

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.

EXTREMES FOR WATER YEARS 1982-1986, 1996-2004.--Peak discharges above base of 1,500 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Oct. 22, 1981	u	e6000*	11.19	Sep. 05, 1996	0945	3290	10.81
Jul. 22, 1982	1200	2810	9.70	Nov. 15, 1996	1100	1860	9.27
Jul 26, 1982	1900	2520	9.50	Sep. 06, 1997	0945	1910*	27.50
Sep. 06, 1982	2100	1660	8.78	Sep. 23, 1997	0715	1660	27.31
Sep. 16, 1982	1600	1860	8.98	May 17, 1998	0300	2240	27.76
Nov. 11, 1982	u	1930*	9.03	Sep. 18, 1998	1545	3170*	28.52
Dec. 20, 1983	2200	2490	9.51	Sep. 22, 1998	0230	1610	27.26
Dec. 22, 1983a	0200	2540*	9.55	Aug. 03, 1999	u	2930*	28.34
Oct. 30, 1984	0800	2260	9.31	Jun. 02, 2000	0645	1760*	27.73
Aug. 14, 1985	0200	2340	9.40	Aug. 01, 2000	2245	1550	27.55
Sep. 18, 1985	u	3620*	10.25	Aug. 28, 2000	1430	1530	27.53
Oct. 05, 1985	2200	5200*	10.93	Oct. 24, 2000	0645	2850	28.57
Oct. 7, 1985	1200	3740	10.31	Nov. 12, 2000	1830	3060*	28.74
Nov. 08, 1985	2030	4720	10.75	Dec. 09, 2000	0415	1760	27.73
Nov. 21, 1985	1030	1590	8.72	May 20, 2002	0800	1800	27.77
Aug. 02, 1986	0630	2280	9.35	May 24, 2002	0045	2220*	28.11
Sep. 05, 1986	2400	3570	10.20	Oct. 10, 2002	0445	1490	27.49
Sep. 13, 1986	0400	4500	10.66	Dec. 28, 2003	2215	1500	27.50
Nov. 13, 1986	0330	2030*	9.14	May 23, 2004	0800	1690	27.67
Oct. 29, 1995	0515	1560	8.56	Sep. 29, 2004	1130	1840*	27.80
Jun. 24, 1996	u	4700*	11.76				

a Previously published as Dec. 20, 1983
e Estimated
u unknown

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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	295	357	e200	235	227	594	e95	208	387	331	224	302
2	253	429	e200	216	204	369	e90	206	347	324	249	278
3	205	538	e190	e200	311	268	e90	200	342	292	419	298
4	206	393	e190	184	237	222	92	203	469	292	267	240
5	459	314	e180	172	204	204	89	378	366	314	763	209
6	539	314	e180	166	e200	188	99	754	663	319	602	278
7	561	273	e170	e160	193	183	103	767	697	278	332	469
8	370	348	e170	e160	235	176	108	441	490	262	318	254
9	372	251	e160	e150	293	199	111	426	434	269	277	236
10	297	235	e150	e150	195	218	250	562	361	298	242	346
11	287	291	143	e140	187	183	152	408	371	294	234	371
12	400	258	128	e140	268	163	151	364	375	368	337	267
13	321	222	124	e140	202	161	135	369	340	309	757	220
14	260	194	122	e130	189	149	267	318	289	246	1090	199
15	310	188	121	e130	201	142	764	300	287	243	849	227
16	242	e175	e120	e130	178	148	283	398	321	505	516	193
17	264	e165	e120	e130	168	133	324	315	310	385	420	342
18	217	255	e120	e130	164	e130	242	269	313	478	452	371
19	194	219	e110	e120	180	e130	199	275	519	482	422	477
20	180	377	e110	e120	176	e125	213	353	379	400	344	377
21	172	312	e110	e120	154	e120	243	455	431	303	426	302
22	167	239	e110	e110	142	e120	213	843	777	243	624	285
23	164	260	e100	e110	137	115	189	1390	509	241	568	241
24	159	307	e100	e200	140	119	179	1240	374	703	380	238
25	158	247	e100	e400	188	117	174	786	321	623	328	213
26	152	222	389	e500	275	113	206	553	302	393	298	189
27	148	272	397	345	170	107	237	524	337	340	328	207
28	144	287	714	273	256	e105	185	512	320	307	282	249
29	431	211	781	240	379	e100	197	466	288	314	254	1290
30	374	e200	360	250	---	e100	232	401	301	263	226	593
31	412	---	277	296	---	e95	---	353	---	242	406	---
TOTAL	8713	8353	6446	5947	6053	5296	5912	15037	12020	10661	13234	9761
MEAN	281	278	208	192	209	171	197	485	401	344	427	325
MAX	561	538	781	500	379	594	764	1390	777	703	1090	1290
MIN	144	165	100	110	137	95	89	200	287	241	224	189
AC-FT	17280	16570	12790	11800	12010	10500	11730	29830	23840	21150	26250	19360
CFSM	9.10	9.01	6.73	6.21	6.75	5.53	6.38	15.7	13.0	11.1	13.8	10.5
IN.	10.49	10.06	7.76	7.16	7.29	6.38	7.12	18.10	14.47	12.83	15.93	11.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY) #

MEAN	281	296	246	165	158	145	145	252	334	339	320	346
MAX	516	530	549	318	272	218	261	575	634	528	427	538
(WY)	1986	1986	1984	1982	1982	1996	1998	2002	2000	1982	2004	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

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1982 - 2004#	
ANNUAL TOTAL	81336		107433			
ANNUAL MEAN	223		294		252	
HIGHEST ANNUAL MEAN					302	
LOWEST ANNUAL MEAN					206	
HIGHEST DAILY MEAN	781	Dec 29	1390	May 23	4000	Jun 24 1996
LOWEST DAILY MEAN	b95	Jan 8	89	Apr 5	c50	Feb 19 1982
ANNUAL SEVEN-DAY MINIMUM	99	Jan 3	93	Mar 31	51	Feb 18 1982
MAXIMUM PEAK FLOW			1840	Sep 29	de6000	Oct 22 1981
MAXIMUM PEAK STAGE			27.80	Sep 29	f11.76	Jun 24 1996
INSTANTANEOUS LOW FLOW			g		h49	Mar 13 1983
ANNUAL RUNOFF (AC-FT)	161300		213100		182800	
ANNUAL RUNOFF (CFSM)	7.21		9.50		8.16	
ANNUAL RUNOFF (INCHES)	97.92		129.34		110.93	
10 PERCENT EXCEEDS	371		493		436	
50 PERCENT EXCEEDS	191		254		204	
90 PERCENT EXCEEDS	120		122		100	

See Period of Record

b Jan. 8-9

c Feb. 19-23, 1982

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

e Estimated

f Site and datum then in use; from flood marks

g Not determined, see lowest daily mean

h Mar. 13-14, 1983

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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 July 7 and August 30. 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, July 8-10 and August 2, 2004; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 15.5°C, July 8-10 and August 2; minimum 0.0°C on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Stream width, feet (00004)	Location in X-sect. looking downstrm ft from l bank (00009)	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Temperature, air, deg C (00020)
JUL							
07...	1700	73.0	3.00	26.04	257	15.0	21.0
07...	1702	73.0	23.0	26.04	257	15.0	21.0
07...	1704	73.0	43.0	26.04	257	15.0	21.0
07...	1706	73.0	63.0	26.04	257	15.0	21.0
07...	1708	73.0	73.0	26.04	257	15.0	21.0
AUG							
30...	1745	71.0	15.0	25.88	205	9.5	12.0
30...	1747	71.0	30.0	25.88	205	9.5	12.0
30...	1749	71.0	45.0	25.88	205	9.5	12.0
30...	1751	71.0	60.0	25.88	205	9.5	12.0

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.5	6.0	7.0	8.0	6.0	6.5	0.0	0.0	0.0	2.5	0.0	1.0
2	9.5	5.0	7.0	7.0	6.0	6.5	0.0	0.0	0.0	1.5	0.0	0.5
3	9.0	5.0	7.0	6.0	4.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0
4	8.0	5.5	6.5	6.5	4.0	5.0	0.0	0.0	0.0	1.5	0.0	0.5
5	7.0	5.5	6.5	5.5	3.5	4.5	0.0	0.0	0.0	1.5	0.5	1.0
6	5.5	4.0	5.0	5.0	3.5	4.5	0.0	0.0	0.0	1.5	0.0	0.5
7	5.5	4.0	4.5	7.0	3.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0
8	6.5	3.5	4.5	7.0	3.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0
9	5.0	3.0	4.0	5.0	3.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
10	7.0	3.5	4.5	4.0	2.5	3.0	1.0	0.0	0.5	0.0	0.0	0.0
11	6.0	3.5	4.5	3.5	1.0	2.5	1.5	0.5	1.0	0.0	0.0	0.0
12	7.0	4.5	5.5	3.0	1.5	2.0	1.5	0.0	1.0	0.0	0.0	0.0
13	7.5	4.5	5.5	3.0	0.5	1.5	0.5	0.0	0.0	0.0	0.0	0.0
14	8.0	4.0	5.5	1.5	0.0	1.0	1.5	0.0	0.5	0.0	0.0	0.0
15	8.0	5.0	6.5	1.0	0.0	0.5	1.0	0.0	0.5	0.0	0.0	0.0
16	7.5	4.5	5.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	5.5	3.0	4.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	3.5	2.0	2.5	3.5	1.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
19	3.0	1.5	2.0	4.0	2.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0
20	3.0	1.5	2.0	7.0	3.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0
21	3.0	0.5	1.5	5.0	1.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
22	4.0	1.5	2.5	3.0	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
23	4.5	2.0	3.0	5.0	2.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0
24	6.5	2.0	4.0	3.5	1.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0
25	4.5	2.5	4.0	1.5	0.0	1.0	0.5	0.0	0.0	0.5	0.0	0.0
26	2.5	1.0	2.0	0.5	0.0	0.0	1.0	0.5	0.5	1.5	0.5	1.0
27	5.0	2.0	3.5	3.0	0.5	2.0	1.5	0.0	0.5	2.0	0.0	1.0
28	4.5	1.5	3.0	2.5	0.5	1.0	1.5	0.0	1.0	2.0	0.0	1.0
29	6.5	4.5	5.5	1.5	0.0	0.5	1.0	0.0	0.5	2.0	0.5	1.0
30	6.0	4.5	5.0	0.0	0.0	0.0	1.5	0.0	0.5	2.5	0.5	1.5
31	7.0	4.5	6.0	---	---	---	1.5	0.0	1.0	2.0	0.5	1.0
MONTH	9.5	0.5	4.5	8.0	0.0	2.8	1.5	0.0	0.2	2.5	0.0	0.3

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WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2.0	0.5	1.0	2.5	1.0	2.0	0.0	0.0	0.0	10.0	3.0	6.0
2	2.5	0.5	1.5	3.5	0.5	1.5	0.0	0.0	0.0	8.5	3.0	6.0
3	2.5	1.5	2.0	4.0	0.5	1.5	2.5	0.0	0.5	11.0	3.0	6.0
4	1.5	0.0	1.0	3.5	0.0	1.5	3.5	0.0	1.0	9.0	2.5	5.5
5	0.0	0.0	0.0	4.5	0.5	2.0	5.5	0.0	2.0	9.5	3.5	5.5
6	0.0	0.0	0.0	2.5	0.0	1.0	5.5	1.5	3.5	9.0	3.0	4.5
7	1.0	0.0	0.5	1.0	0.0	0.0	5.5	1.5	3.5	7.0	3.0	4.0
8	1.5	0.5	1.0	0.0	0.0	0.0	7.0	1.0	3.5	7.5	2.0	4.5
9	2.5	0.5	1.5	2.5	0.0	1.0	9.0	1.0	4.0	4.5	2.5	3.5
10	2.0	0.0	0.5	3.5	0.5	1.5	6.5	0.5	3.0	5.0	3.0	4.0
11	2.5	0.0	1.0	4.5	0.0	2.0	8.0	0.0	3.5	7.5	3.0	5.0
12	2.0	1.0	1.5	4.5	0.5	2.0	7.5	1.5	4.0	7.0	3.0	5.0
13	2.5	1.0	1.5	4.5	0.0	1.5	5.5	0.5	3.0	10.0	3.5	6.0
14	2.5	1.0	1.5	5.5	0.0	2.0	6.5	2.5	4.0	7.0	3.5	5.0
15	3.5	1.0	1.5	5.0	0.0	2.0	7.0	1.5	3.5	5.5	3.5	4.5
16	4.0	0.0	1.5	3.0	0.0	1.5	8.0	1.0	4.0	10.0	3.0	5.5
17	3.0	0.0	1.0	0.5	0.0	0.0	7.5	1.0	3.5	10.5	3.5	6.0
18	3.0	0.5	1.5	0.5	0.0	0.0	5.0	2.5	3.5	7.0	4.0	5.5
19	3.5	1.5	2.0	0.5	0.0	0.0	6.0	1.0	3.5	5.5	4.5	5.0
20	3.5	2.0	2.5	2.0	0.0	0.5	5.0	2.5	3.5	7.0	4.0	5.0
21	3.5	1.0	2.0	4.0	0.0	1.0	7.0	2.0	4.0	8.0	4.0	5.5
22	3.0	0.0	1.5	5.0	0.0	1.5	7.0	2.5	4.0	5.5	4.0	5.0
23	3.0	0.0	1.5	6.5	0.0	2.5	7.0	2.5	4.5	5.0	4.0	4.5
24	3.5	0.0	1.0	7.0	1.0	3.0	7.5	2.5	4.5	5.5	4.0	4.5
25	1.0	0.0	0.5	6.5	1.5	3.0	9.5	1.5	4.5	6.0	3.5	4.5
26	4.5	1.0	2.0	5.0	0.0	2.0	5.0	2.5	3.5	9.5	3.5	6.0
27	4.0	0.5	2.0	3.0	0.0	0.5	8.5	1.5	4.5	6.5	4.5	5.5
28	3.0	1.0	2.0	0.0	0.0	0.0	6.0	2.0	3.5	6.0	4.0	5.0
29	3.5	1.0	2.0	0.5	0.0	0.0	4.5	1.0	3.0	7.0	3.0	5.0
30	---	---	---	0.5	0.0	0.0	5.0	3.0	4.0	7.5	3.5	5.0
31	---	---	---	2.0	0.0	0.5	---	---	---	8.0	3.5	5.5
MONTH	4.5	0.0	1.3	7.0	0.0	1.2	9.5	0.0	3.2	11.0	2.0	5.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	6.0	4.5	5.0	8.0	5.5	6.5	13.5	7.0	9.5	10.5	8.0	9.0
2	8.5	4.0	6.0	9.0	5.0	7.0	15.5	7.5	10.5	11.5	6.5	8.5
3	8.0	4.5	6.0	9.5	5.5	7.5	11.0	8.0	9.0	12.0	7.5	9.0
4	9.0	4.5	6.5	11.5	5.5	8.0	9.0	6.5	7.5	10.0	7.0	8.0
5	11.5	4.5	7.0	11.5	5.5	8.0	8.5	7.5	8.0	11.0	6.5	8.5
6	6.5	4.5	5.5	14.0	5.0	8.5	13.5	7.0	9.0	10.0	7.5	8.5
7	8.5	3.5	6.0	15.0	5.0	9.0	14.5	6.5	10.0	11.0	6.0	8.5
8	7.5	4.5	5.5	15.5	5.5	9.5	10.5	8.0	9.0	10.0	6.0	8.0
9	9.5	4.0	6.5	15.5	5.0	9.5	15.0	7.5	10.5	10.0	6.5	8.0
10	8.5	4.0	6.5	15.5	6.0	10.0	10.5	7.5	9.0	8.5	6.0	7.0
11	8.0	5.0	6.0	14.5	5.5	9.5	11.0	7.0	9.0	10.0	6.5	8.0
12	12.0	4.0	7.5	10.5	7.5	8.5	10.5	9.0	9.5	12.5	7.0	8.5
13	10.0	4.0	6.5	10.0	5.5	7.5	10.5	9.0	9.5	10.5	5.5	7.5
14	9.5	4.5	6.5	9.5	6.0	7.5	10.0	8.5	9.5	8.5	3.5	6.0
15	8.5	5.5	6.5	12.0	6.0	8.0	10.0	8.5	9.0	10.5	6.0	7.5
16	9.0	5.0	7.0	10.0	7.0	8.0	10.5	8.0	9.0	10.5	5.0	7.5
17	10.0	5.0	7.0	8.5	5.5	7.0	14.0	7.0	9.5	9.5	6.5	8.0
18	7.0	5.0	6.0	8.5	6.0	7.0	11.0	8.5	9.5	12.0	8.5	9.5
19	6.0	4.5	5.5	8.5	6.0	7.5	12.0	7.5	9.5	10.0	7.0	8.5
20	8.0	4.5	5.5	9.5	6.0	7.5	14.5	7.0	10.0	9.0	6.5	7.5
21	7.5	5.0	6.0	11.5	6.0	8.0	10.0	8.5	9.0	9.0	6.0	7.5
22	9.5	5.5	7.0	14.5	5.5	9.0	9.5	7.5	8.5	9.0	6.0	7.0
23	7.5	4.5	6.0	10.0	6.5	8.0	10.5	7.5	8.5	9.0	5.0	6.5
24	9.5	5.0	6.5	8.5	7.5	8.0	9.5	7.0	8.5	9.5	5.5	7.0
25	9.0	5.0	6.5	9.0	7.0	8.0	10.0	7.0	8.5	7.0	4.5	6.0
26	12.0	5.0	7.5	9.0	6.0	7.5	10.0	7.0	8.0	8.5	4.0	5.5
27	13.5	5.5	8.5	8.5	6.5	7.0	11.0	7.5	9.0	8.0	5.0	6.5
28	10.5	5.5	7.0	9.5	6.0	7.5	11.0	7.0	8.5	8.0	6.0	7.0
29	9.5	5.0	7.0	9.0	6.5	7.5	10.0	7.0	8.5	8.0	6.5	7.5
30	8.0	5.5	6.5	13.0	6.5	9.0	9.0	6.5	8.0	6.5	4.0	5.5
31	---	---	---	13.5	6.0	9.0	10.5	8.5	9.0	---	---	---
MONTH	13.5	3.5	6.4	15.5	5.0	8.1	15.5	6.5	9.0	12.5	3.5	7.6

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.

REVISIONS.--The maximum discharges for some water years have been revised, as shown in the following table. They supersede figures published in the reports for 1998-2001 and 2003.

Water Year	Date	Discharge (ft ³ /s)	Gage Height (ft)
1998	Jun. 8, 1998	a22,300	71.82
1999	Sep. 18, 1999	a20,000	71.16
2000	Aug. 2, 2000	a13,700	69.20
2001	Jul. 19, 2001	a14,400	69.44
2003	Nov. 6, 2002	a17,400	70.39

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	33800	394	e350	e100	e70	e150	e80	1330	2030	1810	889	308
2	25700	445	e300	e100	e70	e150	e70	1550	2100	1540	819	329
3	5810	430	e300	e100	e70	e150	e70	1270	2040	1430	725	358
4	2530	466	e275	e90	e70	e150	e90	1260	2190	1480	662	318
5	1860	580	e275	e90	e70	e150	e90	1620	2610	1590	619	291
6	1710	1530	e275	e90	e80	e150	297	1790	2520	1480	571	279
7	1510	1390	e250	e90	e80	e150	617	2220	2980	1470	542	270
8	1660	1080	e250	e90	e80	e100	653	2340	2630	1570	524	263
9	1330	1040	e250	e90	e90	e100	641	1930	2210	1470	514	254
10	1100	866	e225	e80	e90	e125	649	1510	2270	1360	506	249
11	961	719	e225	e80	e100	e125	500	1560	2520	1290	494	250
12	830	671	e225	e80	e100	e125	415	1540	2220	1280	477	246
13	764	e650	e200	e80	e100	e125	363	1490	1930	1310	458	244
14	787	e600	e200	e80	e100	e125	333	1720	2030	1160	440	233
15	1570	e580	e175	e80	e125	e100	327	1520	2210	1050	424	223
16	1080	e550	e175	e80	e125	e100	352	2580	2930	1010	414	218
17	846	704	e175	e80	e125	e100	348	3570	4880	1270	414	211
18	716	752	e175	e70	e100	e100	333	2510	5390	1820	419	205
19	630	708	e150	e70	e100	e90	339	2010	4540	1420	403	212
20	564	642	e150	e70	e125	e90	358	2200	3510	1140	443	392
21	518	664	e150	e70	e125	e90	377	2460	3120	994	409	405
22	481	637	e150	e70	e125	e90	401	2630	2750	941	385	393
23	452	535	e100	e70	e125	e100	438	4330	2520	1050	371	475
24	427	e500	e100	e70	e125	e100	429	4220	2440	960	392	386
25	415	e450	e100	e70	e150	e100	447	3680	2650	939	369	343
26	453	e450	e100	e70	e150	e90	470	3100	2510	2450	405	367
27	505	e400	e125	e70	e150	e90	539	3210	2550	5740	433	362
28	451	e400	e125	e60	e150	e80	593	3410	2340	3860	364	370
29	407	e375	e125	e60	e150	e80	755	2780	1940	1970	338	633
30	387	e375	e125	e60	---	e80	935	2240	1920	1370	325	1630
31	394	---	e100	e70	---	e80	---	2080	---	1070	313	---
TOTAL	90648	19583	5900	2430	3120	3435	12369	71660	80480	49294	14861	10717
MEAN	2924	653	190	78.4	108	111	412	2312	2683	1590	479	357
MAX	33800	1530	350	100	150	150	935	4330	5390	5740	889	1630
MIN	387	375	100	60	70	80	70	1260	1920	939	313	205
AC-FT	179800	38840	11700	4820	6190	6810	24530	142100	159600	97770	29480	21260
CFSM	22.8	5.10	1.49	0.61	0.84	0.87	3.22	18.1	21.0	12.4	3.75	2.79
IN.	26.34	5.69	1.71	0.71	0.91	1.00	3.59	20.83	23.39	14.33	4.32	3.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2004, BY WATER YEAR (WY) #

	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	1137	680	331	214	193	165	267	1244	2529
MAX	2924	2346	976	410	688	407	500	2312	3790
(WY)	2004	2003	2003	2002	2003	1998	1998	2004	1998
MIN	289	161	84.5	75.2	61.6	60.6	87.8	752	1716
(WY)	1997	1997	1997	1998	1998	1999	1999	2001	1996

See Period of Record; partial year used in monthly statistics

a From rating curve extended above 8,900 ft³/s on the basis of a slope-conveyance computation at gage height 78.42 ft

e Estimated

15300300 ILIAMNA RIVER NEAR PEDRO BAY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1996 - 2004#	
ANNUAL TOTAL	373599		364497			
ANNUAL MEAN	1024		996		924	
HIGHEST ANNUAL MEAN					1188 2003	
LOWEST ANNUAL MEAN					622 1997	
HIGHEST DAILY MEAN	33800	Oct 1	33800	Oct 1	33800	Oct 1 2003
LOWEST DAILY MEAN	a100	Dec 23	b60	Jan 28	c38	Jan 5 1997
ANNUAL SEVEN-DAY MINIMUM	111	Dec 23	66	Jan 24	40	Jan 2 1997
MAXIMUM PEAK FLOW			d53000	Oct 1	d53000	Oct 1 2003
MAXIMUM PEAK STAGE			78.42	Oct 1	78.42	Oct 1 2003
ANNUAL RUNOFF (AC-FT)	741000		723000		669200	
ANNUAL RUNOFF (CFSM)	8.00		7.78		7.22	
ANNUAL RUNOFF (INCHES)	108.58		105.93		98.06	
10 PERCENT EXCEEDS	2000		2370		2280	
50 PERCENT EXCEEDS	540		408		484	
90 PERCENT EXCEEDS	167		80		85	

See Period of Record; partial year used in monthly statistics

a Dec. 23-26

b Jan. 28-30

c Jan. 5-6, 1997

d From rating curve extended above 8,900 ft³/s on the basis of a slope-conveyance computation at gage height 78.42 ft

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. Rain gage at station. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4800	7120	e3800	e2700	e2200	e1900	e1800	3020	16000	11700	7870	4870
2	5610	7070	e3700	e2700	e2200	e1900	e1800	3180	16100	11400	7800	4820
3	5910	6940	e3700	e2700	e2200	e1900	e1800	3360	16100	11300	7720	4730
4	6020	6860	e3600	e2700	e2200	e1900	e1800	3550	16200	11000	7740	4620
5	6260	6870	e3600	e2600	e2100	e1900	1790	3790	16100	10800	7620	4520
6	e6500	6910	e3500	e2600	e2100	e1900	1840	4040	16100	10500	7550	4440
7	e6800	6840	e3400	e2600	e2100	e1900	1860	4360	16100	10200	7450	4320
8	e7100	e6800	e3400	e2500	e2100	e1900	1880	4720	16000	10000	7320	4230
9	e7300	e6600	e3300	e2500	e2100	e1900	1840	5020	15800	9720	7150	4170
10	e7600	e6400	e3300	e2500	e2100	e1900	1940	5310	15400	9450	7090	4100
11	7760	e6200	e3200	e2500	e2100	e1900	2000	5630	15500	9170	7000	4090
12	e7900	e6000	e3200	e2400	e2100	e1900	2030	5930	15300	8860	6780	4120
13	e8100	e5900	e3100	e2400	e2100	e1900	2040	6140	15100	8650	6620	4040
14	e8200	e5800	e3100	e2400	e2100	e1900	2050	6370	14800	8400	6570	3970
15	8520	e5600	e3000	e2400	e2100	e1900	2050	6550	14500	8160	6510	3880
16	9170	e5400	e3000	e2400	e2000	e1900	2080	6950	14400	7980	6440	3850
17	9260	e5300	e3000	e2300	e2000	e1900	2100	7790	14200	7850	6290	3780
18	e9200	e5200	e2900	e2300	e2000	e1900	2100	8390	14200	7800	6140	e3750
19	9190	e5000	e2900	e2300	e2000	e1900	2130	8800	14400	7780	6020	3710
20	9040	e4800	e2900	e2300	e2000	e1900	2150	9120	14300	7760	5930	3750
21	8930	e4700	e2800	e2300	e2000	e1800	2190	9480	14100	7580	5780	e3650
22	8760	e4600	e2800	e2300	e2000	e1800	2250	9910	13900	7480	5540	3620
23	8580	e4500	e2800	e2300	e2000	e1800	2300	10600	13700	7260	5370	3610
24	8440	e4400	e2700	e2300	e2000	e1800	2380	11600	13500	7100	5490	3520
25	8220	e4300	e2700	e2300	e2000	e1800	2460	12500	13300	6720	5530	3460
26	8080	e4200	e2700	e2200	e2000	e1800	2450	13300	13100	6930	5520	3460
27	7850	e4100	e2600	e2200	e2000	e1800	2560	14000	12800	7340	5400	3320
28	7640	e4000	e2600	e2200	e2000	e1800	2640	14600	12500	7690	5320	3270
29	7410	e4000	e2600	e2200	e2000	e1800	2750	15200	12300	7830	5220	3290
30	7160	e3900	e2800	e2200	---	e1800	2910	15600	12000	7880	5090	3350
31	7140	---	e2800	e2200	---	e1800	---	15800	---	7880	4950	---
TOTAL	238450	166310	95500	74500	59900	57800	63970	254610	437800	270170	198820	118310
MEAN	7692	5544	3081	2403	2066	1865	2132	8213	14590	8715	6414	3944
MAX	9260	7120	3800	2700	2200	1900	2910	15800	16200	11700	7870	4870
MIN	4800	3900	2600	2200	2000	1800	1790	3020	12000	6720	4950	3270
AC-FT	473000	329900	189400	147800	118800	114600	126900	505000	868400	535900	394400	234700
CFSM	5.16	3.72	2.07	1.61	1.39	1.25	1.43	5.51	9.79	5.85	4.30	2.65
IN.	5.95	4.15	2.38	1.86	1.50	1.44	1.60	6.36	10.93	6.75	4.96	2.95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2004, BY WATER YEAR (WY)#

MEAN	7767	5207	3383	2517	2121	1859	1805	4575	15290	13850	8923	8037
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	3944
(WY)	1969	1969	1964	1964	1964	1976	1960	1964	1954	1954	1957	2004

See Period of Record
e Estimated

15302000 NUYAKUK RIVER NEAR DILLINGHAM—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1953 - 2004#	
ANNUAL TOTAL	2269990		2036140			
ANNUAL MEAN	6219		5563		6313	
HIGHEST ANNUAL MEAN					9470	
LOWEST ANNUAL MEAN					4236	
HIGHEST DAILY MEAN					32100	
LOWEST DAILY MEAN	a2200	Jun 21	16200	Jun 4	b770	Jul 2 1977
ANNUAL SEVEN-DAY MINIMUM	2200	Apr 8	1790	Apr 5	b770	Apr 16 1960
MAXIMUM PEAK FLOW		Apr 8	1800	Mar 30	770	Apr 16 1960
MAXIMUM PEAK STAGE			16300	Jun 3	32200	Jul 2 1977
INSTANTANEOUS LOW FLOW			9.19	Jun 3	c10.49	Jul 2 1977
ANNUAL RUNOFF (AC-FT)	4503000		d		770	Apr 16 1960
ANNUAL RUNOFF (CFSM)					4573000	
ANNUAL RUNOFF (INCHES)	4.17		3.73		4.24	
10 PERCENT EXCEEDS	11600		50.84		57.56	
50 PERCENT EXCEEDS	5200				14300	
90 PERCENT EXCEEDS	2660				4390	
					1700	

See Period of Record

a Apr. 8-17

b Apr.16-30, 1960

c Site and datum then in use

d Not determined, see lowest daily mean

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. GOES satellite telemetry 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.-- October 2003, May 2004 to October 2004: maximum discharge during period, 540 ft³/s, May 28, gage height 7.54 ft. Minimum discharge not determined, occurs during winter.

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	86	---	---	---	---	---	---	409	237	70	42	36
2	123	---	---	---	---	---	---	323	206	70	42	38
3	124	---	---	---	---	---	---	239	185	68	40	34
4	94	---	---	---	---	---	---	196	161	73	49	e33
5	80	---	---	---	---	---	---	180	143	81	61	e37
6	74	---	---	---	---	---	---	168	126	71	48	e39
7	69	---	---	---	---	---	---	162	114	62	42	e38
8	66	---	---	---	---	---	---	148	140	57	40	e37
9	65	---	---	---	---	---	---	142	159	56	37	e35
10	e60	---	---	---	---	---	---	152	131	54	36	e33
11	e55	---	---	---	---	---	---	156	118	51	37	e32
12	e55	---	---	---	---	---	---	127	163	49	58	e32
13	e55	---	---	---	---	---	---	116	136	47	46	e33
14	e50	---	---	---	---	---	---	108	117	46	41	e35
15	e50	---	---	---	---	---	---	101	112	46	39	e32
16	e48	---	---	---	---	---	---	95	100	46	39	30
17	e46	---	---	---	---	---	---	89	97	49	38	29
18	e44	---	---	---	---	---	---	92	92	47	37	e28
19	e44	---	---	---	---	---	---	98	85	48	36	32
20	e42	---	---	---	---	---	---	87	80	49	35	42
21	e42	---	---	---	---	---	---	79	75	53	35	40
22	e40	---	---	---	---	---	---	77	70	58	35	64
23	e40	---	---	---	---	---	---	93	68	49	34	74
24	e38	---	---	---	---	---	---	125	79	46	33	53
25	e38	---	---	---	---	---	---	103	148	49	33	e42
26	e38	---	---	---	---	---	---	118	157	44	39	e38
27	e36	---	---	---	---	---	---	128	104	49	41	e36
28	e36	---	---	---	---	---	---	425	83	50	38	e44
29	e36	---	---	---	---	---	---	264	76	50	34	66
30	e36	---	---	---	---	---	---	230	73	44	33	105
31	e34	---	---	---	---	---	---	390	---	43	34	---
TOTAL	1744	---	---	---	---	---	---	5220	3635	1675	1232	1247
MEAN	56.3	---	---	---	---	---	---	168	121	54.0	39.7	41.6
MAX	124	---	---	---	---	---	---	425	237	81	61	105
MIN	34	---	---	---	---	---	---	77	68	43	33	28
AC-FT	3460	---	---	---	---	---	---	10350	7210	3320	2440	2470
CFSM	0.73	---	---	---	---	---	---	2.19	1.58	0.70	0.52	0.54
IN.	0.84	---	---	---	---	---	---	2.53	1.76	0.81	0.60	0.60

e Estimated

15303700 TATALINA RIVER NEAR TAKOTNA—Continued

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	0.5	0.5	0.5
2	---	---	---	---	---	---	---	---	---	0.5	0.5	0.5
3	---	---	---	---	---	---	---	---	---	1.0	0.5	0.5
4	---	---	---	---	---	---	---	---	---	1.5	0.5	1.0
5	---	---	---	---	---	---	---	---	---	1.5	0.5	1.0
6	---	---	---	---	---	---	---	---	---	1.5	0.5	1.0
7	---	---	---	---	---	---	---	---	---	2.0	0.5	1.5
8	---	---	---	---	---	---	---	---	---	1.5	0.5	1.0
9	---	---	---	---	---	---	---	---	---	1.5	0.5	1.0
10	---	---	---	---	---	---	---	---	---	2.0	1.0	1.0
11	---	---	---	---	---	---	---	---	---	1.5	1.0	1.0
12	---	---	---	---	---	---	---	---	---	2.5	1.0	1.5
13	---	---	---	---	---	---	---	---	---	3.0	1.5	2.0
14	---	---	---	---	---	---	---	---	---	5.5	2.5	3.5
15	---	---	---	---	---	---	---	---	---	5.0	4.0	4.5
16	---	---	---	---	---	---	---	---	---	4.5	3.5	4.0
17	---	---	---	---	---	---	---	---	---	4.5	3.5	4.0
18	---	---	---	---	---	---	---	---	---	4.5	3.5	4.0
19	---	---	---	---	---	---	---	---	---	5.0	3.5	4.5
20	---	---	---	---	---	---	---	---	---	7.0	4.0	5.0
21	---	---	---	---	---	---	---	---	---	6.5	5.5	6.0
22	---	---	---	---	---	---	---	---	---	6.5	5.5	6.0
23	---	---	---	---	---	---	---	---	---	6.5	5.5	6.0
24	---	---	---	---	---	---	---	---	---	6.5	5.0	6.0
25	---	---	---	---	---	---	---	---	---	7.5	6.0	6.5
26	---	---	---	---	---	---	---	---	---	7.5	5.5	6.0
27	---	---	---	---	---	---	---	---	---	6.0	5.0	5.5
28	---	---	---	---	---	---	---	---	---	5.0	3.5	4.0
29	---	---	---	---	---	---	---	---	---	5.5	3.5	4.5
30	---	---	---	---	---	---	---	---	---	5.5	5.0	5.0
31	---	---	---	---	---	---	---	---	---	5.0	4.0	4.5
MONTH	---	---	---	---	---	---	---	---	---	7.5	0.5	3.3
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	5.0	4.5	5.0	10.5	9.0	9.5	11.5	10.5	11.0	9.0	7.5	8.0
2	5.5	4.0	5.0	9.0	8.5	8.5	11.5	9.5	10.5	9.0	8.0	8.5
3	6.5	5.0	6.0	10.0	8.0	9.0	11.0	9.5	10.0	8.5	7.0	8.0
4	7.5	5.5	6.5	9.5	8.5	9.0	10.5	9.5	10.0	7.0	5.5	6.5
5	8.5	6.0	7.0	10.5	8.0	9.5	10.5	9.0	10.0	7.0	6.0	6.5
6	9.0	7.0	8.0	11.5	8.5	10.0	12.0	9.0	10.0	6.5	5.0	5.5
7	9.0	7.5	8.0	12.0	9.5	10.5	11.5	10.0	10.5	5.0	3.5	4.5
8	8.0	6.5	7.0	12.0	10.5	11.0	13.5	10.5	11.5	4.5	3.0	3.5
9	7.0	6.0	6.5	12.0	9.5	10.5	13.5	11.0	12.0	4.5	2.5	3.5
10	8.0	6.0	7.0	13.0	9.5	11.0	14.5	12.0	13.0	4.5	2.5	3.5
11	7.5	6.5	7.0	13.5	10.5	12.0	14.0	12.0	13.0	4.0	2.5	3.5
12	7.5	5.5	6.5	14.0	11.0	12.5	12.5	11.0	12.0	4.5	2.5	3.5
13	8.0	6.5	7.5	14.5	11.5	13.0	11.5	11.0	11.0	4.0	2.5	3.0
14	9.0	7.0	8.0	14.5	12.5	13.0	12.0	10.0	11.0	3.5	2.5	3.0
15	9.0	7.0	8.0	14.5	12.0	13.0	12.0	10.5	11.0	3.0	1.5	2.5
16	8.5	7.5	8.0	14.0	12.0	13.0	12.5	10.0	11.5	3.0	2.5	2.5
17	7.5	6.5	7.0	13.0	12.0	12.5	12.5	10.5	11.5	2.5	1.0	2.0
18	8.5	7.0	7.5	13.5	11.0	12.0	13.0	11.5	12.0	1.0	0.0	0.5
19	10.5	7.5	9.0	14.0	11.0	12.5	13.5	11.5	12.5	1.5	0.5	1.0
20	11.0	8.5	10.0	13.0	10.5	12.0	12.5	11.5	12.0	2.0	1.5	1.5
21	12.0	9.5	10.5	13.0	11.0	12.0	12.5	10.5	11.5	2.5	2.0	2.0
22	12.5	10.0	11.0	13.0	10.5	11.5	12.0	10.0	11.0	3.5	2.5	3.0
23	11.5	9.5	10.5	12.5	11.0	12.0	12.0	9.5	11.0	3.5	2.0	2.5
24	9.5	8.0	9.0	12.0	10.5	11.5	11.0	9.5	10.0	2.0	1.0	1.5
25	8.5	7.5	8.0	12.5	9.0	10.5	10.0	8.5	9.5	1.0	0.0	0.5
26	9.5	7.5	8.5	11.5	10.5	10.5	9.5	8.0	9.0	0.0	0.0	0.0
27	11.5	8.5	10.0	10.5	9.5	10.0	8.0	7.0	7.5	0.5	0.0	0.0
28	12.0	10.0	11.0	10.5	9.0	10.0	8.0	6.5	7.0	0.0	0.0	0.0
29	11.5	10.5	11.0	12.0	9.0	10.5	7.5	6.0	7.0	0.0	0.0	0.0
30	11.0	10.0	10.5	12.0	10.5	11.0	8.5	6.5	7.0	0.0	0.0	0.0
31	---	---	---	12.0	10.0	11.0	8.5	7.0	7.5	---	---	---
MONTH	12.5	4.0	8.2	14.5	8.0	11.1	14.5	6.0	10.5	9.0	0.0	3.0

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, 2003, May 27 to September 30, 2004; Maximum gage height 30.25 ft, June 1; minimum gage height 23.51 ft, September 21.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.88	---	---	---	---	---	---	---	30.18	28.39	26.72	25.11
2	25.05	---	---	---	---	---	---	---	29.90	28.39	26.87	24.90
3	25.27	---	---	---	---	---	---	---	29.80	28.61	26.86	24.76
4	25.41	---	---	---	---	---	---	---	29.69	28.69	26.77	24.68
5	25.67	---	---	---	---	---	---	---	29.43	28.56	26.75	24.62
6	26.20	---	---	---	---	---	---	---	29.22	28.29	26.98	24.60
7	26.67	---	---	---	---	---	---	---	28.87	28.08	27.24	24.57
8	26.93	---	---	---	---	---	---	---	28.54	28.05	27.39	24.49
9	26.83	---	---	---	---	---	---	---	28.39	28.15	27.40	24.40
10	26.61	---	---	---	---	---	---	---	28.53	28.06	27.13	24.31
11	26.39	---	---	---	---	---	---	---	29.00	27.83	26.87	24.23
12	26.21	---	---	---	---	---	---	---	29.41	27.67	26.79	24.16
13	26.08	---	---	---	---	---	---	---	29.19	27.44	26.75	24.10
14	25.95	---	---	---	---	---	---	---	28.70	27.21	26.72	24.03
15	25.77	---	---	---	---	---	---	---	28.26	27.05	26.74	23.94
16	25.57	---	---	---	---	---	---	---	27.89	27.07	26.79	23.86
17	25.36	---	---	---	---	---	---	---	27.65	27.15	26.62	23.79
18	25.20	---	---	---	---	---	---	---	27.54	27.11	26.36	23.72
19	25.06	---	---	---	---	---	---	---	27.43	26.97	26.20	23.66
20	---	---	---	---	---	---	---	---	27.25	26.82	26.19	23.61
21	---	---	---	---	---	---	---	---	27.04	26.66	26.25	23.54
22	---	---	---	---	---	---	---	---	27.12	26.53	26.23	23.55
23	---	---	---	---	---	---	---	---	27.32	26.41	26.31	23.57
24	---	---	---	---	---	---	---	---	27.49	26.35	26.37	23.63
25	---	---	---	---	---	---	---	---	27.70	26.47	26.31	23.76
26	---	---	---	---	---	---	---	---	27.85	26.59	26.15	23.80
27	---	---	---	---	---	---	---	26.73	27.98	26.59	26.02	23.83
28	---	---	---	---	---	---	---	27.52	28.19	26.82	25.90	23.75
29	---	---	---	---	---	---	---	28.02	28.45	26.91	25.74	23.65
30	---	---	---	---	---	---	---	28.65	28.46	26.66	25.58	23.81
31	---	---	---	---	---	---	---	29.76	---	26.58	25.37	---
MEAN	---	---	---	---	---	---	---	---	28.42	27.36	26.53	24.08
MAX	---	---	---	---	---	---	---	---	30.18	28.69	27.40	25.11
MIN	---	---	---	---	---	---	---	---	27.04	26.35	25.37	23.54

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43200	37700	e16000	e13000	e12000	e11000	e11000	e124000	93800	69700	50900	36400
2	49700	38500	e16000	e13000	e12000	e11000	e11000	e126000	93000	68200	50300	35500
3	63200	38900	e16000	e13000	e12000	e11000	e11000	e120000	88700	66800	50200	34800
4	77600	40500	e16000	e13000	e12000	e11000	e12000	e114000	85000	66700	50400	33700
5	83800	41800	e16000	e13000	e12000	e11000	e12000	e108000	81800	67000	50400	32800
6	86500	42300	e16000	e13000	e12000	e11000	e13000	101000	78000	68500	51800	32200
7	87600	43900	e15000	e13000	e12000	e11000	e15000	98600	74900	70100	53100	31400
8	89100	47800	e15000	e13000	e12000	e11000	e17000	97200	72700	68900	53300	30500
9	89100	52000	e15000	e13000	e12000	e11000	e19000	96800	72000	66200	52700	29800
10	86900	55400	e15000	e13000	e12000	e11000	e21000	95100	72100	64300	51700	29500
11	82300	52500	e15000	e13000	e12000	e11000	e23000	93000	72400	62100	50500	29300
12	77400	e44000	e15000	e13000	e12000	e11000	e25000	92900	72400	60100	49800	28800
13	72400	e37000	e15000	e13000	e12000	e11000	e27000	92700	71900	58000	49100	28200
14	67600	e32000	e15000	e13000	e12000	e11000	e29000	89300	69700	56200	49300	27800
15	64000	e29000	e15000	e13000	e12000	e11000	e32000	84300	66500	55100	48500	26800
16	61500	e27000	e14000	e13000	e12000	e11000	e36000	80300	64800	53800	47500	25900
17	59900	e25000	e14000	e13000	e12000	e11000	e40000	75900	63400	52600	47300	25700
18	59200	e24000	e14000	e13000	e12000	e11000	e45000	73600	62000	52000	46400	25300
19	57300	e23000	e14000	e13000	e12000	e11000	e50000	72600	61700	52100	45600	25400
20	53200	e22000	e14000	e13000	e12000	e11000	e55000	73200	62200	51700	44700	25200
21	49900	e21000	e14000	e12000	e12000	e11000	e60000	73600	62000	51700	44800	26100
22	48000	e20000	e14000	e12000	e12000	e11000	e66000	72900	60500	51500	44900	27900
23	48200	e20000	e14000	e12000	e12000	e11000	e74000	71600	59400	52600	44400	29800
24	47500	e19000	e14000	e12000	e12000	e11000	e82000	70100	59300	52300	44000	31200
25	44700	e19000	e14000	e12000	e12000	e11000	e90000	70500	60400	51200	43800	31900
26	42900	e18000	e14000	e12000	e11000	e11000	e100000	73400	63600	50600	43400	31700
27	42300	e18000	e14000	e12000	e11000	e11000	e105000	77200	68900	51000	42200	30800
28	41700	e17000	e14000	e12000	e11000	e11000	e110000	82100	69400	49900	41200	29800
29	39600	e17000	e14000	e12000	e11000	e11000	e116000	86500	69300	50500	39800	29500
30	37700	e17000	e14000	e12000	---	e11000	e120000	88400	70000	51400	38500	29400
31	37200	---	e13000	e12000	---	e11000	---	90800	---	51400	37400	---
TOTAL	1891200	940300	454000	392000	344000	341000	1427000	2765600	2121800	1794200	1457900	893100
MEAN	61010	31340	14650	12650	11860	11000	47570	89210	70730	57880	47030	29770
MAX	89100	55400	16000	13000	12000	11000	120000	126000	93800	70100	53300	36400
MIN	37200	17000	13000	12000	11000	11000	11000	70100	59300	49900	37400	25200
AC-FT	3751000	1865000	900500	777500	682300	676400	2830000	5486000	4209000	3559000	2892000	1771000
CFSM	1.96	1.01	0.47	0.41	0.38	0.35	1.53	2.87	2.27	1.86	1.51	0.96
IN.	2.26	1.12	0.54	0.47	0.41	0.41	1.71	3.31	2.54	2.15	1.74	1.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)#

	MEAN	MAX	(WY)	MIN	(WY)
	44900	102000	1994	22650	1979
	21920	43110	2003	12730	1981
	15540	31100	2003	10000	1957
	13150	23030	2003	8400	1966
	11740	20710	1991	6900	1966
	10780	19550	1991	6100	1966
	15300	47570	2004	8600	1953
	80340	161700	1957	22130	1964
	82390	235100	1964	33880	1954
	67850	119500	1980	40910	1997
	75530	169800	1963	41840	1957
	68150	150900	1951	29770	2004

See Period of Record, partial years used in monthly computations
e Estimated

15304000 KUSKOKWIM RIVER AT CROOKED CREEK—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1951 - 2004#	
ANNUAL TOTAL	16803000		14822100			
ANNUAL MEAN	46040		40500		42310	
HIGHEST ANNUAL MEAN					62120 1963	
LOWEST ANNUAL MEAN					28600 1997	
HIGHEST DAILY MEAN	127000	Aug 1	126000	May 2	391000	Jun 5 1964
LOWEST DAILY MEAN	13000	Dec 31	a11000	Feb 26	b6100	Mar 1 1966
ANNUAL SEVEN-DAY MINIMUM	13900	Dec 25	11000	Feb 26	6100	Mar 1 1966
MAXIMUM PEAK FLOW			c		392000	Jun 5 1964
MAXIMUM PEAK STAGE			d18.04	May 2	f25.74	Jun 5 1964
INSTANTANEOUS LOW FLOW					6100	Mar 1 1966
ANNUAL RUNOFF (AC-FT)	33330000		29400000		30650000	
ANNUAL RUNOFF (CFSM)	1.48		1.30		1.36	
ANNUAL RUNOFF (INCHES)	20.10		17.73		18.49	
10 PERCENT EXCEEDS	85600		82000		92900	
50 PERCENT EXCEEDS	42300		35800		26000	
90 PERCENT EXCEEDS	15000		11000		10000	

See Period of Record, partial years used in monthly computations

a Feb. 26 - Apr. 3

b Mar. 1-31, 1966

c Not determined. See highest daily mean.

d From floodmarks, backwater from ice

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

15304400 TAKIKCHAK RIVER NEAR NEWTOK

LOCATION.--Lat 60°48'24", long 164°35'46", in SE¹/₄ SW¹/₄ SW¹/₄ sec. 5, T.08 N., R.86 W. (Baird Inlet D-7 quad), Hydrologic Unit 19030502, on right bank, 1.0 mi upstream from mouth, and 10 south of Newtok.

DRAINAGE AREA.--19.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to September 2004.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 12.5 ft above sea level, from topographic map.

REMARKS.--Records are poor. Rain gage at station, GOES satellite telemetry at station.

EXTREMES FOR CURRENT PERIOD.-- May 2004 to September 2004: maximum discharge during period, 146 ft³/s, May 25, gage height 10.28 ft., from mark on crest-stage gage; minimum daily discharge during period, 18 ft³/s, September 17 to 21.

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	---	---	---	---	---	---	---	---	e34	e26	e22	e21
2	---	---	---	---	---	---	---	---	e34	e26	e22	e20
3	---	---	---	---	---	---	---	---	e33	e26	e22	e20
4	---	---	---	---	---	---	---	---	e33	e26	e21	e20
5	---	---	---	---	---	---	---	---	e32	e25	e22	e20
6	---	---	---	---	---	---	---	---	e32	e25	e21	e19
7	---	---	---	---	---	---	---	---	e31	e25	e21	e19
8	---	---	---	---	---	---	---	---	e31	e24	e21	e20
9	---	---	---	---	---	---	---	---	e30	e24	e24	e19
10	---	---	---	---	---	---	---	---	e30	e24	e25	e20
11	---	---	---	---	---	---	---	---	e30	e24	e26	e20
12	---	---	---	---	---	---	---	---	e29	e24	e26	e20
13	---	---	---	---	---	---	---	---	e32	e24	e25	e19
14	---	---	---	---	---	---	---	---	e29	e24	e24	e19
15	---	---	---	---	---	---	---	---	e32	e27	e23	e19
16	---	---	---	---	---	---	---	---	e30	e26	e22	e19
17	---	---	---	---	---	---	---	---	e35	e24	e22	e18
18	---	---	---	---	---	---	---	---	e31	e24	e21	e18
19	---	---	---	---	---	---	---	---	e29	e23	e21	e18
20	---	---	---	---	---	---	---	---	e28	e23	e21	e18
21	---	---	---	---	---	---	---	+43	e27	e23	e21	e18
22	---	---	---	---	---	---	---	---	e28	e23	e21	e23
23	---	---	---	---	---	---	---	---	e30	e23	e20	e22
24	---	---	---	---	---	---	---	---	e29	e22	e20	e22
25	---	---	---	---	---	---	---	---	e28	e22	e20	e21
26	---	---	---	---	---	---	---	---	e27	e22	e20	e20
27	---	---	---	---	---	---	---	---	e27	e23	e20	e20
28	---	---	---	---	---	---	---	---	e27	e22	e20	e20
29	---	---	---	---	---	---	---	---	e27	e23	e20	e20
30	---	---	---	---	---	---	---	---	e26	e24	e20	e21
31	---	---	---	---	---	---	---	---	---	e22	e20	---
TOTAL	---	---	---	---	---	---	---	---	901	743	674	593
MEAN	---	---	---	---	---	---	---	---	30.0	24.0	21.7	19.8
MAX	---	---	---	---	---	---	---	---	35	27	26	23
MIN	---	---	---	---	---	---	---	---	26	22	20	18
AC-FT	---	---	---	---	---	---	---	---	1790	1470	1340	1180
CFSM	---	---	---	---	---	---	---	---	1.54	1.23	1.11	1.01
IN.	---	---	---	---	---	---	---	---	1.71	1.41	1.28	1.13

+ Result of discharge measurement
e Estimated

15304400 TAKIKCHAK RIVER NEAR NEWTOK—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

	1,2,3,5-Tetra-methyl-benzene water	1,2,3-Tri-chloro-benzene water	1,2,3-Tri-chloro-propane water	1,2,3-Tri-methyl-benzene water	1,2,4-Tri-chloro-benzene water	1,2,4-Tri-methyl-benzene water	Dibromo-chloro-propane water	1,2-Di-bromo-ethane water	1,2-Di-chloro-benzene water	1,2-Di-chloro-ethane water	1,2-Di-chloro-ethane-d4, sur Sch2090	1,3,5-Tri-methyl-benzene water	
Date	unfltrd ug/L (50000)	unfltrd ug/L (77613)	unfltrd ug/L (77443)	unfltrd ug/L (77221)	unfltrd ug/L (34551)	unfltrd ug/L (77222)	unfltrd ug/L (82625)	unfltrd ug/L (77651)	unfltrd ug/L (34536)	unfltrd ug/L (32103)	wat unfltrd pct rcv (99832)	unfltrd ug/L (34541)	unfltrd ug/L (77226)
JUN 14...	<.1	<.3	<.18	<.1	<.1	<.06	<.5	<.04	<.05	<.1	97.6	<.03	<.04
AUG 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,3-Di-chloro-benzene water	1,3-Di-chloro-propane water	1,4-Di-chloro-benzene water	14Bromo-fluoro-benzene surrog. VOC Sch	2,2-Di-chloro-propane water	2-Chloro-toluene water	2-Ethyl-toluene water	3-Chloro-propene water	4-Chloro-toluene water	4-Iso-propyl-toluene water	Acetone water	Acrylo-nitrile water	Benzene water
Date	unfltrd ug/L (34566)	unfltrd ug/L (77173)	unfltrd ug/L (34571)	wat unfltrd pct rcv (99834)	unfltrd ug/L (77170)	unfltrd ug/L (77275)	unfltrd ug/L (77220)	unfltrd ug/L (78109)	unfltrd ug/L (77277)	unfltrd ug/L (77356)	unfltrd ug/L (81552)	unfltrd ug/L (34215)	unfltrd ug/L (34030)
JUN 14...	<.03	<.1	<.03	96.5	<.05	<.04	<.06	<.50	<.05	<.08	<6	<1	<.02
AUG 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bromo-benzene water	Bromo-chloro-methane water	Bromo-di-chloro-methane water	Bromo-ethene water	Bromo-methane water	Carbon di-sulfide water	Chloro-benzene water	Chloro-ethane water	Chloro-methane water	cis-1,2-Di-chloro-ethene water	cis-1,3-Di-chloro-propene water	Di-bromo-methane water	Di-bromo-methane water
Date	unfltrd ug/L (81555)	unfltrd ug/L (77297)	unfltrd ug/L (32101)	unfltrd ug/L (50002)	unfltrd ug/L (34413)	unfltrd ug/L (77041)	unfltrd ug/L (34301)	unfltrd ug/L (34311)	unfltrd ug/L (34418)	unfltrd ug/L (77093)	unfltrd ug/L (34704)	unfltrd ug/L (32105)	unfltrd ug/L (30217)
JUN 14...	<.03	<.12	<.03	<.1	<.3	<.04	<.03	<.1	<.2	<.02	<.05	<.1	<.05
AUG 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
	Di-chloro-di-fluoro-methane wat	Di-chloro-methane water	Di-ethyl ether, water	Diiso-propyl ether, water	Ethyl methac-rylate, water	Ethyl methyl ketone, water	Ethyl-benzene water	Hexa-chloro-buta-diene, water	Hexa-chloro-ethane, water	Iodo-methane water	Iso-butyl methyl ketone, water	Iso-propyl-benzene water	Methyl acrylo-nitrile water
Date	unfltrd ug/L (34668)	unfltrd ug/L (34423)	unfltrd ug/L (81576)	unfltrd ug/L (81577)	unfltrd ug/L (73570)	unfltrd ug/L (81595)	unfltrd ug/L (34371)	unfltrd ug/L (39702)	unfltrd ug/L (34396)	unfltrd ug/L (77424)	unfltrd ug/L (78133)	unfltrd ug/L (77223)	unfltrd ug/L (81593)
JUN 14...	<.18	<.1	<.1	<.10	<.2	<4.0	<.03	<.1	<.1	<.35	<.4	<.04	<.8
AUG 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
	Methyl acryl-ate, water	Methyl methac-rylate, water	Methyl tert-ethyl ether, water	meta-+ para-Xylene, water	Naphth-alene, water	Methyl n-butyl ketone, water	n-Butyl benzene water	n-propyl-benzene water	o-Xylene, water	sec-Butyl-benzene water	Methyl Styrene water	t-Butyl ethyl ether, water	Methyl t-butyl ether, water
Date	unfltrd ug/L (49991)	unfltrd ug/L (81597)	unfltrd ug/L (50005)	unfltrd ug/L (85795)	unfltrd ug/L (34696)	unfltrd ug/L (77103)	unfltrd ug/L (77342)	unfltrd ug/L (77224)	unfltrd ug/L (77135)	unfltrd ug/L (77350)	unfltrd ug/L (77128)	unfltrd ug/L (50004)	unfltrd ug/L (78032)
JUN 14...	<2.0	<.3	<.08	<.06	<.5	<.7	<.1	<.04	<.04	<.06	<.04	<.05	<.2
AUG 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
	tert-Butyl-benzene water	Tetra-chloro-ethene water	Tetra-chloro-methane water	Tetra-hydro-furan, water	Toluene water	Toluene surrog. Sch2090	trans-1,2-Di-chloro-ethene water	trans-1,3-Di-chloro-propene water	trans-1,4-Di-chloro-2-butene, water	Tri-bromo-methane water	Tri-chloro-ethene, water	Tri-chloro-methane water	Tri-chloro-methane water
Date	unfltrd ug/L (77353)	unfltrd ug/L (34475)	unfltrd ug/L (32102)	unfltrd ug/L (81607)	unfltrd ug/L (34010)	wat unfltrd percent recovery (99833)	unfltrd ug/L (34546)	unfltrd ug/L (34699)	unfltrd ug/L (73547)	unfltrd ug/L (32104)	unfltrd ug/L (39180)	unfltrd ug/L (34488)	unfltrd ug/L (32106)
JUN 14...	<.06	<.06	<.06	<2	E.02	101	<.03	<.09	<.7	<.10	<.04	<.16	<.02
AUG 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
		Vinyl chlor-ide, water	Uranium natural water	Number of TICS from VOC	Sample purpose	Sampler type							
Date		unfltrd ug/L (39175)	fltrd, ug/L (22703)	by GCMS number (99871)	code (71999)	code (84164)							
JUN 14...		<.1	<.04	.0	10.00	3044							
AUG 17...		--	<.04	--	10.00	3044							