

15565700 UNALAKLEET RIVER ABOVE CHIROSKEY RIVER NEAR UNALAKLEET

LOCATION.--Lat 63°56'06", long 160°18'18", in NW¹/₄ NE¹/₄ sec. 18, T.18 S., R.8 W. (Unalakleet D-3 quad), Hydrologic Unit 19050102, on the right bank, 3.5 mi upstream from mouth of the Chiroskey River, 28 mi upstream from mouth, 15 mi east of Unalakleet.

DRAINAGE AREA.--1,048 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1997 to September 1999 (no winter record), October 1999 to current year.

REVISED RECORDS.--WRD-AK-99-1: 1998.

GAGE.--Water-stage recorder. Elevation of gage is 40 ft above sea level from topographic map.

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	6070	1290	e450	e240	e160	e130	e120	e1200	6590	2080	2670	3510
2	5140	1220	e450	e240	e160	e130	e120	1530	7400	3780	2440	3260
3	4200	1130	e400	e240	e160	e130	e120	1940	7020	5660	2270	3000
4	3600	1130	e400	e240	e170	e130	e120	2320	6350	5190	2150	2920
5	3050	1130	e450	e240	e170	e130	e120	2580	5950	4030	2020	2800
6	2670	1090	e450	e240	e160	e130	e120	3030	5890	3300	1910	2620
7	2620	1040	e400	e220	e160	e130	e120	2770	5520	2830	1820	2480
8	2720	e1000	e400	e220	e160	e130	e120	3060	5170	2530	1780	2390
9	2500	e950	e400	e220	e140	e130	e120	5330	4530	2290	1750	2300
10	2280	e900	e400	e220	e140	e130	e120	7590	4210	2130	1650	2220
11	2210	e900	e350	e220	e140	e120	e120	6030	4220	2020	1630	2170
12	2100	e850	e350	e200	e140	e120	e120	4120	4150	1910	1750	2170
13	e2000	e800	e350	e200	e140	e120	e120	3700	3900	1800	1800	2130
14	1980	e800	e350	e200	e140	e120	e120	3780	3500	1710	2180	2050
15	1900	e750	e350	e200	e140	e120	e120	3050	3060	1720	4410	1960
16	1830	e750	e350	e200	e140	e120	e120	2400	2710	1750	5670	1900
17	1650	e700	e350	e200	e140	e120	e130	2090	2580	1650	4830	1840
18	e1520	e700	e300	e200	e140	e120	e140	1990	2490	1550	4220	1780
19	e1400	e650	e300	e180	e140	e120	e150	2320	2320	1450	3810	1730
20	e1310	e650	e300	e180	e140	e120	e160	3080	2270	1390	3430	1670
21	e1350	e600	e300	e180	e140	e120	e170	3920	2200	1330	3100	1600
22	e1460	e600	e300	e180	e140	e120	e200	4170	2130	1300	2840	1540
23	e1600	e550	e300	e180	e140	e120	e300	4070	2190	1320	2710	1500
24	1650	e550	e280	e180	e140	e120	e350	3780	2270	1550	3350	1460
25	1480	e600	e280	e180	e140	e120	e400	3660	2250	1940	4100	1420
26	1390	e600	e280	e180	e130	e120	e450	3750	2050	2370	5250	1370
27	1320	e550	e280	e180	e130	e120	e500	4520	1900	3950	5650	1340
28	1250	e500	e260	e160	e130	e120	e600	4410	1790	4910	5130	1320
29	1200	e500	e260	e160	---	e120	e700	4730	1730	3940	4420	1360
30	1180	e450	e260	e160	---	e120	e900	5150	1800	3340	3920	1420
31	1250	---	e260	e160	---	e120	---	5620	---	2990	3710	---
TOTAL	67880	23930	10610	6200	4070	3820	7070	111690	110140	79710	98370	61230
MEAN	2190	798	342	200	145	123	236	3603	3671	2571	3173	2041
MAX	6070	1290	450	240	170	130	900	7590	7400	5660	5670	3510
MIN	1180	450	260	160	130	120	120	1200	1730	1300	1630	1320
AC-FT	134600	47470	21040	12300	8070	7580	14020	221500	218500	158100	195100	121400
CFSM	2.09	0.76	0.33	0.19	0.14	0.12	0.22	3.44	3.50	2.45	3.03	1.95
IN.	2.41	0.85	0.38	0.22	0.14	0.14	0.25	3.96	3.91	2.83	3.49	2.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)#

	1997	1998	1999	2000	2001	2002	2003
MEAN	1465	591	268	164	128	112	142
MAX	2190	798	342	200	145	123	236
(WY)	2003	2003	2003	2003	2003	2003	2002
MIN	1037	394	198	147	116	98.2	105
(WY)	2002	2002	2002	2002	2001	2001	2001

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SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1997 - 2003#	
ANNUAL TOTAL	418968		584720			
ANNUAL MEAN	1148		1602		1389	
HIGHEST ANNUAL MEAN					1656	2001
LOWEST ANNUAL MEAN					1005	2002
HIGHEST DAILY MEAN	17000	May 24	7590	May 10	19600	Jun 8 2001
LOWEST DAILY MEAN	a110	Mar 29	b120	Mar 11	c95	Mar 21 2001
ANNUAL SEVEN-DAY MINIMUM	110	Mar 29	120	Mar 11	95	Mar 21 2001
MAXIMUM PEAK FLOW			7850	May 10	d19700	Jun 8 2001
MAXIMUM PEAK STAGE			93.07	May 10	98.41	Jun 8 2001
MAXIMUM PEAK STAGE					f99.58	May 23 2002
ANNUAL RUNOFF (AC-FT)	831000		1160000		1006000	
ANNUAL RUNOFF (CFSM)	1.10		1.53		1.33	
ANNUAL RUNOFF (INCHES)	14.87		20.76		18.01	
10 PERCENT EXCEEDS	2480		4110		3440	
50 PERCENT EXCEEDS	683		1220		655	
90 PERCENT EXCEEDS	120		120		110	

See Period of Record

a From Mar. 29 to Apr. 24

b From Mar. 11 to Apr. 16

c From Mar. 21 to Apr. 10

d From rating curve extended above 8800 ft³/s

e Estimated

f Backwater from ice

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982-83, 1998 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1998 to current year.

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

REMARKS.-- Records represent water temperature at the sensor within 0.5°C. No record October 11-13 and August 28 due to recorder problems. Temperature was compared with the stream average by cross section on July 17. 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, 14.5°C, July 11-12 2000 and July 19, August 2-3, 2002; minimum, 0.0°C, many days during winter and spring breakup periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 13.0°C, July 13, 20; minimum, 0.0°C, many days during fall, winter and spring breakup periods.

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

Date	Time	STREAM WIDTH (FT) (00004)	SAMPLE LOC- ATION, CROSS SECTION (FT FM R BK) (72103)	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)
JUL							
17...	1151	247	15.0	88.06	1630	8.0	27.0
17...	1153	247	55.0	88.06	1630	8.0	27.0
17...	1155	247	95.0	88.06	1630	8.0	27.0
17...	1157	247	135.0	88.06	1630	8.0	27.0
17...	1159	247	185.0	88.06	1630	8.0	27.0

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	4.5	0.5	4.0	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
2	3.5	3.0	3.5	1.5	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
3	3.5	2.5	3.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
4	2.5	2.0	2.5	1.0	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
5	2.0	1.5	2.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
6	1.5	1.5	1.5	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
7	2.0	1.5	2.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
8	2.0	2.0	2.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	2.0	1.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	2.0	1.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	2.5	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	2.5	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	2.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	1.0	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	1.5	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	1.5	1.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	1.0	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	2.5	1.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	2.5	1.5	2.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	---	---	---	1.5	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0

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TEMPERATURE, WATER, (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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.0	2.5
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	2.0	2.5
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.0	2.5
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.5	2.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.5	2.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.5	1.5
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.5	1.5
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	1.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	1.5
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.0	2.5
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.0	2.5
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.5	2.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.0	1.5
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.5	2.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	2.0	2.5
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	2.5	3.5
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	4.5	5.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	4.0	4.5
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.5	3.5
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	2.5	3.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	3.5	4.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	4.0	4.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	4.5	4.5
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	3.5	4.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.0	3.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	3.0	3.5
29	---	---	---	0.0	0.0	0.0	0.5	0.0	0.0	4.5	3.5	4.0
30	---	---	---	0.0	0.0	0.0	2.5	0.5	1.5	5.5	4.5	5.0
31	---	---	---	0.0	0.0	0.0	---	---	---	5.5	5.5	5.5
MONTH	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.1	5.5	0.5	2.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	6.0	5.0	5.5	9.5	9.0	9.0	9.0	8.0	8.5	8.5	8.0	8.5
2	5.5	4.5	5.0	9.0	8.0	8.0	8.5	7.5	8.0	8.0	8.0	8.0
3	5.0	4.5	4.5	8.0	7.0	7.5	8.5	7.0	7.5	8.0	7.0	7.0
4	5.5	5.0	5.5	8.0	7.5	8.0	9.0	8.5	9.0	7.0	6.5	6.5
5	6.5	5.5	6.0	9.0	7.5	8.0	9.5	8.5	9.0	6.5	6.0	6.5
6	6.5	6.5	6.5	9.5	8.5	9.0	10.5	8.5	9.5	7.0	6.0	6.5
7	7.0	6.0	6.5	10.0	9.0	9.5	10.5	10.0	10.0	6.5	6.5	6.5
8	7.0	6.0	6.5	11.5	9.5	10.5	11.5	9.5	10.0	6.5	6.0	6.0
9	7.5	7.0	7.5	11.5	10.5	11.0	12.5	10.5	11.5	6.5	6.0	6.0
10	7.0	6.5	6.5	11.0	10.0	10.5	12.0	11.0	11.5	6.0	5.5	5.5
11	7.5	6.5	7.0	10.5	10.0	10.0	11.5	10.5	11.0	6.0	5.5	5.5
12	8.5	7.5	8.0	11.5	9.0	10.0	10.5	10.0	10.0	6.5	6.0	6.0
13	9.0	8.5	8.5	13.0	10.5	11.5	10.0	9.5	9.5	6.0	5.0	5.5
14	10.0	9.0	9.5	12.5	10.5	11.5	9.5	9.0	9.0	5.0	4.0	4.5
15	10.0	9.0	9.5	10.5	9.0	9.5	9.5	8.5	9.0	4.5	3.5	4.0
16	9.5	9.0	9.0	9.5	8.5	9.0	8.5	8.0	8.0	4.5	3.0	4.0
17	9.5	8.0	9.0	9.5	7.5	8.5	8.0	7.0	7.5	4.5	3.5	4.0
18	10.5	9.0	9.5	11.0	8.5	9.5	7.0	6.5	6.5	4.0	3.0	3.5
19	10.0	9.0	10.0	12.5	10.5	11.5	7.0	6.5	6.5	4.0	3.0	3.5
20	9.5	8.5	9.0	13.0	11.0	12.0	8.0	6.5	7.5	3.5	2.5	3.0
21	9.5	9.0	9.0	12.5	11.0	11.5	9.0	8.0	8.5	2.5	1.5	2.5
22	11.0	9.0	9.5	11.0	9.5	10.0	8.5	7.0	8.0	2.5	1.5	2.0
23	11.0	10.0	10.5	10.0	9.5	9.5	7.5	7.0	7.0	2.5	1.5	2.0
24	10.5	10.0	10.0	10.5	9.5	10.0	8.0	7.5	7.5	2.5	1.5	2.0
25	10.0	9.0	9.5	11.5	10.0	10.5	8.0	7.0	7.5	2.0	1.5	2.0
26	10.5	8.5	9.5	11.0	9.0	10.0	8.0	7.0	7.5	2.0	1.5	2.0
27	11.5	9.5	10.5	9.0	8.0	8.5	8.0	7.5	8.0	3.0	2.0	2.5
28	11.0	9.5	10.5	8.5	8.0	8.0	---	---	---	3.0	2.5	2.5
29	10.5	10.0	10.5	9.0	8.5	9.0	8.0	7.5	8.0	3.5	3.0	3.0
30	10.0	9.5	9.5	8.5	8.0	8.5	8.0	7.5	8.0	4.0	3.5	3.5
31	---	---	---	8.5	8.0	8.0	8.5	8.0	8.0	---	---	---
MONTH	11.5	4.5	8.3	13.0	7.0	9.6	---	---	---	8.5	1.5	4.5

15743850 DAHL CREEK NEAR KOBUK

LOCATION.--Lat 66°56'46", long 156°54'32", in NW¹/₄ SE¹/₄ sec. 21, T. 18 N., R.9 E. (Shungnak D-2 quad), Hydrologic Unit 19050302, on right bank 25 ft downstream from culvert on road to Bornite at west end of Dahl Creek landing strip, 3.5 mi upstream from mouth and 3 mi north of Kobuk.

DRAINAGE AREA.--11.0 mi².

PERIOD OF RECORD.--Annual maximum, water years 1986-87, April 1988 to current year. (No winter record in water years 1989, 1991-92, 1994, and 1996.)

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

GAGE.--Water-stage recorder. Elevation of gage is 225 ft above sea level, from topographic map. July 16, 1986, to April 28, 1988, the water-stage recorder was operated to obtain annual maximums. Prior to August 17, 1994 at site 50 ft upstream at same datum.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	e16	e11	e6.2	e4.6	e4.0	e3.7	e3.7	37	19	21	18
2	26	e16	e11	e6.0	e4.6	e4.0	e3.7	e3.7	41	23	20	17
3	25	e15	e11	e6.0	e4.6	e4.0	e3.7	e3.8	47	22	20	18
4	27	e15	e10	e6.0	e4.5	e4.0	e3.7	e3.9	44	21	19	19
5	26	e15	e10	e5.8	e4.5	e4.0	e3.7	e4.1	43	20	19	24
6	28	e15	e9.8	e5.8	e4.5	e3.9	e3.7	e4.3	41	26	18	26
7	28	e14	e9.6	e5.8	e4.5	e3.9	e3.7	e4.5	38	47	18	26
8	26	e14	e9.4	e5.6	e4.4	e3.9	e3.7	e5.0	41	35	18	28
9	26	e14	e9.2	e5.6	e4.4	e3.9	e3.7	e5.4	37	34	18	29
10	26	e14	e9.0	e5.6	e4.4	e3.9	e3.7	e5.8	34	31	18	31
11	25	e14	e8.8	e5.6	e4.4	e3.9	e3.6	e7.0	32	30	17	37
12	25	e14	e8.6	e5.4	e4.3	e3.8	e3.6	e10	30	29	17	40
13	25	e13	e8.4	e5.4	e4.3	e3.8	e3.6	13	36	29	17	56
14	24	e13	e8.2	e5.4	e4.3	e3.8	e3.6	14	40	29	16	54
15	24	e13	e8.0	e5.4	e4.3	e3.8	e3.6	15	30	28	21	53
16	e23	e13	e8.0	e5.2	e4.3	e3.8	e3.6	18	28	27	26	51
17	e23	e13	e7.8	e5.2	e4.2	e3.8	e3.6	25	26	25	21	50
18	e22	e13	e7.6	e5.2	e4.2	e3.8	e3.6	34	25	25	20	49
19	e22	e13	e7.6	e5.2	e4.2	e3.8	e3.6	60	24	24	20	46
20	e21	e13	e7.4	e5.0	e4.2	e3.8	e3.6	105	23	34	19	43
21	e21	e12	e7.2	e5.0	e4.2	e3.7	e3.6	159	22	31	19	41
22	e20	e12	e7.2	e5.0	e4.1	e3.7	e3.6	231	23	26	19	39
23	e20	e12	e7.0	e4.9	e4.1	e3.7	e3.6	254	32	26	19	37
24	e19	e12	e7.0	e4.9	e4.1	e3.7	e3.6	212	25	25	19	35
25	e19	e12	e6.8	e4.9	e4.1	e3.7	e3.7	188	22	24	18	34
26	e18	e12	e6.8	e4.8	e4.1	e3.7	e3.7	173	22	24	18	33
27	e18	e11	e6.6	e4.8	e4.1	e3.7	e3.7	134	21	24	18	32
28	e17	e11	e6.4	e4.8	e4.0	e3.7	e3.7	90	21	23	19	32
29	e17	e11	e6.4	e4.7	---	e3.7	e3.7	63	20	22	19	58
30	e17	e11	e6.2	e4.7	---	e3.7	e3.7	52	20	22	18	67
31	e16	---	e6.2	e4.7	---	e3.7	---	43	---	21	18	---
TOTAL	700	396	254.2	164.6	120.5	118.3	109.6	1944.2	925	826	587	1123
MEAN	22.6	13.2	8.20	5.31	4.30	3.82	3.65	62.7	30.8	26.6	18.9	37.4
MAX	28	16	11	6.2	4.6	4.0	3.7	254	47	47	26	67
MIN	16	11	6.2	4.7	4.0	3.7	3.6	3.7	20	19	16	17
AC-FT	1390	785	504	326	239	235	217	3860	1830	1640	1160	2230
CFSM	2.05	1.20	0.75	0.48	0.39	0.35	0.33	5.70	2.80	2.42	1.72	3.40
IN.	2.37	1.34	0.86	0.56	0.41	0.40	0.37	6.57	3.13	2.79	1.99	3.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2002, BY WATER YEAR (WY)#

	MEAN	28.2	9.57	5.88	4.62	4.10	3.76	4.16	53.4	62.3	35.7	67.3	49.6
MAX	67.2	16.0	8.20	6.88	6.15	5.63	7.39	93.1	116	73.2	223	104	
(WY)	1994	1999	2002	1998	1998	1998	1997	1996	1992	1989	1994	1993	
MIN	9.65	3.70	2.55	2.00	2.00	1.63	1.50	6.21	13.1	10.6	17.3	19.8	
(WY)	1993	1993	1993	1993	1993	1993	1993	2001	1997	1997	1990	1991	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1986 - 2002#

	ANNUAL TOTAL	10290.1	7268.4										
ANNUAL MEAN	28.2		19.9										
HIGHEST ANNUAL MEAN													
LOWEST ANNUAL MEAN													
HIGHEST DAILY MEAN		449	Aug 14		254	May 23		1400	Aug 17	1994			
LOWEST DAILY MEAN		a2.9	Apr 19		b3.6	Apr 11		c1.5	Mar 9	1993			
ANNUAL SEVEN-DAY MINIMUM		2.9	Apr 19		3.6	Apr 11		1.5	Mar 9	1993			
MAXIMUM PEAK FLOW					393	May 22		d1840	Aug 17	1994			
MAXIMUM PEAK STAGE					5.77	May 22		6.73	Aug 17	1994			
MAXIMUM PEAK STAGE					f7.03	May 10		f7.03	May 10	2002			
ANNUAL RUNOFF (AC-FT)		20410			14420			17940					
ANNUAL RUNOFF (CFSM)		2.56			1.81			2.25					
ANNUAL RUNOFF (INCHES)		34.80			24.58			30.59					
10 PERCENT EXCEEDS		68			37			61					
50 PERCENT EXCEEDS		12			14			9.6					
90 PERCENT EXCEEDS		3.0			3.7			3.0					

See Period of Record; partial years used in monthly statistics

a From Apr. 19 to May 13

b From Apr. 11 to Apr. 24

c From Mar. 9 to Apr. 30, 1993

d From rating curve extended above 170 ft³/s on basis of slope-area measurement of peak flow

e Estimated

f Backwater from ice

15743850 DAHL CREEK NEAR KOBUK—Continued

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	65	e20	e11	e7.6	e5.8	e5.0	e4.2	e6.0	93	92	91	78
2	61	e20	e11	e7.4	e5.8	e5.0	e4.2	e6.2	102	98	85	74
3	60	e19	e11	e7.4	e5.8	e4.8	e4.2	e6.4	107	89	93	72
4	57	e19	e11	e7.2	e5.8	e4.8	e4.2	e6.6	119	82	85	74
5	54	e18	e11	e7.2	e5.8	e4.8	e4.2	e6.8	140	79	86	69
6	51	e18	e11	e7.0	e5.6	e4.8	e4.2	e7.0	160	76	80	65
7	49	e17	e11	e7.0	e5.6	e4.8	e4.2	e7.4	157	72	76	63
8	47	e17	e11	e7.0	e5.6	e4.8	e4.2	e8.0	149	68	71	79
9	43	e16	e10	e6.8	e5.6	e4.8	e4.2	e9.0	143	65	69	76
10	41	e16	e10	e6.8	e5.6	e4.8	e4.2	e10	143	64	67	73
11	39	e15	e10	e6.8	e5.4	e4.8	e4.2	e11	143	60	112	72
12	37	e15	e10	e6.6	e5.4	e4.6	e4.2	e12	136	57	128	68
13	35	e14	e9.8	e6.6	e5.4	e4.6	e4.2	e12	126	56	110	65
14	33	e14	e9.8	e6.6	e5.2	e4.6	e4.2	e13	114	56	158	62
15	32	e13	e9.6	e6.6	e5.2	e4.6	e4.2	e13	102	51	176	60
16	31	e13	e9.6	e6.4	e5.2	e4.4	e4.2	e13	92	50	186	58
17	e29	e13	e9.4	e6.4	e5.2	e4.4	e4.2	e13	86	47	167	55
18	e28	e13	e9.2	e6.4	e5.0	e4.4	e4.2	e14	81	45	151	53
19	e27	e13	e9.0	e6.4	e5.0	e4.4	e4.2	e14	75	44	136	51
20	e26	e13	e8.8	e6.2	e5.0	e4.4	e4.4	e15	70	43	122	49
21	e25	e12	e8.8	e6.2	e5.0	e4.4	e4.4	e17	66	42	110	47
22	e25	e12	e8.6	e6.2	e5.0	e4.4	e4.4	e20	62	41	99	45
23	e24	e12	e8.6	e6.2	e5.0	e4.4	e4.6	e23	60	44	115	44
24	e24	e12	e8.4	e6.2	e5.0	e4.4	e4.8	32	57	59	111	43
25	e23	e12	e8.4	e6.0	e5.0	e4.2	e5.2	38	54	83	106	41
26	e23	e12	e8.2	e6.0	e5.0	e4.2	e5.6	55	51	111	109	40
27	e22	e12	e8.0	e6.0	e5.0	e4.2	e5.8	84	49	84	102	38
28	e22	e12	e8.0	e6.0	e5.0	e4.2	e5.8	70	47	78	97	37
29	e21	e11	e7.8	e6.0	---	e4.2	e5.8	64	45	76	92	39
30	e21	e11	e7.8	e6.0	---	e4.2	e5.8	63	47	75	88	37
31	e21	---	e7.6	e6.0	---	e4.2	---	74	---	80	83	---
TOTAL	1096	434	293.4	203.2	149.0	140.6	136.4	743.4	2876	2067	3361	1727
MEAN	35.4	14.5	9.46	6.55	5.32	4.54	4.55	24.0	95.9	66.7	108	57.6
MAX	65	20	11	7.6	5.8	5.0	5.8	84	160	111	186	79
MIN	21	11	7.6	6.0	5.0	4.2	4.2	6.0	45	41	67	37
AC-FT	2170	861	582	403	296	279	271	1470	5700	4100	6670	3430
CFSM	3.21	1.32	0.86	0.60	0.48	0.41	0.41	2.18	8.72	6.06	9.86	5.23
IN.	3.71	1.47	0.99	0.69	0.50	0.48	0.46	2.51	9.73	6.99	11.37	5.84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)#

MEAN	28.8	10.1	6.24	4.81	4.22	3.84	4.20	51.0	64.5	37.7	69.6	50.1
MAX	67.2	16.0	9.46	6.88	6.15	5.63	7.39	93.1	116	73.2	223	104
(WY)	1994	1999	2003	1998	1998	1998	1997	1996	1992	1989	1994	1993
MIN	9.65	3.70	2.55	2.00	2.00	1.63	1.50	6.21	13.1	10.6	17.3	19.8
(WY)	1993	1993	1993	1993	1993	1993	1993	2001	1997	1997	1990	1991

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1986 - 2003#
ANNUAL TOTAL	7741.6	13227.0	
ANNUAL MEAN	21.2	36.2	25.9
HIGHEST ANNUAL MEAN			36.7
LOWEST ANNUAL MEAN			18.8
HIGHEST DAILY MEAN	254 May 23	186 Aug 16	1400 Aug 17 1994
LOWEST DAILY MEAN	a3.6 Apr 11	b4.2 Mar 25	c1.5 Mar 9 1993
ANNUAL SEVEN-DAY MINIMUM	3.6 Apr 11	4.2 Mar 25	1.5 Mar 9 1993
MAXIMUM PEAK FLOW		224 Aug 15	d1840 Aug 17 1994
MAXIMUM PEAK STAGE		5.36 Aug 15	6.73 Aug 17 1994
MAXIMUM PEAK STAGE			f7.03 May 10 2002
ANNUAL RUNOFF (AC-FT)	15360	26240	18770
ANNUAL RUNOFF (CFSM)	1.93	3.29	2.36
ANNUAL RUNOFF (INCHES)	26.18	44.73	32.01
10 PERCENT EXCEEDS	42	92	67
50 PERCENT EXCEEDS	14	13	10
90 PERCENT EXCEEDS	3.7	4.4	3.0

See Period of Record; partial years used in monthly statistics

a From Apr. 11 to May 13

b From Mar. 25 to Apr. 15

c From Mar. 9 to Apr. 30, 1993

d From rating curve extended above 170 ft³/s on basis of slope-area measurement of peak flow

e Estimated

f Backwater from ice

15744500 KOBUK RIVER NEAR KIANA

LOCATION.--Lat 66°58'25", long 160°07'51", in NW¹/₄ SE¹/₄ sec. 11, T. 18 N., R. 7 W. (Selawik D-3 quad), Northwest Arctic Borough, Hydrologic Unit 19050304, on left bank, 5.8 mi upstream from Portage Creek, 9.7 mi upstream from Squirrel River, and 7.8 mi east of Kiana.

DRAINAGE AREA.--9,520 mi², approximately.

PERIOD OF RECORD.--September 1976 to current year (discontinued).

REVISED RECORDS.--WDR AK-81-1: 1977 (M), 1978, 1979-80 (M), WDR AK-93-1: 1992.

GAGE.--Water-stage recorder. Elevation of gage is 35 ft above sea level, from topographic map.

REMARKS.--Records fair 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	31200	e14000	e5900	e4000	e2600	e2300	e2100	e3000	44000	35400	27000	35400
2	36900	e13500	e5800	e4000	e2600	e2200	e2100	e3200	48100	55900	25600	32500
3	38000	e13000	e5700	e3900	e2600	e2200	e2100	e3600	51500	63700	25700	30300
4	37000	e12500	e5600	e3800	e2600	e2200	e2100	e4200	53900	57000	26100	29000
5	34600	e12000	e5500	e3700	e2600	e2200	e2100	e5000	63000	60100	26800	28400
6	31400	e11500	e5400	e3600	e2600	e2200	e2100	e6000	70300	63700	26900	28700
7	28600	e11000	e5400	e3600	e2500	e2200	e2100	e7500	78600	60500	26800	28800
8	26800	e10500	e5300	e3500	e2500	e2200	e2100	e10000	80700	51900	25100	28500
9	24800	e10000	e5300	e3400	e2500	e2200	e2100	e14000	83700	43900	23100	28300
10	22500	e9400	e5200	e3400	e2500	e2200	e2100	e19000	82900	38100	21300	29500
11	20300	e8800	e5100	e3300	e2500	e2200	e2100	e28000	84400	34400	20300	30900
12	19500	e8300	e5100	e3300	e2400	e2200	e2100	e40000	85500	31500	22200	30700
13	17900	e8000	e5000	e3200	e2400	e2200	e2100	e60000	84200	29300	30500	29700
14	16500	e7700	e5000	e3200	e2400	e2200	e2100	e68000	78300	27400	38400	28100
15	e15000	e7400	e4900	e3100	e2400	e2200	e2100	e67000	74600	25800	47100	26600
16	e14000	e7200	e4900	e3100	e2400	e2200	e2100	e63000	69600	24600	60500	25000
17	e13000	e7000	e4850	e3000	e2400	e2200	e2100	e58000	63000	23200	65500	23200
18	e12500	e6900	e4800	e3000	e2400	e2200	e2100	e53000	58600	22100	65700	22100
19	e12000	e6800	e4800	e3000	e2400	e2100	e2100	e50000	55800	21000	64400	21100
20	e11500	e6700	e4700	e2900	e2300	e2100	e2100	47600	51300	19900	59900	20100
21	e11000	e6700	e4700	e2900	e2300	e2100	e2100	49500	47900	18700	52800	19100
22	e10500	e6600	e4600	e2900	e2300	e2100	e2100	40700	45000	17800	46000	18200
23	e11000	e6600	e4600	e2800	e2300	e2100	e2100	31400	42400	17200	41800	17400
24	e11500	e6500	e4500	e2800	e2300	e2100	e2100	29200	39800	17700	42600	16800
25	e12000	e6500	e4500	e2800	e2300	e2100	e2100	27900	37600	20700	44400	16000
26	e12500	e6400	e4400	e2800	e2300	e2100	e2200	27300	36200	23500	44800	15200
27	e13000	e6300	e4400	e2700	e2300	e2100	e2200	29900	35000	27700	45900	14800
28	e13500	e6200	e4300	e2700	e2300	e2100	e2200	35800	34100	31700	45100	14100
29	e14000	e6100	e4200	e2700	---	e2100	e2300	38900	33100	34000	43200	14000
30	e14000	e6000	e4100	e2700	---	e2100	e2500	40100	32600	32800	41300	14300
31	e14000	---	e4100	e2700	---	e2100	---	41300	---	29800	38700	---
TOTAL	601000	256100	152650	98500	68000	67000	63900	1002100	1745700	1061000	1215500	716800
MEAN	19390	8537	4924	3177	2429	2161	2130	32330	58190	34230	39210	23890
MAX	38000	14000	5900	4000	2600	2300	2500	68000	85500	63700	65700	35400
MIN	10500	6000	4100	2700	2300	2100	2100	3000	32600	17200	20300	14000
AC-FT1192000	508000	302800	195400	134900	132900	126700	1988000	3463000	2104000	2411000	1422000	
CFSM	2.04	0.90	0.52	0.33	0.26	0.23	0.22	3.40	6.11	3.60	4.12	2.51
IN.	2.35	1.00	0.60	0.38	0.27	0.26	0.25	3.92	6.82	4.15	4.75	2.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	14070	5555	3482	2624	2159	1908	1863	25400	46450	21640	30610	28060																
MAX	29870	11050	6097	3965	2868	2600	3703	52250	87010	40130	78210	78190																
(WY)	1994	1994	1994	1994	1994	1980	1980	2002	1989	1980	1994	1986																
MIN	5003	2750	1926	1606	1331	1116	1000	1635	19690	9032	7809	9542																
(WY)	1997	1981	1982	1982	1984	1984	1984	1992	1997	1997	2002	1996																

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1976 - 2003
ANNUAL TOTAL	5055060	7048250	
ANNUAL MEAN	13850	19310	15410
HIGHEST ANNUAL MEAN			24960
LOWEST ANNUAL MEAN			10020
HIGHEST DAILY MEAN	137000	May 22	85500
LOWEST DAILY MEAN	a1700	Apr 15	b2100
ANNUAL SEVEN-DAY MINIMUM	1700	Apr 15	2100
MAXIMUM PEAK FLOW			86700
MAXIMUM PEAK STAGE			53.75
MAXIMUM PEAK STAGE			f64.26
ANNUAL RUNOFF (AC-FT)	10030000	13980000	11160000
ANNUAL RUNOFF (CFSM)	1.45	2.03	1.62
ANNUAL RUNOFF (INCHES)	19.75	27.54	22.00
10 PERCENT EXCEEDS	31300	51400	41500
50 PERCENT EXCEEDS	6850	10500	5400
90 PERCENT EXCEEDS	1800	2100	1700

See Period of Record; partial years used in monthly statistics

a From Apr. 15 to Apr. 25

b From Mar. 19 to Apr. 25

c From Apr. 1 to May 14, 1984

d From floodmarks

e Estimated

f Backwater from ice

15746900 WULIK RIVER ABOVE FERRIC CREEK NEAR KIVALINA

LOCATION.--Lat 68°04'42", long 163°11'15", in NW¹/₄ sec. 23, T. 31 N., R. 20 W. (DeLong Mts A-2 quad), Northwest Arctic Borough, Hydrologic Unit 19050404, on left bank 0.7 mi upstream from Ferric Creek, 9 miles west of Red Dog Mine site, and 43 miles northeast of Kivalina.

DRAINAGE AREA.--191 mi².

PERIOD OF RECORD.-- July 2000 to September 2003 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 500 ft above sea level, from topographic map.

REMARKS.--Records fair 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	366	e53	e25	e17	e4.8	e0.20	e0.00	e0.00	e1300	1810	505	322
2	355	e49	e24	e16	e4.6	e0.20	e0.00	e0.05	e2100	1800	554	299
3	318	e44	e24	e16	e4.4	e0.00	e0.00	e0.15	e2000	863	638	295
4	290	e43	e24	e16	e4.0	e0.00	e0.00	e0.35	2470	589	528	352
5	e265	e43	e24	e15	e3.8	e0.00	e0.00	e0.90	3590	538	575	351
6	e255	e42	e24	e15	e3.6	e0.00	e0.00	e2.8	4920	463	496	536
7	e260	e40	e23	e14	e3.2	e0.00	e0.00	e7.5	4550	381	405	568
8	e250	e38	e23	e14	e3.0	e0.00	e0.00	e17	4040	323	344	771
9	229	e37	e23	e13	e2.8	e0.00	e0.00	e38	3580	269	377	778
10	194	e36	e23	e13	e2.6	e0.00	e0.00	e54	3700	249	355	856
11	e195	e34	e22	e13	e2.4	e0.00	e0.00	e54	3700	254	332	733
12	e195	e33	e22	e12	e2.2	e0.00	e0.00	e50	4130	246	295	567
13	e175	e31	e22	e12	e2.0	e0.00	e0.00	e43	2920	223	261	468
14	e155	e30	e22	e11	e1.8	e0.00	e0.00	e37	2320	195	261	378
15	e140	e29	e22	e11	e1.6	e0.00	e0.00	e32	1860	175	289	375
16	129	e28	e21	e10	e1.4	e0.00	e0.00	e29	1430	158	352	336
17	e125	e28	e21	e10	e1.4	e0.00	e0.00	e26	1630	134	353	311
18	e105	e28	e21	e9.5	e1.2	e0.00	e0.00	e24	1670	119	326	321
19	e91	e27	e21	e9.0	e1.2	e0.00	e0.00	e23	1140	110	321	279
20	e80	e27	e21	e9.0	e1.0	e0.00	e0.00	e25	903	102	305	239
21	e75	e27	e21	e8.5	e1.0	e0.00	e0.00	e27	902	97	276	e210
22	e75	e27	e21	e8.0	e0.80	e0.00	e0.00	e31	987	114	289	e185
23	e78	e26	e20	e7.5	e0.80	e0.00	e0.00	e39	784	1130	747	e170
24	e82	e26	e20	e7.5	e0.60	e0.00	e0.00	e59	651	1410	836	e155
25	e83	e26	e19	e7.0	e0.60	e0.00	e0.00	e115	639	1000	642	e155
26	e83	e26	e19	e6.5	e0.40	e0.00	e0.00	e350	700	960	556	e125
27	e82	e25	e19	e6.0	e0.40	e0.00	e0.00	e690	515	661	481	e125
28	e77	e25	e18	e6.0	e0.20	e0.00	e0.00	e390	464	486	417	122
29	e71	e25	e18	e5.5	---	e0.00	e0.00	e295	653	453	414	116
30	e65	e25	e17	e5.5	---	e0.00	e0.00	e300	1340	444	389	123
31	e59	---	e17	e5.0	---	e0.00	---	e735	---	453	357	---
TOTAL	5002	978	661	328.5	57.80	0.40	0.00	3494.75	61588	16209	13276	10621
MEAN	161	32.6	21.3	10.6	2.06	0.013	0.000	113	2053	523	428	354
MAX	366	53	25	17	4.8	0.20	0.00	735	4920	1810	836	856
MIN	59	25	17	5.0	0.20	0.00	0.00	0.00	464	97	261	116
MED	129	28	21	10	1.7	0.00	0.00	32	1650	381	377	316
AC-FT	9920	1940	1310	652	115	0.8	0.00	6930	122200	32150	26330	21070
CFSM	0.84	0.17	0.11	0.06	0.01	0.00	0.00	0.59	10.7	2.74	2.24	1.85
IN.	0.97	0.19	0.13	0.06	0.01	0.00	0.00	0.68	12.00	3.16	2.59	2.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)#

	MEAN	88.8	21.8	11.2	5.38	1.93	0.99	0.85	277	1528	418	746	664
MAX	161	32.6	21.3	10.6	3.74	2.96	2.52	690	2053	567	1147	947	
(WY)	2003	2003	2003	2003	2001	2001	2001	2002	2003	2001	2000	2002	
MIN	49.7	3.29	0.40	0.087	0.000	0.000	0.000	28.1	955	269	428	354	
(WY)	2001	2002	2002	2002	2002	2002	2003	2001	2002	2002	2003	2003	

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 2000 - 2003#

ANNUAL TOTAL	107015.20	112216.45	
ANNUAL MEAN	293	307	298
HIGHEST ANNUAL MEAN			307
LOWEST ANNUAL MEAN			280
HIGHEST DAILY MEAN	4800 May 26	4920 Jun 6	4920 Jun 6 2003
LOWEST DAILY MEAN	a0.00 Jan 25	b0.00 Mar 3	0.00 Jan 25 2002
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 25	0.00 Mar 3	0.00 Jan 25 2002
MAXIMUM PEAK FLOW		6490 Jun 6	6520 May 25 2002
MAXIMUM PEAK STAGE		53.67 Jun 6	c53.68 May 25 2002
ANNUAL RUNOFF (AC-FT)	212300	222600	215800
ANNUAL RUNOFF (CFSM)	1.54	1.61	1.56
ANNUAL RUNOFF (INCHES)	20.84	21.86	21.19
10 PERCENT EXCEEDS	799	740	805
50 PERCENT EXCEEDS	27	31	24
90 PERCENT EXCEEDS	0.00	0.00	0.00

See period of record, partial years used in monthly statistics
a From Jan. 25 to Apr. 22
b From Mar. 3 to May 1
c From floodmarks
e Estimated

15746991 IKALUKROK CREEK BELOW RED DOG CREEK NEAR KIVALINA

LOCATION.--Lat 68°02'51", long 163°01'34", in NE¹/₄ NW¹/₄ sec.33, T.31 N., R.19 W. (DeLong Mountains A-2 quad) Northwest Arctic Borough, Hydrologic Unit 19050404, on left bank about 3.5 mi downstream from the mouth of Red Dog Creek, 2.5 mi upstream from the mouth of Dudd Creek, and 45 mi northeast of Kivalina.

DRAINAGE AREA.--98.6 mi².

PERIOD OF RECORD.--June 1995 to current year (no winter record).

GAGE.--Water-stage recorder. Elevation of gage is 650 ft above sea level, from topographic map. Prior to June 1, 1998 at site 1 mi upstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Runoff from 3.6 mi² is impounded in tailings ponds and released intermittently at a maximum rate of 25 ft³/s. Meteor-burst telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, undetermined, July 25, 1996; gage height, 12.22 ft, at site and datum then in use.

EXTREMES FOR CURRENT PERIOD.--Maximum discharge, undetermined, June 6, gage height, undetermined, occurred during backwater conditions; minimum not determined, occurs during the 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	216	---	---	---	---	---	---	---	e595	907	305	203
2	201	---	---	---	---	---	---	---	e935	859	308	194
3	190	---	---	---	---	---	---	---	e915	e560	318	189
4	179	---	---	---	---	---	---	---	e975	e480	286	212
5	162	---	---	---	---	---	---	---	e1600	e380	277	204
6	119	---	---	---	---	---	---	---	e2200	293	252	225
7	e140	---	---	---	---	---	---	---	e2100	245	230	241
8	127	---	---	---	---	---	---	---	e1900	232	219	372
9	114	---	---	---	---	---	---	---	e1700	209	257	333
10	e120	---	---	---	---	---	---	---	e1600	186	261	404
11	119	---	---	---	---	---	---	---	e1700	220	231	359
12	103	---	---	---	---	---	---	---	e1900	216	221	306
13	e87	---	---	---	---	---	---	---	e1400	206	205	277
14	e79	---	---	---	---	---	---	---	e875	186	205	251
15	e78	---	---	---	---	---	---	---	e600	167	205	238
16	e73	---	---	---	---	---	---	---	473	152	241	223
17	e64	---	---	---	---	---	---	---	512	132	240	211
18	e53	---	---	---	---	---	---	---	489	116	222	208
19	e46	---	---	---	---	---	---	---	414	104	213	187
20	e40	---	---	---	---	---	---	---	362	96	200	166
21	e37	---	---	---	---	---	---	---	327	90	191	144
22	e38	---	---	---	---	---	---	---	316	118	196	140
23	e39	---	---	---	---	---	---	---	294	675	388	138
24	e41	---	---	---	---	---	---	---	263	661	361	124
25	e42	---	---	---	---	---	---	---	255	571	304	121
26	e42	---	---	---	---	---	---	---	223	533	290	120
27	e41	---	---	---	---	---	---	---	207	378	270	e150
28	e38	---	---	---	---	---	---	---	240	299	251	104
29	e36	---	---	---	---	---	---	---	326	308	244	94
30	e33	---	---	---	---	---	---	---	479	299	231	107
31	e30	---	---	---	---	---	---	---	---	296	216	---
TOTAL	2727	---	---	---	---	---	---	---	26175	10174	7838	6245
MEAN	88.0	---	---	---	---	---	---	---	872	328	253	208
MAX	216	---	---	---	---	---	---	---	2200	907	388	404
MIN	30	---	---	---	---	---	---	---	207	90	191	94
AC-FT	5410	---	---	---	---	---	---	---	51920	20180	15550	12390
CFSM	0.92	---	---	---	---	---	---	---	9.15	3.44	2.65	2.18
IN.	1.06	---	---	---	---	---	---	---	10.21	3.97	3.06	2.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

MEAN	59.9	12.5	---	---	---	---	---	112	463	212	398	268
MAX	88.0	21.5	---	---	---	---	---	200	872	328	687	515
(WY)	2003	1999	---	---	---	---	---	1999	2003	2003	1998	2002
MIN	39.8	2.56	---	---	---	---	---	23.7	259	91.6	125	84.7
(WY)	2001	2000	---	---	---	---	---	2001	1999	1999	1995	1996

e Estimated

15747000 WULIK RIVER BELOW TUTAK CREEK NEAR KIVALINA

LOCATION.--Lat 67°52'34", long 163°40'28", in NW¹/₄ sec. 34, T. 29 N., R. 22 W. (Noatak D-4 quad), Northwest Arctic Borough, Hydrologic Unit 19050404, on left bank 0.1 mi downstream from Tutak Creek and 25 mi northeast of Kivalina.

DRAINAGE AREA.--705 mi².

PERIOD OF RECORD.--September 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 175 ft above sea level, from topographic map.

REMARKS.--Records fair 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	e1050	e210	e115	e80	e49	e29	e26	e26	3260	3160	1720	1090
2	e1200	e185	e115	e78	e48	e28	e26	e29	5250	5210	1690	1010
3	e1100	e170	e110	e78	e47	e28	e26	e32	5020	2700	2020	948
4	e1010	e165	e110	e76	e46	e28	e26	e34	5570	1880	1760	1020
5	e1000	e170	e110	e76	e45	e28	e26	e38	9290	1670	1700	1030
6	e950	e165	e110	e74	e44	e27	e25	e44	12600	1460	1520	1330
7	906	e155	e105	e74	e43	e27	e25	e51	11800	1220	1290	1590
8	896	e145	e105	e72	e42	e27	e25	e64	10300	1020	1110	1870
9	801	e135	e105	e72	e41	e26	e25	e98	8040	888	1190	2180
10	659	e130	e105	e70	e40	e26	e25	e140	8880	797	1210	2540
11	654	e130	e100	e70	e39	e26	e25	e140	8180	828	1130	2840
12	699	e130	e100	e68	e38	e26	e25	e130	9290	923	1010	2230
13	588	e125	e100	e68	e37	e26	e25	e110	7050	846	908	1800
14	515	e125	e98	e66	e36	e26	e25	e94	5170	756	885	1480
15	533	e120	e96	e66	e35	e26	e25	e83	4260	674	942	1380
16	e500	e120	e96	e64	e34	e26	e25	e74	3010	614	1160	1290
17	e460	e120	e94	e64	e34	e26	e24	e66	3210	544	1200	1150
18	e400	e120	e94	e62	e33	e26	e24	e60	3410	488	1110	1090
19	e345	e120	e92	e62	e33	e26	e24	e60	2630	442	1040	1010
20	e300	e120	e92	e60	e32	e26	e24	e63	2120	409	1030	879
21	e275	e115	e90	e60	e32	e26	e24	e70	1990	384	940	788
22	e285	e115	e90	e58	e31	e26	e24	e79	1980	390	916	696
23	e300	e115	e88	e58	e31	e26	e24	e100	1760	1800	2080	637
24	e315	e115	e88	e56	e30	e26	e24	e150	1450	3580	2970	e583
25	e330	e115	e86	e56	e30	e26	e24	e300	1360	2710	2330	e510
26	e330	e115	e86	e54	e29	e25	e24	e900	1370	3160	2050	e470
27	e320	e115	e84	e54	e29	e25	e24	1770	1140	2390	1890	e435
28	e305	e115	e84	e52	e29	e25	e24	996	953	1740	1580	502
29	e285	e115	e82	e52	---	e25	e24	753	1100	1540	1440	525
30	e265	e115	e82	e50	---	e25	e25	765	2630	1690	1360	610
31	e240	---	e80	e50	---	e26	---	1890	---	1570	1230	---
TOTAL	17816	4010	2992	2000	1037	815	742	9209	144073	47483	44411	35513
MEAN	575	134	96.5	64.5	37.0	26.3	24.7	297	4802	1532	1433	1184
MAX	1200	210	115	80	49	29	26	1890	12600	5210	2970	2840
MIN	240	115	80	50	29	25	24	26	953	384	885	435
AC-FT	35340	7950	5930	3970	2060	1620	1470	18270	285800	94180	88090	70440
CFSM	0.82	0.19	0.14	0.09	0.05	0.04	0.04	0.42	6.81	2.17	2.03	1.68
IN.	0.94	0.21	0.16	0.11	0.05	0.04	0.04	0.49	7.60	2.51	2.34	1.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)#

	MEAN	535	136	64.6	37.0	24.9	19.2	16.7	1783	3253	1688	2783	1699
MAX	1542	290	111	70.0	49.3	39.5	38.8	4856	6669	6144	8458	3076	
(WY)	1994	1994	1986	1986	1986	1991	1991	1993	1989	1989	1994	2002	
MIN	207	63.1	34.2	21.5	12.0	9.10	9.00	20.6	1372	424	496	386	
(WY)	1997	2002	1988	1992	1992	1992	1992	1989	1988	1999	1991	1991	

See Period of Record
e Estimated

15747000 WULIK RIVER BELOW TUTAK CREEK NEAR KIVALINA—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1985 - 2003#	
ANNUAL TOTAL	309817		310101			
ANNUAL MEAN	849		850		1008	
HIGHEST ANNUAL MEAN					1843	1994
LOWEST ANNUAL MEAN					530	1987
HIGHEST DAILY MEAN	16800	May 26	12600	Jun 6	29400	Aug 17 1994
LOWEST DAILY MEAN	a20	Apr 6	b24	Apr 17	c9.0	Apr 30 1985
ANNUAL SEVEN-DAY MINIMUM	20	Apr 6	24	Apr 17	9.0	Apr 30 1985
MAXIMUM PEAK FLOW			15900	Jun 6	38500	Aug 17 1994
MAXIMUM PEAK STAGE			9.45	Jun 6	12.21	Aug 17 1994
ANNUAL PEAK STAGE					d13.5	May 16 1999
ANNUAL RUNOFF (AC-FT)	614500		615100		730000	
ANNUAL RUNOFF (CFSM)	1.20		1.21		1.43	
ANNUAL RUNOFF (INCHES)	16.35		16.36		19.42	
10 PERCENT EXCEEDS	2100		2030		2820	
50 PERCENT EXCEEDS	120		120		120	
90 PERCENT EXCEEDS	21		26		15	

See Period of Record

a From Apr. 6-25

b From Apr. 17-29

c From Apr. 30 to May 10, 1985, and Mar. 4 to May 17, 1992

d From floodmarks, backwater from snow and ice

e Estimated