

SOUTH-CENTRAL ALASKA

15238648 UPPER NUKA RIVER NEAR PARK BOUNDARY NEAR HOMER

LOCATION.--Lat 59°41'04", long 150°42'12" (Seldovia C-2 quad), Kenai Peninsula Borough, Hydrologic Unit 19020202, on left bank, 0.4 mi downstream from terminus of Nuka Glacier, 4.9 mi southeast of Bradley Lake, and 29 mi east of Homer, Alaska.

DRAINAGE AREA.--Indeterminate. Prior to July 29, 1990, drainage area was about 3 mi² and varied according to position of glacier terminus.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1980-81, prior to shift in glacier terminus; September 1984 to current year. Records prior to July 29, 1990, are not equivalent. Published as "Upper Nuka River near Homer" prior to October 1989. Low-flow records not equivalent prior to November 1987 because most low-flow measurements were made at site 0.5 mi downstream.

REVISED RECORDS.--WDR AK-89-1: 1985 (M), 1986-88.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,300 ft above sea level, from topographic map.

REMARKS.--Records fair except estimated daily discharges, which are poor. Water is diverted, 300 ft upstream from gage, into Bradley River drainage since July 29, 1990. Precipitation gage and air temperature recorder at station; daily values of precipitation and air temperature are available from the computer files of the Alaska Science Center, Water Resources Office. 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	183	1.2	0.00	0.00	0.00	e0.00	0.00	e0.00	e1.0	2.5	3.6	1.6
2	57	0.88	e0.00	0.00	0.00	e0.00	0.00	e0.00	e2.0	1.9	8.6	2.0
3	12	0.64	e0.00	0.00	0.00	e0.00	0.00	e0.00	e4.0	1.6	5.9	1.7
4	2.1	0.64	e0.00	0.00	0.00	e0.00	0.00	e0.00	e5.0	1.7	1.8	1.0
5	5.7	0.68	e0.00	0.00	0.00	e0.00	0.00	e0.00	e6.0	2.6	3.3	0.72
6	21	1.7	e0.00	0.00	0.00	e0.00	0.00	e0.00	e5.0	6.0	2.9	0.84
7	12	1.2	e0.00	0.00	0.00	e0.00	0.00	e0.00	e5.0	12	4.5	0.84
8	1.4	0.75	0.00	0.00	0.00	e0.00	0.00	e0.00	e5.0	13	3.4	0.73
9	0.84	0.66	0.00	0.00	0.00	e0.00	0.00	e0.00	2.7	11	2.4	0.72
10	0.78	0.62	0.00	0.00	0.00	e0.00	0.00	e0.00	9.2	8.7	5.0	0.86
11	0.69	e0.50	0.00	0.00	0.00	e0.00	0.00	e0.00	13	8.7	2.0	0.77
12	0.61	0.49	0.00	0.00	0.00	e0.00	0.00	e0.00	4.0	7.7	3.2	0.69
13	0.63	0.45	0.00	0.00	0.00	0.00	0.00	e0.00	4.1	4.5	2.9	0.66
14	13	e0.40	0.00	0.00	0.00	0.00	0.00	e0.00	6.0	2.1	2.5	0.55
15	19	e0.30	0.00	0.00	0.00	0.00	0.00	e0.00	8.4	1.4	2.3	0.49
16	0.93	e0.20	0.00	0.00	0.00	0.00	0.00	e0.00	23	2.5	4.7	0.46
17	0.68	e0.10	0.00	0.00	0.00	0.00	0.00	e0.00	30	6.4	6.5	0.43
18	0.67	e0.00	0.00	0.00	0.00	0.00	0.00	e0.00	21	4.1	3.2	0.42
19	0.57	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	18	3.0	2.1	0.80
20	0.50	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00	16	2.0	1.7	1.1
21	0.47	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00	12	2.4	2.5	0.76
22	0.47	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00	8.5	8.3	2.5	1.2
23	0.47	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00	9.6	12	2.6	0.94
24	0.53	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00	9.6	2.3	1.7	0.71
25	4.2	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00	10	5.1	2.5	0.76
26	17	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00	14	22	1.4	24
27	4.8	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00	13	22	1.1	2.4
28	0.83	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00	13	15	0.74	0.82
29	0.68	0.00	0.00	0.00	e0.00	0.00	e0.00	e0.10	4.1	2.3	0.98	0.77
30	0.59	0.00	0.00	0.00	---	0.00	e0.00	e0.20	4.0	1.8	1.3	7.6
31	0.71	---	0.00	0.00	---	0.00	---	e0.30	---	1.7	1.4	---
TOTAL	363.85	11.41	0.00	0.00	0.00	0.00	0.00	0.60	286.2	198.3	91.22	57.34
MEAN	11.7	0.38	0.00	0.00	0.00	0.00	0.00	0.02	9.54	6.40	2.94	1.91
MAX	183	1.7	0.00	0.00	0.00	0.00	0.00	0.30	30	22	8.6	24
MIN	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	1.4	0.74	0.42
AC-FT	722	23	0.00	0.00	0.00	0.00	0.00	1.2	568	393	181	114

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)#

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	7.81	4.00	0.26	0.04	0.18	0.01	0.01	1.28	27.4	36.1	18.5	12.5		
MAX	62.1	36.7	2.15	0.16	1.56	0.10	0.12	9.96	209	272	53.1	41.1		
(WY)	2003	2003	2003	1995	1994	2003	2003	2003	1999	1999	1998	2002		
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	2.96	0.97	1.72		
(WY)	1992	1992	1991	1991	1991	1991	1992	1998	1992	1991	1991	1991		

See Period of Record and Remarks. Not adjusted to account for changes in drainage area
e Estimated

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1991 - 2004#	
ANNUAL TOTAL	3702.16		1008.92			
ANNUAL MEAN	10.1		2.76		9.05	
HIGHEST ANNUAL MEAN					a45.6	1999
LOWEST ANNUAL MEAN					1.09	1991
HIGHEST DAILY MEAN	183	Oct 1	183	Oct 1	389	Oct 23 2002
LOWEST DAILY MEAN	b0.00	Jan 22	c0.00	Nov 18	d0.00	Nov 3 1990
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 22	0.00	Nov 18	0.00	Nov 3 1990
MAXIMUM PEAK FLOW			356	Oct 1	565	Oct 23 2002
MAXIMUM PEAK STAGE			f4.12	Oct 1	f4.48	Oct 23 2002
ANNUAL RUNOFF (AC-FT)	7340		2000		6560	
10 PERCENT EXCEEDS	29		7.9		16	
50 PERCENT EXCEEDS	1.0		0.00		0.22	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

PRIOR TO REGULATION AND DIVERSION OF NUKA RIVER

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1989, BY WATER YEAR (WY)#

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.6	7.01	2.83	1.48	.49	.21	.22	23.8	34.7	141	180	131
MAX	72.0	24.9	9.00	5.79	2.24	.87	.72	117	81.2	307	432	321
(WY)	1987	1987	1987	1985	1985	1985	1985	1986	1989	1989	1989	1989
MIN	3.84	.024	.000	.000	.000	.000	.000	.016	.76	6.41	12.1	7.08
(WY)	1989	1989	1989	1989	1988	1988	1988	1987	1987	1988	1986	1988

SUMMARY STATISTICS

WATER YEARS 1985 - 1989#

ANNUAL MEAN	47.9
HIGHEST ANNUAL MEAN	96.2
LOWEST ANNUAL MEAN	8.60
HIGHEST DAILY MEAN	1240
LOWEST DAILY MEAN	g.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	h1630
INSTANTANEOUS PEAK STAGE	5.47
ANNUAL RUNOFF (AC-FT)	34700
10 PERCENT EXCEEDS	183
50 PERCENT EXCEEDS	1.1
90 PERCENT EXCEEDS	.00

- # See Period of Record and Remarks. Not adjusted to account for changes in drainage area
a Diversion dam failed Jun. 17, 1999; repaired Sep. 25, 1999
b From Jan. 22-31, Mar. 12 - Apr. 10, and Nov. 18 - Dec. 31
c From Nov. 18 - May 28
d No flow most days during winter
e From crest-stage gage
f No flow many days each year since 1987 during winter through Jun.
g See Period of Record for remark on low-flow records
h From rating curve extended above 380 ft³/s