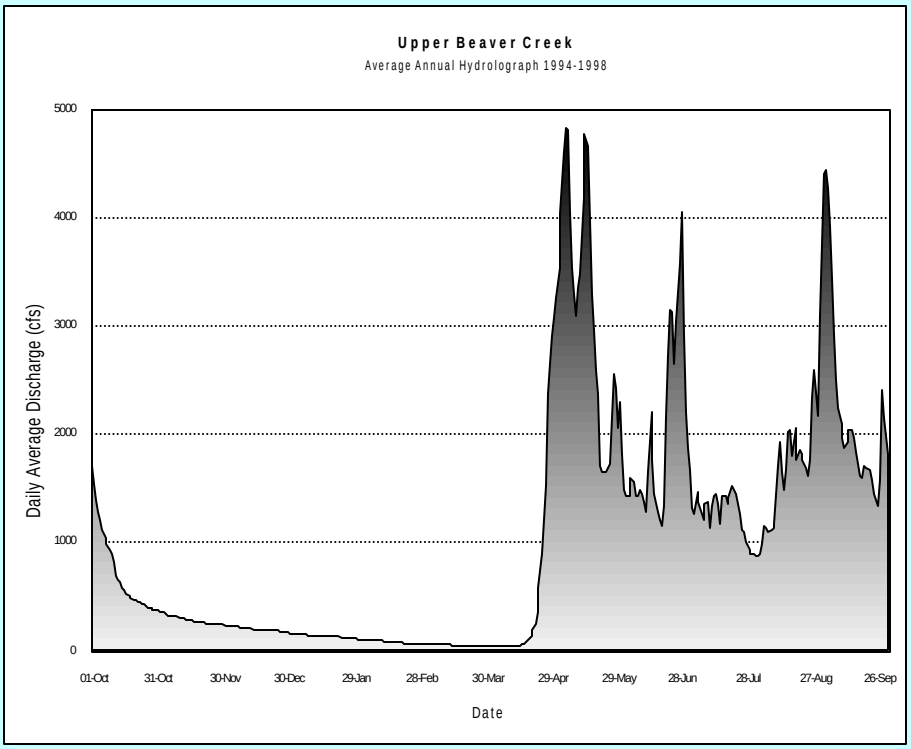

YUKON FLATS NATIONAL WILDLIFE REFUGE

Beaver Creek, Upper

LOCATION.-Lat 66°03.28'N, Long 146°08.61'W, in SW¼NE¼ sec.7, T.14N., R.8E., Fairbanks Meridian. Located approximately 7 miles west of Burman Lakes.

DRAINAGE AREA.-2,134 mi^2

PERIOD OF RECORD.-June 5, 1994 thru Sept. 30, 1998.

REMARKS.-Data are estimated during the winter months due to ice effects.

EXTREMES FOR THE PERIOD OF RECORD.-Maximum Discharge, 11,900 cfs, Sept. 1 and 2, 1995. Minimum Discharge, 15 cfs, Apr. 4 thru 12, 1996.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	3,710	1,320	2,050
2	---	---	---	---	---	---	---	---	---	3,180	1,250	1,900
3	---	---	---	---	---	---	---	---	---	2,840	1,200	1,800
4	---	---	---	---	---	---	---	---	---	2,610	1,160	1,720
5	---	---	---	---	---	---	---	---	1,460	2,510	1,150	1,650
6	---	---	---	---	---	---	---	---	1,490	2,400	1,120	1,570
7	---	---	---	---	---	---	---	---	1,540	2,270	1,090	1,490
8	---	---	---	---	---	---	---	---	1,810	2,170	1,200	1,420
9	---	---	---	---	---	---	---	---	2,300	2,040	1,150	1,370
10	---	---	---	---	---	---	---	---	2,440	1,910	1,100	1,330
11	---	---	---	---	---	---	---	---	2,250	1,780	1,060	1,310
12	---	---	---	---	---	---	---	---	2,130	1,690	1,020	1,270
13	---	---	---	---	---	---	---	---	2,010	1,610	1,000	1,220
14	---	---	---	---	---	---	---	---	1,850	1,650	999	1,200

15	---	---	---	---	---	---	---	---	1,690	1,640	980	1,170
16	---	---	---	---	---	---	---	---	1,540	1,570	965	1,130
17	---	---	---	---	---	---	---	---	1,430	1,540	951	1,100
18	---	---	---	---	---	---	---	---	1,350	1,720	1,010	1,060
19	---	---	---	---	---	---	---	---	1,360	2,000	1,200	1,030
20	---	---	---	---	---	---	---	---	2,320	2,060	1,370	1,000
21	---	---	---	---	---	---	---	---	5,780	2,230	1,410	980
22	---	---	---	---	---	---	---	---	8,260	2,080	1,380	960
23	---	---	---	---	---	---	---	---	10,100	2,010	1,540	941
24	---	---	---	---	---	---	---	---	10,100	1,960	1,740	917
25	---	---	---	---	---	---	---	---	8,270	1,940	1,770	903
26	---	---	---	---	---	---	---	---	9,960	1,470	2,270	878
27	---	---	---	---	---	---	---	---	10,100	1,370	3,410	853
28	---	---	---	---	---	---	---	---	9,200	1,300	3,330	827
29	---	---	---	---	---	---	---	---	5,660	1,250	2,800	803
30	---	---	---	---	---	---	---	---	4,420	1,320	2,470	782
31	---	---	---	---	---	---	---	---	---	1,380	2,230	---
TOTAL	---	---	---	---	---	---	---	---	110,820	61,210	46,645	36,634
MEAN	---	---	---	---	---	---	---	---	4,262	1,975	1,505	1,221
MAX	---	---	---	---	---	---	---	---	10,100	3,710	3,410	2,050
MIN	---	---	---	---	---	---	---	---	1,350	1,250	951	782
CFSM	---	---	---	---	---	---	---	---	2.00	0.93	0.71	0.57
IN.	---	---	---	---	---	---	---	---	1.93	1.07	0.81	0.64
AC-FT	---	---	---	---	---	---	---	---	219,808	121,408	92,519	72,662

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	907	470 e	380 e	290 e	210 e	140 e	90 e	2,100 e	1,450 e	2,680	851	11,900 e
2	886	470 e	380 e	290 e	210 e	140 e	90 e	2,550 e	1,400 e	2,430	909	11,900 e
3	863	470 e	380 e	290 e	210 e	140 e	90 e	3,050 e	1,400 e	2,040	892	11,500 e
4	844	460 e	370 e	280 e	200 e	140 e	90 e	3,700 e	1,600 e	1,810	817	10,500 e
5	836	460 e	370 e	280 e	200 e	130 e	90 e	4,450 e	2,400 e	1,680	817	9,000 e
6	822	460 e	370 e	280 e	200 e	130 e	80 e	5,300 e	2,400 e	1,490	876	7,240
7	813	450 e	370 e	280 e	200 e	130 e	80 e	6,450 e	2,000 e	1,420	1,010	5,850
8	817	450 e	360 e	270 e	190 e	130 e	80 e	5,400 e	1,700 e	1,330	1,190	5,060
9	808	450 e	360 e	270 e	190 e	120 e	80 e	4,850 e	1,450 e	1,250	1,400	4,620
10	783	440 e	360 e	270 e	190 e	120 e	80 e	5,000 e	1,300 e	1,160	1,470	4,260
11	708	440 e	360 e	270 e	190 e	120 e	80 e	5,100 e	1,250 e	1,140	1,490	4,000
12	640	440 e	350 e	260 e	180 e	120 e	80 e	5,150 e	1,200 e	1,080	1,650	4,230
13	603	430 e	350 e	260 e	180 e	120 e	80 e	5,050 e	1,200 e	1,320	1,590	4,600
14	580 e	430 e	350 e	260 e	180 e	120 e	90 e	5,800 e	1,100 e	1,280	1,650	4,500
15	560 e	430 e	350 e	260 e	180 e	110 e	110 e	5,150 e	1,000 e	1,280	2,900	4,130
16	550 e	420 e	340 e	250 e	180 e	110 e	120 e	3,900 e	970 e	1,270	4,590	3,780
17	540 e	420 e	340 e	250 e	170 e	110 e	150 e	3,100 e	960 e	1,280	4,800	3,420
18	540 e	420 e	340 e	250 e	170 e	110 e	190 e	2,500 e	1,000 e	1,280	3,950	3,100
19	530 e	410 e	330 e	240 e	170 e	110 e	230 e	2,100 e	1,100 e	1,150	3,330	2,830
20	530 e	410 e	330 e	240 e	170 e	100 e	270 e	1,800 e	1,000 e	1,070	2,960	2,620
21	520 e	410 e	330 e	240 e	160 e	100 e	320 e	1,650 e	970 e	979	2,950	2,440
22	520 e	400 e	330 e	240 e	160 e	100 e	390 e	1,500 e	930 e	921	3,180	2,280
23	510 e	400 e	320 e	230 e	160 e	100 e	475 e	1,350 e	970 e	883	3,100	2,140
24	510 e	400 e	320 e	230 e	160 e	100 e	570 e	1,250 e	970 e	858	2,810	2,020
25	500 e	400 e	320 e	230 e	150 e	100 e	690 e	1,150 e	930 e	902	2,640	1,930
26	500 e	390 e	310 e	230 e	150 e	100 e	830 e	1,100 e	960 e	1,050	2,630	1,930
27	490 e	390 e	310 e	220 e	150 e	100 e	1,050 e	1,450 e	3,000 e	1,240	2,780	3,090
28	490 e	390 e	310 e	220 e	150 e	100 e	1,200 e	1,900 e	5,800 e	1,140	2,740	6,520
29	480 e	390 e	300 e	220 e	---	90 e	1,400 e	2,050 e	4,950	1,010	2,520	5,690
30	480 e	380 e	300 e	220 e	---	90 e	1,700 e	1,800 e	3,350	917	2,530	4,450
31	480 e	---	300 e	210 e	---	90 e	---	1,580	---	853	6,810	---
TOTAL	19,640	12,780	10,590	7,830	5,010	3,520	10,875	99,280	50,710	40,193	73,832	151,530
MEAN	634	426	342	253	179	114	363	3,203	1,690	1,297	2,382	5,051
MAX	907	470	380	290	210	140	1,700	6,450	5,800	2,680	6,810	11,900

MIN	480	380	300	210	150	90	80	1,100	930	853	817	1,930
CFSM	0.30	0.20	0.16	0.12	0.08	0.05	0.17	1.50	0.79	0.61	1.12	2.37
IN.	0.34	0.22	0.18	0.14	0.09	0.06	0.19	1.73	0.88	0.70	1.29	2.64
AC-FT	38,955	25,349	21,005	15,531	9,937	6,982	21,570	196,919	100,582	79,722	146,444	300,555

WTR YEAR 1995 TOTAL 485,790 MEAN 1,331 MAX 11,900 MIN 80 AC-FT 963,550

e = Estimated daily mean discharge

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,920	460 e	190 e	100 e	50 e	30 e	20 e	6,920	2,260	657	594	2,300
2	3,410	440 e	190 e	100 e	50 e	30 e	20 e	7,010	2,120	690	665	2,450
3	3,020	420 e	190 e	100 e	50 e	30 e	17 e	7,260	1,980	881	786	2,200
4	2,720	400 e	180 e	90 e	50 e	30 e	15 e	8,060	1,860	1,170	1,290	1,930
5	2,510	380 e	180 e	90 e	50 e	30 e	15 e	8,980	1,670	1,350	2,010	1,710
6	2,300	360 e	180 e	90 e	50 e	30 e	15 e	8,740	1,400	1,250	1,970	1,540
7	2,110	340 e	170 e	90 e	50 e	20 e	15 e	7,470	1,120	1,160	1,660	1,400
8	1,950	320 e	170 e	90 e	50 e	20 e	15 e	6,140	975	1,160	1,420	1,280
9	1,850	300 e	170 e	90 e	50 e	20 e	15 e	5,100	905	1,070	1,320	1,190
10	1,760	290 e	160 e	80 e	50 e	20 e	15 e	4,100	878	1,060	1,440	1,140
11	1,630	280 e	160 e	80 e	40 e	20 e	15 e	3,260	833	898	3,540	1,130
12	1,390	270 e	160 e	80 e	40 e	20 e	15 e	3,830	947	1,750	4,310	1,190
13	1,280	260 e	150 e	80 e	40 e	20 e	30 e	4,260	2,590	2,070	3,280	1,230
14	1,180 e	260 e	150 e	80 e	40 e	20 e	30 e	5,440	5,070	1,550	2,500	1,270
15	1,090 e	250 e	150 e	80 e	40 e	20 e	40 e	7,680	3,480	1,220	2,010	1,260
16	1,010 e	250 e	140 e	70 e	40 e	20 e	50 e	8,300	2,410	1,120	1,690	1,200
17	930 e	240 e	140 e	70 e	40 e	20 e	70 e	6,730	1,880	1,680	1,480	1,150
18	860 e	240 e	140 e	70 e	40 e	20 e	100 e	4,960	1,640	1,730	1,360	1,110
19	810 e	240 e	130 e	70 e	40 e	20 e	130 e	4,100	1,490	1,400	1,280	1,070
20	770 e	230 e	130 e	70 e	40 e	20 e	200 e	3,480	1,380	1,140	1,210	1,050
21	740 e	230 e	130 e	70 e	40 e	20 e	400 e	3,090	1,260	967	1,140	1,100
22	710 e	220 e	120 e	70 e	30 e	20 e	600 e	2,610	1,130	846	1,060	1,200
23	680 e	220 e	120 e	60 e	30 e	20 e	900 e	2,220	996	758	985	1,170
24	650 e	220 e	120 e	60 e	30 e	20 e	1,700 e	2,290	890	703	920	1,110
25	620 e	210 e	120 e	60 e	30 e	20 e	2,800 e	2,590	788	662	880	1,050
26	590 e	210 e	110 e	60 e	30 e	20 e	3,900 e	2,910	725	624	909	981
27	560 e	210 e	110 e	60 e	30 e	20 e	4,900 e	2,900	682	590	1,550	943
28	540 e	200 e	110 e	60 e	30 e	20 e	5,810	2,700	667	564	2,590	898
29	520 e	200 e	110 e	60 e	- - -	20 e	6,410	2,800	648	546	2,630	852
30	500 e	200 e	100 e	60 e	- - -	20 e	6,860	2,740	643	545	2,210	812
31	480 e	- - -	100 e	50 e	- - -	20 e	- - -	2,460	- - -	573	1,970	- - -
TOTAL	43,090	8,350	4,480	2,340	1,150	680	35,122	151,130	45,317	32,384	52,659	38,916
MEAN	1,390	278	145	75	41	22	1,171	4,875	1,511	1,045	1,699	1,297
MAX	3,920	460	190	100	50	30	6,860	8,980	5,070	2,070	4,310	2,450
MIN	480	200	100	50	30	20	15	2,220	643	545	594	812
CFSM	0.65	0.13	0.07	0.04	0.02	0.01	0.55	2.28	0.71	0.49	0.80	0.61
IN.	0.75	0.15	0.08	0.04	0.02	0.01	0.61	2.63	0.79	0.56	0.92	0.68
AC-FT	85,468	16,562	8,886	4,641	2,281	1,349	69,663	299,762	89,885	64,233	104,448	77,189

CAL YEAR 1995 TOTAL 498,700 MEAN 1,366 MAX 11,300 MIN 80 AC-FT 989,157
WTR YEAR 1996 TOTAL 415,618 MEAN 1,139 MAX 8,980 MIN 15 AC-FT 824,366

e = Estimated daily mean discharge

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	785	200 e	140 e	100 e	70 e	40 e	25 e	195 e	1,050 e	441	731	1,390

2	750	200 e	140 e	100 e	70 e	40 e	25 e	230 e	970 e	423	695	1,560
3	662	200 e	140 e	100 e	60 e	40 e	25 e	280 e	910 e	410	730	1,610
4	573	190 e	140 e	100 e	60 e	30 e	25 e	340 e	860 e	402	707	1,560
5	487	190 e	140 e	100 e	60 e	30 e	25 e	390 e	880 e	391	667	1,450
6	440	190 e	140 e	100 e	60 e	30 e	25 e	450 e	990 e	397	654	1,390
7	424	190 e	140 e	100 e	60 e	30 e	25 e	510 e	1,100 e	414	655	1,310
8	402	180 e	130 e	90 e	60 e	30 e	25 e	590 e	1,250 e	419	659	1,240
9	355	180 e	130 e	90 e	60 e	30 e	25 e	680 e	1,300 e	438	687	1,170
10	322	180 e	130 e	90 e	60 e	30 e	25 e	780 e	1,250 e	459	717	1,100
11	300 e	180 e	130 e	90 e	60 e	30 e	25 e	900 e	1,200 e	467	732	1,050
12	290 e	180 e	130 e	90 e	60 e	30 e	25 e	1,050 e	910 e	462	750	1,070
13	280 e	180 e	130 e	90 e	50 e	30 e	25 e	1,150 e	790 e	489	767	1,140
14	280 e	170 e	130 e	90 e	50 e	30 e	25 e	1,300 e	840 e	1,560	806	1,210
15	270 e	170 e	130 e	90 e	50 e	30 e	25 e	1,500 e	910 e	1,920	811	1,280
16	260 e	170 e	120 e	80 e	50 e	30 e	25 e	1,800 e	890 e	1,430	824	1,310
17	250 e	170 e	120 e	80 e	50 e	30 e	25 e	2,100 e	910 e	1,240	945	1,270
18	250 e	170 e	120 e	80 e	50 e	30 e	25 e	2,400 e	890 e	1,020	1,190	1,190
19	240 e	160 e	120 e	80 e	50 e	30 e	25 e	2,700 e	730 e	891	1,810	1,480
20	240 e	160 e	120 e	80 e	50 e	30 e	30 e	2,500 e	650 e	1,430	2,100	2,150
21	230 e	160 e	120 e	80 e	50 e	30 e	40 e	2,400 e	620 e	1,980	1,930	2,230
22	230 e	160 e	120 e	80 e	40 e	30 e	45 e	2,300 e	577	2,130	1,650	2,300
23	230 e	160 e	120 e	80 e	40 e	30 e	55 e	2,300 e	561	2,190	1,440	2,070
24	220 e	150 e	110 e	80 e	40 e	30 e	65 e	2,100 e	559	1,960	1,290	1,830
25	220 e	150 e	110 e	70 e	40 e	30 e	75 e	1,900 e	588	1,630	1,200	1,680
26	220 e	150 e	110 e	70 e	40 e	30 e	85 e	1,600 e	577	1,370	1,240	1,590
27	210 e	150 e	110 e	70 e	40 e	30 e	100 e	1,300 e	550	1,200	1,660	1,470
28	210 e	150 e	110 e	70 e	40 e	30 e	120 e	1,200 e	519	1,060	1,790	1,380
29	210 e	150 e	110 e	70 e	---	30 e	140 e	1,100 e	488	947	1,630	1,300
30	210 e	140 e	110 e	70 e	---	30 e	170 e	1,000 e	464	858	1,480	1,230
31	200 e	---	100 e	70 e	---	30 e	---	1,000 e	---	783	1,350	---
TOTAL	10,250	5,130	3,850	2,630	1,470	960	1,400	40,045	24,783	31,211	34,297	44,010
MEAN	331	171	124	85	53	31	47	1,292	826	1,007	1,106	1,467
MAX	785	200	140	100	70	40	170	2,700	1,300	2,190	2,100	2,300
MIN	200	140	100	70	40	30	25	195	464	391	654	1,050
CFSM	0.15	0.08	0.06	0.04	0.02	0.01	0.02	0.61	0.39	0.47	0.52	0.69
IN.	0.18	0.09	0.07	0.05	0.03	0.02	0.02	0.70	0.43	0.54	0.60	0.77
AC-FT	20,331	10,175	7,636	5,217	2,916	1,904	2,777	79,428	49,156	61,906	68,027	87,293

CAL YEAR 1996 TOTAL 378,928 MEAN 1,038 MAX 8,980 MIN 15 AC-FT 751,593
WTR YEAR 1997 TOTAL 200,036 MEAN 548 MAX 2,700 MIN 25 AC-FT 396,766

e = Estimated daily mean discharge

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,200	350 e	260 e	180 e	120 e	80 e	50 e	---	2,520	---	---	---
2	1,150	350 e	250 e	180 e	120 e	80 e	50 e	---	---	---	---	---
3	1,080	340 e	250 e	170 e	120 e	80 e	50 e	---	---	440	---	---
4	1,010	340 e	250 e	170 e	120 e	80 e	50 e	---	---	420	---	---
5	968	340 e	250 e	170 e	120 e	80 e	50 e	---	---	---	---	---
6	921	330 e	240 e	170 e	110 e	80 e	50 e	---	---	---	---	---
7	871	330 e	240 e	160 e	110 e	70 e	50 e	---	---	---	---	---
8	807	330 e	240 e	160 e	110 e	70 e	50 e	---	---	1,020	---	---
9	755	330 e	240 e	160 e	110 e	70 e	50 e	---	---	2,030	---	---
10	722	325 e	230 e	160 e	110 e	70 e	50 e	---	---	2,320	---	---
11	655	320 e	230 e	160 e	110 e	70 e	50 e	---	---	1,360	---	---
12	528	320 e	230 e	150 e	110 e	70 e	50 e	---	---	1,700	---	---
13	500	320 e	230 e	150 e	100 e	70 e	50 e	---	---	1,720	---	---
14	480 e	310 e	220 e	150 e	100 e	60 e	50 e	---	---	1,240	---	---
15	460 e	310 e	220 e	150 e	100 e	60 e	50 e	---	---	793	---	---
16	440 e	310 e	220 e	150 e	100 e	60 e	50 e	---	---	525		---
17	430 e	300 e	220 e	150 e	100 e	60 e	50 e	---	---	---	---	---

18	420 e	300 e	210 e	140 e	100 e	60 e	46 e	---	---	---	---	---
19	410 e	300 e	210 e	140 e	100 e	60 e	40 e	---	---	---	2,670	---
20	400 e	290 e	210 e	140 e	90 e	60 e	40 e	---	---	---	1,200	---
21	400 e	290 e	210 e	140 e	90 e	60 e	40 e	---	---	---	---	---
22	390 e	290 e	200 e	140 e	90 e	50 e	40 e	440	---	---	---	---
23	390 e	280 e	200 e	140 e	90 e	50 e	40 e	748	---	---	---	---
24	380 e	280 e	200 e	130 e	90 e	50 e	40 e	994	---	---	---	---
25	380 e	280 e	200 e	130 e	90 e	50 e	40 e	1,030	---	---	---	---
26	380 e	270 e	190 e	130 e	90 e	50 e	40 e	1,350	---	---	---	---
27	370 e	270 e	190 e	130 e	80 e	50 e	40 e	3,000	---	---	---	---
28	370 e	270 e	190 e	130 e	80 e	50 e	---	4,460	---	---	---	---
29	360 e	260 e	190 e	130 e	---	50 e	---	3,780	---	---	---	---
30	360 e	260 e	180 e	130 e	---	50 e	---	2,730	---	---	---	---
31	350 e	---	180 e	120 e	---	50 e	---	4,170	---	---	---	---
TOTAL	18,337	9,195	6,780	4,610	2,860	1,950	1,256	---	---	---	---	---
MEAN	592	307	219	149	102	63	47	---	---	---	---	---
MAX	1,200	350	260	180	120	80	50	---	---	---	---	---
MIN	350	260	180	120	80	50	40	---	---	---	---	---
CFSM	0.28	0.14	0.10	0.07	0.05	0.03	0.02	---	---	---	---	---
IN.	0.32	0.16	0.12	0.08	0.05	0.03	0.02	---	---	---	---	---
AC-FT	36,371	18,238	13,448	9,144	5,673	3,868	2,491	---	---	---	---	---

CAL YEAR 1997 TOTAL 215,118 MEAN 589 MAX 2,700 MIN 25 AC-FT 426,680

e = Estimated daily mean discharge