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Public-data File 86-10

STREAMFLOW DATA FOR DELTA CREEK, COLD BAY A-1 QUADRANGLE, ALASKA

By

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Alaska Division of
Geological and Geophysical Surveys

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THIS REPORT HAS NOT BEEN REVIEWED FOR
TECHNICAL CONTENT (EXCEPT AS NOTED IN
TEXT) OR FOR CONFORMITY TO THE
EDITORIAL STANDARDS OF DGCS.

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INTRODUCTION

Delta Creek, a small stream 16 mi southeast of Cold Bay, Alaska, is being considered for a small hydroelectric project by the Alaska Power Authority (APA) and the community of King Cove, Alaska. The Water Resources Section of the Alaska Division of Geological and Geophysical Surveys (DGGs) was contracted by APA to reduce and summarize flow data for Delta Creek as part of a hydroelectric feasibility study. DOWL Engineers collects stage and temperature data on Delta Creek for APA and has established rating curves for the stream based on miscellaneous discharge measurements.

Tasks

Using DOWL Engineers data from 1982 to September 1985, the Water Resources Section produced the following: Daily, Monthly, and Annual Mean Discharge Summaries; Minimum and Maximum Flow Summaries; Power and Energy Estimates; Daily and Monthly Streamflow Hydrographs; and Flow-Duration Curves. The DOWL Engineers stage and discharge data for Delta Creek are good for such a small stream in a remote part of the state. Nonetheless, it should be noted that the length of record (1982-Sept. 1985) is not adequate to thoroughly define the streamflow of Delta Creek. Different streamflow levels in the future could significantly affect the data summaries and flow-duration curves, or a channel change could result in an altered rating curve.

National Weather Service records for Cold Bay show that 1982, 1983, and 1985 had above normal precipitation, while 1984 was below the normal of 35 in. per year. Streamflow for 1982, 1983, and 1984 generally reflect the precipitation levels given above (higher in 1982, 1983, lower in 1984) but it is too early for specific climate/streamflow comparison.

Methods

The streamflow summaries and daily hydrographs (see computer printout and Figure 1) were calculated with simple sums and averages. Power figures (see printout) were taken from the following formula:

$$\begin{aligned} \text{Power (kilowatts)} &= \text{Discharge (cfs)} \times \\ &\quad \text{Head (201 ft)} \times \\ &\quad \text{System Efficiency (0.85)} \times \\ &\quad \text{Conversion Factor (0.0847)} \end{aligned}$$

Head and efficiency variables were supplied by APA.

Flow-duration curves (Figures 2 and 3) for 1982-1984 were plotted on two types of graph paper. The flow-duration curve in Figure 2 is plotted on rectangular-coordinate paper so that the area under the curve can be determined more easily. Figure 3 presents the curve on log-probability paper to give better definition to the ends of the curve where the slope changes rapidly. Discharge class intervals for the curves were taken from the 1959 U.S. Geological Survey Water Supply Paper 1542-A entitled "Flow Duration Curves" by James K. Searcy. Table 1 is a tabular presentation of the flow-duration data. Table 2 summarizes the minimum and maximum flows for the period of record. Additional streamflow data reduction will be submitted to APA as soon as the discharges for October-December 1985, are tabulated.

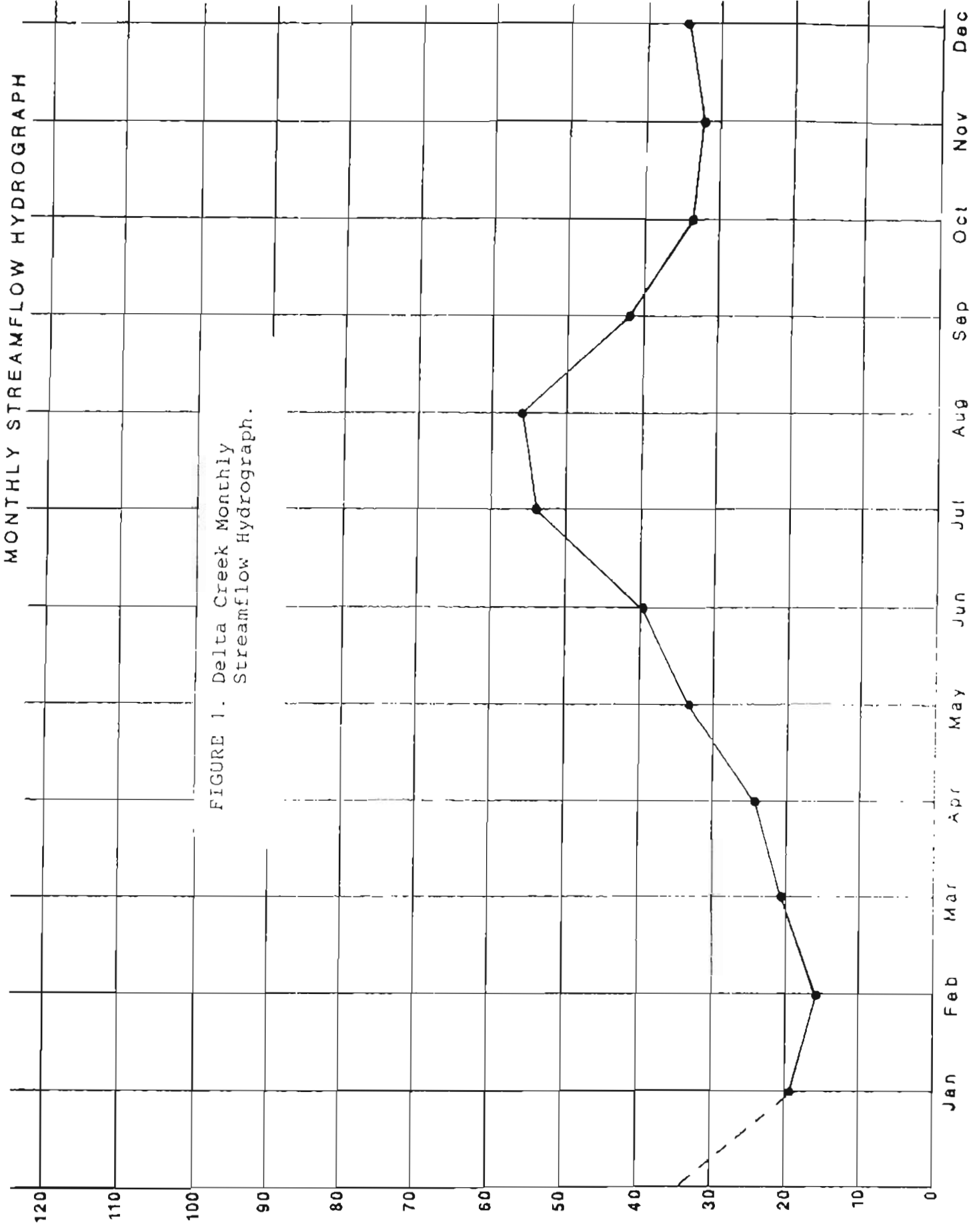
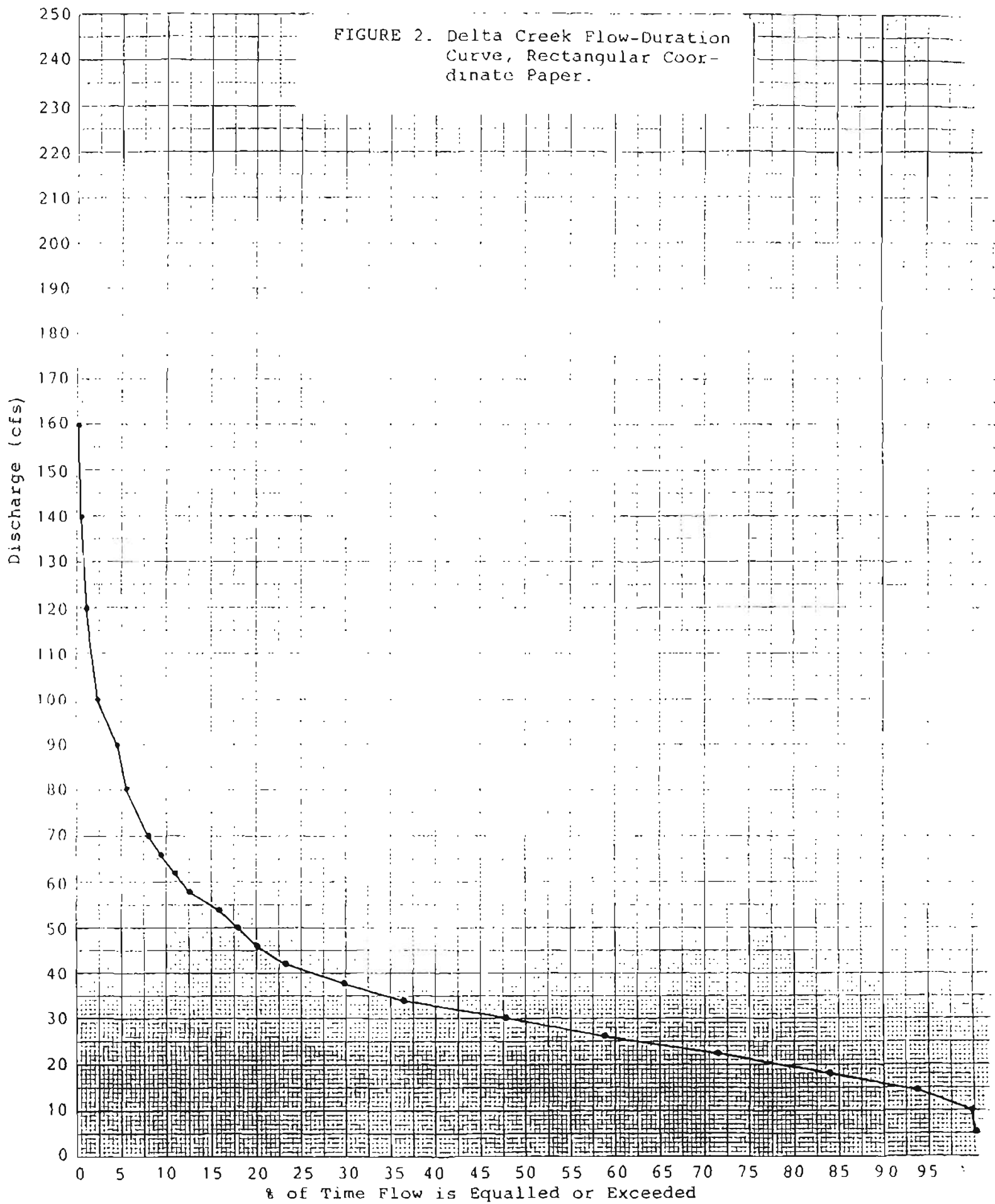


FIGURE 1. Delta Creek Monthly Streamflow Hydrograph.

Month

FIGURE 2. Delta Creek Flow-Duration Curve, Rectangular Coordinate Paper.



8 of Time Flow is Equalled or Exceeded

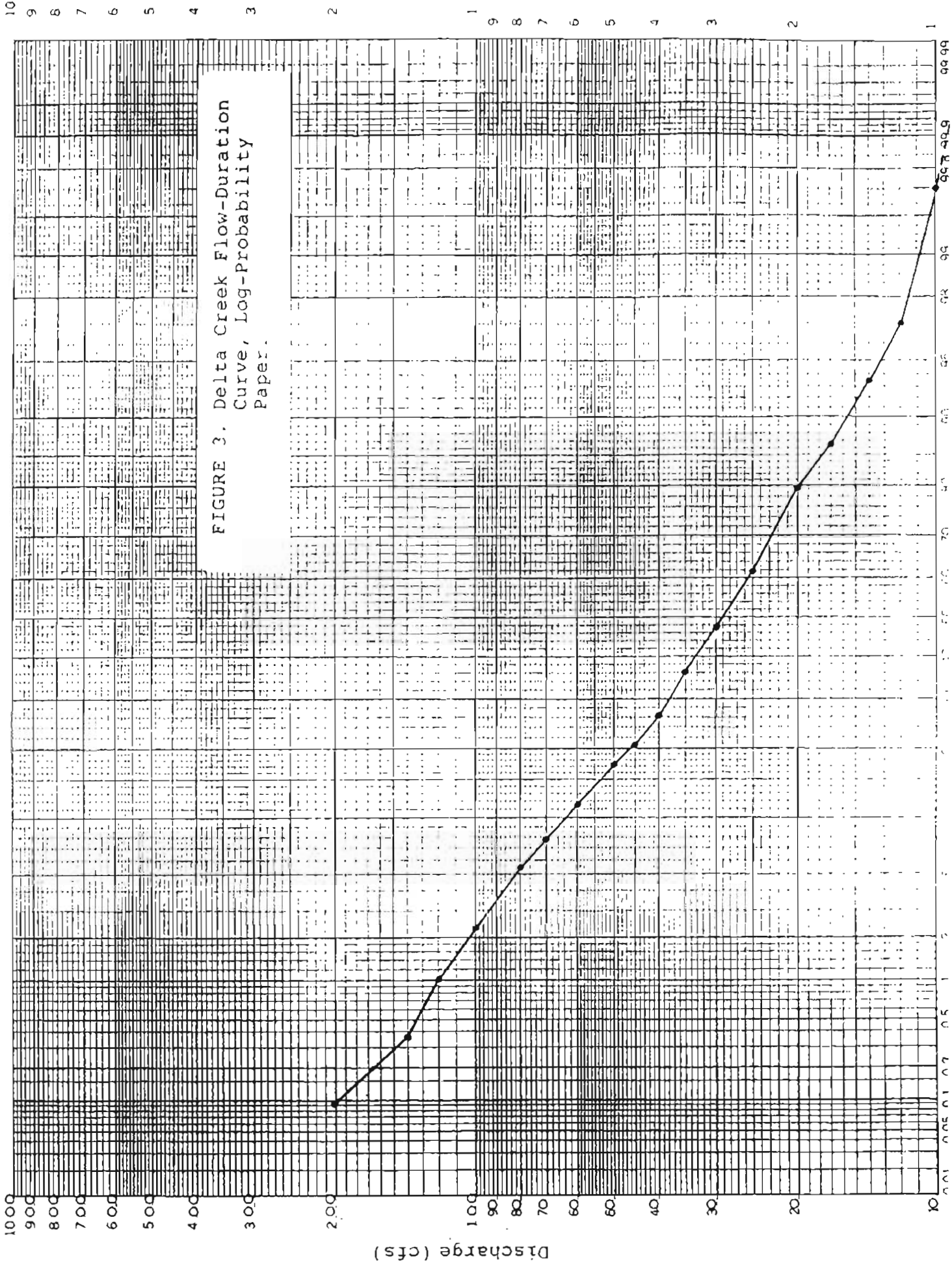


Table 1. Flow-Duration Curves.

<u>Rectangular-Coordinate Paper</u>		<u>Log-Probability Paper</u>	
<u>Discharge</u> <u>(cfs)</u>	<u>Percent</u> <u>of time</u>	<u>Discharge</u> <u>(cfs)</u>	<u>Percent</u> <u>of time</u>
5	100	8	100
10	99.7	10	99.7
14	93.5	12	97.1
18	83.5	14	93.5
22	71.2	17	86.5
26	58.7	20	79.6
30	47.5	25	61.8
34	37.9	30	47.3
38	29.9	35	36.2
42	23.3	40	26.5
46	20.0	45	20.7
50	17.7	50	17.3
54	15.7	60	11.5
58	12.5	70	7.88
62	10.9	80	5.50
66	9.35	100	2.29
70	7.88	120	1.01
80	5.50	140	.367
90	4.31	170	.092
100	2.29	200	.092
120	1.01	250	0.0
140	.367		
160	.183		
200	.092		
250	0.0		

Table 2. Daily minimum and maximum flows for period of record.

<u>Month</u>	<u>Min. (cfs) date</u>	<u>Max. (cfs) date</u>
JAN	9, 01-17-82	42, 01-29-85
FEB	10, numerous 1982	33, 02-12-85
MAR	9, 03-3,4-82	217, 03-23-85
APR	11, numerous 1985	87, 04-27-85
MAY	10, 05-01-85	76, 05-08-85
JUN	19, 06-02-85	110, 06-30-82
JUL	15, 07-09-85	141, 07-22-82
AUG	14, 08-3,4-85	169, 08-11-85
SEP	18, 09-10-85	133, 09-06-82
OCT	15, 10-01-85	131, 10-30-84
NOV	20, 11-18-83	82, 11/01/84
DEC	19, 12-24-82	234, 12-21-83

Instantaneous minimum and maximum flow for period of record

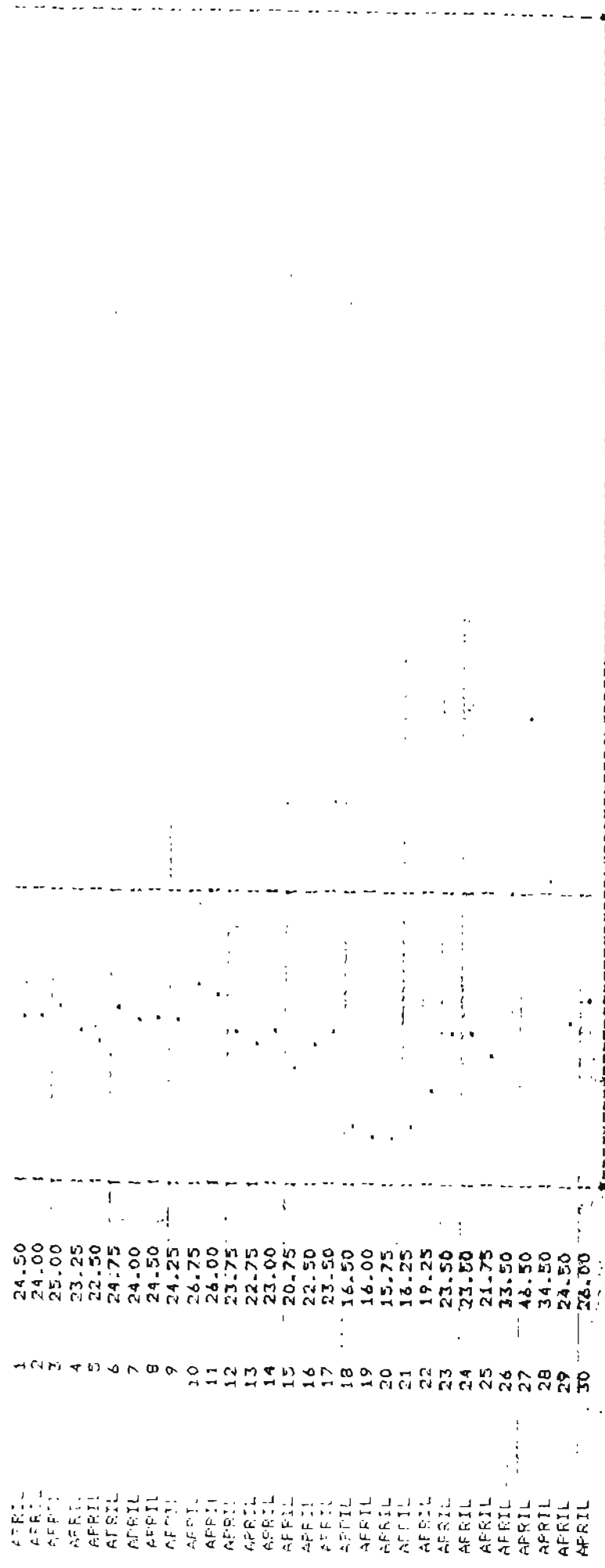
Min. 9 cfs, numerous days

Max. 370 cfs, 09-11-85

DNR--DIV. GEOLOGICAL AND GEOPHYSICAL SURVEY
 KING COVE, ALASKA-DELTA CREEK
 TIMEPLOT OF DAILY MEANS

MONTH=APRIL

MONTH DAY MEAN OF FLOW MIN 13.25 MAX 26.667



INR-NTU - GEOLOGICAL AND SEISMOLOGICAL SURVEY
 KING COFF, ALABAMA
 TEMPERATURE OF DAILY MEAN

MIN 13.25
 MAX 76.6667

MIN 13.25

MEAN OF FLOW

DAY

MONTH

MONTH	DAY	MEAN OF FLOW
MAY	1	27.00
MAY	2	25.25
MAY	3	24.00
MAY	4	25.00
MAY	5	23.50
MAY	6	25.75
MAY	7	25.75
MAY	8	32.50
MAY	9	33.25
MAY	10	32.25
MAY	11	30.25
MAY	12	30.75
MAY	13	33.25
MAY	14	35.00
MAY	15	32.75
MAY	16	32.75
MAY	17	40.50
MAY	18	37.50
MAY	19	36.25
MAY	20	37.25
MAY	21	35.50
MAY	22	34.00
MAY	23	33.50
MAY	24	32.75
MAY	25	38.25
MAY	26	36.75
MAY	27	36.00
MAY	28	32.75
MAY	29	35.25
MAY	30	32.25
MAY	31	30.50

76.6667

7
 U.S. GEOLOGICAL SURVEY
 WATER RESOURCES DIVISION
 WASHINGTON, D. C. 20540
 TIME OF RAIN GAGES

MONTH=JULY

MAY
 56667

MONTH	DAY	MEAN OF FLOW	MIN
JULY	1	36.75	13.25
JULY	2	43.50	
JULY	3	40.25	
JULY	4	40.50	
JULY	5	43.00	
JULY	6	44.50	
JULY	7	47.00	
JULY	8	49.25	
JULY	9	47.75	
JULY	10	42.50	
JULY	11	41.50	
JULY	12	44.00	
JULY	13	47.00	
JULY	14	41.00	
JULY	15	46.00	
JULY	16	44.00	
JULY	17	42.50	
JULY	18	52.00	
JULY	19	56.75	
JULY	20	58.00	
JULY	21	59.50	
JULY	22	82.75	
JULY	23	83.00	
JULY	24	72.75	
JULY	25	63.25	
JULY	26	69.25	
JULY	27	88.75	
JULY	28	63.50	
JULY	29	63.50	
JULY	30	61.50	
JULY	31	59.00	

ENR DIV. GEOLOGICAL AND GEOPHYSICAL SURVEY
 KING CAMP, ALASKA-DETAILED
 TIMELOT OF DATA MEAN

MONTH- AUGUST

MONTH	DAY	MEAN OF FLOW	MIN 13.25	MAY 76.66667
AUGUST	1	56.25		
AUGUST	2	55.00		
AUGUST	3	51.00		
AUGUST	4	51.75		
AUGUST	5	54.25		
AUGUST	6	56.50		
AUGUST	7	59.25		
AUGUST	8	60.00		
AUGUST	9	61.50		
AUGUST	10	73.25		
AUGUST	11	85.25		
AUGUST	12	57.75		
AUGUST	13	53.50		
AUGUST	14	54.75		
AUGUST	15	50.00		
AUGUST	16	47.25		
AUGUST	17	45.25		
AUGUST	18	45.75		
AUGUST	19	48.75		
AUGUST	20	45.50		
AUGUST	21	50.00		
AUGUST	22	52.00		
AUGUST	23	52.00		
AUGUST	24	64.75		
AUGUST	25	50.00		
AUGUST	26	50.75		
AUGUST	27	51.00		
AUGUST	28	51.75		
AUGUST	29	60.75		
AUGUST	30	67.25		
AUGUST	31	52.00		

DNR-DIV. GEOLOGICAL AND GEOPHYSICAL SURVEYS
 KING COVE, ALASKA DELTA CREEK
 TIMEPLOT OF DAILY MEANS

MONTH-SEPTEMBER

MONTH	DAY	MEAN OF FLOW	MIN 13.25	MAX 96.66667
SEPTEMBER	1	51.00		
SEPTEMBER	2	44.75		
SEPTEMBER	3	43.00		
SEPTEMBER	4	44.25		
SEPTEMBER	5	51.00		
SEPTEMBER	6	52.75		
SEPTEMBER	7	42.75		
SEPTEMBER	8	38.50		
SEPTEMBER	9	33.75		
SEPTEMBER	10	29.00		
SEPTEMBER	11	50.00		
SEPTEMBER	12	48.50		
SEPTEMBER	13	42.25		
SEPTEMBER	14	44.00		
SEPTEMBER	15	34.25		
SEPTEMBER	16	32.50		
SEPTEMBER	17	37.00		
SEPTEMBER	18	35.50		
SEPTEMBER	19	34.25		
SEPTEMBER	20	34.50		
SEPTEMBER	21	48.50		
SEPTEMBER	22	41.25		
SEPTEMBER	23	35.25		
SEPTEMBER	24	31.50		
SEPTEMBER	25	31.75		
SEPTEMBER	26	34.50		
SEPTEMBER	27	39.00		
SEPTEMBER	28	58.25		
SEPTEMBER	29	49.75		
SEPTEMBER	30	32.75		

DNR-DIV. GEOLOGICAL AND GEOPHYSICAL SURVEYS
 KING COVE, ALASKA: DELTA CREEK
 TIMEPLOT OF DAILY MEANS

MONTH=OCTOBER

MONTH	DAY	MEAN OF FLOW	MIN 13.25	MAX 94.66667
OCTOBER	1	34.50		
OCTOBER	2	33.50		
OCTOBER	3	38.00		
OCTOBER	4	36.67		
OCTOBER	5	36.33		
OCTOBER	6	34.67		
OCTOBER	7	30.00		
OCTOBER	8	32.33		
OCTOBER	9	34.67		
OCTOBER	10	34.67		
OCTOBER	11	32.67		
OCTOBER	12	35.67		
OCTOBER	13	36.00		
OCTOBER	14	52.00		
OCTOBER	15	38.67		
OCTOBER	16	42.33		
OCTOBER	17	35.00		
OCTOBER	18	31.33		
OCTOBER	19	29.33		
OCTOBER	20	27.67		
OCTOBER	21	28.33		
OCTOBER	22	26.00		
OCTOBER	23	25.00		
OCTOBER	24	24.00		
OCTOBER	25	24.33		
OCTOBER	26	25.33		
OCTOBER	27	27.00		
OCTOBER	28	27.00		
OCTOBER	29	27.00		
OCTOBER	30	49.33		
OCTOBER	31	51.00		

INR-DIV. GEOLOGICAL AND GEOPHYSICAL SURVEYS
 KING COVE, ALASKA: DELTA BREEZ
 TIME PLOT OF DAILY MEANS

MONTH=NOVEMBER

MONTH	DAY	MEAN OF FLOW	MIN 13.25	MAX 96.66667
NOVEMBER	1	46.67		
NOVEMBER	2	34.33		
NOVEMBER	3	30.00		
NOVEMBER	4	29.00		
NOVEMBER	5	27.67		
NOVEMBER	6	30.67		
NOVEMBER	7	40.33		
NOVEMBER	8	31.67		
NOVEMBER	9	29.00		
NOVEMBER	10	30.67		
NOVEMBER	11	36.33		
NOVEMBER	12	33.67		
NOVEMBER	13	34.33		
NOVEMBER	14	35.33		
NOVEMBER	15	33.00		
NOVEMBER	16	31.33		
NOVEMBER	17	28.00		
NOVEMBER	18	26.67		
NOVEMBER	19	30.00		
NOVEMBER	20	35.67		
NOVEMBER	21	34.67		
NOVEMBER	22	32.33		
NOVEMBER	23	30.00		
NOVEMBER	24	34.00		
NOVEMBER	25	30.00		
NOVEMBER	26	29.00		
NOVEMBER	27	33.00		
NOVEMBER	28	41.67		
NOVEMBER	29	32.67		
NOVEMBER	30	31.33		

DNR DIV. GEOLOGICAL AND GEOCHEMICAL SURVEY
 KING COVE, ALASKA: DEPT. TO CORRECTION
 TIME PLOT OF DAILY MEANS

MONTH=DECEMBER

MONTH	DAY	MEAN OF FLOW	MIN 13.25	MAX 96.6667
DECEMBER	1	28.33		
DECEMBER	2	26.00		
DECEMBER	3	26.67		
DECEMBER	4	29.67		
DECEMBER	5	39.00		
DECEMBER	6	29.67		
DECEMBER	7	30.33		
DECEMBER	8	28.67		
DECEMBER	9	26.33		
DECEMBER	10	27.00		
DECEMBER	11	27.33		
DECEMBER	12	24.00		
DECEMBER	13	23.00		
DECEMBER	14	22.33		
DECEMBER	15	23.33		
DECEMBER	16	23.00		
DECEMBER	17	31.67		
DECEMBER	18	38.67		
DECEMBER	19	35.67		
DECEMBER	20	67.00		
DECEMBER	21	96.67		
DECEMBER	22	72.00		
DECEMBER	23	44.67		
DECEMBER	24	33.33		
DECEMBER	25	30.33		
DECEMBER	26	29.00		
DECEMBER	27	28.00		
DECEMBER	28	37.33		
DECEMBER	29	32.33		
DECEMBER	30	31.67		
DECEMBER	31	32.67		

MIN 15.72566
MAX 55.31452

U.S. GEOLOGICAL SURVEY
ALASKA DISTRICT OFFICE
TERRACE BLVD., ANCHORAGE, ALASKA

MEAN OF FLOW
MIN 15.72566

MEAN OF FLOW

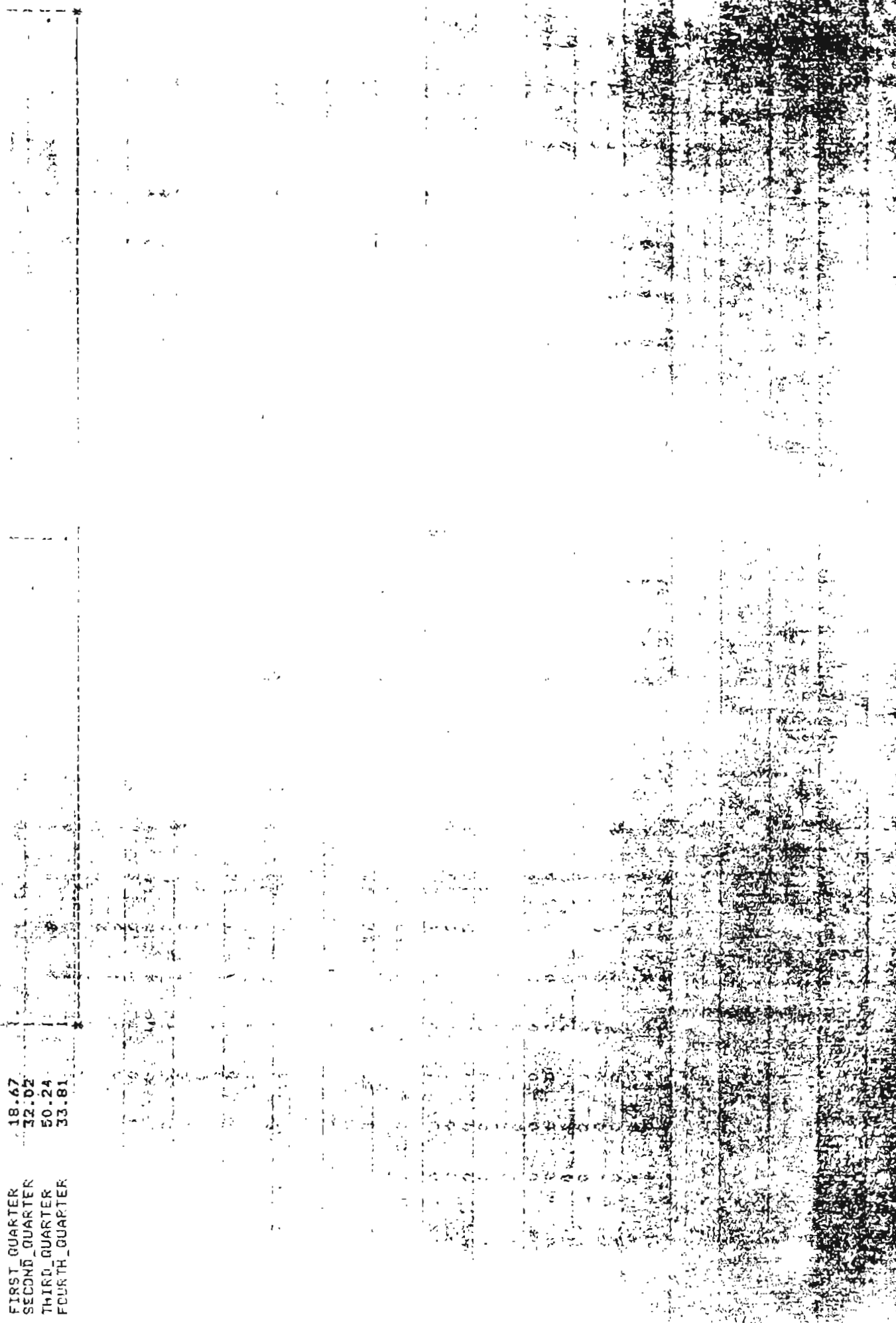
MONTH

MONTH	MEAN OF FLOW
JANUARY	19.32
FEBRUARY	15.73
MARCH	20.74
APRIL	24.11
MAY	32.21
JUNE	39.75
JULY	53.44
AUGUST	55.31
SEPTEMBER	41.68
OCTOBER	33.92
NOVEMBER	32.77
DECEMBER	34.70



DNR-DIV. GEOLOGICAL AND GEOPHYSICAL SURVEYS
KING COVE, ALASKA: DELTA GREEN
TIMEPLOT OF QUARTERLY MEANS

QUARTER	MEAN OF FLOW	MIN	MAX
FIRST QUARTER	18.67	18.67324	50.23641
SECOND QUARTER	32.02		
THIRD QUARTER	50.24		
FOURTH QUARTER	33.81		



DNR-DIV. GEOLOGICAL AND GEOPHYSICAL SURVEY
 KING COVE, ALASKA: PETA CREEK
 MEAN DAILY DISCHARGE SUMMARY

MONTH	DAY	MEAN FLOW (CFS.)	MINIMUM FLOW (CFS.)	MAXIMUM FLOW (CFS.)	MEDIAN FLOW (CFS.)	STANDARD DEVIATION OF MEAN	COVER (KWS)	ENERGY (KW-HRS) (24 HRS X POWER)	NUMBER OF STAGE OBSERVATIONS
JANUARY	1	25.00	21.00	29.00	25.00	7.77	61.775	9682.60	2
JANUARY	2	27.00	20.00	34.00	27.00	7.60	700.717	9377.21	3
JANUARY	3	25.33	20.00	30.00	26.00	5.03	366.599	8798.37	3
JANUARY	4	24.67	20.00	28.00	26.00	4.16	356.951	8566.83	3
JANUARY	5	23.67	20.00	26.00	25.00	3.21	342.480	8219.53	3
JANUARY	6	21.50	16.00	26.00	22.00	4.47	311.127	7467.04	4
JANUARY	7	22.00	14.00	30.00	22.00	7.20	318.172	7640.69	4
JANUARY	8	19.25	13.00	26.00	19.00	6.70	275.577	6605.60	4
JANUARY	9	19.75	14.00	25.00	20.00	5.56	285.892	6859.25	4
JANUARY	10	18.25	11.00	23.00	19.50	5.85	244.076	6338.30	4
JANUARY	11	18.00	11.00	22.00	19.50	5.23	260.478	6251.47	4
JANUARY	12	19.25	11.00	24.00	21.00	6.18	278.567	6685.60	4
JANUARY	13	18.75	11.00	24.00	20.00	5.02	271.731	6511.95	4
JANUARY	14	18.00	11.00	24.00	18.50	6.06	260.478	6251.47	4
JANUARY	15	19.50	11.00	23.00	22.00	5.74	282.185	6772.43	4
JANUARY	16	21.00	9.00	28.00	22.50	7.16	303.871	7293.38	4
JANUARY	17	16.50	11.00	25.00	16.00	7.72	338.772	5730.52	4
JANUARY	18	18.50	11.00	25.00	19.00	5.97	267.713	6425.12	4
JANUARY	19	18.00	11.00	23.00	19.00	5.29	260.478	6251.47	4
JANUARY	20	19.25	11.00	23.00	21.50	5.56	278.567	6685.60	4
JANUARY	21	16.00	10.00	22.00	16.00	6.38	231.536	5556.86	4
JANUARY	22	17.25	12.00	21.00	18.00	4.11	249.625	5990.99	4
JANUARY	23	17.50	10.00	22.00	19.00	5.26	253.242	6077.82	4
JANUARY	24	15.25	10.00	19.00	14.50	4.50	220.683	5296.39	4
JANUARY	25	17.50	13.00	20.00	16.50	3.11	253.242	6077.82	4
JANUARY	26	15.50	11.00	20.00	15.50	4.65	224.300	5383.21	4
JANUARY	27	16.75	11.00	25.00	15.50	6.55	242.389	5817.34	4
JANUARY	28	19.75	13.00	30.00	18.00	7.63	295.802	6859.25	4
JANUARY	29	23.25	14.00	42.00	18.50	13.20	336.451	8074.82	4
JANUARY	30	18.00	12.00	27.00	16.50	6.98	260.478	6251.47	4
JANUARY	31	17.75	11.00	29.00	15.50	8.30	256.860	6144.65	4
FEBRUARY	1	19.00	12.00	29.00	17.50	7.26	274.519	6590.70	4
FEBRUARY	2	18.25	12.00	25.00	18.00	5.85	264.096	6338.30	4
FEBRUARY	3	18.25	12.00	23.00	19.00	5.62	264.096	6338.30	4
FEBRUARY	4	17.75	12.00	24.00	17.50	5.06	256.860	6164.65	4
FEBRUARY	5	16.50	12.00	22.00	16.00	4.20	238.772	5730.52	4
FEBRUARY	6	16.50	12.00	21.00	16.50	3.87	238.772	5730.52	4
FEBRUARY	7	15.75	12.00	19.00	16.00	3.30	227.918	5470.04	4
FEBRUARY	8	18.75	12.00	19.00	16.00	3.30	227.918	5470.04	4
FEBRUARY	9	16.00	12.00	19.00	16.50	3.16	231.536	5556.86	4
FEBRUARY	10	15.50	12.00	19.00	15.50	3.11	224.300	5383.21	4
FEBRUARY	11	17.50	12.00	24.00	15.00	5.45	238.772	5730.52	4
FEBRUARY	12	18.75	12.00	33.00	15.00	9.74	271.331	6511.99	4
FEBRUARY	13	18.50	12.00	24.00	15.00	5.45	238.772	5730.52	4
FEBRUARY	14	18.50	12.00	19.00	16.50	2.38	224.300	5383.21	4
FEBRUARY	15	18.00	13.00	18.00	16.50	2.16	231.536	5556.86	4
FEBRUARY	16	18.00	13.00	17.00	15.00	1.83	217.065	5209.56	4
FEBRUARY	17	15.00	13.00	18.00	15.50	1.41	217.065	5209.56	4
FEBRUARY	18	14.50	13.00	16.00	14.50	1.73	209.830	5035.91	4
FEBRUARY	19	14.75	12.00	16.00	15.50	1.89	213.447	5122.73	4

INR-IV. GEOLOGICAL AND GEOPHYSICAL SURVEYS
 KING COVE, ALASKA: DELTA CREEK
 MEAN DAILY DISCHARGE SUMMARY

MONTH	DAY	MEAN FLOW (CFS)	MINIMUM FLOW (CFS)	MAXIMUM FLOW (CFS)	MEDIAN FLOW (CFS)	STANDARD DEVIATION OF MEAN	POWER (KWS) (P-RHE/11.8)	ENERGY (KW-HRS) (24HRS X POWER)	NUMBER OF STAGE OBSERVATIONS
FEBRUARY	20	14.75	11.00	17.00	13.50	2.63	213.45	5122.7	4
FEBRUARY	21	13.50	10.00	16.00	14.00	2.65	195.36	4688.4	4
FEBRUARY	22	14.50	11.00	16.00	13.50	2.38	209.83	5035.9	4
FEBRUARY	23	14.50	10.00	17.00	13.50	3.11	209.83	5035.9	4
FEBRUARY	24	14.00	10.00	17.00	14.50	2.94	202.59	4862.3	4
FEBRUARY	25	14.00	11.00	18.00	14.50	2.16	202.59	4862.3	4
FEBRUARY	26	15.00	12.00	18.00	15.00	2.58	217.07	5209.6	4
FEBRUARY	27	14.75	13.00	16.00	15.00	1.50	213.45	5122.7	4
FEBRUARY	28	13.50	10.00	16.00	14.50	2.38	195.36	4688.4	4
FEBRUARY	29	14.00	10.00	16.00	16.00	3.42	231.54	5556.9	1
MARCH	1	14.50	10.00	18.00	15.00	3.42	209.83	5035.9	4
MARCH	2	13.75	10.00	16.00	14.50	2.63	198.98	4775.4	4
MARCH	3	13.50	9.00	16.00	14.50	3.11	195.36	4688.4	4
MARCH	4	13.25	9.00	15.00	14.50	2.87	191.74	4601.8	4
MARCH	5	20.00	10.00	31.00	19.50	8.83	289.42	6946.1	4
MARCH	6	18.75	11.00	24.00	20.00	5.74	271.33	6512.0	4
MARCH	7	16.75	12.00	20.00	17.50	3.59	242.39	5817.3	4
MARCH	8	16.50	13.00	19.00	17.00	2.65	238.77	5730.5	4
MARCH	9	15.50	14.00	17.00	15.50	1.29	224.30	5383.2	4
MARCH	10	15.75	14.00	18.00	15.50	1.71	227.92	5470.0	4
MARCH	11	18.50	15.00	18.00	18.50	1.29	238.77	5730.5	4
MARCH	12	16.50	13.00	20.00	16.50	2.89	238.77	5730.5	4
MARCH	13	17.25	15.00	22.00	16.00	3.20	249.62	5991.0	4
MARCH	14	18.25	15.00	24.00	17.00	4.03	264.10	6338.3	4
MARCH	15	17.00	16.00	19.00	16.50	1.41	246.01	5904.2	4
MARCH	16	16.75	15.00	20.00	16.00	2.36	242.39	5817.3	4
MARCH	17	17.50	15.00	20.00	16.00	3.79	253.24	6077.8	4
MARCH	18	17.75	13.00	27.00	15.50	6.29	256.86	6164.6	4
MARCH	19	18.00	13.00	25.00	17.00	5.83	260.48	6251.5	4
MARCH	20	20.00	13.00	27.00	20.00	6.22	288.42	6946.1	4
MARCH	21	21.25	15.00	28.00	21.00	6.70	307.51	7380.2	4
MARCH	22	44.25	18.00	114	22.50	46.55	640.34	15368.2	4
MARCH	23	70.50	20.00	217	22.50	97.67	1020.21	24484.9	4
MARCH	24	38.25	20.00	88.00	22.50	33.21	553.52	13284.4	4
MARCH	25	20.75	12.00	30.00	20.50	7.46	300.27	7206.6	4
MARCH	26	17.75	12.00	21.00	19.00	4.27	256.86	6164.6	4
MARCH	27	17.00	12.00	21.00	17.50	3.92	246.01	5904.2	4
MARCH	28	17.25	10.00	21.00	18.00	4.11	249.62	5991.0	4
MARCH	29	19.00	12.00	23.00	18.50	4.35	260.48	6251.5	4
MARCH	30	19.75	12.00	27.00	20.00	6.13	285.80	6859.3	4
MARCH	31	24.00	12.00	33.00	26.00	9.95	354.54	8508.9	4
APRIL	1	24.00	12.00	37.00	24.50	10.41	354.54	8508.9	4
APRIL	2	25.00	12.00	39.00	22.50	11.22	347.30	8333.3	4
APRIL	3	25.00	12.00	39.00	24.50	11.40	361.77	8682.6	4
APRIL	4	27.00	12.00	39.00	21.00	11.32	336.43	8074.6	4
APRIL	5	27.00	12.00	37.00	20.50	10.54	325.60	7814.3	4
APRIL	6	27.00	12.00	37.00	19.50	11.80	358.16	8595.8	4
APRIL	7	27.00	12.00	37.00	20.00	11.80	347.30	8333.3	4
APRIL	8	27.00	12.00	37.00	20.00	11.80	354.54	8508.9	4
APRIL	9	27.00	12.00	37.00	20.00	11.80	350.92	8428.1	4

DNR DIV. GEOLOGICAL AND GEOPHYSICAL SURVEY
 KING DAM, ALASKA-BELLA CREEK
 DAILY DISCHARGE SUMMARY

MONTH	DAY	MEAN FLOW (CFS.)	MINIMUM FLOW (CFS.)	MAXIMUM FLOW (CFS.)	MEDIAN FLOW (CFS.)	STANDARD DEVIATION OF MEAN	COEFFICIENT OF VARIATION	ENERGY (KW-HRS) (24 HRS X POWER)	NUMBER OF STAGE OPERATIONS
APRIL	10	26.75	11.00	44.00	26.00	13.60	397.079	9059.4	4
APRIL	11	26.00	12.00	41.00	25.50	12.99	376.246	9029.9	4
APRIL	12	23.75	12.00	39.00	22.00	11.67	343.686	8248.5	4
APRIL	13	22.75	11.00	38.00	21.00	11.47	329.115	7901.2	4
APRIL	14	23.00	13.00	36.00	21.50	9.97	337.633	7968.0	4
APRIL	15	20.75	11.00	36.00	18.00	10.72	300.273	7206.5	4
APRIL	16	22.50	16.00	39.00	19.50	8.74	375.578	7814.3	4
APRIL	17	23.50	18.00	33.00	22.50	7.33	340.069	8161.6	4
APRIL	18	16.50	11.00	21.00	17.00	4.20	238.772	5730.5	4
APRIL	19	18.00	11.00	20.00	16.50	3.74	231.536	5556.9	4
APRIL	20	15.75	11.00	20.00	16.00	4.03	227.918	5470.0	4
APRIL	21	16.25	11.00	21.00	16.50	4.57	235.154	5643.7	4
APRIL	22	19.25	11.00	24.00	21.00	5.74	278.547	6685.6	4
APRIL	23	23.50	11.00	40.00	21.50	12.07	310.042	8161.6	4
APRIL	24	23.50	11.00	35.00	24.00	9.85	340.069	8161.6	4
APRIL	25	31.50	11.00	33.00	21.50	9.00	314.744	7553.9	4
APRIL	26	33.50	21.00	57.00	28.00	17.00	684.778	11634.7	4
APRIL	27	46.50	20.00	87.00	39.50	28.58	672.901	16149.6	4
APRIL	28	34.50	10.00	68.00	30.00	25.58	492.250	11982.0	4
APRIL	29	24.50	10.00	35.00	26.50	10.47	354.539	8508.9	4
APRIL	30	26.00	11.00	37.00	28.00	11.14	376.246	9029.9	4
MAY	1	27.00	10.00	39.00	29.50	13.64	390.717	9377.2	4
MAY	2	25.25	11.00	40.00	25.00	12.28	365.393	8769.4	4
MAY	3	24.00	11.00	40.00	22.50	12.14	347.304	8115.3	4
MAY	4	25.00	11.00	41.00	24.00	12.54	361.775	8482.6	4
MAY	5	23.50	12.00	42.00	20.00	12.90	340.069	8161.6	4
MAY	6	25.75	17.00	45.00	20.50	13.00	377.628	8943.1	4
MAY	7	25.75	15.00	49.00	19.50	15.69	372.628	8943.1	4
MAY	8	32.50	14.00	76.00	20.00	29.24	470.307	11287.4	4
MAY	9	33.25	12.00	66.00	27.50	24.57	481.161	11547.9	4
MAY	10	32.25	12.00	60.00	28.50	21.82	466.650	11200.6	4
MAY	11	30.25	12.00	57.00	26.00	19.86	437.748	10505.9	4
MAY	12	30.75	11.00	53.00	28.50	19.74	444.983	10679.6	4
MAY	13	31.25	11.00	55.00	33.50	20.27	481.161	11547.9	4
MAY	14	35.00	12.00	64.00	37.00	17.30	506.485	12155.6	4
MAY	15	42.50	12.00	63.00	32.00	18.25	473.925	11374.2	4
MAY	16	32.00	12.00	57.00	31.00	19.35	473.925	11374.2	4
MAY	17	32.00	11.00	56.00	37.50	10.85	586.075	14065.8	4
MAY	18	32.00	11.00	52.00	33.50	13.48	542.663	14065.8	4
MAY	19	32.00	11.00	52.00	32.50	15.59	524.574	15023.9	4
MAY	20	32.00	11.00	52.00	34.00	18.95	539.045	12584.8	4
MAY	21	33.00	11.00	56.00	31.50	18.76	513.721	12324.3	4
MAY	22	33.00	11.00	55.00	30.00	16.02	492.014	11806.3	4
MAY	23	33.00	10.00	53.00	29.50	16.22	484.778	11634.7	4
MAY	24	33.00	10.00	53.00	28.50	15.95	473.925	11374.2	4
MAY	25	33.00	10.00	53.00	29.50	16.12	481.161	11547.9	4
MAY	26	33.00	10.00	53.00	29.50	16.12	481.161	11547.9	4
MAY	27	33.00	10.00	53.00	29.50	16.12	481.161	11547.9	4
MAY	28	33.00	10.00	53.00	29.50	16.12	481.161	11547.9	4
MAY	29	33.00	10.00	53.00	29.50	16.12	481.161	11547.9	4
MAY	30	33.00	10.00	53.00	29.50	16.12	481.161	11547.9	4

DNR-DIV. GEOLOGICAL AND GEOPHYSICAL SURVEY
 KING COVE, ALASKA DELTA CREEK
 MEAN DAILY DISCHARGE SUMMARY

MONTH	DAY	MEAN FLOW (CFS.)	MINIMUM FLOW (CFS.)	MAXIMUM FLOW (CFS.)	MEDIAN FLOW (CFS.)	STANDARD DEVIATION OF MEAN	POWER (KWS) (P=QRE/11.8)	ENERGY (KW-HRS) (24HRS X POWER)	NUMBER OF STAGE OBSERVATIONS
MAY	30	32.75	22.00	42.00	33.50	5.36	477.922	11374.2	4
MAY	31	30.50	25.00	38.00	29.50	6.56	441.365	10592.8	4
JUNE	1	28.50	21.00	35.00	29.00	6.24	412.423	9898.2	4
JUNE	2	32.00	19.00	41.00	34.00	7.42	463.072	11113.7	4
JUNE	3	38.50	21.00	57.00	38.00	16.82	557.134	13371.2	4
JUNE	4	33.00	23.00	41.00	34.00	7.48	477.543	11461.0	4
JUNE	5	30.75	22.00	40.00	30.50	7.37	444.983	10679.6	4
JUNE	6	29.00	20.00	42.00	27.00	10.13	417.652	10071.8	4
JUNE	7	29.25	20.00	46.00	25.50	12.04	423.277	10158.6	4
JUNE	8	31.50	20.00	56.00	25.00	16.82	455.836	10940.1	4
JUNE	9	35.00	22.00	64.00	27.00	19.63	506.485	12155.6	4
JUNE	10	34.25	26.00	53.00	29.00	12.61	495.632	11895.2	4
JUNE	11	34.75	28.00	50.00	30.50	10.24	507.047	12068.8	4
JUNE	12	34.75	27.00	51.00	30.50	10.97	507.867	12068.8	4
JUNE	13	37.25	25.00	53.00	35.50	11.67	539.045	12937.1	4
JUNE	14	37.50	23.00	55.00	36.00	13.40	542.663	13023.9	4
JUNE	15	37.75	26.00	60.00	32.50	15.20	546.380	13110.7	4
JUNE	16	42.00	28.00	68.00	35.00	17.91	607.792	14586.8	4
JUNE	17	39.75	32.00	48.00	39.50	6.55	575.222	13805.3	4
JUNE	18	41.75	36.00	57.00	37.00	10.18	604.164	14499.9	4
JUNE	19	42.50	36.00	62.00	36.00	13.00	615.017	14760.4	4
JUNE	20	45.175	32.00	67.00	42.00	16.64	662.048	15889.2	4
JUNE	21	43.75	22.00	62.00	45.50	19.81	633.106	15194.5	4
JUNE	22	53.00	21.00	76.00	57.50	24.59	766.963	18407.1	4
JUNE	23	49.50	22.00	82.00	47.00	25.00	716.314	17191.5	4
JUNE	24	46.25	32.00	64.00	44.50	14.57	669.204	16062.8	4
JUNE	25	41.75	32.00	60.00	37.50	12.97	604.164	14499.9	4
JUNE	26	48.00	36.00	72.00	39.50	19.44	694.600	16570.6	4
JUNE	27	42.00	23.00	60.00	42.50	16.31	607.782	14536.8	4
JUNE	28	46.25	33.00	61.00	45.50	14.31	660.284	16062.8	4
JUNE	29	47.50	30.00	65.00	47.50	14.72	687.371	16476.9	4
JUNE	30	59.00	30.00	110	48.00	35.81	877.787	20990.9	4
JULY	1	36.75	25.00	57.00	32.50	14.24	531.809	12763.4	4
JULY	2	43.50	26.00	62.00	43.00	16.44	620.488	15107.7	4
JULY	3	40.25	24.00	70.00	33.50	20.43	582.458	13979.0	4
JULY	4	40.50	22.00	66.00	37.00	19.54	584.078	14065.8	4
JULY	5	43.00	20.00	75.00	38.50	23.85	672.253	14934.1	4
JULY	6	44.50	18.00	71.00	44.50	25.07	643.959	15435.0	4
JULY	7	47.00	18.00	73.00	48.50	25.83	680.137	16323.3	4
JULY	8	49.25	17.00	92.00	44.00	33.53	712.697	17104.7	4
JULY	9	47.75	15.00	86	35.00	40.79	690.990	16581.8	4
JULY	10	42.50	23.00	72.00	37.50	22.52	615.017	14760.4	4
JULY	11	41.50	28.00	65.00	36.50	17.22	600.546	14413.1	4
JULY	12	44.00	28.00	71.00	38.50	19.65	636.724	15281.4	4
JULY	13	47.50	31.00	69.00	46.50	13.49	680.137	16323.3	4
JULY	14	41.50	31.00	58.00	33.50	11.80	593.311	14239.5	4
JULY	15	44.00	31.00	74.00	38.50	18.89	665.666	15976.0	4
JULY	16	44.00	27.00	75.00	37.00	14.83	636.724	15281.4	4
JULY	17	42.50	27.00	64.00	44.50	12.45	615.017	14760.4	4
JULY	18	52.00	30.00	70.00	52.50	18.22	752.492	18059.8	4

INR-11V, GEOLOGICAL AND GEOPHYSICAL SURVEY
 KING COVE, ALASKA; DELTA CREEK
 MEAN DAILY DISCHARGE SUMMARY

MONTH	DAY	MEAN FLOW (CFS.)	MINIMUM FLOW (CFS.)	MAXIMUM FLOW (CFS.)	MEDIAN FLOW (CFS.)	STANDARD DEVIATION OF MEAN	POWER (FWS)	ENERGY (KW-HRS.) (24 HRS X POWER)	NUMBER OF STAGE OBSERVATIONS
JULY	19	56.75	30.00	87.00	55.00	24.27	601.23	19709.5	4
JULY	20	58.00	32.00	94.00	53.00	29.44	839.30	20143.6	4
JULY	21	59.50	30.00	90.00	59.00	28.16	861.02	20664.6	4
JULY	22	82.75	42.00	141	74.00	41.69	1197.48	28739.4	4
JULY	23	83.00	37.00	122	86.50	35.34	1201.09	28826.2	4
JULY	24	72.75	34.00	115	71.00	33.22	1053.77	25366.4	4
JULY	25	63.25	31.00	98.00	62.00	27.83	810.89	21967.0	4
JULY	26	69.25	39.00	131	53.50	42.60	1407.12	24050.8	4
JULY	27	68.75	36.00	1130	54.50	43.87	994.88	23877.2	4
JULY	28	65.50	36.00	119	49.50	39.01	947.85	22748.4	4
JULY	29	63.50	35.00	1120	49.50	39.42	918.91	22053.8	4
JULY	30	61.50	33.00	112	50.50	36.37	889.97	21359.2	4
JULY	31	59.00	31.00	101	52.00	33.51	853.79	20490.9	4
AUGUST	1	56.25	25.00	100	50.00	32.71	813.99	19535.8	4
AUGUST	2	55.00	18.00	99.00	51.50	33.62	795.91	19101.7	4
AUGUST	3	51.00	14.00	96.00	47.00	35.42	738.02	17712.5	4
AUGUST	4	51.75	14.00	93.00	50.00	36.21	748.87	17973.0	4
AUGUST	5	54.25	21.00	99.00	48.50	36.22	785.05	18841.2	4
AUGUST	6	56.50	26.00	104	48.00	37.11	817.61	19622.7	4
AUGUST	7	59.25	28.00	91.00	59.00	28.85	857.41	20577.8	4
AUGUST	8	60.00	31.00	89.00	60.00	23.90	868.26	20838.2	4
AUGUST	9	61.50	36.00	100	55.00	27.23	889.97	21359.2	4
AUGUST	10	73.25	35.00	119	69.50	38.06	1060.00	25440.0	4
AUGUST	11	85.25	36.00	169	68.00	59.88	1733.65	39607.7	4
AUGUST	12	57.75	28.00	90.00	56.50	26.08	876.70	20056.8	4
AUGUST	13	53.50	26.00	105	41.50	36.79	774.20	18580.8	4
AUGUST	14	54.75	23.00	90.00	53.00	35.19	792.29	19014.9	4
AUGUST	15	50.00	22.00	84.00	47.00	31.23	723.50	17365.2	4
AUGUST	16	47.25	19.00	83.00	43.50	30.49	683.75	16410.1	4
AUGUST	17	45.25	18.00	80.00	41.50	27.94	651.81	15715.5	4
AUGUST	18	45.75	17.00	77.00	44.50	27.89	647.05	15089.2	4
AUGUST	19	48.75	15.00	79.00	50.50	33.47	705.44	16931.1	4
AUGUST	20	45.50	17.00	81.00	42.00	28.20	659.43	15802.3	4
AUGUST	21	50.00	20.00	96.00	42.00	34.33	723.55	17365.2	4
AUGUST	22	52.00	15.00	116	38.50	45.25	752.49	18059.8	4
AUGUST	23	52.80	15.00	118	37.50	45.79	752.49	18059.8	4
AUGUST	24	54.75	15.00	112	66.00	40.30	937.00	22487.9	4
AUGUST	25	56.00	24.00	94.00	41.00	30.41	723.55	17365.2	4
AUGUST	26	56.00	31.00	97.00	37.50	31.44	734.40	17625.7	4
AUGUST	27	57.00	34.00	97.00	36.50	30.69	738.02	17712.5	4
AUGUST	28	57.75	33.00	96.00	39.00	29.81	748.87	17973.0	4
AUGUST	29	58.75	33.00	94.00	37.00	24.96	679.11	21098.7	4
AUGUST	30	57.75	28.00	97.00	66.50	40.59	973.17	23356.2	4
AUGUST	31	57.00	28.00	98.00	42.50	29.94	752.49	18059.8	4
SEPTEMBER	1	57.00	28.00	97.00	40.00	26.92	738.02	17712.5	4
SEPTEMBER	2	57.00	28.00	96.00	34.50	26.22	676.52	16236.5	4
SEPTEMBER	3	57.00	28.00	96.00	30.50	26.70	622.25	14934.1	4
SEPTEMBER	4	57.00	27.00	91.00	19.50	31.19	640.34	15368.2	4
SEPTEMBER	5	57.00	28.00	96.00	45.00	49.35	882.73	21185.5	4
SEPTEMBER	6	57.00	28.00	97.00	48.00	50.43	908.06	21793.8	4

TNR-DIV. GEOLOGICAL AND GEOPHYSICAL SURVEYS
KING COVE, ALASKA: DELTA STATION
MEAN DAILY DISCHARGE SUMMARY

MONTH	DAY	MEAN FLOW (CFS.)	MINIMUM FLOW (CFS.)	MAXIMUM FLOW (CFS.)	MEDIAN FLOW (CFS.)	STANDARD DEVIATION OF MEAN	POWER (KWS) (P-RUE/11.8)	ENERGY (KW-HRS) (24HRS X POWER)	NUMBER OF STAGE OBSERVATIONS
SEPTEMBER	7	42.78	24.00	68.00	39.50	21.00	618.435	14847.2	4
SEPTEMBER	8	38.00	23.00	66.00	31.50	19.44	549.698	13197.6	4
SEPTEMBER	9	33.75	19.00	58.00	29.00	16.92	488.396	11721.5	4
SEPTEMBER	10	29.00	18.00	41.00	28.50	9.49	419.609	10071.8	4
SEPTEMBER	11	50.00	25.00	111	32.00	40.93	723.550	17365.2	4
SEPTEMBER	12	46.50	32.00	86.00	34.00	26.35	672.901	16149.8	4
SEPTEMBER	13	47.25	28.00	96.00	32.50	32.57	683.755	16410.1	4
SEPTEMBER	14	44.00	25.00	86.00	32.50	28.37	636.724	15281.4	4
SEPTEMBER	15	24.25	20.00	56.00	30.50	15.97	495.632	11895.2	4
SEPTEMBER	16	32.60	24.00	40.00	33.00	7.00	470.307	11287.4	4
SEPTEMBER	17	37.00	26.00	54.00	34.00	12.06	535.427	12850.2	4
SEPTEMBER	18	35.50	24.00	47.00	35.50	10.08	513.721	12329.3	4
SEPTEMBER	19	34.25	28.00	52.00	31.00	12.84	495.632	11895.2	4
SEPTEMBER	20	34.50	26.00	49.00	31.50	10.66	499.250	11982.0	4
SEPTEMBER	21	48.00	26.00	89.00	39.50	28.10	701.843	16844.2	4
SEPTEMBER	22	41.25	25.00	69.00	35.50	19.67	596.929	14326.3	4
SEPTEMBER	23	35.25	25.00	54.00	31.00	12.82	510.103	12242.5	4
SEPTEMBER	24	31.50	22.00	45.00	29.50	9.75	455.834	10940.1	4
SEPTEMBER	25	31.75	22.00	44.00	30.50	9.11	459.454	11026.9	4
SEPTEMBER	26	34.50	25.00	49.00	32.00	11.33	499.250	11982.0	4
SEPTEMBER	27	39.00	28.00	51.00	38.90	9.83	564.369	13644.9	4
SEPTEMBER	28	59.25	22.00	116	47.50	42.03	842.936	20230.6	4
SEPTEMBER	29	49.75	21.00	75.00	51.50	27.75	719.932	17278.4	4
SEPTEMBER	30	32.75	24.00	50.00	28.50	12.04	473.925	11374.2	4
OCTOBER	1	34.50	15.00	66.00	28.50	22.25	499.250	11982.0	4
OCTOBER	2	33.50	21.00	53.00	30.00	13.89	484.778	11634.7	4
OCTOBER	3	38.00	23.00	53.00	38.00	15.00	549.698	13197.6	3
OCTOBER	4	36.67	20.00	45.00	45.00	14.43	530.603	12734.5	3
OCTOBER	5	36.33	32.00	42.00	35.00	5.13	525.780	12616.7	3
OCTOBER	6	34.67	28.00	42.00	34.00	7.02	501.661	12039.9	3
OCTOBER	7	30.00	22.00	36.00	32.00	7.21	434.130	10419.1	3
OCTOBER	8	32.33	26.00	41.00	30.00	7.77	467.894	11229.5	3
OCTOBER	9	34.67	21.00	54.00	29.00	17.21	501.661	12039.9	3
OCTOBER	10	34.67	20.00	56.00	28.00	18.90	501.661	12039.9	3
OCTOBER	11	32.67	27.00	41.00	30.00	7.37	472.719	11345.3	3
OCTOBER	12	38.67	28.00	41.00	38.00	6.81	516.132	12387.2	3
OCTOBER	13	36.00	22.00	59.00	27.00	20.07	520.956	12502.9	3
OCTOBER	14	52.00	22.00	108	26.00	48.64	752.492	18059.8	3
OCTOBER	15	38.67	28.00	56.00	35.00	15.82	559.545	13429.1	3
OCTOBER	16	42.33	25.00	62.00	40.00	18.61	612.606	14762.8	3
OCTOBER	17	35.00	25.00	53.00	27.00	15.62	506.485	12155.8	3
OCTOBER	18	31.33	23.00	48.00	25.00	12.74	453.425	10882.2	3
OCTOBER	19	29.33	22.00	42.00	24.00	11.02	424.483	10187.6	3
OCTOBER	20	27.67	21.00	39.00	23.00	9.67	400.364	9608.7	3
OCTOBER	21	28.33	21.00	33.00	21.00	6.45	410.012	9840.3	3
OCTOBER	22	24.00	21.00	35.00	26.00	5.00	376.246	9029.9	3
OCTOBER	23	25.00	21.00	37.00	24.00	4.58	361.775	8681.8	3
OCTOBER	24	24.00	21.00	31.00	24.00	3.00	347.304	8339.3	3
OCTOBER	25	24.33	20.00	31.00	26.00	3.77	352.128	8451.1	3
OCTOBER	26	23.33	20.00	33.00	23.00	1.81	366.599	8796.4	3

DNR-IV. GEOLOGICAL AND GEOPHYSICAL SURVEY
 KING COVE, ALASKA-DELTA CREEK
 MEAN DAILY FRESHWATER DISCHARGE SUMMARY

MONTH	DAY	MEAN FLOW (CFS.)	MINIMUM FLOW (CFS.)	MAXIMUM FLOW (CFS.)	MEDIAN FLOW (CFS.)	STANDARD DEVIATION OF MEAN	POWER (FOUR/11.8)	ENERGY (KW HRS) (24HRS X POWER)	NUMBER OF STAGE OBSERVATIONS
OCTOBER	27	27.00	23.00	34.00	24.00	6.02	390.717	9377.2	3
OCTOBER	28	27.00	26.00	28.00	27.00	1.00	390.717	9377.2	3
OCTOBER	29	27.00	24.00	31.00	26.00	3.61	390.717	9377.2	3
OCTOBER	30	60.33	25.00	131	25.00	61.20	873.084	20954.0	3
OCTOBER	31	51.00	26.00	99.00	28.00	41.58	739.021	17712.5	3
NOVEMBER	1	46.67	24.00	82.00	34.00	31.01	675.313	16207.5	3
NOVEMBER	2	34.33	24.00	53.00	26.00	16.20	496.838	11924.1	3
NOVEMBER	3	30.00	23.00	42.00	25.00	10.44	434.130	10419.1	3
NOVEMBER	4	29.00	22.00	42.00	23.00	11.27	419.659	10071.8	3
NOVEMBER	5	27.67	22.00	38.00	23.00	8.96	400.364	9608.7	3
NOVEMBER	6	30.67	22.00	36.00	34.00	7.57	443.777	10650.7	3
NOVEMBER	7	40.33	31.00	57.00	33.00	14.47	583.664	14007.9	3
NOVEMBER	8	31.67	28.00	38.00	29.00	5.51	458.248	10998.0	3
NOVEMBER	9	29.00	28.00	30.00	29.00	1.00	419.659	10071.8	3
NOVEMBER	10	30.67	27.00	33.00	32.00	3.21	443.777	10650.7	3
NOVEMBER	11	36.33	27.00	51.00	31.00	12.86	525.780	12518.7	3
NOVEMBER	12	33.67	27.00	38.00	36.00	5.84	407.190	11692.6	3
NOVEMBER	13	34.33	25.00	46.00	32.00	10.49	476.838	11924.1	3
NOVEMBER	14	35.33	24.00	54.00	28.00	16.29	511.309	12271.4	3
NOVEMBER	15	33.00	25.00	47.00	27.00	12.17	477.543	11461.0	3
NOVEMBER	16	31.33	25.00	43.00	26.00	10.12	453.425	10882.2	3
NOVEMBER	17	28.00	21.00	39.00	24.00	9.64	405.108	9724.5	3
NOVEMBER	18	26.67	20.00	35.00	24.00	8.33	385.893	9261.4	3
NOVEMBER	19	30.00	21.00	41.00	28.00	10.15	434.130	10419.1	3
NOVEMBER	20	35.67	27.00	45.00	35.00	9.02	516.130	12387.2	3
NOVEMBER	21	34.67	31.00	41.00	32.00	5.51	591.661	12039.9	3
NOVEMBER	22	32.33	30.00	37.00	30.00	4.04	467.896	11229.5	3
NOVEMBER	23	30.00	27.00	35.00	28.00	4.36	434.130	10419.1	3
NOVEMBER	24	34.00	27.00	40.00	35.00	6.56	492.014	11808.3	3
NOVEMBER	25	30.00	26.00	33.00	31.00	3.61	434.130	10419.1	3
NOVEMBER	26	29.00	26.00	33.00	28.00	3.61	419.659	10071.8	3
NOVEMBER	27	33.00	27.00	44.00	28.00	9.54	477.543	11461.0	3
NOVEMBER	28	41.67	28.00	69.00	28.00	23.67	600.950	14471.0	3
NOVEMBER	29	32.67	25.00	44.00	29.00	10.02	477.543	11345.3	3
NOVEMBER	30	31.33	24.00	40.00	30.00	8.08	453.425	10882.2	3
DECEMBER	1	28.33	24.00	34.00	27.00	5.13	410.012	9840.3	3
DECEMBER	2	26.00	23.00	30.00	25.00	3.61	376.246	9029.9	3
DECEMBER	3	26.67	22.00	33.00	25.00	5.69	385.893	9261.4	3
DECEMBER	4	29.67	23.00	41.00	25.00	9.87	429.306	10303.4	3
DECEMBER	5	39.00	21.00	74.00	22.00	30.32	564.369	13544.9	3
DECEMBER	6	29.67	22.00	44.00	23.00	12.42	429.306	10303.4	3
DECEMBER	7	30.33	22.00	41.00	28.00	9.71	438.954	10534.9	3
DECEMBER	8	28.67	21.00	41.00	24.00	10.79	414.835	9956.0	3
DECEMBER	9	26.33	21.00	36.00	22.00	8.39	381.070	9145.7	3
DECEMBER	10	27.00	23.00	32.00	26.00	4.58	390.717	9377.2	3
DECEMBER	11	27.33	27.00	28.00	27.00	0.58	395.541	9493.0	3
DECEMBER	12	24.00	23.00	26.00	23.00	1.73	347.304	8335.3	3
DECEMBER	13	23.00	22.00	25.00	22.00	1.73	332.833	7988.0	3
DECEMBER	14	23.33	21.00	24.00	22.00	1.53	323.186	7756.5	3
DECEMBER	15	23.33	20.00	27.00	23.00	3.51	337.657	8103.8	3

UNIT DIV. GEOLOGICAL AND SCIENTIFIC
KING COVE, RELATIONSHIP TO CREEK
MEAN DAILY FLOW (CFS.)

MONTH	DAY	MEAN FLOW (CFS.)	MINIMUM FLOW (CFS.)	MAXIMUM FLOW (CFS.)	MEDIAN FLOW (CFS.)	STANDARD DEVIATION	ENERGY (KWH)	NUMBER OF STAGE OBSERVATIONS
DECEMBER	16	23.00	20.00	28.00	21.00	1.74	332.07	3
DECEMBER	17	31.67	22.00	39.00	34.00	0.74	458.00	3
DECEMBER	18	38.67	31.00	52.00	33.00	11.59	13429.1	3
DECEMBER	19	35.67	20.00	44.00	43.00	13.58	12387.2	3
DECEMBER	20	67.00	20.00	144	37.00	67.72	23269.4	3
DECEMBER	21	96.67	20.00	234	36.00	119.2	33572.7	3
DECEMBER	22	72.00	20.00	163	33.00	79.08	25005.9	3
DECEMBER	23	44.67	20.00	77.00	37.00	22.24	15512.9	3
DECEMBER	24	33.33	19.00	51.00	30.00	16.26	11576.8	3
DECEMBER	25	30.33	22.00	41.00	28.00	9.71	10534.9	3
DECEMBER	26	29.00	25.00	36.00	26.00	4.08	10071.8	3
DECEMBER	27	28.00	23.00	33.00	28.00	5.00	9724.5	3
DECEMBER	28	37.33	25.00	55.00	32.00	15.70	12966.0	3
DECEMBER	29	32.33	24.00	38.00	35.00	7.37	11229.5	3
DECEMBER	30	31.67	23.00	39.00	33.00	8.08	10998.0	3
DECEMBER	31	32.67	21.00	46.00	31.00	12.58	11345.3	3

DNR-DIV. GEOLOGICAL AND GEOPHYSICAL SURVEYS
 KING COVE, ALASKA-BETA DATA
 MEAN MONTHLY DISCHARGE SUMMARY

MONTH	MEAN FLOW (CFS.)	MINIMUM FLOW (CFS.)	MAXIMUM FLOW (CFS.)	MEDIAN FLOW (CFS.)	STANDARD DEVIATION OF MEAN	POWER (KW)	ENERGY (KW-HRS) (220.54 HRS X POWER)	NUMBER OF STAGE OBSERVATIONS
JANUARY	19.32	9.00	42.00	20.00	6.17	276.609	204271	118
FEBRUARY	15.73	10.00	33.00	15.00	3.29	277.866	166051	113
MARCH	20.74	9.00	217	17.00	21.25	300.157	219202	124
APRIL	24.11	10.00	87.00	21.00	12.37	348.872	254872	120
MAY	32.21	10.00	76.00	28.50	15.45	466.106	340519	124
JUNE	39.75	19.00	110	35.50	15.74	575.222	420234	120
JULY	53.44	15.00	141	44.50	27.73	773.265	564916	124
AUGUST	55.31	14.00	169	49.00	31.25	890.466	584701	124
SEPTEMBER	41.68	18.00	133	32.00	23.52	503.200	440673	120
OCTOBER	33.92	15.00	131	28.00	16.01	490.795	358555	95
NOVEMBER	32.77	20.00	82.00	20.00	10.37	474.166	346407	90
DECEMBER	34.70	19.00	234	27.00	29.59	502.400	366035	93

DNR-DIV. GEOLOGICAL AND GEOPHYSICAL SURVEYS
 KING COVE, ALASKA: FIDA CREEK
 MEAN QUARTERLY DISCHARGE SUMMARY

QUARTER	MEAN FLOW (CFS.)	MINIMUM FLOW (CFS.)	MAXIMUM FLOW (CFS.)	MEDIAN FLOW (CFS.)	STANDARD DEVIATION OF MEAN	NUMBER OF DAYS	ENERGY (KW-HRS) (0.1515 HRS X POWER)	NUMBER OF STAGE OBSERVATIONS
FIRST QUARTER	18.67	9.00	217	17.00	13.17	200,000	32,018	355
SECOND QUARTER	32.02	10.00	110	30.00	15.00	179,830	10,154.06	364
THIRD QUARTER	50.24	14.00	169	38.50	20.20	702,071	107,315.7	368
FOURTH QUARTER	33.81	15.00	234	28.00	20.80	481,203	10,720.89	378

DNR-DIV. GEOLOGICAL AND GEOPHYSICAL SURVEY
KING COVE, ALASKA-Delta Creek
OVERALL MEAN DISCHARGE

OBS	MEAN FLOW (CFS.)	MINIMUM FLOW (CFS.)	MAXIMUM FLOW (CFS.)	MEDIAN FLOW (CFS.)	STANDARD DEVIATION OF MEAN	POWER (KUS) (P-RHT/11.0)	ENERGY (KW_HOURS) (0.77 KURS X POWER)	NUMBER OF STAG OBSERVATIONS
1	33.82	9.00	234	27.00	23.47	409.48	4200784	1365