

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 Chiroscopy 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, in CFS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1270	e600	e250	e160	e130	e120	e110	e140	3000	898	1040	666
2	1240	e600	e250	e160	e130	e120	e110	e140	2770	868	996	655
3	1210	e550	e240	e160	e130	e120	e110	e150	2760	895	958	653
4	1230	e550	e240	e160	e130	e120	e110	e160	2910	973	923	683
5	1370	e500	e230	e160	e130	e120	e110	e180	2770	1030	892	838
6	1420	e500	e230	e160	e130	e120	e110	e200	2470	1120	861	1070
7	1420	e480	e220	e150	e130	e120	e110	e220	2260	1160	835	1370
8	1390	e480	e220	e150	e130	e120	e110	e240	2100	1120	814	1750
9	1360	e460	e220	e150	e130	e120	e110	e270	1980	1120	803	1770
10	1330	e440	e210	e150	e130	e120	e110	e300	1890	1110	804	1750
11	1260	e420	e210	e150	e130	e120	e110	e350	1820	1110	811	2000
12	e1200	e420	e210	e150	e130	e120	e110	e400	1800	1100	794	2640
13	e1200	e400	e200	e150	e130	e120	e110	e450	1780	1080	765	3630
14	e1100	e380	e200	e150	e130	e120	e110	e550	1740	1100	740	4700
15	e1100	e380	e200	e150	e130	e120	e110	e650	1610	1140	723	4350
16	e1000	e360	e190	e150	e130	e120	e110	e800	1530	1120	730	3730
17	e1000	e360	e190	e150	e130	e120	e110	e1000	1470	1080	766	3210
18	e950	e360	e190	e140	e130	e120	e110	e1300	1410	1080	838	2820
19	e950	e340	e190	e140	e130	e120	e110	e1700	1350	1060	896	2530
20	e900	e340	e180	e140	e130	e120	e110	e2500	1270	1030	905	2290
21	e900	e320	e180	e140	e130	e120	e110	e4000	1210	997	867	2110
22	e850	e320	e180	e140	e130	e120	e110	e6000	1140	967	822	1970
23	e850	e300	e180	e140	e130	e120	e110	e10000	1080	950	781	1860
24	e800	e300	e170	e140	e130	e120	e110	e17000	1040	942	755	1780
25	e800	e290	e170	e140	e120	e120	e120	e16600	1010	941	735	1720
26	e750	e280	e170	e140	e120	e120	e120	16400	1010	972	721	1660
27	e700	e280	e170	e140	e120	e120	e120	14800	1040	1010	712	1690
28	e700	e270	e170	e140	e120	e115	e130	12700	998	1140	706	2060
29	e650	e270	e170	e140	---	e110	e130	7640	964	1210	701	3660
30	e650	e260	e160	e140	---	e110	e130	5050	939	1150	691	5310
31	e600	---	e160	e140	---	e110	---	3750	---	1080	679	---
TOTAL	32150	11810	6150	4570	3600	3685	3390	125640	51121	32553	25064	66925
MEAN	1037	393.7	198.4	147.4	128.6	118.9	113.0	4053	1704	1050	808.5	2231
MAX	1420	600	250	160	130	120	130	17000	3000	1210	1040	5310
MIN	600	260	160	140	120	110	110	140	939	868	679	653
AC-FT	63770	23430	12200	9060	7140	7310	6720	249200	101400	64570	49710	132700
CFSM	0.99	0.38	0.19	0.14	0.12	0.11	0.11	3.87	1.63	1.00	0.77	2.13
IN.	1.14	0.42	0.22	0.16	0.13	0.13	0.12	4.46	1.81	1.16	0.89	2.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)#

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
MEAN	1224	521.8	243.2	151.7	121.6	108.3	110.8	2399	3627	1595	2834	2786
MAX	1471	685	279	154	129	119	115	4053	8788	2467	5690	3890
(WY)	2001	2001	2001	2000	2002	2002	2000	2002	2001	2001	1998	1998
MIN	1037	394	198	147	116	98.2	105	1182	1216	562	809	1385
(WY)	2002	2002	2002	2002	2001	2001	2001	2001	1997	1997	2002	1999

See Period of Record
e Estimated

15565700 UNALAKLEET RIVER ABOVE CHIROSKEY RIVER NEAR UNALAKLEET—Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1997 - 2002#	
ANNUAL TOTAL	579802		366658			
ANNUAL MEAN	1588		1005		1318	
HIGHEST ANNUAL MEAN					1656	
LOWEST ANNUAL MEAN					1005	
HIGHEST DAILY MEAN	19600		17000		19600	
LOWEST DAILY MEAN	a95	Jun 8	b110	May 24	a95	Jun 8 2001
ANNUAL SEVEN-DAY MINIMUM	95	Mar 21	110	Mar 29	95	Mar 21 2001
MAXIMUM PEAK FLOW			c		d19700	Jun 8 2001
MAXIMUM PEAK STAGE					98.41	Jun 8 2001
MAXIMUM PEAK STAGE			f99.58	May 23	f99.58	May 23 2002
ANNUAL RUNOFF (AC-FT)	1150000		727300		955000	
ANNUAL RUNOFF (CFSM)	1.52		0.96		1.26	
ANNUAL RUNOFF (INCHES)	20.58		13.01		17.09	
10 PERCENT EXCEEDS	3370		1920		3100	
50 PERCENT EXCEEDS	400		420		550	
90 PERCENT EXCEEDS	100		120		110	

See Period of Record
a From Mar. 21 to Apr. 10
b From Mar. 29 to Apr. 24
c Not determined. See Highest Daily Mean
d From rating curve extended above 8800 ft³/s
f Backwater from ice

15565700 UNALAKLEET RIVER ABOVE CHIROSKEY RIVER NEAR UNALAKLEET—Continued

WATER TEMPERATURE, (DEGREES CELSIUS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002												
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	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	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	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	0.5	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.5
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	1.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.5	1.5
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.5	1.5
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.0	2.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.0	2.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.0	2.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.0	2.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.0	3.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	3.0	3.5
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	4.0	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	4.5
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	6.0	5.0	5.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	5.5	5.5
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.0	5.5
29	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.0	5.5
30	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	5.5	4.5	5.0
31	---	---	---	0.0	0.0	0.0	---	---	---	5.0	4.5	5.0
MONTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	2.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	6.5	5.0	5.5	11.0	9.5	10.5	14.0	12.0	12.5	8.0	7.5	8.0
2	6.5	6.0	6.0	10.5	10.0	10.0	14.5	12.5	13.5	8.0	7.5	7.5
3	6.0	5.5	6.0	10.5	9.0	9.5	14.5	13.0	13.5	8.0	7.5	7.5
4	7.0	5.5	6.0	10.0	9.0	9.0	13.5	12.0	13.0	8.0	7.5	7.5
5	7.5	6.0	7.0	9.0	8.5	8.5	13.5	11.5	12.5	8.0	7.5	7.5
6	8.0	7.0	7.5	9.0	7.5	8.0	13.0	11.5	12.5	8.5	8.0	8.0
7	7.5	6.5	7.0	9.0	8.5	8.5	12.0	10.5	11.5	8.5	7.5	8.0
8	6.5	5.5	6.0	9.0	8.5	8.5	11.5	10.0	10.5	8.0	7.0	7.5
9	7.0	6.0	6.5	9.0	8.0	8.5	10.5	10.0	10.5	7.5	6.5	7.0
10	7.0	6.5	7.0	11.0	8.5	10.0	10.5	9.0	10.0	6.5	6.0	6.5
11	8.5	6.5	7.0	11.0	9.5	10.5	11.0	9.0	10.0	7.0	6.0	6.5
12	9.0	7.5	8.0	10.5	10.0	10.0	11.0	9.5	10.0	6.5	6.0	6.5
13	9.0	8.0	8.5	10.0	9.5	10.0	10.5	9.0	9.5	6.0	5.5	6.0
14	9.5	8.0	8.5	10.5	9.5	10.0	10.0	8.5	9.5	6.0	6.0	6.0
15	11.0	8.5	9.5	11.5	9.5	10.5	9.5	9.5	9.5	6.0	5.5	6.0
16	12.0	10.0	11.0	11.5	10.5	11.0	9.5	9.0	9.0	6.0	5.5	5.5
17	12.5	10.5	11.5	13.5	10.5	12.0	9.0	8.5	9.0	5.5	5.0	5.0
18	13.0	11.0	12.0	14.0	12.0	13.0	9.5	8.5	9.0	5.0	4.0	4.5
19	13.0	11.5	12.0	14.5	12.5	13.5	9.0	8.5	9.0	4.0	3.5	4.0
20	12.5	11.0	11.5	14.0	12.0	13.0	9.5	8.0	9.0	4.0	3.0	3.5
21	12.0	10.5	11.0	13.5	11.5	12.5	10.0	8.0	9.0	3.5	2.5	3.0
22	11.5	9.5	10.5	13.0	12.0	12.0	9.5	8.0	9.0	4.0	3.0	3.0
23	11.0	10.0	10.5	12.5	11.0	11.5	9.5	7.5	8.5	4.5	3.5	3.5
24	11.0	8.5	10.0	12.0	11.5	11.5	9.5	7.5	8.5	5.5	4.5	5.0
25	10.5	9.0	9.5	11.5	10.5	11.0	8.5	8.0	8.5	6.0	5.0	5.5
26	10.0	8.5	9.0	10.5	10.0	10.0	8.5	7.5	8.0	6.5	6.0	6.0
27	11.5	8.5	10.0	11.0	9.5	10.5	9.0	7.5	8.0	6.5	6.0	6.0
28	11.0	10.0	10.5	12.0	10.0	11.0	9.0	7.5	8.5	6.0	6.0	6.0
29	10.0	8.5	9.0	12.0	11.0	11.5	9.5	8.0	8.5	6.0	5.5	5.5
30	10.5	8.0	9.5	12.5	11.0	11.5	9.0	7.0	8.0	5.5	4.5	5.0
31	---	---	---	13.0	11.0	12.0	8.5	7.5	8.0	---	---	---
MONTH	13.0	5.0	8.8	14.5	7.5	10.6	14.5	7.0	9.9	8.5	2.5	5.9

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.

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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14200	e7500	e3400	e2400	e2000	e1900	e1800	e2000	45900	12600	9550	7110
2	13800	e7000	e3400	e2400	e2000	e1800	e1800	e2100	36200	12500	9190	6930
3	13500	e7000	e3300	e2400	e2000	e1800	e1800	e2200	32200	13200	8750	6770
4	13500	e6500	e3200	e2300	e2000	e1800	e1800	e2300	31900	14500	8300	6570
5	14700	e6500	e3200	e2300	e2000	e1800	e1800	e2500	31500	14800	7900	6880
6	16500	e6200	e3100	e2300	e2000	e1800	e1800	e3000	30800	14900	7450	7960
7	18900	e6000	e3000	e2300	e2000	e1800	e1800	e4000	31200	14300	7180	12100
8	19600	e6000	e3000	e2300	e2000	e1800	e1800	e5000	31000	14600	7060	18000
9	18800	e5800	e2900	e2200	e2000	e1800	e1800	e6000	32100	17400	7010	20900
10	18000	e5600	e2900	e2200	e2000	e1800	e1800	e8000	33600	21900	6870	23500
11	e17000	e5500	e2900	e2200	e1900	e1800	e1800	e11000	34000	24700	6720	24500
12	e16000	e5400	e2800	e2200	e1900	e1800	e1800	e15000	33100	22800	6600	24000
13	e16000	e5300	e2800	e2200	e1900	e1800	e1800	e19000	30800	20400	6430	24700
14	e15000	e5100	e2800	e2200	e1900	e1800	e1800	e22000	28100	18600	6440	33300
15	e14000	e5000	e2700	e2200	e1900	e1800	e1700	e24000	26800	17200	6510	43000
16	e14000	e4900	e2700	e2200	e1900	e1800	e1700	e25000	25100	16300	6600	44300
17	e13000	e4700	e2700	e2100	e1900	e1800	e1700	e27000	23400	15400	6940	46700
18	e12000	e4600	e2600	e2100	e1900	e1800	e1700	e40000	22500	14400	9520	46400
19	e12000	e4500	e2600	e2100	e1900	e1800	e1700	e60000	21300	13400	10700	41800
20	e11000	e4400	e2600	e2100	e1900	e1800	e1700	79300	19800	12700	10700	36600
21	e11000	e4300	e2600	e2100	e1900	e1800	e1700	101000	18700	12600	9950	32300
22	e10000	e4200	e2600	e2100	e1900	e1800	e1700	137000	17100	13600	9270	28900
23	e10000	e4100	e2600	e2100	e1900	e1800	e1700	137000	15900	14500	8820	26500
24	e9500	e4000	e2500	e2100	e1900	e1800	e1700	131000	16100	14600	8240	24400
25	e9500	e3900	e2500	e2100	e1900	e1800	e1700	129000	19300	14000	7730	22500
26	e9000	e3800	e2500	e2100	e1900	e1800	e1800	131000	18600	12800	7290	21100
27	e8500	e3700	e2500	e2000	e1900	e1800	e1800	131000	17100	11800	6960	20400
28	e8500	e3600	e2500	e2000	e1900	e1800	e1800	122000	15500	11100	6850	20400
29	e8000	e3600	e2400	e2000	---	e1800	e1900	101000	14100	10500	6770	21800
30	e8000	e3500	e2400	e2000	---	e1800	e1900	79200	13100	10100	6770	24000
31	e7500	---	e2400	e2000	---	e1800	---	61000	---	9800	7020	---
TOTAL	401000	152200	86100	67300	54200	55900	53100	1619600	766800	462000	242090	724320
MEAN	12940	5073	2777	2171	1936	1803	1770	52250	25560	14900	7809	24140
MAX	19600	7500	3400	2400	2000	1900	1900	137000	45900	24700	10700	46700
MIN	7500	3500	2400	2000	1900	1800	1700	2000	13100	9800	6430	6570
AC-FT	795400	301900	170800	133500	107500	110900	105300	3212000	1521000	916400	480200	1437000
CFSM	1.36	0.53	0.29	0.23	0.20	0.19	0.19	5.49	2.68	1.57	0.82	2.54
IN.	1.57	0.59	0.34	0.26	0.21	0.22	0.21	6.33	3.00	1.81	0.95	2.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2002, BY WATER YEAR (WY)#

MEAN	13870	5440	3427	2603	2148	1899	1853	25140	46000	21150	30270	28210
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 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1976 - 2002#

ANNUAL TOTAL		6020900		4684610								
ANNUAL MEAN		16500		12830						15260		
HIGHEST ANNUAL MEAN										24960		1994
LOWEST ANNUAL MEAN										10020		1977
HIGHEST DAILY MEAN			130000	Jun 9	a137000	May 22			155000	Jun 5	1992	
LOWEST DAILY MEAN			b1900	Apr 21	c1700	Apr 15			d1000	Apr 1	1984	
ANNUAL SEVEN-DAY MINIMUM			1900	Apr 21	1700	Apr 15			1000	Apr 1	1984	
MAXIMUM PEAK FLOW					146000	May 22			161000	Jun 4	1992	
MAXIMUM PEAK STAGE					60.39	May 22			f62.94	Jun 1	1989	
MAXIMUM PEAK STAGE									g64.26	Jun 1	1989	
ANNUAL RUNOFF (AC-FT)		11940000		9292000					11060000			
ANNUAL RUNOFF (CFSM)			1.73			1.35				1.60		
ANNUAL RUNOFF (INCHES)			23.53			18.31				21.78		
10 PERCENT EXCEEDS			43300			28400				41000		
50 PERCENT EXCEEDS			3800			6000				5400		
90 PERCENT EXCEEDS			2000			1800				1700		

See Period of Record; partial years used in monthly statistics
a From May 22-23
b From Apr. 21 to May 14
c From Apr. 15 to Apr. 25
d From Apr. 1 to May 14, 1984
e Estimated
f From flood marks
g 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 current year.

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, in CFS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	e8.5	e0.80	e0.20	e0.00	e0.00	e0.00	e0.20	e500	287	71	621
2	163	e8.0	e0.80	e0.20	e0.00	e0.00	e0.00	e0.20	e700	553	67	536
3	147	e7.5	e0.70	e0.20	e0.00	e0.00	e0.00	e0.20	1740	342	63	737
4	126	e6.5	e0.70	e0.10	e0.00	e0.00	e0.00	e0.20	1970	229	60	1780
5	125	e6.0	e0.70	e0.10	e0.00	e0.00	e0.00	e0.20	2040	181	57	3810
6	123	e5.5	e0.60	e0.10	e0.00	e0.00	e0.00	e0.20	1480	169	54	2980
7	e90	e5.0	e0.60	e0.10	e0.00	e0.00	e0.00	e0.20	893	179	53	3190
8	e82	e4.6	e0.50	e0.10	e0.00	e0.00	e0.00	e0.20	1570	229	50	2460
9	e74	e4.4	e0.50	e0.10	e0.00	e0.00	e0.00	e0.20	1760	547	50	1570
10	e66	e4.0	e0.50	e0.10	e0.00	e0.00	e0.00	e0.20	2230	641	46	1290
11	e60	e3.6	e0.50	e0.10	e0.00	e0.00	e0.00	e0.20	2010	448	43	1040
12	e55	e3.4	e0.40	e0.10	e0.00	e0.00	e0.00	e0.20	1460	378	40	810
13	e50	e3.2	e0.40	e0.10	e0.00	e0.00	e0.00	e0.20	1100	383	37	672
14	e45	e2.9	e0.40	e0.10	e0.00	e0.00	e0.00	e0.20	834	321	37	582
15	e41	e2.7	e0.40	e0.10	e0.00	e0.00	e0.00	e0.20	773	281	127	757
16	e38	e2.5	e0.40	e0.10	e0.00	e0.00	e0.00	e0.20	754	266	527	975
17	e34	e2.3	e0.30	e0.10	e0.00	e0.00	e0.00	e0.30	1080	247	332	798
18	e30	e2.1	e0.30	e0.10	e0.00	e0.00	e0.00	e0.70	1100	220	244	617
19	e27	e1.9	e0.30	e0.10	e0.00	e0.00	e0.00	e4.0	679	193	188	478
20	e25	e1.8	e0.30	e0.10	e0.00	e0.00	e0.00	e15	367	207	156	359
21	e23	e1.7	e0.30	e0.10	e0.00	e0.00	e0.00	e70	250	241	129	346
22	e21	e1.5	e0.30	e0.10	e0.00	e0.00	e0.00	e250	551	348	107	266
23	e20	e1.4	e0.20	e0.10	e0.00	e0.00	e0.10	e1000	610	325	94	237
24	e18	e1.4	e0.20	e0.10	e0.00	e0.00	e0.10	e3200	340	261	83	226
25	e17	e1.3	e0.20	e0.00	e0.00	e0.00	e0.10	e4400	295	203	74	221
26	e15	e1.2	e0.20	e0.00	e0.00	e0.00	e0.20	e4800	393	164	182	208
27	e14	e1.1	e0.20	e0.00	e0.00	e0.00	e0.20	e3400	422	135	2390	197
28	e12	e1.0	e0.20	e0.00	e0.00	e0.00	e0.20	e2100	301	114	4210	188
29	e11	e0.90	e0.20	e0.00	---	e0.00	e0.20	e950	258	97	2060	185
30	e10	e0.90	e0.20	e0.00	---	e0.00	e0.20	e650	204	86	1120	272
31	e9.5	---	e0.20	e0.00	---	e0.00	---	e550	---	78	801	---
TOTAL	1718.5	98.80	12.50	2.70	0.00	0.00	1.30	21393.20	28664	8353	13552	28408
MEAN	55.44	3.293	0.403	0.087	0.000	0.000	0.043	690.1	955.5	269.5	437.2	946.9
MAX	163	8.5	0.80	0.20	0.00	0.00	0.20	4800	2230	641	4210	3810
MIN	9.5	0.90	0.20	0.00	0.00	0.00	0.00	0.20	204	78	37	185
MED	38	2.6	0.40	0.10	0.00	0.00	0.00	0.20	764	241	83	619
AC-FT	3410	196	25	5.4	0.00	0.00	2.6	42430	56860	16570	26880	56350
CFSM	0.29	0.02	0.00	0.00	0.00	0.00	0.00	3.61	5.00	1.41	2.29	4.96
IN.	0.33	0.02	0.00	0.00	0.00	0.00	0.00	4.17	5.58	1.63	2.64	5.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	54.69	16.46	6.065	2.765	1.868	1.482	1.280	359.1	1267	383.7	851.9	767.4
MAX	59.7	29.6	11.7	5.44	3.74	2.96	2.52	690	1576	567	1147	947
(WY)	2002	2001	2001	2001	2001	2001	2001	2002	2001	2001	2000	2002
MIN	49.7	3.29	0.40	0.087	0.000	0.000	0.043	28.1	959	270	437	421
(WY)	2001	2002	2002	2002	2002	2002	2002	2001	2002	2002	2002	2001

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 2000 - 2002
ANNUAL TOTAL	110732.10	102204.00	
ANNUAL MEAN	303.4	280.0	293.3
HIGHEST ANNUAL MEAN			306
LOWEST ANNUAL MEAN			281
HIGHEST DAILY MEAN	4840	Aug 13	4840
LOWEST DAILY MEAN	a0.20	Dec 23	b0.00
ANNUAL SEVEN-DAY MINIMUM	0.20	Dec 23	0.00
MAXIMUM PEAK FLOW		6520	6520
MAXIMUM PEAK STAGE		c53.68	c53.68
ANNUAL RUNOFF (AC-FT)	219600	202700	212500
ANNUAL RUNOFF (CFSM)	1.59	1.47	1.54
ANNUAL RUNOFF (INCHES)	21.57	19.91	20.87
10 PERCENT EXCEEDS	942	799	862
50 PERCENT EXCEEDS	5.5	2.3	12
90 PERCENT EXCEEDS	1.3	0.00	0.00

See Period of Record, partial years used in monthly statistics
a From Dec.23-31
b From Jan.25 to Apr.22
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, 2390 ft³/s, September 5, gage height, 10.98 ft; minimum not determined, occurs during the winter.

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	e100	---	---	---	---	---	---	---	e150	145	52	281
2	e110	---	---	---	---	---	---	---	e230	257	53	251
3	e105	---	---	---	---	---	---	---	e400	161	51	452
4	e100	---	---	---	---	---	---	---	e500	124	48	951
5	e90	---	---	---	---	---	---	---	e460	112	46	1880
6	e80	---	---	---	---	---	---	---	e360	103	46	1460
7	e70	---	---	---	---	---	---	---	308	98	45	1620
8	e65	---	---	---	---	---	---	---	447	117	42	1130
9	e58	---	---	---	---	---	---	---	537	326	44	787
10	e52	---	---	---	---	---	---	---	535	329	40	672
11	e48	---	---	---	---	---	---	---	482	232	34	554
12	e44	---	---	---	---	---	---	---	367	209	29	456
13	e38	---	---	---	---	---	---	---	336	240	28	401
14	e36	---	---	---	---	---	---	---	253	189	25	405
15	e32	---	---	---	---	---	---	---	240	162	143	598
16	e29	---	---	---	---	---	---	---	247	152	210	570
17	e26	---	---	---	---	---	---	---	301	140	119	474
18	e24	---	---	---	---	---	---	---	329	129	93	390
19	e22	---	---	---	---	---	---	---	217	117	77	302
20	e20	---	---	---	---	---	---	---	144	108	66	224
21	e18	---	---	---	---	---	---	---	125	96	61	202
22	e16	---	---	---	---	---	---	---	213	88	58	175
23	e14	---	---	---	---	---	---	---	192	95	54	153
24	e12	---	---	---	---	---	---	---	149	81	51	145
25	e11	---	---	---	---	---	---	---	141	74	47	142
26	e10	---	---	---	---	---	---	---	148	66	180	154
27	e8.0	---	---	---	---	---	---	---	144	63	897	158
28	e7.0	---	---	---	---	---	---	---	113	60	1580	139
29	e6.0	---	---	---	---	---	---	---	91	57	877	130
30	e5.0	---	---	---	---	---	---	---	102	55	481	190
31	e4.0	---	---	---	---	---	---	---	---	55	348	---
TOTAL	1260.0	---	---	---	---	---	---	---	8261	4240	5925	15446
MEAN	40.6	---	---	---	---	---	---	---	275	137	191	515
MAX	110	---	---	---	---	---	---	---	537	329	1580	1880
MIN	4.0	---	---	---	---	---	---	---	91	55	25	130
AC-FT	2500	---	---	---	---	---	---	---	16390	8410	11750	30640
CFSM	0.43	---	---	---	---	---	---	---	2.89	1.43	2.00	5.40
IN.	0.49	---	---	---	---	---	---	---	3.22	1.65	2.31	6.02

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. Flow from 2.8 square miles of the drainage basin is regulated by a tailings dam at the Red Dog Mine site. Up to 25 ft³/s of the flow at the gage may be discharge from Red Dog Mine during the summer period.

DISCHARGE, in CFS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	465	e95	e44	e30	e25	e22	e21	e22	1580	598	302	2060
2	425	e90	e44	e30	e25	e22	e21	e22	2000	1170	291	1730
3	484	e90	e44	e30	e24	e22	e21	e22	3260	1110	280	2090
4	496	e85	e42	e30	e24	e22	e21	e22	3960	799	270	4060
5	509	e80	e42	e29	e24	e22	e21	e22	4280	650	261	13400
6	550	e80	e40	e29	e24	e22	e20	e22	3500	574	250	11400
7	471	e75	e40	e29	e24	e22	e20	e22	2040	533	245	e11000
8	372	e75	e40	e28	e24	e22	e20	e22	2790	553	238	e8000
9	e350	e70	e39	e28	e24	e22	e20	e22	3410	1120	240	e5400
10	e340	e70	e39	e28	e24	e22	e20	e22	3930	2120	242	e4200
11	e300	e70	e38	e28	e24	e22	e20	e23	4070	1530	228	e3000
12	e280	e65	e38	e28	e23	e21	e20	e23	3160	1190	217	e2400
13	e260	e65	e37	e28	e23	e21	e20	e23	2380	1150	208	e2000
14	e240	e60	e37	e27	e23	e21	e20	e23	1950	1010	203	e1900
15	e220	e60	e36	e27	e23	e21	e20	e23	1610	855	311	e2200
16	e210	e60	e36	e27	e23	e21	e20	e24	1530	760	1190	e2500
17	e200	e55	e36	e27	e23	e21	e20	e26	1970	703	1030	e2200
18	e180	e55	e35	e27	e23	e21	e20	e45	2090	646	758	e1800
19	e170	e55	e35	e27	e23	e21	e20	e120	1820	588	621	e1500
20	e160	e55	e34	e26	e23	e21	e20	e200	1060	555	538	e1200
21	e160	e55	e34	e26	e23	e21	e20	e500	769	561	486	e1100
22	e150	e50	e34	e26	e23	e21	e20	e1200	809	637	442	e950
23	e140	e50	e33	e26	e23	e21	e20	e2800	1540	634	410	e850
24	e140	e50	e33	e26	e23	e21	e20	e6000	971	606	381	e800
25	e130	e48	e32	e26	e22	e21	e20	e12500	770	532	359	e800
26	e120	e48	e32	e25	e22	e21	e21	16800	802	472	384	e750
27	e120	e46	e32	e25	e22	e21	e21	13600	868	424	3540	e700
28	e110	e46	e32	e25	e22	e21	e21	7570	743	382	9670	e700
29	e110	e46	e31	e25	---	e21	e22	3770	620	354	6160	e750
30	e100	e44	e31	e25	---	e21	e22	2410	554	335	3510	e850
31	e100	---	e31	e25	---	e21	---	1950	---	317	2520	---
TOTAL	8062	1893	1131	843	653	662	612	69850	60836	23468	35785	92290
MEAN	260.1	63.10	36.48	27.19	23.32	21.35	20.40	2253	2028	757.0	1154	3076
MAX	550	95	44	30	25	22	22	16800	4280	2120	9670	13400
MIN	100	44	31	25	22	21	20	22	554	317	203	700
AC-FT	15990	3750	2240	1670	1300	1310	1210	138500	120700	46550	70980	183100
CFSM	0.37	0.09	0.05	0.04	0.03	0.03	0.03	3.20	2.88	1.07	1.64	4.36
IN.	0.43	0.10	0.06	0.04	0.03	0.03	0.03	3.69	3.21	1.24	1.89	4.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2002, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	532.3	136.6	62.83	35.51	24.27	18.84	16.27	1865	3167	1697	2859	1729						
MAX	1542	290	111	70.0	49.3	39.5	38.8	4856	6669	6144	8458	3102						
(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						

15747000 WULIK RIVER BELOW TUTAK CREEK NEAR KIVALINA—Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1985 - 2002	
ANNUAL TOTAL	370367		296085			
ANNUAL MEAN	1015		811.2		1017	
HIGHEST ANNUAL MEAN					1843	
LOWEST ANNUAL MEAN					530	
HIGHEST DAILY MEAN	21100		16800		29400	
LOWEST DAILY MEAN	a23	Aug 13	b20	May 26	c9.0	Aug 17 1994
ANNUAL SEVEN-DAY MINIMUM	23	May 9	20	Apr 6	9.0	Apr 30 1985
MAXIMUM PEAK FLOW			20600		38500	
MAXIMUM PEAK STAGE			10.18		12.21	
MAXIMUM PEAK STAGE					d13.5	
ANNUAL RUNOFF (AC-FT)	734600		587300		736600	
ANNUAL RUNOFF (CFSM)	1.44		1.15		1.44	
ANNUAL RUNOFF (INCHES)	19.54		15.62		19.60	
10 PERCENT EXCEEDS	3110		2100		2890	
50 PERCENT EXCEEDS	65		55		120	
90 PERCENT EXCEEDS	29		21		15	

See Period of Record
a From May 9-15
b From Apr. 6-25
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