL SEVEN-DAY MINIMUM	8000	Apr 14	14000	Mar 23	6100	Mar 1	1966
MAXIMUM PEAK FLOW			129000	Aug 2	392000	Jun 5	1964
MAXIMUM PEAK STAGE			11.87	Aug 2			
MAXIMUM PEAK STAGE			d18.86	Apr 27	f25.74	Jun 5	1964
INSTANTANEOUS LOW FLOW					6100	Mar 1	1966
ANNUAL RUNOFF	31920000		35080000		30680000		
ANNUAL RUNOFF (AC-FT)	1.42		1.56		1.36		
ANNUAL RUNOFF (INCHES)	19.25		21.15		18.50		
10 PERCENT EXCEEDS	76300		82100		93200		
50 PERCENT EXCEEDS	46500		47900		26000		
90 PERCENT EXCEEDS	8400		17000		10000		

See Period of Record, partial years used in monthly computations

a Apr. 14-24

b Mar. 23 - Apr. 5

c Mar. 1-31, 1966

d From floodmarks, backwater from ice

f From floodmarks, backwater from ice, at different site, same datum

15304000 KUSKOKWIM RIVER AT CROOKED CREEK—Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1951 - 2002#	
ANNUAL TOTAL	15964800		14196600			
ANNUAL MEAN	43740		38890		42230	
HIGHEST ANNUAL MEAN					62120	1963
LOWEST ANNUAL MEAN					28600	1997
HIGHEST DAILY MEAN	124000	May 22	170000	May 16	391000	Jun 5 1964
LOWEST DAILY MEAN	a9000	Apr 1	b8000	Apr 14	c6100	Mar 1 1966
ANNUAL SEVEN-DAY MINIMUM	9140	Mar 30	8000	Apr 14	6100	Mar 1 1966
MAXIMUM PEAK FLOW			d181000	May 16	392000	Jun 5 1964
MAXIMUM PEAK STAGE			d15.66	May 16		
MAXIMUM PEAK STAGE			f22.61	May 14	g25.74	Jun 5 1964
ANNUAL RUNOFF (AC-FT)	31670000		28160000		30590000	
ANNUAL RUNOFF (CFSM)	1.41		1.25		1.36	
ANNUAL RUNOFF (INCHES)	19.10		16.98		18.45	
10 PERCENT EXCEEDS	102000		76300		93700	
50 PERCENT EXCEEDS	27000		26000		26000	
90 PERCENT EXCEEDS	10000		8400		10000	

See Period of Record, partial years used in monthly computations
a Apr. 1-5
b Apr. 14-24
c Mar. 1-31, 1966
d Maximum observed, but may have been higher during period of missing record
e Estimated
f From floodmarks, backwater from ice
g From floodmarks, backwater from ice, at different site, same datum

15304060 KUSKOKWIM RIVER AT ANIAK

LOCATION.--Lat 61°35'14", long 159°32'54", in SE¹/₄ SE¹/₄ sec. 2, T. 17 N., R. 57 W. (Russian Mission C-2 quad), Hydrologic unit 19030502, on the left bank near the NW corner of the west end of the runway in the village of Aniak.

WATER-STAGE RECORDS

PERIOD OF RECORD.--May 1996 to September 2003 (discontinued) (no winter record).

GAGE.--Water-stage recorder. A supplementary stage gage was installed April 23, 1998 approximately 1 mi upstream from gage of record. This gage records water elevation at the Aniak city dike system during ice break-up events. Elevation of the gage is 75 ft above sea level from topographic map.

REMARKS.--GOES satellite telemetry at station. Supplementary stage records are available from the computer files of the Alaska Science Center, Water Resources Office.

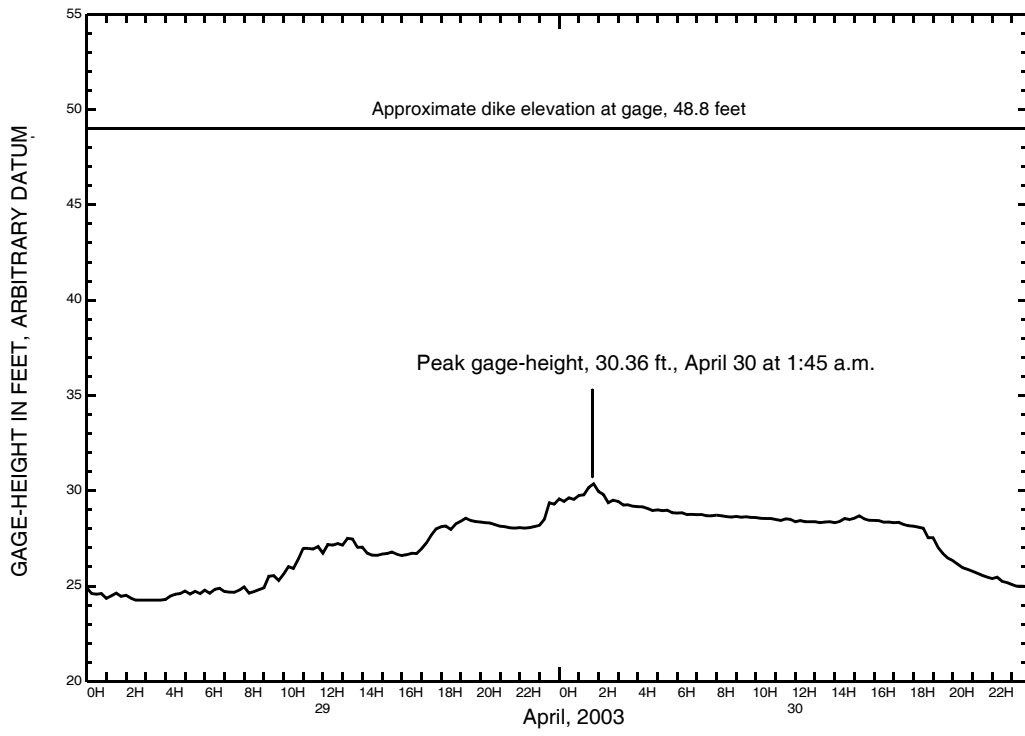
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed 26.97 ft, May 18, 2002, but may have been higher during periods of missing record. Minimum gage height observed 14.37 ft, October 27, 2000, but may have been lower during periods of missing record.

EXTREMES FOR CURRENT PERIOD.--October 1-17, 2002 and May 4 to September 30, 2003: Maximum gage height observed 22.92 ft, August 1, 2, but may have been higher during periods of missing record. Minimum gage height observed 16.15 ft, Sep. 29, but may have been lower during periods of missing record.

GAGE-HEIGHT, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.95	---	---	---	---	---	---	---	18.83	18.43	22.76	19.38
2	19.31	---	---	---	---	---	---	---	19.18	18.52	22.86	19.34
3	19.36	---	---	---	---	---	---	---	20.35	19.13	22.69	19.25
4	19.22	---	---	---	---	---	---	20.85	20.86	19.75	22.35	19.14
5	19.06	---	---	---	---	---	---	20.72	20.77	20.62	21.93	19.11
6	18.85	---	---	---	---	---	---	20.69	20.71	21.01	21.53	19.14
7	18.70	---	---	---	---	---	---	20.64	20.54	21.07	21.10	19.22
8	18.60	---	---	---	---	---	---	20.16	20.25	20.99	20.72	19.18
9	18.55	---	---	---	---	---	---	19.90	19.97	20.69	20.36	19.04
10	18.68	---	---	---	---	---	---	20.31	19.76	20.29	19.86	18.87
11	18.62	---	---	---	---	---	---	20.57	19.58	20.01	19.52	18.72
12	18.46	---	---	---	---	---	---	20.64	19.58	19.89	19.61	18.54
13	18.38	---	---	---	---	---	---	21.00	19.79	19.81	19.77	18.34
14	18.45	---	---	---	---	---	---	20.92	19.92	19.76	20.30	18.16
15	18.49	---	---	---	---	---	---	20.44	19.81	19.67	20.89	17.98
16	18.42	---	---	---	---	---	---	20.02	19.74	19.60	21.33	17.78
17	18.35	---	---	---	---	---	---	19.51	19.76	19.52	21.53	17.60
18	---	---	---	---	---	---	---	19.12	19.80	19.47	21.74	17.44
19	---	---	---	---	---	---	---	18.77	19.95	19.59	21.77	17.29
20	---	---	---	---	---	---	---	18.53	20.13	19.52	21.47	17.32
21	---	---	---	---	---	---	---	18.48	19.97	19.42	21.26	17.35
22	---	---	---	---	---	---	---	18.43	19.70	19.43	21.10	17.29
23	---	---	---	---	---	---	---	18.46	19.49	19.20	20.68	16.99
24	---	---	---	---	---	---	---	18.29	19.33	18.87	20.22	16.75
25	---	---	---	---	---	---	---	18.34	19.17	18.73	19.90	16.71
26	---	---	---	---	---	---	---	18.26	---	18.73	19.69	16.61
27	---	---	---	---	---	---	---	18.26	---	18.82	19.59	16.64
28	---	---	---	---	---	---	---	18.47	---	19.21	19.61	16.67
29	---	---	---	---	---	---	---	18.48	---	20.16	19.57	16.74
30	---	---	---	---	---	---	---	18.51	---	21.38	19.50	16.84
31	---	---	---	---	---	---	---	18.67	---	22.21	19.42	---
MEAN	---	---	---	---	---	---	---	---	---	19.79	20.79	17.98
MAX	---	---	---	---	---	---	---	---	---	22.21	22.86	19.38
MIN	---	---	---	---	---	---	---	---	---	18.43	19.42	16.61

15304060 KUSKOKWIM RIVER AT ANIAK—Continued



River ice break-up hydrograph for Kuskokwim River at Dike (supplementary gage) at Aniak, 2003

15304060 KUSKOKWIM RIVER AT ANIAK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1998 to September 2003 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May 1998 to September 2003 (seasonal).

INSTRUMENTATION.--Electronic water temperature recorder set for 1-hour recording interval on left bank.

REMARKS.--Records represent water temperature from sensor within 0.5°C. No water temperature record December 22 - April 1 due to battery failure. No record from April 30 to June 4 when probe was out of water. No record from June 24-30 when water dropped below probe elevation. Temperature at the sensor was compared with the stream average by cross section on June 7 which found a variation of 1.5°C. The variation found between mean stream temperature and sensor temperature was usually less than 1.0°C.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum recorded, 16.5°C, July 8-10, 20, 2003, but may have been higher during periods of missing record; minimum, 0.0°C, many days during fall and winter most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 16.5°C, July 8-10, 20; minimum, 0.0°C, many days during fall and winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	STREAM WIDTH (FT) (00004)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	GAGE HEIGHT (FEET) (00065)	TEMPERATURE WATER (DEG C) (00010)	SAM-PLING METHOD, CODES (82398)
JUN						
07...	1151	1800	10.0	20.56	9.5	10
07...	1152	1800	400	20.56	10.5	10
07...	1153	1800	800	20.56	10.5	10
07...	1154	1800	1200	20.56	11.0	10
07...	1155	1800	1600	20.56	11.0	10

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	7.0	6.0	6.5	3.5	3.0	3.5	0.0	0.0	0.0	---	---	---
2	6.0	5.5	6.0	3.0	2.5	2.5	0.0	0.0	0.0	---	---	---
3	5.5	4.5	5.0	2.5	2.0	2.0	0.0	0.0	0.0	---	---	---
4	4.5	4.0	4.0	2.5	2.0	2.0	0.0	0.0	0.0	---	---	---
5	4.0	3.5	3.5	3.0	2.5	3.0	0.0	0.0	0.0	---	---	---
6	4.0	3.5	4.0	3.5	3.0	3.5	0.0	0.0	0.0	---	---	---
7	5.0	4.0	4.5	3.5	3.0	3.5	0.0	0.0	0.0	---	---	---
8	5.0	4.0	4.5	3.0	2.0	2.5	0.0	0.0	0.0	---	---	---
9	4.0	3.5	4.0	2.0	1.0	1.0	0.0	0.0	0.0	---	---	---
10	4.0	3.5	4.0	1.0	1.0	1.0	0.0	0.0	0.0	---	---	---
11	5.0	4.0	4.5	1.5	1.0	1.0	0.0	0.0	0.0	---	---	---
12	5.5	5.0	5.0	1.5	1.5	1.5	0.0	0.0	0.0	---	---	---
13	6.0	5.0	5.5	1.5	1.5	1.5	0.0	0.0	0.0	---	---	---
14	6.0	6.0	6.0	1.5	0.0	1.0	0.0	0.0	0.0	---	---	---
15	6.0	5.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
16	5.0	4.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
17	4.5	3.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
18	3.5	2.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
19	2.0	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
20	0.5	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	0.5	0.0	0.0	0.0	0.0	0.0	---	---	---	---	---	---
23	1.5	0.5	1.0	0.0	0.0	0.0	---	---	---	---	---	---
24	2.0	1.0	1.5	0.0	0.0	0.0	---	---	---	---	---	---
25	3.0	2.0	2.5	0.0	0.0	0.0	---	---	---	---	---	---
26	3.0	3.0	3.0	0.0	0.0	0.0	---	---	---	---	---	---
27	3.0	2.5	2.5	0.0	0.0	0.0	---	---	---	---	---	---
28	2.5	2.0	2.0	0.0	0.0	0.0	---	---	---	---	---	---
29	3.0	2.0	2.5	0.0	0.0	0.0	---	---	---	---	---	---
30	4.0	3.0	3.5	0.0	0.0	0.0	---	---	---	---	---	---
31	4.0	3.5	4.0	---	---	---	---	---	---	---	---	---
MONTH	7.0	0.0	3.5	3.5	0.0	1.0	---	---	---	---	---	---

15304060 KUSKOKWIM RIVER AT ANIAK—Continued

TEMPERATURE, WATER (DEGREES CELSIUS), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	---	---	---
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	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
7	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
8	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
9	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
10	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
11	---	---	---	---	---	---	0.0	0.0	0.0	---	---	---
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	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	11.5	---	10.5	13.0	12.5	13.0	---	---	11.5
2	---	---	---	11.0	10.0	10.5	12.5	12.0	12.5	---	---	11.0
3	---	---	---	11.0	10.0	10.5	12.5	12.0	12.5	---	---	10.5
4	---	---	---	13.5	11.0	12.0	13.0	12.0	12.5	---	---	10.5
5	10.0	9.0	9.5	14.0	13.0	13.5	13.5	12.5	13.0	---	---	10.5
6	9.0	8.5	9.0	13.5	13.0	13.5	13.5	13.0	13.0	---	---	10.0
7	9.5	9.0	9.0	15.0	13.0	14.0	14.0	13.0	13.5	---	---	10.0
8	9.5	9.0	9.0	16.5	14.5	15.5	14.5	13.5	14.0	---	---	10.0
9	9.5	9.0	9.0	16.5	15.5	16.0	15.5	14.5	15.0	---	---	9.5
10	9.5	9.0	9.0	16.5	14.5	15.5	15.5	15.0	15.0	---	---	9.5
11	11.0	9.5	10.0	14.5	14.0	14.0	---	---	15.0	---	---	9.5
12	11.5	10.0	11.0	15.0	13.5	14.0	---	---	14.5	---	---	9.5
13	12.5	11.0	11.5	16.0	14.0	15.0	---	---	14.5	---	---	9.0
14	13.0	11.5	12.0	16.0	15.0	15.5	---	---	14.0	---	---	9.0
15	13.0	12.0	12.5	15.5	14.5	15.0	---	---	14.0	---	---	8.5
16	12.5	10.5	12.0	14.5	13.5	14.0	---	---	13.0	---	---	8.5
17	11.5	10.0	11.0	14.0	12.0	13.0	---	---	12.5	---	---	8.0
18	12.0	11.0	11.0	13.5	11.5	12.5	---	---	12.5	---	---	7.5
19	11.5	10.0	11.0	16.0	13.0	14.0	---	---	12.0	---	---	7.5
20	10.5	10.0	10.0	16.5	14.5	15.5	---	---	12.0	---	---	7.0
21	10.5	9.5	10.0	16.0	14.0	15.0	---	---	11.5	---	---	6.5
22	12.0	10.0	11.0	16.0	13.5	14.5	---	---	11.5	---	---	6.5
23	12.5	11.5	12.0	15.5	14.0	14.5	---	---	11.5	---	---	6.0
24	---	---	---	14.0	13.5	14.0	---	---	11.5	---	---	6.0
25	---	---	---	14.0	12.5	13.5	---	---	11.5	---	---	6.0
26	---	---	---	13.5	12.5	13.0	---	---	11.5	---	---	5.5
27	---	---	---	12.5	11.5	11.5	---	---	11.5	---	---	5.5
28	---	---	---	13.5	11.0	12.0	---	---	11.5	---	---	5.5
29	---	---	---	13.5	12.5	13.0	---	---	11.5	---	---	6.0
30	---	---	---	13.5	12.5	13.0	---	---	11.0	---	---	6.0
31	---	---	---	13.5	12.5	13.0	---	---	11.0	---	---	---
MONTH	---	---	---	16.5	---	13.6	---	---	12.7	---	---	8.2