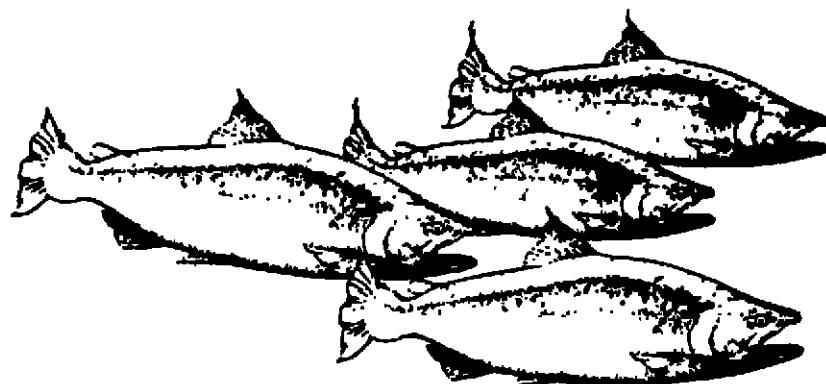


SKAGIT RIVER FRY STRANDING INTEGRATION MODEL STUDY

**SEATTLE CITY LIGHT
ENVIRONMENTAL AFFAIRS DIVISION**

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SKAGIT RIVER FRY STRANDING
INTEGRATION MODEL

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SKAGIT RIVER FRY STRANDING INTEGRATION MODEL

Information collected for the Skagit River salmon and steelhead fry stranding studies was used to develop season-long "high-side" estimates of fry stranded in potholes and on gravel bars along the river. These estimates were considered high-side only within the limits of the study and did not contain adjustments for variables such as observer error, predation on trapped or stranded fry, and similar factors affecting total fry trapped or stranded.

The estimates for pothole stranding were based on the highest stranding rates observed (fry stranded/event) during the experimental field study phase. The highest observed pothole stranding rate occurred at experimental beginning flows of 6,000 cfs and endflows of 3,000 cfs at Newhalem (Beck, 1989). Similarly, the estimates for fry stranding on gravel bars were based on the highest stranding rates observed during the two experimental field study seasons. The highest gravel bar stranding rates (fry stranded/event) during both seasons occurred when downramp ramping rates and amplitude fluctuations were relatively high.

Within the limits of the study it was suggested that the stranding estimates for potholes and gravel bars would over estimate the total fry stranded because the combination of downramp event variables (ramp rate, amplitude, etc.) causing the highest stranding rates do not reflect Seattle City Light's actual daily operational patterns. The high ramping rates and large amplitude fluctuation levels used to make the estimates were considerably higher than the typical daily operational levels more commonly encountered.

Similarly, it was assumed that the total number of fry stranded in potholes or on gravel bars in a given year will vary in response to factors such as: operational patterns of Seattle City Light, adult escapement, egg-to-fry survival, and the annual variation in the type and amount of gravel bars and potholes.

It was evident that a model was needed to integrate Seattle City Light's (SCL) actual operational patterns during the Interim Flow Agreement period (1981-1987) with estimated relative pothole and gravel bar fry stranding levels. The previously discussed fry trapped and stranded estimates are relative in the sense that they reflect only fry that could be accounted for by the study data. The SKAGIT MODEL projections should be viewed as relative indices of fry stranding or trapping. Observer errors and predation on trapped and stranded fry, for example, are not accounted for by the SKAGIT MODEL. The indices reported here are intended to reflect the significance or magnitude of fry stranding under different flow scenarios.

The foundation of the model, called SKAGMDL (SKAGIT MODEL), is the data resulting from R.W. Beck's, Skagit River Fry Stranding Studies Report (1989). To project the number of fry trapped and/or stranded in potholes or on gravel bars, the actual flow conditions for years 1981-87 were used in conjunction with the fry trapping and stranding data developed under experimental flow conditions in base years 1985-86. The stranding data is presented in the Skagit River Fry Stranding Studies Report (Beck, 1989). The SKAGIT MODEL projects numbers of fry trapped and stranded for each of the seven flow-years (1981-87) using 1985-86 trapping and stranding data which assume: that fry densities and species composition remained constant from 1981-87. For example, if SCL operations for flow-year 1982 had occurred during 1985-86, the SKAGIT MODEL projects the outcome.

The SKAGIT MODEL requires downramp flow parameters as input to project pothole and gravel bar trapping and stranding estimates. These downramp flow parameters are produced by a separate model called the FLOW EVENT MODEL. The FLOW EVENT MODEL converts raw (unusable) streamflow measurements into parameters that can be used for calculations within the SKAGIT MODEL. The FLOW EVENT MODEL produces a downramp event file which is composed of rows of data, each row representing a separate downramp event. A single downramp event typically occurs once every 24 hours, although it is possible that multiple downramps can occur within a 24-hour period.

The SKAGIT MODEL flow chart (Figure 1) and table listings (Table 1) show the data types used in the model. The following describes the FLOW EVENT MODEL and then describes the steps the SKAGIT MODEL takes to develop various fry stranding and trapping projections.

FLOW EVENT MODEL

The FLOW EVENT MODEL processes hourly flow data from Newhalem and Marblemount gaging stations to produce event files, that describe downramp events. Two programs are used to produce the event files. Program EVENT GRAVEL BAR (EVENTG) is used to produce event files of gravel bar downramp events, and program EVENT POTHOLE (EVENTP) is used to produce event files of pothole downramp events. The output files resulting from these programs function as the input files for the SKAGIT MODEL.

The most important aspect of the FLOW EVENT MODEL is the parameter definitions used to describe gravel bar or pothole downramp events. These definitions were developed primarily from the results of the Beck (1989) Skagit River Fry Stranding Study.

Figure 1 Skagit River Fry Stranding Prediction Model (SKAGMDL) Flow Chart.

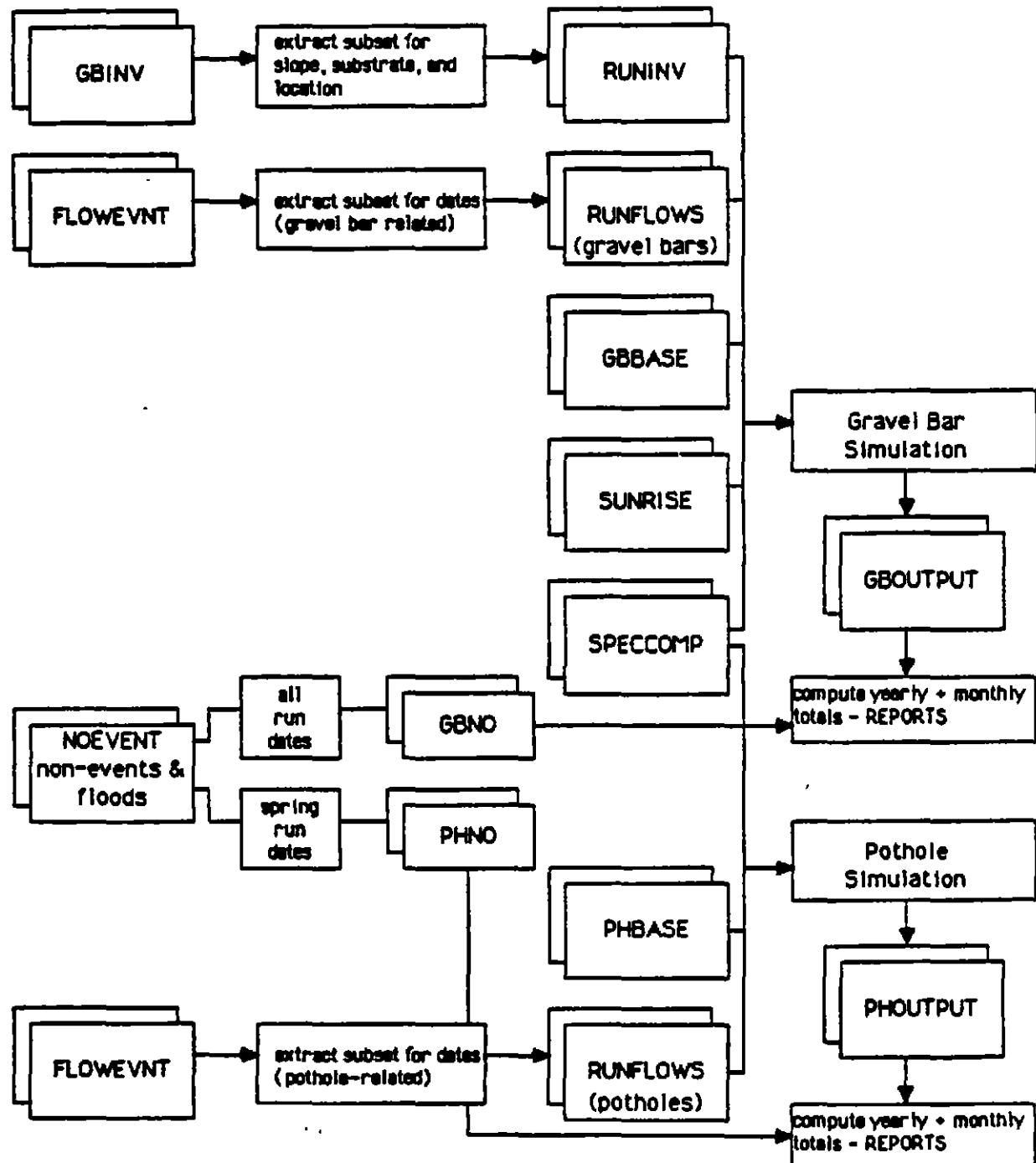


TABLE 1

LISTING OF INPUT AND OUTPUT TABLES AND PARAMETERS
USED IN THE SKAGIT MODEL

Table: EVENTG

Column Definition

#	Name	Type
1	MONTH	INTEGER
2	DAY	INTEGER
3	YEAR	INTEGER
4	SEASON	INTEGER
5	EVENT	INTEGER
6	NENDTIME	REAL
7	AMPL	REAL
8	AVERR	REAL
9	MAXRR	REAL
10	MD	INTEGER

Current number of rows: 1,770

Table: GBINV

Column Definition

#	Name	Type
1	GBTYPE	INTEGER
2	SLOPE	INTEGER
3	SUTSTR	INTEGER
4	LOCATION	INTEGER
5	LINEALFT	REAL
6	SLOPE NM	TEXT
7	SUBST NM	TEXT
8	LOCAT NM	TEXT

Current number of rows: 18

Table: NOEVNTG

Column Definition

#	Name	Type
1	YEAR	INTEGER
2	MONTH	INTEGER
3	DAY	INTEGER
4	SEASON	INTEGER
5	GBTXT	TEXT
6	MD	INTEGER

Current number of rows: 298

Table: EVENTP

Column Definition

#	Name	Type
1	MONTH	INTEGER
2	DAY	INTEGER
3	YEAR	INTEGER
4	SEASON	INTEGER
5	EVENT	INTEGER
6	MBEGFLOW	REAL
7	MENDFLOW	REAL
8	MD	INTEGER

Current number of rows: 975

Table: GBASE

Column Definition

#	Name	Type
1	GBTYPE	INTEGER
2	SEASON	INTEGER
3	AMPLVL	INTEGER
4	RRLVL	INTEGER
5	AVESTRND	REAL

Current number of rows: 144

Table: NOEVNTP

Column Definition

#	Name	Type
1	YEAR	INTEGER
2	MONTH	INTEGER
3	DAY	INTEGER
4	SEASON	INTEGER
5	GBTXT	TEXT
6	MD	INTEGER

Current number of rows: 143

Table: PHBASE
Column Definitions

#	Name	Type
1	PHNUM	TEXT
2	AVGTR	REAL
3	AVGST	REAL
4	CONNFLD	REAL

Current number of rows: 226

Table: SPECCOMP

Column Definitions

#	Name	Type
1	GBORPH	TEXT
2	SEASON	INTEGER
3	EVENODD	TEXT
4	CHIN%	REAL
5	PINK%	REAL
6	CHUM%	REAL
7	COHO%	REAL
8	STHD%	REAL
9	FLAG	INTEGER

Current number of rows: 4

Table: SUNRISE

Column Definition

#	Name	Type
1	BEGDATE	INTEGER
2	ENDDATE	INTEGER
3	RISETIME	REAL
4	SETTIME	REAL

Current number of rows: 25

Table: GBOUTPUT
Column Definitions

#	Name	Type
1	YEAR	INTEGER
1	MONTH	INTEGER
3	DAY	INTEGER
4	SEASON	INTEGER
5	EVENT	INTEGER
6	GBTYPE	INTEGER
7	CHINSTR	REAL
8	PINKSTR	REAL
9	CHUMSTR	REAL
10	COHOSTR	REAL
11	STHDSTR	REAL
12	SALMSTR	REAL
13	TOTSTR	REAL
14	AMPL	REAL
15	RRATE	REAL
16	GBTTEXT	TEXT

Current number of rows: 0

Table: PHOUTPUT
Column Definitions

#	Name	Type
1	YEAR	INTEGER
2	MONTH	INTEGER
3	DAY	INTEGER
4	SEASON	INTEGER
5	EVENT	INTEGER
6	BEGFLOW	REAL
7	ENDFLOW	REAL
8	#DISCONN	INTEGER
9	CHINTRP	REAL
10	PINKTRP	REAL
11	CHUMTRP	REAL
12	COHOTRP	REAL
13	STHDTRP	REAL
14	CHINTRP	REAL
15	PINKSTR	REAL
16	CHUMSTR	REAL
17	COHOSTR	REAL
18	STHDSTR	REAL
19	SALMSTR	REAL
20	SALMTRP	REAL
21	TOTSTR	REAL
22	TOTTRP	REAL

Gravel Bar Events

The gravel bar downramp event was best defined using the following parameters;

- a. Beginning Time - time downramp began at Newhalem
- b. Beginning Flow - at what Newhalem flow (cfs) did the downramp begin
- c. Ending Time - time downramp ended at Newhalem
- d. Ending Flow - at what Newhalem flow (cfs) did the downramp end
- e. Maximum Ramp Rate - during a downramp event, and between any two hours, what was the maximum downramping rate
- f. Average Ramp Rate - during the entire downramp what was the average downramping rate
- g. Downramp Amplitude - difference between beginning and end flows

A gravel bar downramp event had to begin with at least a 100 cfs reduction in flow and the end of the downramp was identified by when the reduction in flow between any two hours falls below 300 cfs/hr. Once the beginning and end of a potential downramp are found by the FLOW EVENT MODEL, two other criteria are checked prior to final verification. To qualify as an event, the downramp must have a total amplitude of more than 400 cfs (at Newhalem) and the hourly maximum downramp rate must exceed 300 cfs/hr. If all conditions are met the data is entered into the event file.

The results of the Beck (1989) Skagit River Fry Stranding Study were used to establish much of this "conditional criteria". A reduction in flow, as measured at Newhalem, of less than 400 cfs was assumed to have very little, if any effect, as measured by fry stranding on gravel bars. Gravel bars, even with small slopes (0-5%), would not have significant amounts of gravel bar surface area dewatered with an amplitude of 400 cfs or less.

The speed with which gravel bar dewatering occurs also affects stranding of fry on gravel bars (Beck, 1989). In general, the more quickly a gravel bar is dewatered the less time a fry has to avoid becoming stranded on the bar. The Beck studies examined the effects of downramping rate as low as 500 cfs/hr for steelhead fry and 1,000 cfs/hr for salmon fry. For the purposes of this project we selected 300 cfs/hr as the minimum downramp rate required to qualify as a gravel bar downramp event. We assumed that below this level the speed of gravel bar dewatering would be slow enough that most, if not all fry would have adequate time to avoid gravel bar stranding.

Pothole Downramp Events

The following parameters were used to define pothole downramp events:

- a. Newhalem Beginning Time - time downramp event began at Newhalem
- b. Newhalem Beginning Flow - at what Newhalem flow (cfs) did the downramp event begin
- c. Newhalem Ending Time - time downramp event ended at Newhalem
- d. Newhalem Ending Flow - at what Newhalem flow (cfs) did the downramp event begin
- e. Marblemount Maximum Flow - maximum flow at Marblemount just before start of downramp event
- f. Marblemount Minimum Flow - minimum flow at Marblemount just after end of downramp event

The pothole downramp event had to begin with a flow reduction at Newhalem of more than 100 cfs between any two hours. The end of a pothole downramp is defined as when the flow either begins to increase or remains unchanged or stabilizes for four hours or more at Newhalem. Once the beginning and end of a downramp event is determined for Newhalem it qualifies as a pothole downramp event if the downramp amplitude is equal to, or greater than 500 cfs. Once qualified at Newhalem; the downramp event must be relocated at Marblemount by examining the USGS gage data for Marblemount. Because the pothole connection and dry flows identified in the Beck (1989) report are tied into the Marblemount stream gage each pothole downramp event had to be re-located at Marblemount so that trapping and stranding projections could be made. The maximum flow of the downramp event at Marblemount is selected from a "window" of hourly Marblemount flows that occurred 2-5 hours after the downramp event began upriver at Newhalem. The highest flow found within the "window" is selected as the beginning flow of the pothole downramp event. Likewise, the minimum flow of the downramp is selected, by knowing the beginning time at Newhalem, and searching a "window" of flows at Marblemount for the lowest flow value. This value is used to describe the end of the downramp at Marblemount. For any set of Marblemount beginning and ending flows the SKAGIT MODEL can determine which potholes were connected/disconnected and project the number of fry trapped and stranded.

The following is a "Pseudo-Code Outline" of the FLOW EVENT MODEL which is made up of two parts; the gravel bar event program (EVENTG) and the pothole event program (EVENTP). Pseudo-Code Outlines are not

written with complete sentences, nor are they grammatically correct. They provide a means of examining the basic logic used to produce the desired output files.

The Pseudo-Code outline that follows and the FLOW EVENT MODEL USER GUIDE (Appendix A) provide more detail and explanation for the FLOW EVENT MODEL.

FLOW EVENT MODEL - PSEUDO-CODE OUTLINE

Develops downramp event data for SKAGMDL model and X-Y data for output hydrograph plotting.

Input Data Files

USGS Newhalem Gage Flow Data

USGS Marblemount Gage Flow Data

Output Data Files

Unit 3 Gravel bar downramp event data (Appendix B)

Plotting Data Files

Unit 12 Newhalem Flow for month

Unit 22 Newhalem Flow data during gravel bar downramps for month

Unit 32 Newhalem Flow during pothole downramps for month

Unit 42 Newhalem Flow at end of gravel bar downramps for month

Unit 52 Newhalem Flow at end of pothole downramps for month

Unit 62 Marblemount Flow for month

Unit 72 Marblemount Flow at ends of pothole downramps for month

Appendix C contains hydrographs showing the location of all downramps identified by the Gravel Bar Event Program.

Program Logic

Open input files and downramp event data output file
For each day ...

If first day THEN

Read today's 24 hours of flow data at Newhalem and Marblemount ELSE
Move today's data from "next day" array

Read next days 24 hours of flow data at Newhalem and Marblemount
If first day of month THEN

Close files for previous months plotter output
Open files for plotter results output

Write day's streamgage data to files 12 and 62 for plotting

FOR each hour of day

Set hour for starting downramp search
= 1 am or end of last downramp, whichever is later

Find start of downramp, defined as hour in which hourly reduction in flow is more than 100 cfs

Compute Max Downramp Rate = largest hourly reduction in flow during downramp

Find end of downramp, defined as hour in which reduction is less than previous hour or less than 300 cfs, whichever is numerically smaller. (Downramp cannot be later than 6 am on the day following the start of the downramp).

Compute Amplitude = flow at start of downramp - flow at end of downramp

Compute Average Ramp Rate = Amplitude/(duration of downramp in hours)

If Max Down Ramp Rate G.E. 300 cfs and Amplitude G.E. 300 cfs THEN

Write downramp data to event file, including:

Date

Season

Number of downramps for day

Time of downramp start

Time of downramp end

Average ramp rate

Maximum ramp rate

Downramp amplitude

Newhalem flow at start of downramp

Newhalem flow at end of downramp

Write hourly flows during downramp to file 22

Write flow at end of downramp to file 42

NEXT HOUR

NEXT DAY

EVENT (POTHOLE EVENT PROGRAM)

Develops downramp event data for pothole model and X-Y data for hydrograph plotting

Input Data Files

Unit 1 Newhalem Flows
Unit 2 Marblemount Flows

Output Data Files

Unit 4 Pothole downramp event data (Appendix B)

Plotting Data Files

Unit 12 Newhalem Flow for month
Unit 22 Newhalem Flow data during gravel bar downramps for month
Unit 32 Newhalem Flow during pothole downramps for month
Unit 42 Newhalem Flow at end of gravel bar downramps for month
Unit 52 Newhalem Flow at end of pothole downramps for month
Unit 62 Marblemount Flow for month
Unit 72 Marblemount Flow at ends of pothole downramps for month

PROGRAM LOGIC

Open input files and downramp event data output file

For each day ...

If first day THEN

 Read today's 24 hours of flow data at Newhalem and Marblemount
 ELSE
 Move today's data from "next day array"

Read next days 24 hours of flow data at Newhalem and Marblemount

If first day of month THEN

 Close files for previous months plotter output
 Open files for plotter results output

Write day's streamgage data to files 12 and 62 for plotting

FOR each hour of day

Set hour for starting downramp search
= 1 am or end of last downramp, whichever is later
Find start of downramp, defined as hour in which hourly reduction
in flow is more than 100 cfs

Find end of downramp, defined as hour before which an increase in
flow occurs or 4th hour of no flow change. (Downramp can't end later
than 6 am on the day following the start of the ramp)

Find maximum flow at Marblemount just after start of downramp

Find minimum flow at Marblemount just after end of downramp

Compute Amplitude = flow at start of downramp - flow at end of
downramp

Compute Average Ramp Rate = Amplitude/(duration of downramp in
hours)

If Amplitude more than 300 cfs THEN

Write downramp data to event file, including:

Date

Season

Number of downramps for day

Time of downramp start

Time of downramp end

Amplitude

Average downramp rate

Newhalem flow at start of downramp

Newhalem flow at end of downramp

Maximum Marblemount flow just after downramp
start

Minimum Marblemount flow just after downramp end

Write hourly flows during downramp to file 32

Write flow at end of downramp to file 52

NEXT HOUR

NEXT DAY

SKAGIT MODEL

The following discussion briefly reviews the major components of
the SKAGIT MODEL. The SKAGIT MODEL flow chart (Figure 1) and table
listings (Table 1) show the model components and data types. Greater
detail is available from the Pseudo-Code Outline that follows and the
Users Guide for the SKAGIT MODEL (Appendix D).

The gravel bar database table, (Table 2) GBBASE, contains the average number of salmon and steelhead (AVESTRND) that were stranded on gravel bars during the fry stranding studies (1985-86) by gravel bar type (GBTYPE), season (SEASON), and the experimental amplitudes (AMPLVL) and ramp rates (RRLVL). Average-stranding values (AVESTRND) for the summer/fall steelhead gravel bar stranding study were taken directly from the matrices presented in the Skagit River Fry Stranding Report (Beck, 1989) (Table 2). The average stranding values for the spring salmon gravel bar stranding study were recalculated omitting the statistically non-significant ENDFLOW factor shown in the matrix presented in the Beck (1988) report.

The gravel bar inventory table, GBINV, contains descriptions of the 18 types of gravel bars (GBTYPE) used during the 1985-86 Skagit River Fry Stranding Studies (Table 3). Parameters used to describe gravel bar types include slope of the bar (SLOPE), primary size of the substrate (SUBSTRT), location of the bar on the Skagit River (LOCATION), and the actual number of lineal feet (LINEALFT) of each type of bar in the river during the experimental period (1985-86). Values for all parameters in GBINV are the same as those developed for the Skagit River Fry Stranding Studies. Gravel bar slopes were described using three levels (1 = 0-5%, 2 = 5%-10%, 3 = greater than 10%), substrate size two levels (1 = 3", 2 = less than 3"), and location three levels (1 = upper reach, 2 = middle reach, 3 = lower reach).

The pothole database table, PHBASE, contains; the identifier code for each pothole location (PHLOC), the identifier code for each pothole studied (PHNUM), the observed average number of fry trapped (AVGTR) and stranded (AVGST) during the study period for each pothole, and the flow below which each pothole is no longer connected to the river (CONNFLD) (Table 4).

A table called SPECCOMP lists the relative species composition individually for steelhead (STHD%) and the four species of salmon (CHIN%, PINK%, CHUM%, COHO%) by season (SEASON), whether odd or even years (EVENODD), and by gravel bars or potholes (GBORPH) (Table 5). These values are used in SKAGIT MODEL to separate the combined fry trapping and stranding values contained in the GBBASE and PHBASE tables into values for each species. All species composition values were taken directly from the Skagit River Fry Stranding Studies Report (Beck, 1989) and represent the species composition of fry that were trapped or stranded in potholes or stranded on gravel bars during the experimental study period (1985-86).

Table 2 Gravel Bar Database For Spring and Summer Seasons Containing Average Stranded By Gravel Bar Type And Season.

Table: GBASE

Season	Gravel Bar Type	Downramp Ramp Rate Level	Downramp Amplitude Level	Average Fry Stranding
SEASON	GBTYPE	RRLVL	AMPLVL	AVESTRND
1	1	1	1	0.875
1	1	1	2	1.083
1	1	2	1	5.333
1	1	2	2	2.625
1	2	1	1	0.875
1	2	1	2	1.083
1	2	2	1	5.333
1	2	2	2	2.625
1	3	1	1	0.667
1	3	1	2	0.583
1	3	2	1	1.750
1	3	2	2	0.667
1	4	1	1	0.583
1	4	1	2	0.750
1	4	2	1	0.792
1	4	2	2	0.375
1	5	1	1	0.583
1	5	1	2	0.750
1	5	2	1	0.792
1	5	2	2	0.375
1	6	1	1	0.583
1	6	1	2	2.000
1	6	2	1	2.167
1	6	2	2	2.000
1	7	1	1	0.083
1	7	1	2	0.250
1	7	2	1	0.250
1	7	2	2	0.167
1	8	1	1	0.083
1	8	1	2	0.250
1	8	2	1	0.250
1	8	2	2	0.167
1	9	1	1	0.417
1	9	1	2	0.333
1	9	2	1	0.292
1	9	2	2	0.375
1	10	1	1	0.083
1	10	1	2	0.167
1	10	2	1	0.167
1	10	2	2	0.250
1	11	1	1	0.083
1	11	1	2	0.167
1	11	2	1	0.167
1	11	2	2	0.250
1	12	1	1	0.200
1	12	1	2	0.200
1	12	2	1	0.000
1	12	2	2	0.133
1	13	1	1	0.000
1	13	1	2	0.125

Season	Gravel Bar Type	Downramp Ramp Rate Level	Downramp Amplitude Level	Average Fry Stranding AVESTRND
SEASON	GBTYPE	RRLVL	AMPLVL	-----
-----	-----	-----	-----	-----
1	13	2	1	0.250
1	13	2	2	0.250
1	14	1	1	0.000
1	14	1	2	0.125
1	14	2	1	0.250
1	14	2	2	0.250
1	15	1	1	0.167
1	15	1	2	0.167
1	15	2	1	0.056
1	15	2	2	0.056
1	16	1	1	0.000
1	16	1	2	0.167
1	16	2	1	0.000
1	15	2	2	0.167
1	17	1	1	0.000
1	17	1	2	0.167
1	17	2	1	0.000
1	17	2	2	0.167
1	18	1	1	0.167
1	18	1	2	0.083
1	18	2	1	0.083
1	18	2	2	0.167
2	1	1	1	3.000
2	1	1	2	3.700
2	1	2	1	1.900
2	1	2	2	17.300
2	2	1	1	3.000
2	2	1	2	3.700
2	2	2	1	1.900
2	2	2	2	17.300
2	3	1	1	1.000
2	3	1	2	4.400
2	3	2	1	0.900
2	3	2	2	4.300
2	4	1	1	0.600
2	4	1	2	21.400
2	4	2	1	4.800
2	4	2	2	9.400
2	5	1	1	0.600
2	5	1	2	21.400
2	5	2	1	4.800
2	5	2	2	9.400
2	6	1	1	1.000
2	6	1	2	1.500
2	6	2	1	0.400
2	6	2	2	2.300
2	7	1	1	1.900
2	7	1	2	5.100
2	7	2	1	2.500
2	7	2	2	11.200
2	8	1	1	1.700
2	8	1	2	5.100

Season	Gravel Bar Type	Downramp Ramp Rate Level	Downramp Amplitude Level	Average Fry Stranding
SEASON	GBTYPE	RRLVL	AMPLVL	AVESTRND
-----	-----	-----	-----	-----
2	8	2	1	2.500
2	8	2	2	11.200
2	9	1	1	0.300
2	9	1	2	1.400
2	9	2	1	0.400
2	9	2	2	1.100
2	10	1	1	0.200
2	10	1	2	0.100
2	10	2	1	0.300
2	10	2	2	0.400
2	11	1	1	0.200
2	11	1	2	0.100
2	11	2	1	0.300
2	11	2	2	0.400
2	12	1	1	0.500
2	12	1	2	0.400
2	12	2	1	0.100
2	12	2	2	1.800
2	13	1	1	0.000
2	13	1	2	1.200
2	13	2	1	0.000
2	13	2	2	2.500
2	14	1	1	0.000
2	14	1	2	1.200
2	14	2	1	0.000
2	14	2	2	2.500
2	15	1	1	0.000
2	15	1	2	0.000
2	15	2	1	0.000
2	15	2	2	0.000
2	16	1	1	0.500
2	16	1	2	2.000
2	16	2	1	1.300
2	16	2	2	3.700
2	17	1	1	0.500
2	17	1	2	2.000
2	17	2	1	1.300
2	17	2	2	3.700
2	18	1	1	0.300
2	18	1	2	0.000
2	18	2	1	0.100
2	18	2	2	0.500

Table 3 Gravel Bar Inventory Of Eighteen (18) Gravel Bar Types Found In The Skagit River Study Area.

Table: GBINV

Gravel Bar Type GBTYPE	Slope Category SLOPE	Substrate Category SUBSTRT	River Loc. Category LOCATION	Lineal Ft of Gravel Bar LINEALFT	(Label for Slope Cat.) SLOPE_NM	(Label for Substrate) SUBST_NM
1	1	1	1	700.	0 - 5%	LT 3
2	1	1	2	1200.	0 - 5%	LT 3
3	1	1	3	5800.	0 - 5%	LT 3
4	1	2	1	1200.	0 - 5%	GT 3
5	1	2	2	600.	0 - 5%	GT 3
6	1	2	3	600.	0 - 5%	GT 3
7	2	1	1	1200.	>5% - 10%	LT 3
8	2	1	2	1000.	>5% - 10%	LT 3
9	2	1	3	2400.	>5% - 10%	LT 3
10	2	2	1	3110.	>5% - 10%	GT 3
11	2	2	2	1400.	>5% - 10%	GT 3
12	2	2	3	2000.	>5% - 10%	GT 3
13	3	1	1	2000.	> 10%	LT 3
14	3	1	2	800.	> 10%	LT 3
15	3	1	3	2000.	> 10%	LT 3
16	3	2	1	1850.	> 10%	GT 3
17	3	2	2	400.	> 10%	GT 3
18	3	2	3	800.	> 10%	GT 3

Pathole Location	Pothole Number	Average Number Trapped	Average Number Stranded	Connection Flow
PHLOC	PHNUM	AV6TR	AV6ST	CONNFLD
4	14	1.5	0.	5740.
4	15	0.	0.	4288.
4	16	0.	0.	5740.
4	17	0.5	0.	5310.
4	18	0.	0.	5740.
4	19	0.	0.	5740.
4	2	12.4	0.	5740.
4	3	0.13333	0.	5740.
4	4	0.13333	0.06667	5740.
4	5	2.78571	0.	5740.
4	5	0.	0.	4730.
4	6	0.	0.	3840.
4	6	0.6	0.	5740.
4	7	7.5	0.	4880.
4	7	0.	0.	5740.
4	8	0.	0.	5740.
4	8	0.	0.	4880.
6	1	0.	0.64286	4790.
6	10	137.143	4.42857	3470.
6	11	12.	9.45454	4895.
6	13	0.	0.	4910.
6	13A	45.25	0.	3545.
6	14	0.5	2.25	4910.
6	15	0.	0.	5740.
6	16	0.	0.	4880.
6	17	0.	0.	4880.
6	19	0.	0.	4430.
6	2	0.	0.	5740.
6	20	0.	0.	4490.
6	3	0.	0.	4910.
6	4	2.9	0.	5015.
6	5	0.26667	0.	5740.
6	5A	0.	0.	5740.
6	6	4.6	0.	5740.
6	7	0.	0.	5740.
6	8	0.	0.	5740.
6	8A	0.	0.	4260.
6	9	0.13333	1.13333	4770.
7	1	0.	0.	4880.
7	10	0.	0.	4880.
7	11	0.	0.	4880.
7	2	0.	0.	5740.
7	3	0.	0.	4880.
7	4	0.	0.	4880.
7	5	0.	0.	5740.
7	6	0.	0.	4497.
7	7	0.8	0.2	4175.
7	8	0.	0.	5740.
7	X	1.66667	14.	4895.
7	Y	0.5	3.5	3790.
7	Z	0.	0.	3790.
8	1	0.	0.	4880.

Pothole Location	Pothole Number	Average Number Trapped	Average Number Stranded	Connection Flow
PHLOC	PHNUM	AVGTR	AVGST	CONNFL0
8	2	0.	0.	4880.
8	3	0.	0.	4880.
8	4	0.	0.	4880.
8	7	0.	0.	4880.
8	8	0.	0.	4880.
10	1	3.85714	0.	4260.
10	10	10.	0.	4655.
10	12	1.	0.	4550.
10	13	2.42857	0.	4585.
10	14	4.28571	0.71429	4585.
10	15	124.143	0.	5150.
10	16	0.33333	0.5	4840.
10	17	0.	0.	4600.
10	2	0.	0.	5145.
10	26	0.	0.	5145.
10	27	0.	0.	5145.
10	3	0.	0.	4840.
10	4	7.	0.	5310.
10	5	0.	0.	5145.
10	6	0.	0.	5145.
10	7	0.	0.	5145.
10	8	0.	0.	5085.
10	9	0.	0.	5325.
10	A	0.6	0.2	4190.
10	B	0.	0.	4550.
10	C	0.	0.	4500.
10	D	0.	0.	3653.
10	E	25.	0.	3653.
10	F	0.	0.57143	5310.
10	G	1.33333	0.	4585.
10	H	0.33333	0.	4550.
10	J	0.	5.	3925.
11	10	0.	0.	4490.
11	A	19.4	0.	4940.
11	B	107.	0.	5135.
12	11	14.2	0.	3825.
12	12	0.	0.	4290.
12	13	0.	0.	4430.
12	14	0.	0.	4430.
12	16	0.	0.	4430.
12	1A	75.	4.	4040.
12	1B	61.5	0.	3675.
12	1C	6.66667	0.	4335.
12	1D	0.2	0.6	5150.
12	1E	37.	0.1	5150.
12	5	4.	1.8	5135.
12	6	4.2	0.	5740.
12	8	0.	0.	5740.
12	A	0.	0.	3370.
13	10	0.	0.	4880.
13	11	0.	3.71429	4360.
13	12	1.30769	0.	5740.

Pothole Location	Pothole Number	Average Number Trapped	Average Number Stranded	Connection Flow
PHLOC	PHNUM	AVGTR	AVGST	CONNFL0
13	13	0.	0.	5740.
13	16	0.	0.	4910.
13	3	2.	0.	4290.
13	4	0.	0.	5740.
13	5	0.15385	0.	5740.
13	7	17.4545	0.09091	5740.
13	8	0.	0.	5740.
13	9	12.8	0.	4790.
13	A	2.66667	1.	3565.
13	B	17.6667	5.	3565.
13	C	8.	1.	3790.
13	D	0.	5.	3790.
14	A	2.1	2.2	4910.
14	B	0.5	0.	4635.
16	A	0.	0.	4290.
16	B	0.	0.	4290.
16	C	0.	0.	4290.
18	A	0.	0.	4290.
18	B	0.	0.	4290.
18	C	0.	0.	5740.
18	D	0.	0.	5740.
18	E	0.	0.	5740.
18	F	0.	0.	5740.
18	G	0.	0.	5740.
19	H	0.	0.	4430.
19	I	0.	0.	4430.
19	J	0.	0.	4430.
19	K	0.	0.	5740.
21	A	14.5	0.	3575.
21	B	0.	0.	3490.
21	C	0.	0.	5740.
21	D	0.	0.	4910.
21	E	0.	0.	5740.
21	F	0.	0.	5740.
21	G	0.	0.	5740.
21	H	0.	0.	5740.
21	I	0.	0.	5740.
22	I	0.	0.	4910.
22	C	0.	0.	3466.
23	I	3.5	0.	4910.
23	11	0.	0.	5740.
23	12	0.	0.	5520.
23	14	0.	0.	5740.
23	2	0.	0.	5310.
23	3	0.	0.	4910.
23	4	64.75	0.	5565.
23	5	0.2	0.	5565.
23	6	0.	0.	5740.
23	7	0.	0.	5520.
23	9	0.	0.	5740.
23	B	137.	0.	4910.
23	C	28.5	0.	4940.

Pothole Location	Pothole Number	Average Number Trapped	Average Number Stranded	Connection Flow
PHLOC	PHNUM	AVGTR	AVGST	CONNFL0
-----	-----	-----	-----	-----
23	E	0.	0.	3490.
24	I	0.	0.	3660.
26	I	4.	1.	4295.
26	11	0.	0.	4490.
26	12	0.	0.	4490.
26	2	33.5714	0.	4185.
26	3	0.	0.	4910.
26	4	16.5385	0.07692	4910.
26	5	0.	0.	4490.
26	6	0.	0.	4880.
26	7	0.	0.	4880.
26	A	14.5	1.25	4140.
26	C	5.	0.	4120.
26	D	0.	0.	4040.
27	A	9.5	0.	3560.
27	F	0.	0.	3326.
27	G	0.	0.	3660.
29	B	0.	0.	3490.
29	C	0.	0.	3490.
-0-	10	0.	0.	4200.

TABLE 5

SPECIES COMPOSITION (SPECCOMP) BY SEASON
POTHOLE AND GRAVEL BARS

<u>GRAVEL BAR OR POTHOLE</u>	<u>SEASON</u>	<u>EVEN/ODD YEAR</u>	<u>%CHIN</u>	<u>%PINK</u>	<u>%CHUM</u>	<u>%STHD</u>
PH	1	-0-	0.978	0.007	0.000	0.012
GB	2	-0-	0.000	0.000	0.000	0.992
GB	1	Even ¹	0.628	0.300	0.050	0.022
GB	1	Odd ²	0.897	0.000	0.072	0.031

1 - actual data from field studies of spring 1986 when pink fry were present.

2 - adjusted data assuming pink fry not present during odd

The SUNRISE table contains data that is used in SKAGIT MODEL to determine whether a downramp event ends during the night or day (Table 6). The table includes the sunrise (RISETIME) and sunset (SETTIME) times for five-day increments from February 1 through May 31. Each period or increment is expressed as a beginning date (BEGDATE) and an ending date (ENDDATE). The sunrise and sunset times for each period were developed using the 1986 sunrise and sunset tables printed by the Elliott Sales Corporation in Tacoma, Washington.

Each table described above is required to operate the SKAGIT MODEL. Output data from the FLOW EVENT Model is fed into the SKAGIT MODEL resulting in the formation of two output files, GBOUTPUT and PHOUTPUT. GBOUTPUT is a table created by SKAGIT MODEL representing projections of salmon and steelhead fry stranding on gravel bars. PHOUTPUT is the other table created by SKAGMDL and it represents projections of fry trapped and stranded in potholes. These two output tables can be used in conjunction with each other to create many different combinations of output tables or reports. These output reports are discussed in greater detail later in this report.

The previously shown SKAGIT MODEL flow chart (Figure 1) illustrates the structure of the model and where the tables discussed above appear in the model. The following "Pseudo-Code" outline of the model provides the best description of how the SKAGIT MODEL operates. Pseudo-code outlines are not written with complete sentences or grammatically correct.

PSEUDO-CODE OUTLINE OF SKAGMDL

Set Parameters for the Model Run (User Input Section)

Pick slopes, substrates, locations and dates for this run. This defines what subsets of the gravel bar inventory data and of the historical flow data will be used during the model run.

Slopes: choices are (1) 0 to 5% slope, (2) 5% to 10% slope, (3) greater than 10% slope, or (4) all slopes.

Substrates: choices are (1) less than 3 inches average substrate size, (2) greater than 3 inches, or (3) all substrate sizes.

Locations: choices are (1) Upper reach, (2) Middle reach, (3) Lower reach, or (4) all reaches.

TABLE 6

SUNRISE AND SUNSET TIMES USED TO DETERMINE
DAYLIGHT VS. DARKNESS DOWNRAMPS

<u>Beginning Date BEGDATE</u>	<u>Ending Date ENDDATE</u>	<u>Sunrise Time(*) RISETIME</u>	<u>Sunset Time(*) SETTIME</u>
201	204	7.63	17.10
205	209	7.55	17.23
210	214	7.40	17.37
215	219	7.28	17.50
220	224	7.13	17.63
225	301	6.98	17.77
302	306	6.83	17.90
307	311	6.67	18.03
312	316	6.50	18.15
317	321	6.33	18.27
322	326	6.15	18.40
327	331	5.98	18.52
401	406	5.82	18.65
407	410	5.65	18.77
411	415	5.48	18.87
416	420	5.32	19.00
421	425	5.17	19.12
426	430	5.00	19.25
501	505	4.85	19.37
506	510	4.73	19.47
511	515	4.60	19.58
516	520	4.48	19.70
521	525	4.38	19.80
526	530	4.32	19.90
531	531	4.25	19.98

(*) times are expressed as decimal fraction of an hour

Dates: first choose between (1) all historical flow event data in the database or (2) a subset of the flow event data for particular time periods. If option (2) is chosen, which is the usual approach, then a screen appears that allows the operator to specify year, then season (spring or summer) and/or beginning and ending date. After the time periods are entered, the operator is given a chance to edit the dates if a mistake was made and this becomes necessary.

Next, choose which module within the model is to be run: (1) gravel bars, (2) potholes, or (3) both gravel bars and potholes. If running gravel bars, choose between average and maximum ramp rate as the ramp rate measure to be extracted from the historical gravel bar flow event data.

Run the Model - Gravel Bars

Project a subset of the GBINV table for the desired slopes, substrates and locations. Store in temporary table RUNINV, which contains the variables GBTYPE, LOCFLION and LINEALFT.

Project a subset of the gravel bar historical flow event data (table EVENTG) for the dates requested and store in temporary table RUNFLOWS. Select average or maximum ramp rate as desired and recode it as a categorical variable called RRLVL ("ramp rate level"). RRLVL=1 if the actual ramp rate is LE 3000, RRLVL=2 if actual ramp rate GT 3000.

Project a subset of the gravel bar non-event days stored in table NOEVNTG, again for the dates requested, and store in table GBNO. This will be used when the reports are generated at the end of the simulation.

Write out data from the following tables into ASCII files on disk, to be used as input to the external Pascal program GBSIM:

RUNFLOWS
RUNINV
GBBASE
SPECCOMP (using entries for gravel bars only)
SUNRISE

"Zip" out of R:base and run the GBSIM program. This program reads the data files listed above, performs calculations as described in the next section, and creates a new data file which is subsequently loaded into the database table GBOUTPUT.

What happens in gravel bar simulation program GBSIM:

Outer Loop on RUNFLOWS, i.e. flow events for each day

Inner Loop on RUNINV, i.e. gravel bar types for this run

For the current day and gravel bar type, find two entries in GBBASE with matching GBTYPE, SEASON and RRLVL for the 2 AMPLVL's. Store the average stranding value (AVESTRND) for AMPLVL=1 in variable ST1 and for AMPLVL=2 in variable ST2. If the actual amplitude (AMPL) from RUNFLOWS is between 400 and 2000 then calculate actual stranding from straight line equation 1, if AMPL is greater than 2000 then use straight line equation 2 (Appendix E). If amplitude AMPL is less than 400, then it is a non-event and actual stranding is set to zero.

Total stranding = (actual stranding) * (LINEALFT)/200

Calculate seasonal density factor using interpolation method discussed in Appendix F. Modify total stranding by this factor.

Break out total stranding by species using factors in table SPECCOMP. For summer, there is a single set of factors. For spring, there is one set for odd years and one for even years.

For spring dates only, apply daytime multiplier if the event ended during daylight hours (i.e. after sunrise, before sunset). Use the following endtimes: for river location 1 use Newhalem endtime, for river location 2 use Newhalem endtime plus 3 hours, for river location 3 use Newhalem endtime plus 6.5 hours.

Daytime multiplier of 7.66 is applied to all salmon species if it is a daytime event, and the program also stores the letter "D" in a flag variable whenever this is done, to be used later when tabling output.

Write out a record to the file GBOUT with the calculated data for this date and gravel bar type. This is the file that will be used to load data into the R:base table GBOUTPUT.

End inner loop.
End out loop.

Return to R:base.

Remove temporary tables RUNFLOWS and RUNINV.

Run the Model - Potholes

Project a subset of the pothole flow event in table EVENTP for the dates requested (for spring only) and store in temporary table RUNFLOWS. This contains the date, season and Marblemount beginning and ending flow.

Project a subset of the pothole non-event days stored in table NOEVNTP, again for the dates requested, and store in table PHNO. This will be used when the reports are generated at the end of the simulation.

Write out data from the following database tables into ASCII files on disk for input to Pascal program PHSIM:

RUNFLOWS
PHBASE
SPECCOMP (selecting entries for potholes only)

"Zip" out of R:base and run pothole simulation program PHSIM. This reads the data files listed above, performs various calculations, and writes out a data file which is then loaded into the database table PHOUTPUT.

What happens in pothole simulation program PHSIM:
Loop on RUNFLOWS, flow event data for each day
MINFLOW=min(MBEGFLOW,MENDFLOW)
MAXFLO=max(MBEGFLOW,MENDFLOW)

Read records from the PHBASE file - AVGST (average stranded), AVGTR (averaged trapped) and CONNFLO (connecting flow). If CONNFLO for a pothole is GE MINFLO and LE MAXFLO for this event then increment #DISCONN by 1 and add the AVGTR and AVGST to total trapped and total stranded for that event.

Calculate seasonal density factor using interpolation method discussed in Appendix F. Modify total trapped and stranded by this factor.

Break out total stranding and trapped by species using factors in table SPECCOMP. There is a single set of factors for potholes. Calculate totals for all salmon species, as well, i.e. excluding steelhead.

Write out a record to the file to be loaded into PHOUTPUT with calculated data for this date.

End loop.
Return to R:base.

Table the data in GBOUTPUT/PHOUTPUT

Once GBOUTPUT and PHOUTPUT exist, a number of different output tables can be constructed. The choices are to order the data (1) chronologically, or (2) by stranding totals. Data can be summarized (1) by year and season, (2) by year and month (3) by day.

For gravel bar tables that are summarized over season or month, the data are shown for each gravel bar type. For daily detail reports, however, the data for all gravel bar types within an event are summed. If any of the 3 river locations (reaches) were in daylight during a portion of the event, then the comment field is modified to show a "D" for that reach. The non-event days and days that had flooding are merged in from table GBNO at the time of printing the daily detail report.

For pothole daily detail tables, the non-event days are merged in from table PHNO at the time of printing.

SKAGIT MODEL RESULTS

Output tables listing Skagit River fry trapping and stranding information were developed for flow years 1981-86 (Tables 7-13). These tables have been placed at the end of the report due to their length. For each year of flow data, five types of tables were produced: (1) season totals by gravel bar type and total number of pothole disconnections, (2) monthly totals by gravel bar type and total potholes disconnected, (3) daily totals for gravel bars and potholes. Extremely small numbers within these tables will appear in engineering notation (e.g., 1.E.2=.01). Due to flooding conditions in spring 1982 and summer 1983, there were a few daily estimates that could not be made. The gravel bar portion of the table includes comments indicating "daylight" events and times when "no event" occurred. A designation of "NO EVENT" in the daily table denotes that no change in amplitude occurred that day. A sub-table shows the total number of daylight and nighttime events by reach that occurred that year and the corresponding number of fry stranded by species, and (4) daily detail as described above but with data ranked by total stranding (daily) by season for both gravel bars and potholes.

Table 14 summarizes the estimated total number of fry stranded each season and year. Of those fry stranded in the potholes during the spring season, nearly 98% were chinook fry with the remainder steelhead, pink and coho salmon. Note that small numbers of pink salmon were stranded in potholes on odd years. In reality, very few if any pink salmon fry would be present in the Skagit River on odd years. However, the field data from the spring of 1985 did show that a very small number of pink salmon fry were observed in potholes. Grand totals are not affected. Percentage-wise, very few pinks are stranded in potholes.

On the gravel bars in spring (even years), nearly 2/3 of the fry stranded were chinook, nearly 1/3 pink salmon, with lesser numbers of chum salmon and steelhead. In odd years approximately 90% of the stranded fry were chinook with lesser numbers of chum

Dates: first choose between (1) all historical flow event data in the database or (2) a subset of the flow event data for particular time periods. If option (2) is chosen, which is the usual approach, then a screen appears that allows the operator to specify year, then season (spring or summer) and/or beginning and ending date. After the time periods are entered, the operator is given a chance to edit the dates if a mistake was made and this becomes necessary.

Next, choose which module within the model is to be run: (1) gravel bars, (2) potholes, or (3) both gravel bars and potholes. If running gravel bars, choose between average and maximum ramp rate as the ramp rate measure to be extracted from the historical gravel bar flow event data.

Run the Model - Gravel Bars

Project a subset of the GBINV table for the desired slopes, substrates and locations. Store in temporary table RUNINV, which contains the variables GBTYPE, LOCATION and LINEALFT.

Project a subset of the gravel bar historical flow event data (table EVENTG) for the dates requested and store in temporary table RUNFLOWS. Select average or maximum ramp rate as desired and recode it as a categorical variable called RRLVL ("ramp rate level"). RRLVL=1 if the actual ramp rate is LE 3000, RRLVL=2 if actual ramp rate GT 3000.

Project a subset of the gravel bar non-event days stored in table NOEVNTG, again for the dates requested, and store in table GBNO. This will be used when the reports are generated at the end of the simulation.

Write out data from the following tables into ASCII files on disk, to be used as input to the external Pascal program GBSIM:

RUNFLOWS
RUNINV
GBBASE
SPECCOMP (using entries for gravel bars only)
SUNRISE

"Zip" out of R:base and run the GBSIM program. This program reads the data files listed above, performs calculations as described in the next section, and creates a new data file which is subsequently loaded into the database table GBOUTPUT.

What happens in gravel bar simulation program GBSIM:

Outer Loop on RUNFLOWS, i.e. flow events for each day

Inner Loop on RUNINV, i.e. gravel bar types for this run

For the current day and gravel bar type, find two entries in GBBASE with matching GBTYPE, SEASON and RRLVL for the 2 AMPLVL's. Store the average stranding value (AVESTRND) for AMPLVL=1 in variable ST1 and for AMPLVL=2 in variable ST2. If the actual amplitude (AMPL) from RUNFLOWS is between 400 and 2000 then calculate actual stranding from straight line equation 1, if AMPL is greater than 2000 then use straight line equation 2 (Appendix E). If amplitude AMPL is less than 400, then it is a non-event and actual stranding is set to zero.

Total stranding = (actual stranding) * (LINEALFT)/200

Calculate seasonal density factor using interpolation method discussed in Appendix F. Modify total stranding by this factor.

Break out total stranding by species using factors in table SPECCOMP. For summer, there is a single set of factors. For spring, there is one set for odd years and one for even years.

For spring dates only, apply daytime multiplier if the event ended during daylight hours (i.e. after sunrise, before sunset). Use the following endtimes: for river location 1 use Newhalem endtime, for river location 2 use Newhalem endtime plus 3 hours, for river location 3 use Newhalem endtime plus 6.5 hours.

Daytime multiplier of 7.66 is applied to all salmon species if it is a daytime event, and the program also stores the letter "D" in a flag variable whenever this is done, to be used later when tabling output.

Write out a record to the file GBOUT with the calculated data for this date and gravel bar type. This is the file that will be used to load data into the R:base table GBOUTPUT.

End inner loop.
End out loop.

Return to R:base.

Remove temporary tables RUNFLOWS and RUNINV.

Run the Model - Potholes

Project a subset of the pothole flow event in table EVENTP for the dates requested (for spring only) and store in temporary table RUNFLOWS. This contains the date, season and Marblemount beginning and ending flow.

Project a subset of the pothole non-event days stored in table NOEVNTP, again for the dates requested, and store in table PHNO. This will be used when the reports are generated at the end of the simulation.

Write out data from the following database tables into ASCII files on disk for input to Pascal program PHSIM:

RUNFLOWS
PHBASE
SPECCOMP (selecting entries for potholes only)

"Zip" out of R:base and run pothole simulation program PHSIM. This reads the data files listed above, performs various calculations, and writes out a data file which is then loaded into the database table PHOUTPUT.

What happens in pothole simulation program PHSIM:
Loop on RUNFLOWS, flow event data for each day
MINFLOW=min(MBEGFLOW,MENDFLOW)
MAXFLO=max(MBEGFLOW,MENDFLOW)

Read records from the PHBASE file - AVGST (average stranded), AVGTR (averaged trapped) and CONNFLO (connecting flow). If CONNFLO for a pothole is GE MINFLO and LE MAXFLO for this event then increment #DISCONN by 1 and add the AVGTR and AVGST to total trapped and total stranded for that event.

Calculate seasonal density factor using interpolation method discussed in Appendix F. Modify total trapped and stranded by this factor.

Break out total stranding and trapped by species using factors in table SPECCOMP. There is a single set of factors for potholes. Calculate totals for all salmon species, as well, i.e. excluding steelhead.

Write out a record to the file to be loaded into PHOUTPUT with calculated data for this date.

End loop.
Return to R:base.

Table the data in GBOUTPUT/PHOUTPUT

Once GBOUTPUT and PHOUTPUT exist, a number of different output tables can be constructed. The choices are to order the data (1) chronologically, or (2) by stranding totals. Data can be summarized (1) by year and season, (2) by year and month (3) by day.

For gravel bar tables that are summarized over season or month, the data are shown for each gravel bar type. For daily detail reports, however, the data for all gravel bar types within an event are summed. If any of the 3 river locations (reaches) were in daylight during a portion of the event, then the comment field is modified to show a "D" for that reach. The non-event days and days that had flooding are merged in from table GBNO at the time of printing the daily detail report.

For pothole daily detail tables, the non-event days are merged in from tabl. PHNO at the time of printing.

SKAGIT MODEL RESULTS

Output tables listing Skagit River fry trapping and stranding information were developed for flow years 1981-86 (Tables 7-13). These tables have been placed at the end of the report due to their length. For each year of flow data, five types of tables were produced: (1) season totals by gravel bar type and total number of pothole disconnections, (2) monthly totals by gravel bar type and total potholes disconnected, (3) daily totals for gravel bars and potholes. Extremely small numbers within these tables will appear in engineering notation (e.g., I.E.2=.01). Due to flooding conditions in spring 1982 and summer 1983, there were a few daily estimates that could not be made. The gravel bar portion of the table includes comments indicating "daylight" events and times when "no event" occurred. A designation of "NO EVENT" in the daily table denotes that no change in amplitude occurred that day. A sub-table shows the total number of daylight and nighttime events by reach that occurred that year and the corresponding number of fry stranded by species, and (4) daily detail as described above but with data ranked by total stranding (daily) by season for both gravel bars and potholes.

Table 14 summarizes the estimated total number of fry stranded each season and year. Of those fry stranded in the potholes during the spring season, nearly 98% were chinook fry with the remainder steelhead, pink and coho salmon. Note that small numbers of pink salmon were stranded in potholes on odd years. In reality, very few if any pink salmon fry would be present in the Skagit River on odd years. However, the field data from the spring of 1985 did show that a very small number of pink salmon fry were observed in potholes. Grand totals are not affected. Percentage-wise, very few pinks are stranded in potholes.

On the gravel bars in spring (even years), nearly 2/3 of the fry stranded were chinook, nearly 1/3 pink salmon, with lesser numbers of chum salmon and steelhead. In odd years approximately 90% of the stranded fry were chinook with lesser numbers of chum and steelhead. During the summer season over 99% of the gravel bar stranded fry are steelhead with the remainder coho.

TABLE 14

**TOTAL ESTIMATED NUMBER OF STRANDED SALMON
AND STEELHEAD ON GRAVEL BARS
AND IN POTHOLE BY YEAR AND SEASON**

		<u>Spring</u>	<u>Summer</u>	<u>Subtotals</u>	<u>Grand Totals</u>
1981	GB	6,087.9	4,871.6	10,959.5	12,918
	PH	1,958.5	--	1,958.5	
1982	GB	16,222.0	9,783.1	26,005.1	30,417.9
	PH	4,412.8	--	4,412.8	
1983	GB	18,713.8	9,307.9	28,021.7	30,297.3
	PH	2,276.6	--	2,276.6	
1984	GB	10,872.8	4,957.6	15,830.4	17,521.3
	PH	1,690.9	--	1,690.9	
1985	GB	8,383.9	9,300.4	17,684.3	20,441.0
	PH	2,756.7	--	2,756.7	
1986	GB	14,349.5	5,885.4	20,234.9	22,660.8
	PH	2,425.9	--	2,425.9	
1987	GB	6,073.1	3,908.7	9,981.8	11,004.3
	PH	1,022.5	--	1,022.5	
Histor.	GB	11,529.0	6,859.0	18,388.0	20,751.0
Average	PH	2,363.0		2,363.0	

The estimated total number of fry stranded in potholes and on gravel bars ranged from 11,004 in 1987 to 30,417.9 in 1982 and averaged 20,751 over the seven-year period (Figure 2).

For gravel bars in the spring the estimated total number of fry stranded ranged from 6,073.1 in 1987 to 18,713.8 in 1983 and averaged 11,529 for the period from 1981-87 (Figure 2). Table 15 shows that the total number of gravel bar events ranged from a low of 101 in 1981 to a high of 194 in 1982, with a seven year average of 151 events. Figure 3 and Table 15 both show the annual change in the fry stranded/event for spring gravel bar downramps. The seven-year average of this index was 74 fry stranded/event, with a low of 46 in 1987 and 116 in 1983. The variability in this index could be due to a number of factors but in general measures the effect of the average event for a given year. For example, the average event in 1983 stranded 56 more fry than the average 1981 event.

On gravel bars during the summer season, the SKAGIT MODEL estimated that the total number of stranded fry ranged from 4,871.6 in 1981 to 9,783.1 in 1982 and averaged 6,859 over the seven years that were modeled (Figure 2). Table 16 shows that the total number of summer gravel bar downramp events ranged from a low of 48 events in 1987 to a high of 103 in 1985, with a seven-year average of 83 events during the 90-day summer vulnerability period. Figure 4 and Table 16 both show the annual change in the fry stranded/event for the summer gravel bar downramps. The seven-year average of this index was 81 fry stranded/event, with a low of 60 in 1984 and a high of 107 in 1983.

For both spring and summer combined, the estimated number of fry stranded on gravel bars averaged 20,751 with a range from 11,004.3 in 1987 to 30,417.9 in 1982 (Figure 2).

The projected number of fry stranded in potholes during the seven years ranged from 1,022.5 in 1987 to 4,412.8 in 1982 and averaged 2,363.4 (Figure 2). Table 17 shows the total number of spring pothole downramp events for each year. The seven-year average was 87 events with a high of 117 in 1982 and a low of 49 in 1987. Figure 5 and Table 17 show the annual change in the fry stranded per event index. The seven-year average was 26 fry stranded/event. The highest index value of 38 fry/event occurred in 1982. The lowest value occurred in 1987 with a value of 21 fry/event.

**Figure 2 Predicted Number Of Fry Stranded In Potholes And On Gravel Bars
For Each Year Modeled From 1981-87.**

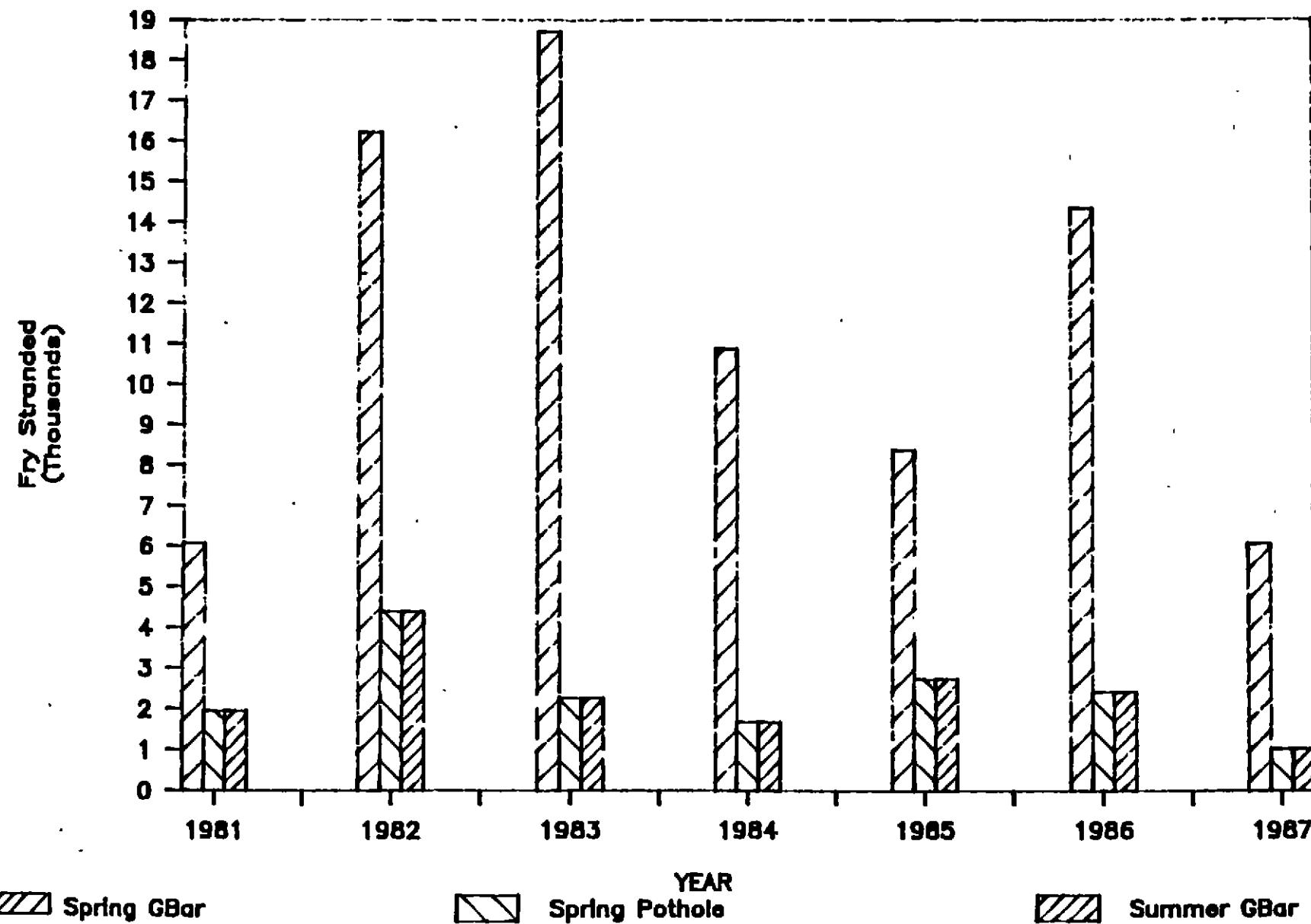


TABLE 15
SUMMARY OF THE NUMBER AND PERCENTAGE (%) OF DAYLIGHT AND NIGHTTIME EVENTS
BY REACH FOR GRAVEL BARS IN THE SPRING AND ASSOCIATED ESTIMATES OF
FRY STRANDED AND AVERAGE NUMBER OF STRANDED FRY PER EVENT

Year	Total Events	REACH 1				REACH 2				REACH 3				Total Stranded	Fry Stranded Per Event					
		Events		Percent		Stranded		Events		Percent		Stranded								
		D	N	D	N	D	N	D	N	D	N	D	N							
1981	101	50	51	50:50		900	167	45	56	45:55		1023	132	39	62	39:61	3332	486	6088	60
1982	194	78	116	40:60		1822	522	74	120	38:62		1555	489	101	93	52:48	10736	1010	16222	84
1983	161	56	105	35:65		1488	654	45	116	28:72		1242	589	94	67	58:42	13912	695	18714	116
1984	142	68	74	48:52		1459	392	50	92	35:65		1087	388	56	86	39:61	6464	1016	10873	77
1985	147	66	81	45:55		1141	376	55	92	37:63		997	347	53	94	36:64	4414	1054	8384	57
1986	182	50	132	28:72		1024	896	31	151	17:83		576	854	70	112	38:62	9215	1676	14350	79
1987	133	47	86	35:65		492	314	37	96	28:72		395	320	46	87	35:65	3601	856	6073	46
Average	151	59	92	40:60		1189	474	48	103	33:67		982	446	66	86	42:58	7382	970	11529	74

Figure 3 Average Number Of Fry Stranded Per Event For Spring Gravel Bar Downramps By Year.

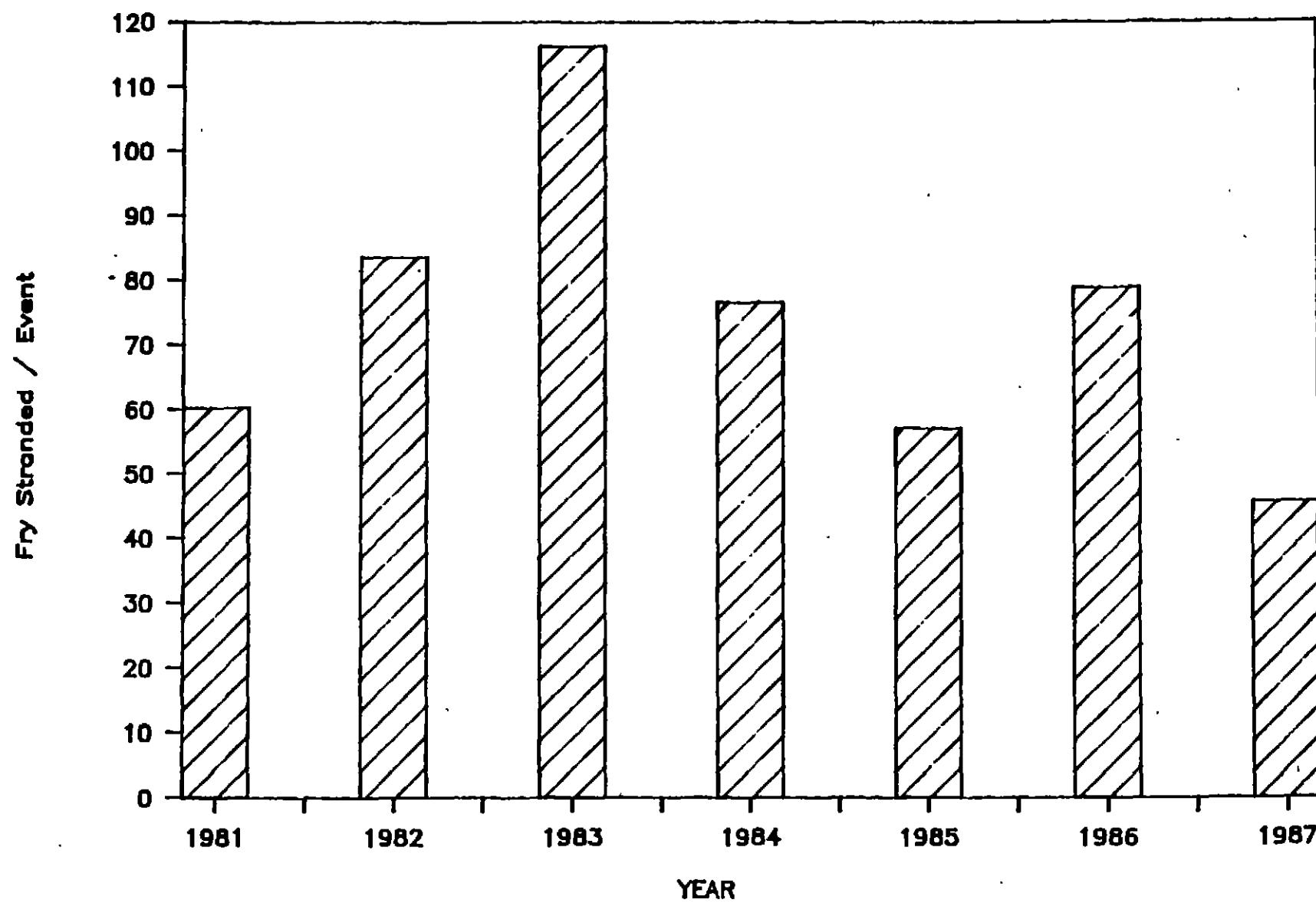


Figure 4 Average Number Of Fry Stranded Per Event For Summer Gravel Bar Downramps By Year.

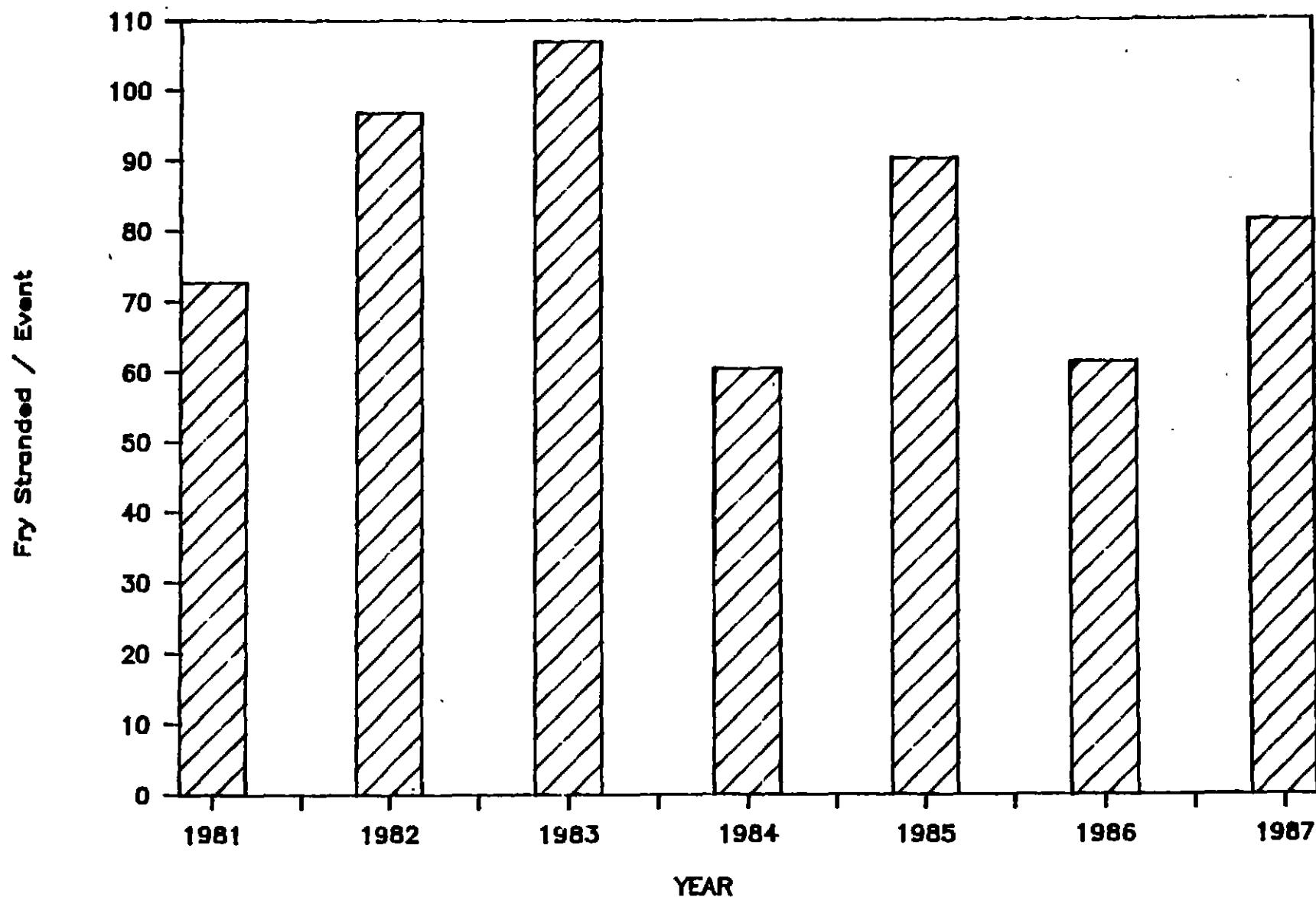


TABLE 16

SUMMARY OF THE NUMBER OF SUMMER GRAVEL BAR EVENTS, ESTIMATED TOTAL
NUMBER OF STRANDED FRY, AND INDEX OF AVERAGE
FRY STRANDED/EVENT FOR EACH YEAR
(1981-87)

<u>Year</u>	<u>Total Number Of Events</u>	<u>Estimated Total Fry Stranded</u>	<u>Average Fry Stranded/Event</u>
1981	67	4,872	73
1982	101	9,783	97
1983	87	9,308	107
1984	82	4,958	60
1985	103	9,300	90
1986	96	5,885	61
1987	48	3,909	81

Figure 5 Average Number Of Fry Stranded Per Event For Spring Pothole Downramps By Year.

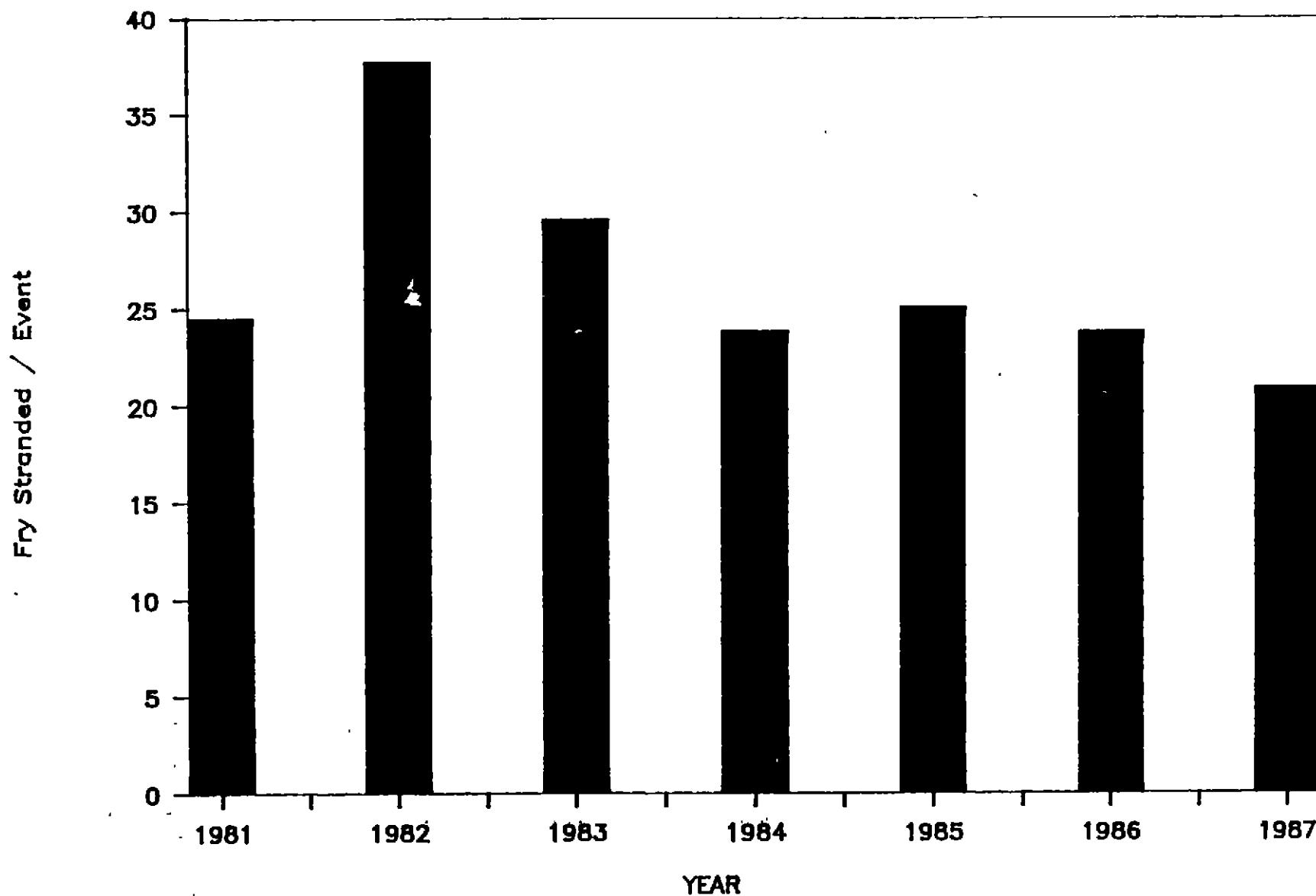


TABLE 17
 SUMMARY OF THE NUMBER OF SPRING POTHOLE DOWNRAMP EVENTS, POTHOLE
 DISCONNECTIONS, FRY TRAPPED AND STRANDED,
 AND FRY STRANDED PER EVENT FOR EACH YEAR
 (1981-87)

<u>Year</u>	<u>Pothole Events</u>	<u>Pothole Disconnections</u>	<u>Fry Trapped</u>	<u>Fry Stranded</u>	<u>Fry Stranded Per Event</u>
1981	80	7,788	31,717	1,959	24
1982	117	15,234	77,301	4,413	38
1983	77	10,046	44,019	2,277	30
1984	71	8,167	33,830	1,691	24
1985	110	11,413	49,307	2,757	25
1986	102	10,586	47,809	2,426	24
1987	49	4,712	19,964	1,023	21
Average	87	9,707	43,421	2,364	26

Although a more detailed analysis would be necessary to assign portions of the stranding totals to certain operational or environmental characteristics, it is of some interest to Seattle City Light to know the percentage of daylight and nighttime downrampings that occurred over the seven-year period from 1981-87. Daylight downrampings in the spring have been shown to strand, on the average, 7.66 times more fry on gravel bars than nighttime downrampings.

Table 15 summarizes these data. Figure 6 indicates that the percentage of daylight downramps has slowly been reduced from 1981 to 1987 in all three stream reaches. The overall percentage of daylight downrampings was higher than expected. This is partially explained by the use of hourly rather than 15-minute flow data in the FLOW EVENT MODEL. It appears that many of the daylight downrampings were the result of events occurring within the hour of sunrise. If 15-minute data were used many of these events would have been re-classified as darkness downramp events (Tables 7-13).

Table 15 shows that 77% of the fry stranding attributed to daylight downramping between 1981-87 occurred in Reach 3 (Marblemount to Rockport). In 1981 and 1982, 45% of the events were daylight events. In 1983, 1984, and 1985, the number fell to about 40% daylight events, and by 1986-87, only 27% and 33% respectively of all events were daytime events.

As discussed previously, Tables 7-13 also list daily gravel bar stranding and pothole trapping and stranding by rank, the highest number of fish trapped and stranded ranked at the top of the list (descending order). Many of the highest gravel bar stranding events were daylight downramping events.

It should be emphasized again that these estimates were made within the limits imposed by Beck's Skagit River Studies (1987). The strengths and weaknesses of these results were briefly discussed in this report and in greater detail within the Beck (1987) report. The purpose of this report was to put actual daily flow data through the SKAGIT MODEL to improve upon the high-side estimates presented in Beck's Skagit River Studies Report (1987). Resulting estimates were derived to establish a sense for the magnitude of the trapping and stranding problem, not to place and absolute number on the number of fry stranded.

For these reasons we have not attempted to discuss these findings in detail. It is also important to note here that no attempt was made to estimate steelhead and coho fry trapping and stranding in potholes during the summer/fall season (season 2). Data was unavailable for this purpose. Pothole trapping and stranding of fry does occur during this time period and these numbers would have contributed to the total fry stranded during each of the seven years modeled.

**Figure 6 Yearly Percentage Of Daylight Downramp Events By Stream Reach
For Spring Season Gravel Bar Downramps.**

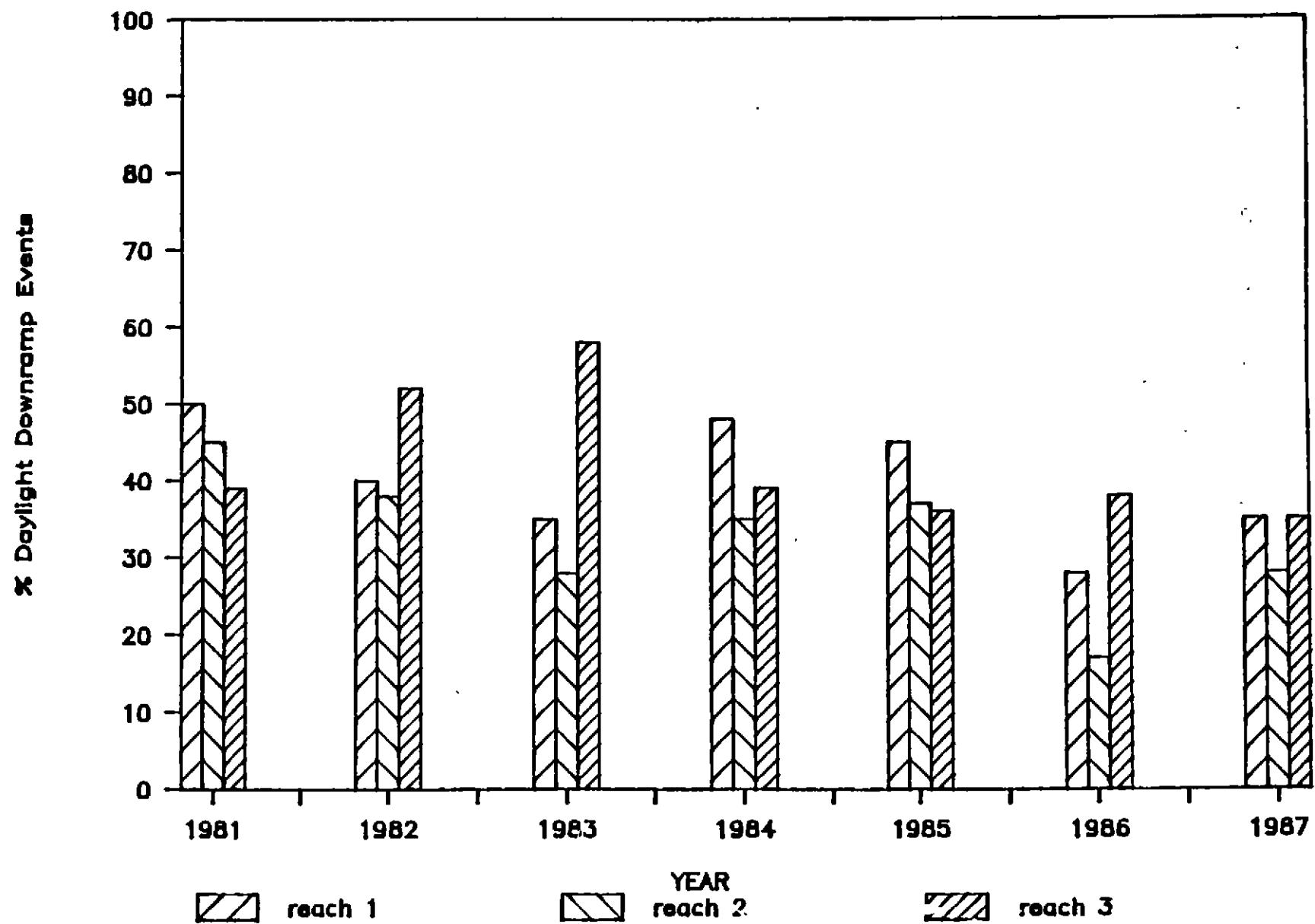


Table 3 Gravel bar and pothole stranding and trapping estimates produced by SKAGMDL for 1986.

PARAMETERS FOR THIS RUN:

04/19/87
12:40:42

Slope categories:

0 to 5%
> 5% to 10%
> 10%

Substrate categories:

Less than 3 inches
Greater than 3 inches

Location codes:

Upper reach
Middle reach
Lower reach

Flow data was extracted for the following time periods:

YEAR	SEASON	SEGDATE	ENDDATE
86	1	201	531
86	2	715	930

Both gravel bars and potholes were run.
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

Chronological order

Season totals only

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Standing - Season Totals

(Results of applying base year stranding data to the indicated flow regime)

Flow Year	Season	GBType	Chinook	Pink	Chum	Coho	Steelhd	Total	Salmon +	
								Salmon	Steelhd	
86	1	1	287.96	137.56	22.93	0.00	5.53	448.44	453.96	
86	1	2	522.20	249.46	41.57	0.00	9.48	813.23	822.71	
86	1	3	2362.98	1128.82	188.14	0.00	28.85	3679.93	3708.77	
86	1	4	334.63	159.86	26.64	0.00	6.46	521.14	527.60	
86	1	5	177.47	84.78	14.15	0.00	3.24	276.38	279.61	
86	1	6	514.56	245.80	40.97	0.00	6.49	801.33	807.81	
86	1	7	76.55	36.57	6.10	0.00	1.66	119.21	120.88	
86	1	8	71.52	34.16	5.69	0.00	1.39	111.37	112.77	
86	1	9	585.87	279.88	46.65	0.00	7.13	912.40	919.53	
86	1	10	154.98	74.03	12.34	0.00	3.19	241.34	244.54	
86	1	11	76.27	36.43	6.08	0.00	1.43	118.77	120.21	
86	1	12	261.27	124.81	20.80	0.00	3.19	406.89	410.09	
86	1	13	42.05	20.09	3.34	0.00	1.08	65.49	66.56	
86	1	14	20.54	9.80	1.63	0.00	0.43	31.98	32.40	
86	1	15	218.18	104.23	17.36	0.00	2.69	339.74	342.43	
86	1	16	51.96	24.83	4.13	0.00	1.34	80.92	82.27	
86	1	17	13.72	6.55	1.09	0.00	0.29	21.36	21.65	
86	1	18	64.66	30.88	5.15	0.00	0.78	100.68	101.46	
<hr/>			Season subtotals:	5837.4	2788.5	464.7	0.0	84.7	9090.6	9175.2
86	2	1	0.00	0.00	0.00	5.26	403.95	3.28	407.21	
86	2	2	0.00	0.00	0.00	5.59	692.49	5.59	698.08	
86	2	3	0.00	0.00	0.00	16.84	2088.25	16.84	2105.09	
86	2	4	0.00	0.00	0.00	11.70	1451.30	11.70	1463.01	
86	2	5	0.00	0.00	0.00	5.85	725.65	5.85	731.50	
86	2	6	0.00	0.00	0.00	1.00	123.89	1.00	124.98	
86	2	7	0.00	0.00	0.00	4.95	613.75	4.95	618.70	
86	2	8	0.00	0.00	0.00	4.12	511.46	4.12	515.58	
86	2	9	0.00	0.00	0.00	2.17	269.40	2.17	271.57	
86	2	10	0.00	0.00	0.00	0.77	95.49	0.77	96.26	
86	2	11	0.00	0.00	0.00	0.35	42.99	0.35	43.34	
86	2	12	0.00	0.00	0.00	1.37	169.41	1.37	170.78	
86	2	13	0.00	0.00	0.00	1.02	127.09	1.02	128.11	
86	2	14	0.00	0.00	0.00	0.41	50.83	0.41	51.25	
86	2	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
86	2	16	0.00	0.00	0.00	2.53	313.45	2.53	315.97	
86	2	17	0.00	0.00	0.00	0.55	67.77	0.55	68.32	
86	2	18	0.00	0.00	0.00	0.25	31.50	0.25	31.75	
<hr/>			Season subtotals:	0.0	0.0	0.0	62.7	7778.7	62.7	7841.4

Potholes Stranding and Trapping - Season Totals

=====
=====

(Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish
Second line shows TRAPPED fish

Flow						Total	Salmon +	
Year #	Disconnect	Chinook	Pink	Chum	Coho	Steelhd	Salmon	Steelhd
-----	-----	-----	-----	-----	-----	-----	-----	-----
86	7262	1581.0	11.3	0.0	4.8	19.4	1597.2	1616.6
		31461.8	225.2	0.0	96.5	386.0	31783.5	32169.5

PARAMETERS FOR THIS RUN:

04/19/87
12:58:36

Slope categories:

0 to 5%
` 5% to 10%
10%

Substrate categories:

Less than 3 inches
Greater than 3 inches

Location codes:

Upper reach
Middle reach
Lower reach

Flow data was extracted for the following time periods:

YEAR	SEASON	BEGDATE	ENDDATE
86	1	201	531
86	2	715	930

Both gravel bars and potholes were run.
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

Chronological order

Monthly totals only

Tables will be written for gravel bars and/or potholes as selected.

Gavel Bar Stranding - Monthly Detail with Subtotals

=====

(Results of applying base year stranding data to the indicated flow regime)

Flow YR/MO	GBTypr	Chinook	Pink	Chum	Coho	Steelhd	Total Salmon	Salmon + Steelhd
86/ 2	1	75.97	36.29	6.05	0.00	0.70	118.31	119.01
86/ 2	2	96.35	46.03	7.67	0.00	1.20	150.05	151.25
86/ 2	3	281.10	134.28	22.38	0.00	4.02	437.76	441.78
86/ 2	4	87.72	41.91	6.98	0.00	0.81	136.60	137.41
86/ 2	5	32.40	15.47	2.58	0.00	0.41	50.45	50.85
86/ 2	6	33.43	16.06	2.68	0.00	0.62	52.37	53.00
86/ 2	7	17.27	8.25	1.37	0.00	0.16	26.89	27.05
86/ 2	8	10.19	4.87	0.81	0.00	0.14	15.86	16.00
86/ 2	9	72.02	34.41	5.73	0.00	1.01	112.17	113.18
86/ 2	10	37.57	17.95	2.99	0.00	0.35	58.51	58.86
86/ 2	11	12.23	5.84	0.97	0.00	0.16	19.05	19.21
86/ 2	12	.29.53	14.11	2.35	0.00	0.43	45.98	46.41
86/ 2	13	6.95	3.32	0.55	0.00	0.07	10.82	10.89
86/ 2	14	1.74	0.83	0.14	0.00	0.03	2.72	2.75
86/ 2	15	24.66	11.78	1.96	0.00	0.36	38.39	38.75
86/ 2	16	8.59	4.10	0.48	0.00	0.09	13.37	13.46
86/ 2	17	1.17	0.55	0.09	0.00	0.02	1.81	1.83
86/ 2	18	9.25	4.42	0.73	0.00	0.12	14.40	14.52
<hr/>								
Month total:		838.3	400.5	66.7	0.0	10.7	1305.5	1316.2

Flow YR/MO	GBTypr	Chinook	Pink	Chum	Coho	Steelhd	Total Salmon	Salmon + Steelhd
86/ 3	1	95.59	45.66	7.61	0.00	2.20	148.86	151.05
86/ 3	2	174.61	83.41	13.90	0.00	3.77	271.92	275.70
86/ 3	3	973.33	464.97	77.49	0.00	11.23	1515.79	1527.02
86/ 3	4	111.88	53.45	8.90	0.00	2.58	174.24	176.82
86/ 3	5	59.72	28.53	4.75	0.00	1.29	93.00	94.29
86/ 3	6	220.11	105.15	17.52	0.00	2.71	342.78	345.50
86/ 3	7	29.56	14.13	2.35	0.00	0.69	46.04	46.74
86/ 3	8	27.17	12.98	2.16	0.00	0.58	42.30	42.88
86/ 3	9	240.63	114.96	19.16	0.00	2.76	374.75	377.51
86/ 3	10	56.14	26.82	4.47	0.00	1.30	87.43	88.74
86/ 3	11	27.49	13.13	2.19	0.00	0.59	42.81	43.40
86/ 3	12	108.08	51.63	8.60	0.00	1.26	168.32	169.57
86/ 3	13	19.83	9.48	1.58	0.00	0.47	30.89	31.36
86/ 3	14	9.07	4.33	0.72	0.00	0.19	14.13	14.31
86/ 3	15	90.25	43.11	7.19	0.00	1.06	140.54	141.60
86/ 3	16	24.51	11.71	1.95	0.00	0.59	38.17	38.76
86/ 3	17	6.06	2.90	0.48	0.00	0.12	9.44	9.57
86/ 3	18	26.17	12.50	2.08	0.00	0.29	40.76	41.05
<hr/>								
Month total:		2300.2	1098.9	183.1	0.0	33.7	3582.2	3615.9

Flow YR/MO	GBTypr	Chinook	Pink	Chum	Coho	Steelhd	Total Salmon	Salmon + Steelhd
86/ 4	1	86.65	41.39	6.90	0.00	1.87	134.94	136.81

86/ 4	1	717.58	342.79	57.13	0.00	9.08	1117.51	1126.59
86/ 4	4	100.84	48.17	9.03	0.00	2.20	157.04	159.24
86/ 4	5	61.32	29.29	4.98	0.00	1.10	95.49	96.59
86/ 4	6	214.08	102.27	17.05	0.00	2.54	333.40	335.94
86/ 4	7	23.78	11.36	1.90	0.00	0.64	37.04	37.68
86/ 4	8	27.53	13.15	2.19	0.00	0.53	42.87	43.40
86/ 4	9	173.03	82.66	13.78	0.00	2.20	269.46	271.66
86/ 4	10	47.48	22.68	3.78	0.00	1.17	73.95	75.11
86/ 4	11	28.01	13.38	2.23	0.00	0.53	43.62	44.15
86/ 4	12	82.60	39.46	6.57	0.00	1.03	128.63	129.67
86/ 4	13	13.71	6.55	1.09	0.00	0.48	21.35	21.83
86/ 4	14	9.06	4.33	0.72	0.00	0.19	14.11	14.30
86/ 4	15	68.98	32.95	5.49	0.00	0.87	107.41	108.28
86/ 4	16	16.95	8.10	1.35	0.00	0.59	26.39	26.99
86/ 4	17	6.05	2.89	0.48	0.00	0.13	9.43	9.55
86/ 4	18	16.38	7.82	1.30	0.00	0.22	25.50	25.72
Month total:		1873.4	895.0	149.2	0.0	28.6	2917.6	2946.1

Flow YR/MO	GBType	Chinook	Pink	Chum	Coho	Steelhd	Total Salmon	Salmon + Steelhd
86/ 5	1	29.75	14.21	2.37	0.00	0.76	46.33	47.10
86/ 5	2	71.81	34.30	5.72	0.00	1.31	111.83	113.14
86/ 5	3	390.97	186.77	31.13	0.00	4.52	608.87	613.39
86/ 5	4	34.19	16.53	2.72	0.00	0.88	53.25	54.13
86/ 5	5	24.04	11.48	1.91	0.00	0.44	37.43	37.87
86/ 5	6	46.73	22.32	3.72	0.00	0.61	72.78	73.38
86/ 5	7	5.93	2.83	0.47	0.00	0.16	9.24	9.41
86/ 5	8	6.64	3.17	0.53	0.00	0.14	10.34	10.47
86/ 5	9	100.18	47.86	7.98	0.00	1.15	156.01	157.17
86/ 5	10	13.78	6.58	1.09	0.00	0.36	21.46	21.83
86/ 5	11	8.53	4.08	0.68	0.00	0.16	13.29	13.45
86/ 5	12	41.06	19.62	3.27	0.00	0.47	63.95	64.43
86/ 5	13	1.55	0.74	0.12	0.00	0.05	2.42	2.47
86/ 5	14	0.65	0.31	0.05	0.00	0.02	1.02	1.04
86/ 5	15	34.29	16.38	2.73	0.00	0.40	53.40	53.80
86/ 5	16	1.92	0.92	0.15	0.00	0.07	2.99	3.06
86/ 5	17	0.44	0.21	0.03	0.00	1.E-2	0.68	0.69
86/ 5	18	12.86	6.14	1.02	0.00	0.14	20.03	20.18
Month total:		825.3	394.3	65.7	0.0	11.7	1285.3	1297.0

Flow YR/MO	GBType	Chinook	Pink	Chum	Coho	Steelhd	Total Salmon	Salmon + Steelhd
86/ 7	1	0.00	0.00	0.00	0.31	38.58	0.31	38.89
86/ 7	2	0.00	0.00	0.00	0.53	66.14	0.53	66.67
86/ 7	3	0.00	0.00	0.00	1.19	147.66	1.19	148.85
86/ 7	4	0.00	0.00	0.00	0.55	68.70	0.55	69.25
86/ 7	5	0.00	0.00	0.00	0.27	34.35	0.27	34.63
86/ 7	6	0.00	0.00	0.00	0.09	11.38	0.09	11.47
86/ 7	7	0.00	0.00	0.00	0.40	49.29	0.40	49.69
86/ 7	8	0.00	0.00	0.00	0.33	41.07	0.33	41.41
86/ 7	9	0.00	0.00	0.00	0.15	18.76	0.15	18.91
86/ 7	10	0.00	0.00	0.00	0.08	10.41	0.08	10.49
86/ 7	11	0.00	0.00	0.00	0.04	4.68	0.04	4.72
86/ 7	12	0.00	0.00	0.00	0.14	17.40	0.14	17.54

86/ 7 13	0.00	0.00	0.00	0.04	5.37	0.04	5.41
86/ 7 14	0.00	0.00	0.00	0.02	2.15	0.02	2.16
86/ 7 15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86/ 7 16	0.00	0.00	0.00	0.18	22.72	0.18	22.90
86/ 7 17	0.00	0.00	0.00	0.04	4.91	0.04	4.95
86/ 7 18	0.00	0.00	0.00	0.03	3.75	0.03	3.78
Month total:	0.0	0.0	0.0	4.4	547.3	4.4	551.7

Flow YR/MO GBType	Chinook	Pink	Chum	Coho	Total Steelhd	Salmon Steelhd	Salmon + Steelhd
86/ 8 1	0.00	0.00	0.00	2.01	249.14	2.01	251.15
86/ 8 2	0.00	0.00	0.00	3.45	427.09	3.45	430.54
86/ 8 3	0.00	0.00	0.00	12.16	1507.53	12.16	1519.69
86/ 8 4	0.00	0.00	0.00	9.61	1191.52	9.61	1201.13
86/ 8 5	0.00	0.00	0.00	4.80	595.76	4.80	600.56
86/ 8 6	0.00	0.00	0.00	0.63	78.32	0.63	78.95
86/ 8 7	0.00	0.00	0.00	3.37	418.08	3.37	421.45
86/ 8 8	0.00	0.00	0.00	2.81	348.40	2.81	351.21
86/ 8 9	0.00	0.00	0.00	1.58	195.71	1.58	197.29
86/ 8 10	0.00	0.00	0.00	0.43	53.44	0.43	53.87
86/ 8 11	0.00	0.00	0.00	0.19	24.06	0.19	24.25
86/ 8 12	0.00	0.00	0.00	0.80	99.30	0.80	100.10
86/ 8 13	0.00	0.00	0.00	0.86	107.08	0.86	107.94
86/ 8 14	0.00	0.00	0.00	0.35	42.83	0.35	43.18
86/ 8 15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86/ 8 16	0.00	0.00	0.00	1.81	223.92	1.81	225.72
86/ 8 17	0.00	0.00	0.00	0.39	48.42	0.39	48.81
86/ 8 18	0.00	0.00	0.00	0.13	16.28	0.13	16.40
Month total:	0.0	0.0	0.0	45.4	5626.9	45.4	5672.2

Flow YR/MO GBType	Chinook	Pink	Chum	Coho	Total Steelhd	Salmon Steelhd	Salmon + Steelhd
86/ 9 1	0.00	0.00	0.00	0.94	116.23	0.94	117.17
86/ 9 2	0.00	0.00	0.00	1.61	199.26	1.61	200.86
86/ 9 3	0.00	0.00	0.00	3.49	433.07	3.49	436.56
86/ 9 4	0.00	0.00	0.00	1.54	191.08	1.54	192.62
86/ 9 5	0.00	0.00	0.00	0.77	95.54	0.77	96.31
86/ 9 6	0.00	0.00	0.00	0.27	34.19	0.27	34.46
86/ 9 7	0.00	0.00	0.00	1.18	146.38	1.18	147.56
86/ 9 8	0.00	0.00	0.00	0.98	121.98	0.98	122.96
86/ 9 9	0.00	0.00	0.00	0.44	54.93	0.44	55.37
86/ 9 10	0.00	0.00	0.00	0.26	31.64	0.26	31.90
86/ 9 11	0.00	0.00	0.00	0.12	14.24	0.12	14.36
86/ 9 12	0.00	0.00	0.00	0.43	52.70	0.43	53.13
86/ 9 13	0.00	0.00	0.00	0.12	14.64	0.12	14.76
86/ 9 14	0.00	0.00	0.00	0.05	5.86	0.05	5.90
86/ 9 15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86/ 9 16	0.00	0.00	0.00	0.54	66.81	0.54	67.35
86/ 9 17	0.00	0.00	0.00	0.12	14.44	0.12	14.56
86/ 9 18	0.00	0.00	0.00	0.09	11.48	0.09	11.57

Potholes Stranding and Trapping - Monthly Detail with Subtotals
 ======
 (Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish
 Second line shows TRAPPED fish

Flow YR/MO	#Disconnects						Total	Salmon + Steelhd	
		Chinook	Pink	Chum	Coho	Steelhd		Salmon	Steelhd
86/ 2	1074	60.01	0.43	0.00	0.18	0.74	60.63	61.36	
		1654.65	11.84	0.00	5.08	20.30	1671.57	1691.88	
86/ 3	2504	752.64	5.39	0.00	2.31	9.23	760.34	769.57	
		13525.95	96.81	0.00	41.49	165.96	13664.25	13830.21	
86/ 4	1995	515.81	3.69	0.00	1.58	6.33	521.09	527.42	
		10342.08	74.02	0.00	31.72	126.90	10447.83	10574.73	
86/ 5	1689	252.57	1.81	0.00	0.77	3.10	255.15	258.25	
		5939.09	42.51	0.00	18.22	72.87	5999.81	6072.68	
Year totals:		1581.0	11.3	0.0	4.8	19.4	1597.2	1616.6	
		31461.8	225.2	0.0	96.5	386.0	31783.5	32169.5	

PARAMETERS FOR THIS RUN:

04/19/87
13:14:10

Slope categories:

0 to 5%
> 5% to 10%
> 10%

Substrate categories:

Less than 3 inches
Greater than 3 inches

Location codes:

Upper reach
Middle reach
Lower reach

Flow data was extracted for the following time periods:

YEAR	SEASON	BEGDATE	ENDDATE
86.	1	201	531
86.	2	713	930

Both gravel bars and potholes were run.
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

Chronological order

Daily detail report

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Daily Detail with Subtotals
=====
(Results of applying base year stranding data to the indicated flow regime)

Comment	YR/MO/DY	Flow					Total Salmon	Salmon + Steelhd	Ampl	RampRate
		Chinook	Pink	Chum	Coho	Steelhd				
Daylight	86/ 2/ 1	4.36	2.08	0.35	0.00	0.03	6.79	6.81	1710.	855.
Daylight	86/ 2/ 2	11.10	5.30	0.88	0.00	0.08	17.28	17.36	2930.	675.
Daylight	86/ 2/ 3	9.71	4.64	0.77	0.00	0.10	15.11	15.22	1940.	775.
	86/ 2/ 4	1.13	0.54	0.09	0.00	0.04	1.77	1.81	920.	460.
Daylight	86/ 2/ 5	9.61	4.59	0.76	0.00	0.15	14.96	15.1	1800.	900.
	86/ 2/ 6	4.94	2.36	0.39	0.00	0.17	7.70	7.8	1720.	860.
	86/ 2/ 7	2.74	1.31	0.22	0.00	0.10	4.27	4.36	1080.	440.
	86/ 2/ 8	5.56	2.66	0.44	0.00	0.19	8.67	8.86	1530.	660.
	86/ 2/ 9	5.17	2.47	0.41	0.00	0.18	8.05	9.23	1350.	530.
	86/ 2/10	11.01	5.26	0.88	0.00	0.38	17.15	17.53	2720.	1285.
	86/ 2/11	7.58	3.62	0.60	0.00	0.26	11.80	12.06	1520.	625.
No event	86/ 2/12									
Daylight	86/ 2/13	37.46	17.89	2.98	0.00	0.25	58.33	58.58	1300.	640.
	86/ 2/14	14.44	6.90	1.15	0.00	0.50	22.49	22.99	2150.	885.
Daylight	86/ 2/15	46.18	22.06	3.68	0.00	0.62	71.91	72.53	3400.	610.
	86/ 2/16	0.32	0.16	0.03	0.00	1.E-2	0.50	0.51	530.	245.
	86/ 2/17	14.81	7.07	1.18	0.00	0.52	23.06	23.58	1790.	885.
Daylight	86/ 2/18	47.32	22.60	3.76	0.00	0.50	73.69	74.19	1670.	645.
	86/ 2/19	14.50	6.92	1.15	0.00	0.51	22.58	23.09	1630.	1185.
Daylight	86/ 2/20	27.41	13.09	2.18	0.00	0.29	42.69	42.97	1110.	540.
Daylight	86/ 2/21	93.18	44.51	7.42	0.00	0.85	145.11	145.96	3180.	705.
Daylight	86/ 2/22	53.51	25.56	4.26	0.00	0.81	83.34	84.15	2350.	775.
	86/ 2/23	29.69	14.18	2.36	0.00	1.04	46.24	47.28	4270.	1745.
Daylight	86/ 2/24	121.01	57.81	9.63	0.00	0.79	188.45	189.25	1900.	940.
Daylight	86/ 2/25	12.93	6.18	1.03	0.00	0.06	20.14	20.20	600.	805.
Daylight	86/ 2/26	202.48	96.73	16.12	0.00	0.92	315.33	316.25	2030.	545.
Daylight	86/ 2/27	17.59	8.40	1.40	0.00	0.19	27.40	27.58	790.	325.
	86/ 2/28	32.58	15.57	2.60	0.00	1.14	50.74	51.88	3230.	1585.
Month subtotal:		838.3	400.5	66.7	9.0	10.7	1305.6	1316.2		

Comment	YR/MO/DY	Flow					Total Salmon	Salmon + Steelhd	Ampl	RampRate
		Chinook	Pink	Chum	Coho	Steelhd				
Daylight	86/ 3/ 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.	50.
	86/ 3/ 2	33.35	15.94	2.65	0.00	1.17	51.94	53.11	3120.	1480.
	86/ 3/ 3	33.14	15.83	2.64	0.00	1.16	51.61	52.77	3060.	1335.
	86/ 3/ 4	33.18	15.85	2.64	0.00	1.16	51.67	52.83	3070.	1475.
	86/ 3/ 5	32.86	15.70	2.61	0.00	1.15	51.17	52.32	2980.	1335.
Daylight	86/ 3/ 6	41.15	19.66	3.27	0.00	0.66	64.08	64.74	1460.	640.
	86/ 3/ 7	21.93	10.48	1.75	0.00	0.77	34.15	34.93	1620.	725.

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,
"Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

	86/ 3/ 8	15.67	7.49	1.25	0.00	1.55		
	86/ 3/ 9	32.71	15.63	2.60	0.00	1.14		
Daylight	86/ 3/10	76.18	36.39	6.06	0.00	1.17	1	
	86/ 3/11	32.39	15.48	2.58	0.00	1.17		
Daylight	86/ 3/12	91.09	43.51	7.25	0.00	1.22	1	
	86/ 3/13	29.70	14.19	2.36	0.00	1.04	1	
	86/ 3/14	36.80	17.58	2.93	0.00	1.29	5	
	86/ 3/15	37.22	17.78	2.96	0.00	1.30	5	
Daylight	86/ 3/16	165.88	79.24	13.21	0.00	1.28	25	
Daylight	86/ 3/17	160.70	76.77	12.79	0.00	1.14	25	
	86/ 3/18	29.62	14.15	2.36	0.00	1.04	4	
Daylight	86/ 3/19	157.03	75.01	12.50	0.00	1.04	24	
Daylight	86/ 3/20	159.07	75.99	12.66	0.00	1.09	24	
Daylight	86/ 3/21	142.51	68.08	11.35	0.00	0.65	22	
Daylight	86/ 3/22	158.48	75.71	12.62	0.00	1.08	24	
Daylight	86/ 3/23	158.98	75.94	12.66	0.00	1.09	24	
Daylight	86/ 3/24	161.34	77.07	12.85	0.00	1.16	25	
	86/ 3/25	37.37	17.85	2.97	0.00	1.11	5	
	86/ 3/26	34.28	16.37	2.73	0.00	1.20	5	
	86/ 3/27	38.29	18.29	3.05	0.00	1.34	5	
Daylight	86/ 3/28	107.12	51.17	8.53	0.00	1.33	15	
	86/ 3/29	31.26	14.93	2.49	0.00	1.09	4	
	86/ 3/30	38.50	18.37	3.06	0.00	1.35	5	
Daylight	86/ 3/31	172.41	82.36	13.73	0.00	1.46	26	
Month subtotal:		2300.2	1098.8	183.1	0.0	33.7	351	

Comment	YR/MO/DY	Flow						Total Sals.
		Chinook	Pink	Chum	Coho	Steelhd	Sockeye	
Daylight	86/ 4/ 1	0.00	0.00	0.00	0.00	0.00		
	86/ 4/ 2	30.02	14.34	2.39	0.00	1.15		
	86/ 4/ 3	36.76	17.56	2.93	0.00	1.29		
Daylight	86/ 4/ 4	76.88	36.73	6.12	0.00	1.31		
Daylight	86/ 4/ 5	103.61	49.49	8.25	0.00	1.45		
	86/ 4/ 6	36.69	17.53	2.92	0.00	1.20		
	86/ 4/ 7	33.64	16.07	2.68	0.00	1.18		
	86/ 4/ 8	36.05	17.22	2.87	0.00	1.26		
Daylight	86/ 4/ 9	171.72	82.03	13.67	0.00	1.44		
Daylight	86/ 4/10	172.41	82.36	13.73	0.00	1.46		
	86/ 4/11	38.99	18.58	3.09	0.00	1.26		
	86/ 4/12	39.96	19.09	3.18	0.00	1.40		
	86/ 4/13	37.76	18.04	3.01	0.00	1.32		
Daylight	86/ 4/14	169.52	80.98	13.50	0.00	0.78		
No event	86/ 4/15							
Daylight	86/ 4/16	0.00	0.00	0.00	0.00	0.00		
	86/ 4/17	26.83	12.82	2.14	0.00	0.94		
Daylight	86/ 4/18	163.56	78.13	13.02	0.00	1.22		

"No event" = insufficient amplitude to be considered an event, "Ft"
 "Daylight" = event endtime was after sunrise; no comment indicates

86/ 4/19	25.46	12.16	2.03	0.00	0.89	39.65	40.54	1800.	585.	
86/ 4/20	20.37	9.73	1.62	0.00	0.71	31.72	32.43	1540.	760.	
Daylight	86/ 4/21	164.56	78.61	13.10	0.00	1.24	256.27	257.52	3740.	1605.
Daylight	86/ 4/22	159.66	76.27	12.71	0.00	1.11	248.64	249.75	2660.	1275.
Daylight	86/ 4/23	91.91	43.91	7.32	0.00	0.61	143.14	143.74	1380.	605.
Daylight	86/ 4/24	52.13	24.90	4.15	0.00	0.55	81.17	81.73	1300.	230.
86/ 4/25	37.97	18.14	3.02	0.00	1.33	59.13	60.46	4420.	1885.	
86/ 4/26	25.65	12.25	2.04	0.00	0.90	39.95	40.85	1810.	660.	
Daylight	86/ 4/27	52.13	24.90	4.15	0.00	0.55	81.17	81.73	1300.	650.
86/ 4/28	36.05	17.22	2.87	0.00	1.26	56.15	57.41	3880.	1845.	
Daylight	86/ 4/29	0.00	0.00	0.00	0.00	0.00	0.00	340.	170.	
86/ 4/30	33.25	15.88	2.55	0.00	1.16	51.78	52.94	3090.	1535.	
<hr/>										
Month subtotal:		1873.4	894.9	149.2	0.0	28.6	2917.6	2946.1		

Comment	YR/MO/DY	Flow						Total Salmon	Salmon + Steelhd	Ampl	RampRate
		Chinook	Pink	Chum	Coho	Steelhd					
	86/ 5/ 1	32.21	15.39	2.57	0.00	1.13	50.16	51.29	3090.	1500.	
	86/ 5/ 2	28.87	13.79	2.30	0.00	1.01	44.96	45.98	2400.	1200.	
	86/ 5/ 3	29.13	13.92	2.32	0.00	1.02	45.37	46.39	2780.	1260.	
	86/ 5/ 4	28.81	13.76	2.29	0.00	1.01	44.87	45.88	3000.	1480.	
	86/ 5/ 5	10.57	5.05	0.84	0.00	0.57	16.47	16.84	1140.	550.	
	86/ 5/ 6	16.55	7.91	1.32	0.00	0.58	25.77	26.35	1540.	770.	
	86/ 5/ 7	7.80	3.73	0.62	0.00	0.27	12.15	12.42	1010.	410.	
	86/ 5/ 8	19.68	9.40	1.57	0.00	0.69	30.65	31.34	1840.	920.	
	86/ 5/ 9	14.50	6.92	1.15	0.00	0.51	22.58	23.09	1530.	745.	
	86/ 5/10	8.08	3.96	0.64	0.00	0.28	12.58	12.86	1100.	550.	
No event	86/ 5/11										
Daylight	86/ 5/12	119.22	56.95	9.49	0.00	0.64	185.66	186.31	2050.	630.	
Daylight	86/ 5/13	54.57	26.07	4.34	0.00	0.36	94.99	95.34	1380.	585.	
Daylight	86/ 5/14	31.72	15.15	2.53	0.00	0.21	49.41	49.61	1040.	520.	
Daylight	86/ 5/15	33.29	15.90	2.65	0.00	0.22	51.84	52.06	1100.	550.	
Daylight	86/ 5/16	51.18	24.45	4.07	0.00	0.34	79.70	80.04	1480.	735.	
Daylight	86/ 5/17	20.02	9.57	1.60	0.00	0.33	31.18	31.51	1520.	455.	
Daylight	86/ 5/18	59.86	28.60	4.77	0.00	0.39	93.22	93.61	1810.	905.	
Daylight	86/ 5/19	39.88	19.05	3.17	0.00	0.26	62.11	62.38	1440.	720.	
86/ 5/20		12.00	5.73	0.95	0.00	0.42	18.69	19.11	2740.	815.	
86/ 5/21		9.22	4.40	0.73	0.00	0.32	14.36	14.68	1870.	655.	
Daylight	86/ 5/22	52.97	25.30	4.22	0.00	0.24	82.50	82.74	1630.	750.	
Daylight	86/ 5/23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	490.	245.	
Daylight	86/ 5/24	22.80	10.89	1.81	0.00	0.24	35.51	35.76	1900.	430.	
Daylight	86/ 5/25	10.97	5.24	0.87	0.00	0.07	17.08	17.15	980.	490.	
Daylight	86/ 5/26	31.25	14.93	2.49	0.00	0.24	48.67	48.92	4210.	1950.	
Daylight	86/ 5/27	34.22	16.35	2.72	0.00	0.16	53.29	53.45	1960.	755.	
Daylight	86/ 5/28	20.04	9.57	1.59	0.00	0.14	31.21	31.35	2810.	890.	
Daylight	86/ 5/29	14.83	7.09	1.18	0.00	0.10	23.10	23.20	2340.	990.	
Daylight	86/ 5/30	9.99	4.77	0.79	0.00	0.07	15.56	15.63	2710.	1320.	

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

86/ 5/31	1.07	0.51	0.09	0.00	0.04	1.66	1.70	3360.	1580.
Month subtotal:	825.3	394.2	65.7	0.0	11.7	1285.3	1297.0		

Comment	YR/MO/DY	Flow					Total Salmon	Salmon + Steelhd	Ampl	RampRate
		Chinook	Pink	Chum	Coho	Steelhd				
	86/ 7/15	0.00	0.00	0.00	0.16	0.00	0.16	540.	130.	
	86/ 7/16	0.00	0.00	0.00	1.E-2	1.33	1.E-2	1.34	670.	335.
	86/ 7/17	0.00	0.00	0.00	0.20	25.02	0.20	25.22	2240.	540.
	86/ 7/18	0.00	0.00	0.00	0.08	10.20	0.08	10.28	1150.	460.
	86/ 7/19	0.00	0.00	0.00	0.19	23.72	0.19	23.92	1710.	470.
	86/ 7/20	0.00	0.00	0.00	0.03	3.53	0.03	3.56	650.	275.
	86/ 7/21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	460.	220.
	86/ 7/22	0.00	0.00	0.00	0.55	68.35	0.55	68.91	2260.	1085.
	86/ 7/23	0.00	0.00	0.00	0.25	31.76	0.25	32.02	1400.	540.
	86/ 7/24	0.00	0.00	0.00	0.03	3.53	0.03	3.56	590.	275.
	86/ 7/25	0.00	0.00	0.00	0.12	14.66	0.12	14.79	840.	420.
	86/ 7/26	0.00	0.00	0.00	0.18	22.59	0.18	22.77	980.	245.
	86/ 7/27	0.00	0.00	0.00	0.22	27.53	0.22	27.75	1040.	400.
	86/ 7/28	0.00	0.00	0.00	1.77	219.96	1.77	221.73	2960.	775.
	86/ 7/29	0.00	0.00	0.00	0.12	14.71	0.12	14.82	750.	225.
	86/ 7/30	0.00	0.00	0.00	0.31	38.27	0.31	38.58	1110.	215.
	86/ 7/31	0.00	0.00	0.00	0.34	42.00	0.34	42.34	1130.	395.
Month subtotal:		0.0	0.0	0.0	4.4	547.3	4.4	551.8		

Comment	YR/MO/DY	Flow					Total Salmon	Salmon + Steelhd	Ampl	RampRate
		Chinook	Pink	Chum	Coho	Steelhd				
No event	86/ 8/ 1									
No event	86/ 8/ 2									
	86/ 8/ 3	0.00	0.00	0.00	0.99	122.47	0.99	123.45	2090.	855.
	86/ 8/ 4	0.00	0.00	0.00	4.89	605.75	4.89	610.64	4710.	735.
	86/ 8/ 5	0.00	0.00	0.00	1.72	212.77	1.72	214.49	2580.	830.
	86/ 8/ 6	0.00	0.00	0.00	1.43	177.76	1.43	179.19	2390.	795.
	86/ 8/ 7	0.00	0.00	0.00	3.23	400.76	3.23	403.99	3600.	1265.
	86/ 8/ 8	0.00	0.00	0.00	3.13	387.86	3.13	390.98	3530.	985.
	86/ 8/ 9	0.00	0.00	0.00	2.16	268.06	2.16	270.23	2880.	710.
	86/ 8/10	0.00	0.00	0.00	3.22	398.91	3.22	402.13	3590.	840.

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 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

86/ 8/11	0.00	0.00	0.00	4.50	557.68	4.50	562.18	4450.	1135.	
86/ 8/12	0.00	0.00	0.00	0.11	13.41	0.11	13.52	690.	335.	
86/ 8/13	0.00	0.00	0.00	4.82	572.47	4.82	577.09	4530.	1545.	
86/ 8/14	0.00	0.00	0.00	0.70	98.12	0.79	98.91	1890.	790.	
86/ 8/15	0.00	0.00	0.00	0.85	105.88	0.85	106.73	2000.	455.	
86/ 8/16	0.00	0.00	0.00	0.50	74.12	0.50	74.71	1550.	625.	
86/ 8/17	0.00	0.00	0.00	0.04	4.94	0.04	4.98	570.	280.	
86/ 8/18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	270.	130.	
86/ 8/19	0.00	0.00	0.00	0.38	47.29	0.38	47.67	1170.	275.	
86/ 8/20	0.00	0.00	0.00	0.03	4.24	0.03	4.27	560.	225.	
86/ 8/21	0.00	0.00	0.00	0.31	38.12	0.31	38.42	1040.	385.	
86/ 8/22	0.00	0.00	0.00	1.70	210.93	1.70	212.63	2570.	460.	
86/ 8/23	0.00	0.00	0.00	1.31	163.01	1.31	164.33	2310.	425.	
No event	86/ 8/24									
86/ 8/25	0.00	0.00	0.00	0.66	82.59	0.66	83.25	1670.	355.	
86/ 8/26	0.00	0.00	0.00	0.73	90.35	0.73	91.08	1780.	510.	
86/ 8/27	0.00	0.00	0.00	0.46	57.18	0.46	57.84	1310.	475.	
86/ 8/28	0.00	0.00	0.00	1.83	227.52	1.83	229.35	2660.	805.	
86/ 8/29	0.00	0.00	0.00	3.26	404.44	3.26	407.71	3620.	985.	
86/ 8/30	0.00	0.00	0.00	0.91	113.25	0.91	114.17	2040.	780.	
86/ 8/31	0.00	0.00	0.00	1.50	186.97	1.50	188.48	2440.	550.	
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Month subtotal:		0.0	0.0	0.0	45.4	5626.9	45.4	5672.2		

Comment	Flow YR/MO/DY	Chinook	Pink	Chum	Coho	Steelhd	Total Salmon	Salmon + Steelhd	Ampl	RampRate
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	86/ 9/ 1	0.00	0.00	0.00	1.76	218.39	1.76	220.16	2650.	790.
	86/ 9/ 2	0.00	0.00	0.00	0.60	73.96	0.60	74.55	1620.	770.
	86/ 9/ 3	0.00	0.00	0.00	0.61	75.23	0.61	75.84	1680.	810.
	86/ 9/ 4	0.00	0.00	0.00	0.71	87.30	0.71	88.00	1920.	800.
	86/ 9/ 5	0.00	0.00	0.00	1.19	147.54	1.19	148.73	2380.	850.
	86/ 9/ 6	0.00	0.00	0.00	0.83	103.22	0.83	104.06	2120.	830.
No event	86/ 9/ 7									
	86/ 9/ 8	0.00	0.00	0.00	0.10	12.04	0.10	12.14	730.	300.
	86/ 9/ 9	0.00	0.00	0.00	1.12	139.23	1.12	140.35	2490.	720.
	86/ 9/10	0.00	0.00	0.00	0.61	75.47	0.61	76.08	2030.	700.
	86/ 9/11	0.00	0.00	0.00	0.91	112.30	0.91	113.21	2370.	655.
	86/ 9/12	0.00	0.00	0.00	0.68	84.10	0.68	84.77	2170.	430.
	86/ 9/13	0.00	0.00	0.00	0.11	13.11	0.11	13.22	820.	335.
No event	86/ 9/14									
	86/ 9/15	0.00	0.00	0.00	0.42	51.73	0.42	52.15	1920.	725.
	86/ 9/16	0.00	0.00	0.00	0.36	45.08	0.36	45.45	1820.	715.
	86/ 9/17	0.00	0.00	0.00	0.26	32.52	0.26	32.78	1520.	755.
	86/ 9/18	0.00	0.00	0.00	0.80	98.50	0.80	99.30	2700.	890.
	86/ 9/19	0.00	0.00	0.00	0.57	70.24	0.57	70.80	2410.	580.
	86/ 9/20	0.00	0.00	0.00	0.49	60.46	0.49	60.95	2350.	810.
	86/ 9/21	0.00	0.00	0.00	0.09	10.70	0.09	10.79	970.	480.

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding.
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

86/ 9/22	0.00	0.00	0.00	0.44	54.28	0.44	54.72	2440.	780.
86/ 9/23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.	170.
86/ 9/24	0.00	0.00	0.00	0.14	16.73	0.14	16.87	1550.	620.
86/ 9/25	0.00	0.00	0.00	1.E-2	1.64	1.E-2	1.65	620.	305.
86/ 9/26	0.00	0.00	0.00	0.06	6.83	0.06	6.88	1100.	480.
86/ 9/27	0.00	0.00	0.00	0.07	8.65	0.07	8.72	1450.	450.
86/ 9/28	0.00	0.00	0.00	0.03	3.69	0.03	3.72	1040.	515.
86/ 9/29	0.00	0.00	0.00	1.E-2	1.50	1.E-2	1.52	330.	410.

Month subtotal: 0.0 0.0 0.0 13.0 1604.4 13.0 1617.4

Year total: 5837.3 2788.5 464.7 62.7 7863.2 9153.3 17016.6

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

SUMMARY OF DAY/NIGHT EVENTS FOR SPRING SALMON ONLY
FOR THE FOLLOWING FLOW REGIME YEARS:

YEAR

86

Daylight events

Number of events

59

Total chinook stranded

4430.69

Total pinks stranded

2116.53

Total chums stranded

352.71

Total cohos stranded

0.

Total salmon stranded (all species)

6900.

Nighttime events

Number of events

58

Total chinook stranded

1406.58

Total pinks stranded

671.95

Total chums stranded

111.96

Total cohos stranded

0.

Total salmon stranded (all species)

2190.57

Potholes Stranding and Trapping - Daily Detail with Subtotals
 (Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish
Second line shows TRAPPED fish

First line shows STRANDED fish
 Second line shows TRAPPED fish

86/ 2/25	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25200.	21700.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 2/26	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13300.	13000.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 2/27	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8990.	8030.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 2/28	58	0.86	6.E-3	0.00	3.E-3	0.01	0.87	0.88	8470.	5360.
		141.25	1.01	0.00	0.43	1.73	142.69	144.43		
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Month subtotals:		60.01	0.43	0.00	0.19	0.74	60.63	61.36		
		1654.65	11.84	0.00	5.08	20.30	1671.57	1691.88		

YR/MO/DY	#Disconnect	Flow					Total Salmon	Salmon + Steelhd	Begflow	Endflow
		Chinook	Pink	Chum	Coho	Sthd				
86/ 3/ 1	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7830.	6900.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/ 2	88	35.57	0.25	0.00	0.11	0.44	35.93	36.37	5210.	4400.
		536.82	3.84	0.00	1.55	6.59	542.31	548.90		
86/ 3/ 3	36	6.45	0.05	0.00	0.02	0.08	6.52	6.59	4610.	4320.
		70.35	0.50	0.00	0.22	0.86	71.07	71.93		
86/ 3/ 4	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4820.	4820.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/ 5	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6480.	6480.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/ 6	182	43.48	0.31	0.00	0.13	0.53	43.93	44.46	6760.	4150.
		972.57	6.24	0.00	2.68	10.71	881.49	892.20		
86/ 3/ 7	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7350.	6760.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/ 8	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5640.	5640.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/ 9	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6790.	6480.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/10	195	55.02	0.39	0.00	0.17	0.68	55.59	56.26	6340.	3860.
		1008.85	7.22	0.00	3.10	12.38	1019.17	1031.55		
86/ 3/11	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6930.	6650.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/12	226	74.84	0.54	0.00	0.23	0.92	75.61	76.52	6860.	3010.
		1343.09	9.61	0.00	4.12	16.48	1356.83	1373.31		
86/ 3/13	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7140.	7140.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/14	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6550.	6370.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/15	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5850.	5850.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/16	64	34.78	0.25	0.00	0.11	0.43	35.13	35.56	5510.	4760.
		526.11	3.77	0.00	1.61	6.45	531.49	537.95		
86/ 3/17	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5210.	5180.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/18	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5360.	5360.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/19	152	37.01	0.26	0.00	0.11	0.45	37.39	37.85	5880.	4430.
		691.85	4.95	0.00	2.12	8.49	698.92	707.41		

First line shows STRANDED fish
 Second line shows TRAPPED fish

86/ 3/20	132	43.82	0.31	0.00	0.13	0.54	44.27	44.80	5600.	4070.
		808.87	3.79	0.00	2.48	9.93	817.14	827.06		
86/ 3/21	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5950.	5950.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/22	192	49.40	0.35	0.00	0.15	0.61	49.90	50.51	6200.	4040.
		1008.61	7.22	0.00	3.09	12.38	1018.92	1031.30		
86/ 3/23	218	70.51	0.50	0.00	0.22	0.87	71.23	72.09	6230.	3560.
		1208.97	8.65	0.00	3.71	14.83	1221.33	1236.16		
86/ 3/24	218	70.51	0.50	0.00	0.22	0.87	71.23	72.09	7140.	3540.
		1208.97	8.65	0.00	3.71	14.83	1221.33	1236.16		
86/ 3/25	195	55.02	0.39	0.00	0.17	0.68	55.59	56.26	6930.	3890.
		1008.85	7.22	0.00	3.10	12.38	1019.17	1031.55		
86/ 3/26	126	35.66	0.25	0.00	0.11	0.44	36.03	36.47	6160.	4610.
		682.67	4.89	0.00	2.09	8.38	689.66	698.03		
86/ 3/27	64	1.45	1.E-2	0.00	4.E-3	0.02	1.46	1.48	6580.	5240.
		155.03	1.11	0.00	0.48	1.90	156.61	158.51		
86/ 3/28	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8630.	6550.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 3/29	154	38.40	0.28	0.00	0.12	0.47	38.88	39.35	8470.	4370.
		729.02	5.22	0.00	2.24	8.94	736.47	745.42		
86/ 3/30	41	30.13	0.22	0.00	0.09	0.37	30.44	30.81	4120.	3140.
		456.34	3.27	0.00	1.40	5.60	461.01	466.61		
86/ 3/31	218	70.51	0.50	0.00	0.22	0.87	71.23	72.09	7070.	3540.
		1208.97	9.65	0.00	3.71	14.83	1221.33	1236.16		
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Month subtotals:		752.64	5.39	0.00	2.31	9.23	760.34	769.57		
		13525.95	96.81	0.00	41.49	165.96	13664.25	13830.21		

Flow	YR/MO/DY	#Discn	Chinook	Pink	Chum	Coho	Sthd	Total	Salmon +	Begflow	Endflow
								Salmon	Stealhd		
86/ 4/ 1		58	0.89	6.E-3	0.00	3.E-3	0.01	0.90	0.91	6900.	5330.
			146.29	1.05	0.00	0.45	1.79	147.79	149.59		
86/ 4/ 2		226	74.84	0.54	0.00	0.23	0.92	75.61	76.52	6480.	2880.
			1343.09	9.61	0.00	4.12	16.48	1356.83	1373.31		
86/ 4/ 3		8	4.33	0.03	0.00	0.01	0.05	4.38	4.43	3540.	3370.
			134.13	0.96	0.00	0.41	1.65	135.50	137.14		
86/ 4/ 4		226	74.84	0.54	0.00	0.23	0.92	75.61	76.52	6020.	2860.
			1343.09	9.61	0.00	4.12	16.48	1356.83	1373.31		
86/ 4/ 5		225	74.84	0.54	0.00	0.23	0.92	75.61	76.52	6580.	3390.
			1343.09	9.61	0.00	4.12	16.48	1356.83	1373.31		
86/ 4/ 6		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5240.	5240.
			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/ 7		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6130.	6130.
			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/ 8		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7990.	7990.
			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/ 9		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7350.	7280.
			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/10		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7280.	6900.
			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/11		54	0.89	6.E-3	0.00	3.E-3	0.01	0.90	0.91	6130.	5600.
			82.77	0.59	0.00	0.25	1.02	83.62	84.64		

First line shows STRANDED fish
 Second line shows TRAPPED fish

86/ 4/12	141	36.36	0.26	0.00	0.11	0.45	36.73	37.18	5850.	4490.
		691.85	4.95	0.00	2.12	8.49	698.92	707.41		
86/ 4/13	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4760.	4760.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/14	113	41.84	0.30	0.00	0.13	0.51	42.27	42.78	5150.	4180.
		643.51	4.61	0.00	1.97	7.90	650.09	657.98		
86/ 4/15										
No event										
86/ 4/16	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4150.	4150.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/17	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4150.	4150.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/18	186	44.71	0.32	0.00	0.14	0.55	45.16	45.71	7350.	4090.
		891.64	6.38	0.00	2.73	10.94	900.76	911.70		
86/ 4/19	152	37.01	0.26	0.00	0.11	0.45	37.39	37.85	6020.	4400.
		691.85	4.95	0.00	2.12	8.49	698.92	707.41		
86/ 4/20	68	2.13	0.01	0.00	7.E-3	0.03	2.15	2.18	6410.	5150.
		312.82	2.24	0.00	0.96	3.84	316.02	319.86		
86/ 4/21	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9890.	5990.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/22	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9070.	6370.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/23	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8950.	7670.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/24	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7590.	6410.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/25	186	44.71	0.32	0.00	0.14	0.55	45.16	45.71	8190.	4090.
		891.64	6.38	0.00	2.73	10.94	900.76	911.70		
86/ 4/26	76	3.89	0.03	0.00	0.01	0.05	3.93	3.98	6440.	5090.
		421.38	3.02	0.00	1.29	5.17	425.69	430.86		
86/ 4/27	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7280.	6160.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/28	160	42.11	0.30	0.00	0.13	0.52	42.54	43.06	7910.	4340.
		746.51	5.34	0.00	2.29	9.16	754.14	763.30		
86/ 4/29	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7550.	7280.
		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86/ 4/30	116	32.43	0.23	0.00	0.10	0.40	32.76	33.16	7710.	4850.
		658.42	4.71	0.00	2.02	8.08	665.15	673.23		
Month subtotals:		515.81	3.69	0.00	1.58	6.33	521.09	527.42		
		10342.08	74.02	0.00	31.72	126.90	10447.83	10574.73		

Flow	YR/MO/DY	#Disconnect	Chinook	Pink	Chum	Coho	Sthd	Total Salmon	Salmon + Steelhd	Begflow	Endflow
86/ 5/ 1	118	31.89	0.23	0.00	0.10	0.39	32.21	32.60	7630.	4820.	
		638.16	4.57	0.00	1.96	7.83	644.68	652.52			
86/ 5/ 2	142	34.09	0.24	0.00	0.10	0.42	34.44	34.86	6550.	4460.	
		648.61	4.64	0.00	1.99	7.96	655.24	663.20			
86/ 5/ 3	77	3.53	0.03	0.00	0.01	0.04	3.56	3.61	7250.	5030.	
		381.87	2.73	0.00	1.17	4.69	385.78	390.46			
86/ 5/ 4	80	3.40	0.02	0.00	1.E-2	0.04	3.44	3.48	7750.	4940.	
		412.18	2.95	0.00	1.26	5.06	416.39	421.45			

First line shows STRANDED fish
Second line shows TRAPPED fish

First line shows STRANDED fish
Second line shows TRAPPED fish

Month subtotals: 1252.57 1.81 0.00 0.77 .10 255.15 258.25
5939.09 42.51 0.00 18.22 72.87 5999.81 6072.69

Year totals: 1581.0 11.3 0.0 4.9 19.4 1597.2 1616.6
31461.8 225.2 0.0 96.5 396.0 31783.5 32169.5

PARAMETERS FOR THIS RUN:

04/19/87
13:54:27

Slope categories:

0 to 5%
> 5% to 10%
> 10%

Substrate categories:

Less than 3 inches
Greater than 3 inches

Location codes:

Upper reach
Middle reach
Lower reach

Flow data was extracted for the following time periods:

YEAR	SEASON	BEGDATE	ENDDATE
86	1	201	531
86	2	715	930

Both gravel bars and potholes were run.
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

Rank by stranding using the database column --
TOTSTR

Daily detail report

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Daily Detail with Stranding Ranking
 ======
 (Results from applying base year stranding data to the indicated flow regime)

Comment	YR/MO/DY	Flow					Total Salmon	Salmon + Steelhd	Ampl	RampRate
		Chinook	Pink	Chum	Coho	Steelhd				
Daylight	86/ 2/26	202.48	76.73	16.12	0.00	0.92	315.33	316.25	2030.	545.
Daylight	86/ 3/31	172.41	82.36	13.73	0.00	1.46	268.49	269.95	5470.	945.
Daylight	86/ 4/10	172.41	82.36	13.73	0.00	1.46	268.49	269.95	5470.	1120.
Daylight	86/ 4/ 9	171.72	82.03	13.67	0.00	1.44	267.43	268.88	5320.	1655.
Daylight	86/ 4/14	169.52	80.98	13.50	0.00	0.78	264.00	264.77	1630.	720.
Daylight	86/ 3/16	165.88	79.24	13.21	0.00	1.28	258.32	259.60	4030.	2005.
Daylight	86/ 4/21	164.56	78.61	13.10	0.00	1.24	256.27	257.52	3740.	1605.
Daylight	86/ 4/18	163.56	78.13	13.02	0.00	1.22	254.72	255.94	3520.	1735.
Daylight	86/ 3/24	161.34	77.07	12.85	0.00	1.16	251.26	252.41	3030.	1460.
Daylight	86/ 3/17	160.70	76.77	12.79	0.00	1.14	250.27	251.41	2890.	1000.
Daylight	86/ 4/22	159.66	76.27	12.71	0.00	1.11	248.64	249.75	2660.	1275.
Daylight	86/ 3/20	159.07	75.99	12.68	0.00	1.09	247.73	248.82	2530.	1085.
Daylight	86/ 3/23	158.98	75.94	12.66	0.00	1.09	247.58	248.68	2510.	1125.
Daylight	86/ 3/22	158.48	75.71	12.62	0.00	1.08	246.81	247.89	2400.	1015.
Daylight	86/ 3/19	157.03	75.01	12.50	0.00	1.04	244.54	245.59	2080.	1015.
Daylight	86/ 3/21	142.51	68.08	11.33	0.00	0.65	221.94	222.60	1450.	650.
Daylight	86/ 2/24	121.01	57.81	9.63	0.00	0.79	188.45	189.25	1900.	940.
Daylight	86/ 5/12	119.22	56.95	9.49	0.00	0.64	185.66	186.31	2050.	630.
Daylight	86/ 3/28	107.12	51.17	8.53	0.00	1.33	166.81	168.14	4400.	1625.
Daylight	86/ 4/ 5	103.61	49.49	8.25	0.00	1.46	161.36	162.81	5420.	1020.
Daylight	86/ 2/21	93.18	44.51	7.42	0.00	0.85	145.11	145.96	3180.	705.
Daylight	86/ 4/23	91.91	43.91	7.32	0.00	0.61	143.14	143.74	1380.	605.
Daylight	86/ 3/12	91.09	43.51	7.25	0.00	1.32	141.85	143.17	4370.	1255.
Daylight	86/ 4/ 4	76.88	36.73	6.12	0.00	0.81	119.74	120.54	1680.	660.
Daylight	86/ 3/10	76.18	36.39	6.06	0.00	1.17	118.63	119.80	3120.	1125.
Daylight	86/ 5/18	59.86	28.60	4.77	0.00	0.39	93.22	93.61	1810.	905.
Daylight	86/ 5/13	54.57	26.07	4.34	0.00	0.36	84.99	85.34	1380.	585.
Daylight	86/ 2/22	53.51	25.56	4.26	0.00	0.81	83.34	84.15	2350.	775.
Daylight	86/ 5/22	52.97	25.30	4.22	0.00	0.24	82.50	82.74	1630.	750.
Daylight	86/ 4/27	52.13	24.90	4.15	0.00	0.55	81.17	81.73	1300.	650.
Daylight	86/ 4/24	52.13	24.90	4.15	0.00	0.55	81.17	81.73	1300.	230.
Daylight	86/ 5/16	51.18	24.45	4.07	0.00	0.34	79.70	80.04	1480.	735.
Daylight	86/ 2/18	47.32	22.60	3.76	0.00	0.50	73.69	74.19	1670.	645.
Daylight	86/ 2/15	46.18	22.06	3.48	0.00	0.62	71.91	72.53	3400.	610.
Daylight	86/ 3/ 6	41.15	19.66	3.27	0.00	0.66	64.08	64.74	1460.	640.
86/ 4/12	39.98	19.09	3.18	0.00	1.40	62.23	63.63	4980.	1010.	
Daylight	86/ 5/19	39.88	19.05	3.17	0.00	0.26	62.11	62.38	1440.	720.
86/ 4/11	38.89	18.58	3.09	0.00	1.36	60.57	61.93	4680.	1075.	
86/ 3/30	38.50	18.39	3.06	0.00	1.35	59.96	61.31	4570.	1895.	
86/ 3/27	38.29	18.29	3.05	0.00	1.34	59.63	60.97	4510.	1325.	
86/ 4/25	37.97	18.14	3.02	0.00	1.33	59.13	60.46	4420.	1885.	
86/ 4/13	37.76	18.04	3.01	0.00	1.32	58.80	60.12	4360.	2040.	
86/ 3/25	37.37	17.85	2.97	0.00	1.31	58.19	59.50	4250.	1030.	
86/ 3/15	37.22	17.78	2.96	0.00	1.30	57.97	59.27	4210.	2035.	
86/ 3/14	36.80	17.59	2.93	0.00	1.29	57.31	58.60	4090.	1050.	
Daylight	86/ 2/13	37.46	17.89	2.98	0.00	0.25	58.33	58.58	1300.	640.
86/ 4/ 3	36.76	17.56	2.93	0.00	1.29	57.25	58.54	4080.	1105.	
86/ 4/ 6	36.69	17.53	2.92	0.00	1.29	57.14	58.43	4060.	1025.	
86/ 4/28	36.05	17.22	2.87	0.00	1.26	56.15	57.41	3880.	1845.	
86/ 4/ 8	36.05	17.22	2.87	0.00	1.26	56.15	57.41	3880.	1925.	
86/ 3/26	34.28	16.37	2.73	0.00	1.20	53.38	54.58	3380.	1005.	

Daylight	86/ 4/ 7	33.64	16.07	2.68	0.00	1.18	52.38	53.56	3200.	915.
Daylight	86/ 5/27	34.22	16.35	2.72	0.00	0.16	53.29	53.45	1960.	715.
	86/ 3/ 2	33.35	15.94	2.65	0.00	1.17	51.94	53.11	3120.	1480.
	86/ 4/30	33.25	15.88	2.65	0.00	1.16	51.78	52.94	3090.	1535.
	86/ 3/ 4	33.18	15.85	2.64	0.00	1.16	51.67	52.83	3070.	1475.
	86/ 3/ 3	33.14	15.83	2.64	0.00	1.16	51.61	52.77	3060.	1335.
	86/ 3/ 5	32.86	15.70	2.61	0.00	1.15	51.17	52.32	2980.	1335.
	86/ 3/ 9	32.71	15.63	2.60	0.00	1.14	50.95	52.09	2940.	1400.
Daylight	86/ 5/15	33.29	15.90	2.65	0.00	0.22	51.84	52.06	1100.	550.
	86/ 2/28	32.50	15.57	2.60	0.00	1.14	50.74	51.88	3230.	1063.
	86/ 3/11	32.37	15.48	2.58	0.00	1.13	50.45	51.59	2850.	1400.
	86/ 5/ 1	32.21	15.39	2.57	0.00	1.13	50.16	51.29	3090.	1000.
	86/ 3/29	31.26	14.93	2.49	0.00	1.09	48.68	49.78	2530.	1285.
Daylight	86/ 5/14	31.72	15.15	2.53	0.00	0.21	49.41	49.61	1040.	520.
Daylight	86/ 5/26	31.25	14.93	2.49	0.00	0.24	48.67	48.92	4210.	1950.
	86/ 4/ 2	30.02	14.34	2.39	0.00	1.05	46.74	47.79	2180.	505.
	86/ 3/13	29.70	14.19	2.36	0.00	1.04	46.25	47.27	2090.	955.
	86/ 2/23	29.69	14.18	2.36	0.00	1.04	46.20	47.28	4270.	1745.
	86/ 3/18	29.62	14.15	2.36	0.00	1.04	46.13	47.17	2070.	985.
	86/ 5/ 3	29.13	13.92	2.32	0.00	1.02	45.37	46.39	2780.	1260.
	86/ 5/ 2	28.87	13.79	2.30	0.00	1.01	44.96	45.98	2400.	1200.
	86/ 5/ 4	28.81	13.76	2.29	0.00	1.01	44.87	45.88	3000.	1480.
Daylight	86/ 2/20	27.41	13.09	2.18	0.00	0.29	42.69	42.97	1110.	540.
	86/ 4/17	26.83	12.82	2.14	0.00	0.94	41.79	42.72	1870.	935.
	86/ 4/26	25.65	12.25	2.04	0.00	0.90	39.95	40.85	1810.	660.
	86/ 4/19	25.46	12.16	2.03	0.00	0.89	39.65	40.54	1800.	585.
Daylight	86/ 5/24	22.80	10.89	1.81	0.00	0.24	35.51	35.76	1900.	430.
	86/ 3/ 7	21.93	10.48	1.75	0.00	0.77	34.16	34.93	1620.	725.
	86/ 4/20	20.37	9.73	1.62	0.00	0.71	31.72	32.43	1540.	760.
Daylight	86/ 3/17	20.02	9.57	1.60	0.00	0.33	31.18	31.51	1520.	455.
Daylight	86/ 5/28	20.04	9.57	1.59	0.00	0.14	31.21	31.35	2810.	890.
	86/ 5/ 8	19.68	9.40	1.57	0.00	0.69	30.65	31.34	1840.	920.
Daylight	86/ 2/27	17.59	8.40	1.40	0.00	0.19	27.40	27.58	790.	325.
	86/ 5/ 6	16.55	7.91	1.32	0.00	0.58	25.77	26.35	1540.	770.
	86/ 3/ 8	15.67	7.49	1.25	0.00	0.55	24.40	24.95	1300.	645.
	86/ 2/17	14.81	7.07	1.18	0.00	0.52	23.06	23.58	1790.	885.
Daylight	86/ 5/29	14.83	7.09	1.18	0.00	0.10	23.10	23.20	2340.	990.
	86/ 2/19	14.50	6.92	1.15	0.00	0.51	22.58	23.09	1630.	1185.
	86/ 5/ 9	14.50	6.92	1.15	0.00	0.51	22.58	23.09	1530.	745.
	86/ 2/14	14.44	6.90	1.15	0.00	0.50	22.49	22.99	2150.	885.
Daylight	86/ 2/25	12.93	6.18	1.03	0.00	0.06	20.14	20.20	600.	805.
	86/ 5/20	12.00	5.73	0.95	0.00	0.42	18.69	19.11	2740.	815.
	86/ 2/10	11.01	5.26	0.88	0.00	0.38	17.15	17.53	2720.	1285.
Daylight	86/ 2/ 2	11.10	5.30	0.88	0.00	0.08	17.28	17.36	2930.	675.
Daylight	86/ 5/25	10.97	5.24	0.87	0.00	0.07	17.08	17.15	980.	490.
	86/ 5/ 5	10.57	5.05	0.84	0.00	0.37	16.47	16.84	1140.	550.
Daylight	86/ 5/30	9.99	4.77	0.79	0.00	0.07	15.56	15.63	2710.	1320.
Daylight	86/ 2/ 3	9.71	4.64	0.77	0.00	0.10	15.11	15.22	1940.	775.
Daylight	86/ 2/ 5	9.61	4.59	0.76	0.00	0.15	14.96	15.11	1800.	900.
	86/ 5/21	9.22	4.40	0.73	0.00	0.32	14.36	14.68	1870.	655.
	86/ 5/10	8.08	3.86	0.64	0.00	0.28	12.58	12.86	1100.	550.
	86/ 5/ 7	7.80	3.73	0.62	0.00	0.27	12.15	12.42	1010.	410.
	86/ 2/11	7.58	3.62	0.60	0.00	0.26	11.80	12.06	1520.	625.
	86/ 2/ 8	5.56	2.66	0.44	0.00	0.19	8.67	8.86	1530.	660.
	86/ 2/ 9	5.17	2.47	0.41	0.00	0.18	8.05	8.23	1350.	530.
	86/ 2/ 6	4.94	2.36	0.39	0.00	0.17	7.70	7.87	1720.	860.
Daylight	86/ 2/ 1	4.36	2.08	0.35	0.00	0.03	6.79	6.82	1710.	855.
	86/ 2/ 7	2.74	1.31	0.22	0.00	0.10	4.27	4.36	1080.	440.
	86/ 2/ 4	1.13	0.54	0.09	0.00	0.04	1.77	1.81	920.	460.

86/ 5/31	1.07	0.51	0.09	0.00	0.04	1.66	1.70	3360.	1580.
8 / 2/16	0.32	0.16	0.03	0.00	1.E-2	0.50	0.51	530.	245.
Daylight 86/ 4/16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	240.	120.
Daylight 86/ 4/29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	340.	170.
Daylight 86/ 4/ 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	300.	60.
Daylight 86/ 3/ 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.	50.
Daylight 86/ 5/23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	490.	245.

Comment	Flow					Total	Salmon +			Aapl	RampRate
	YR/MO/DY	Chinook	Pink	Chum	Coho	Steelhd	Salmon	Steelhd			
86/ 8/ 4	0.00	0.00	0.00	4.89	605.75	4.89	610.64	4710.	735.		
86/ 8/13	0.00	0.00	0.00	4.62	572.47	4.62	577.09	4530.	1545.		
86/ 8/11	0.00	0.00	0.00	4.50	557.68	4.50	562.18	4450.	1135.		
86/ 8/27	0.00	0.00	0.00	3.26	404.44	3.26	407.71	3620.	985.		
86/ 8/ 7	0.00	0.00	0.00	3.23	400.76	3.23	403.99	3600.	1265.		
86/ 8/10	0.00	0.00	0.00	3.22	398.91	3.22	402.13	3590.	840.		
86/ 8/ 8	0.00	0.00	0.00	3.13	387.86	3.13	390.98	3530.	985.		
86/ 8/ 9	0.00	0.00	0.00	2.16	268.06	2.16	270.23	2880.	710.		
86/ 8/28	0.00	0.00	0.00	1.83	227.52	1.83	229.35	2660.	805.		
86/ 7/28	0.00	0.00	0.00	1.77	219.96	1.77	221.73	2960.	775.		
86/ 9/ 1	0.00	0.00	0.00	1.76	218.39	1.76	220.16	2650.	790.		
86/ 8/ 5	0.00	0.00	0.00	1.72	212.77	1.72	214.49	2580.	830.		
86/ 8/22	0.00	0.00	0.00	1.70	210.93	1.70	212.63	2570.	460.		
86/ 8/31	0.00	0.00	0.00	1.50	186.97	1.50	188.48	2440.	550.		
86/ 8/ 6	0.00	0.00	0.00	1.43	177.76	1.43	179.19	2390.	795.		
86/ 8/23	0.00	0.00	0.00	1.31	163.01	1.31	164.33	2310.	425.		
86/ 9/ 5	0.00	0.00	0.00	1.19	147.54	1.19	148.73	2380.	850.		
86/ 9/ 9	0.00	0.00	0.00	1.12	139.23	1.12	140.35	2490.	720.		
86/ 8/ 3	0.00	0.00	0.00	0.99	122.47	0.99	123.45	2090.	855.		
86/ 8/30	0.00	0.00	0.00	0.91	113.25	0.91	114.17	2040.	780.		
86/ 9/11	0.00	0.00	0.00	0.91	112.30	0.91	113.21	2370.	655.		
86/ 8/15	0.00	0.00	0.00	0.85	105.88	0.85	106.73	2000.	455.		
86/ 9/ 6	0.00	0.00	0.00	0.83	103.22	0.83	104.06	2120.	830.		
86/ 9/18	0.00	0.00	0.00	0.80	98.50	0.80	99.30	2700.	890.		
86/ 8/14	0.00	0.00	0.00	0.79	98.12	0.79	98.91	1890.	790.		
86/ 8/26	0.00	0.00	0.00	0.77	90.55	0.73	91.08	1780.	510.		
86/ 9/ 4	0.00	0.00	0.00	0.71	87.30	0.71	88.00	1920.	800.		
86/ 9/12	0.00	0.00	0.00	0.68	84.10	0.68	84.77	2170.	430.		
86/ 8/25	0.00	0.00	0.00	0.66	82.59	0.66	83.25	1670.	355.		
86/ 9/10	0.00	0.00	0.00	0.61	75.47	0.61	76.08	2030.	700.		
86/ 9/ 3	0.00	0.00	0.00	0.61	75.23	0.61	75.84	1680.	810.		
86/ 8/16	0.00	0.00	0.00	0.60	74.12	0.60	74.71	1550.	625.		
86/ 9/ 2	0.00	0.00	0.00	0.60	73.96	0.60	74.55	1620.	770.		
86/ 9/19	0.00	0.00	0.00	0.57	70.24	0.57	70.80	2410.	580.		
86/ 7/22	0.00	0.00	0.00	0.55	68.35	0.55	68.91	2260.	1085.		
86/ 9/20	0.00	0.00	0.00	0.49	60.46	0.49	60.95	2350.	810.		
86/ 8/27	0.00	0.00	0.00	0.46	57.18	0.46	57.64	1310.	475.		

86/ 9/22	0.00	0.00	0.00	0.44	54.28	0.44	54.72	2440.	780.
86/ 9/15	0.00	0.00	0.00	0.42	51.73	0.42	52.15	1920.	725.
86/ 8/19	0.00	0.00	0.00	0.38	47.29	0.38	47.67	1170.	275.
86/ 8/16	0.00	0.00	0.00	0.36	45.08	0.36	45.45	1820.	715.
86/ 7/21	0.00	0.00	0.00	0.34	42.00	0.34	42.34	1130.	395.
86/ 7/30	0.00	0.00	0.00	0.31	38.27	0.31	38.58	1110.	215.
86/ 8/21	0.00	0.00	0.00	0.31	38.12	0.31	38.42	1040.	385.
86/ 9/17	0.00	0.00	0.00	0.26	32.52	0.26	32.78	1520.	755.
86/ 7/23	0.00	0.00	0.00	0.25	31.76	0.25	32.02	1400.	540.
86/ 7/27	0.00	0.00	0.00	0.22	27.53	0.22	27.75	1040.	400.
86/ 7/17	0.00	0.00	0.00	0.20	25.02	0.20	25.22	2240.	540.
86/ 7/19	0.00	0.00	0.00	0.19	23.72	0.19	23.92	1710.	470.
86/ 7/26	0.00	0.00	0.00	0.18	22.59	0.18	22.77	980.	245.
86/ 9/24	0.00	0.00	0.00	0.14	16.73	0.14	16.87	1550.	620.
86/ 7/29	0.00	0.00	0.00	0.12	14.71	0.12	14.82	750.	225.
86/ 7/25	0.00	0.00	0.00	0.12	14.66	0.12	14.79	840.	420.
86/ 8/12	0.00	0.00	0.00	0.11	13.41	0.11	13.52	690.	335.
86/ 9/13	0.00	0.00	0.00	0.11	13.11	0.11	13.22	820.	335.
86/ 9/ 8	0.00	0.00	0.00	0.10	12.04	0.10	12.14	730.	300.
86/ 9/21	0.00	0.00	0.00	0.09	11.70	0.09	10.79	970.	480.
86/ 7/18	0.00	0.00	0.00	0.08	10.20	0.08	10.28	1150.	460.
86/ 9/27	0.00	0.00	0.00	0.07	8.65	0.07	8.72	1450.	450.
86/ 9/26	0.00	0.00	0.00	0.06	6.83	0.06	6.88	1100.	480.
86/ 8/17	0.00	0.00	0.00	0.04	4.94	0.04	4.98	570.	280.
86/ 8/20	0.00	0.00	0.00	0.03	4.24	0.03	4.27	560.	225.
86/ 9/28	0.00	0.00	0.00	0.03	3.69	0.03	3.72	1040.	515.
86/ 7/24	0.00	0.00	0.00	0.03	3.53	0.03	3.56	590.	275.
86/ 7/20	0.00	0.00	0.00	0.03	3.53	0.03	3.56	650.	275.
86/ 9/25	0.00	0.00	0.00	1.E-2	1.64	1.E-2	1.65	620.	305.
86/ 9/29	0.00	0.00	0.00	1.E-2	1.53	1.E-2	1.52	830.	410.
86/ 7/16	0.00	0.00	0.00	1.E-2	1.33	1.E-2	1.34	670.	335.
86/ 7/15	0.00	0.00	0.00	0.00	0.16	0.00	0.16	540.	130.
86/ 8/18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	270.	130.
86/ 7/21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	460.	220.
86/ 9/23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	350.	170.

Potholes Stranding and Trapping - Daily Detail with Stranding Ranking
 ======
 (Results of applying base year data to the indicate flow regime)

First line shows STRANDED fish
 Second line shows TRAPPED fish

Flow YR/MO/DY	#Disconn	Total						Salmon +		
		Chinook	Pink	Chum	Coho	Sthd	Salmon	Steelhd	Bagflow	Endflow
86/ 3/17	226	74.84	0.54	0.00	0.23	0.92	75.41	76.52	6860.	3010.
		1343.09	9.61	0.00	4.12	16.48	1356.83	1373.31		
86/ 4/ 4	226	74.84	0.54	0.00	0.23	0.92	75.41	76.52	6020.	2860.
		1343.09	9.61	0.00	4.12	16.48	1356.83	1373.31		
86/ 4/ 5	225	74.84	0.54	0.00	0.23	0.92	75.41	76.52	6580.	3390.
		1343.09	9.61	0.00	4.12	16.48	1356.83	1373.31		
86/ 4/ 2	226	74.84	0.54	0.00	0.23	0.92	75.41	76.52	6480.	2880.
		1343.09	9.61	0.00	4.12	16.48	1356.83	1373.31		
86/ 3/24	218	70.51	0.50	0.00	0.22	0.87	71.23	72.09	7140.	3540.
		1208.97	8.65	0.00	3.71	14.83	1221.33	1236.16		
86/ 3/23	218	70.51	0.50	0.00	0.22	0.87	71.23	72.09	6230.	3560.
		1208.97	8.65	0.00	3.71	14.83	1221.33	1236.16		
86/ 3/31	218	70.51	0.50	0.00	0.22	0.87	71.23	72.09	7070.	3540.
		1208.97	8.65	0.00	3.71	14.83	1221.33	1236.16		
86/ 3/10	195	55.02	0.39	0.00	0.17	0.68	55.59	56.26	6340.	3860.
		1008.85	7.22	0.00	3.10	12.38	1019.17	1031.55		
86/ 3/25	195	55.02	0.39	0.00	0.17	0.68	55.59	56.26	6930.	3890.
		1008.85	7.22	0.00	3.10	12.38	1019.17	1031.55		
86/ 7/22	192	49.40	0.35	0.00	0.15	0.61	49.90	50.51	6200.	4040.
		1008.81	7.22	0.00	3.09	12.38	1018.92	1031.30		
86/ 4/18	186	44.71	0.32	0.00	0.14	0.55	45.16	45.71	7350.	4090.
		891.64	6.38	0.00	2.73	10.94	900.76	911.70		
86/ 4/25	186	44.71	0.32	0.00	0.14	0.55	45.16	45.71	8190.	4090.
		891.64	6.38	0.00	2.73	10.94	900.76	911.70		
86/ 3/20	132	43.82	0.31	0.00	0.13	0.54	44.27	44.90	5600.	4070.
		808.87	5.79	0.00	2.48	9.93	817.14	827.06		
86/ 3/ 6	182	43.48	0.31	0.00	0.13	0.53	43.93	44.46	6760.	4150.
		872.57	6.24	0.00	2.68	10.71	881.49	892.20		
86/ 4/29	160	42.11	0.30	0.00	0.13	0.52	42.54	43.06	7910.	4340.
		746.51	5.34	0.00	2.29	9.16	754.14	763.30		
86/ 4/14	113	41.84	0.30	0.00	0.13	0.51	42.27	42.78	5150.	4180.
		643.51	4.61	0.00	1.97	7.90	650.09	657.98		
86/ 3/29	156	38.48	0.38	0.00	0.12	0.47	38.88	39.35	8470.	4370.
		720.02	5.22	0.00	2.24	8.94	736.47	745.42		
86/ 3/19	152	37.01	0.26	0.00	0.11	0.45	37.39	37.85	5880.	4430.
		691.85	4.95	0.00	2.12	8.49	698.92	707.41		
86/ 4/19	152	37.01	0.26	0.00	0.11	0.45	37.39	37.85	6020.	4400.
		691.85	4.95	0.00	2.12	8.49	698.92	707.41		
86/ 4/12	141	36.36	0.26	0.00	0.11	0.45	36.73	37.18	5850.	4490.
		691.85	4.95	0.00	2.12	8.49	698.92	707.41		
86/ 3/26	126	35.66	0.25	0.00	0.11	0.44	36.03	36.47	6160.	4610.
		682.67	4.99	0.00	2.09	8.38	689.66	698.03		
86/ 3/ 2	98	35.57	0.25	0.00	0.11	0.44	35.93	36.37	5210.	4400.
		536.82	3.84	0.00	1.65	6.59	542.31	548.90		
86/ 3/16	64	34.78	0.25	0.00	0.11	0.43	35.13	35.56	5510.	4760.
		526.11	3.77	0.00	1.61	6.45	531.49	537.95		
86/ 5/ 2	142	34.09	0.24	0.00	0.10	0.42	34.44	34.86	6550.	4460.
		648.61	4.64	0.00	1.99	7.96	655.24	663.20		

First line shows STRANDED fish
 Second line shows TRAPPED fish

YR/MO/DY	#	Flow	Total						Salmon +	
			Disconnect	Chinook	Pink	Chum	Coho	Sthd	Salmon	Steelhd
86/ 4/30	116	32.43	0.23	0.00	0.10	0.40	32.76	33.16	7710.	4850.
		658.42	4.71	0.00	2.02	8.08	665.15	673.23		
86/ 5/ 1	118	31.89	0.23	0.00	0.10	0.39	32.21	32.60	7630.	4820.
		638.16	4.57	0.00	1.96	7.83	644.68	652.52		
86/ 5/30	41	30.13	0.22	0.00	0.09	0.37	30.44	30.81	4120.	3140.
		456.34	3.27	0.00	1.40	5.60	461.01	466.61		
86/ 5/16	131	26.79	0.19	0.00	0.08	0.33	27.06	27.39	5270.	3890.
		426.91	3.06	0.00	1.31	5.24	431.28	436.52		
86/ 5/ 8	123	26.75	0.19	0.00	0.08	0.33	27.02	27.35	6270.	4730.
		504.30	3.61	0.00	1.55	6.19	509.46	515.65		
86/ 2/21	142	26.33	0.19	0.00	0.08	0.32	26.60	26.92	7390.	4460.
		500.99	3.59	0.00	1.54	6.15	506.12	512.26		
86/ 5/ 9	118	23.66	0.17	0.00	0.07	0.29	23.90	24.19	6230.	4820.
		473.47	3.39	0.00	1.45	5.81	478.32	484.12		
86/ 5/13	114	22.23	0.16	0.00	0.07	0.27	22.45	22.73	5270.	4180.
		341.86	2.45	0.00	1.05	4.20	345.36	349.55		
86/ 5/13	122	21.17	0.15	0.00	0.06	0.26	21.39	21.65	6340.	4760.
		399.24	2.86	0.00	1.23	4.90	403.32	408.22		
86/ 5/14	94	20.32	0.14	0.00	0.06	0.25	20.53	20.78	5450.	4400.
		306.88	2.20	0.00	0.94	3.77	310.01	313.78		
86/ 2/15	133	18.81	0.14	0.00	0.06	0.25	19.00	19.23	7280.	4550.
		357.85	2.56	0.00	1.10	4.39	361.51	365.90		
86/ 5/24	140	15.90	0.11	0.00	0.05	0.19	15.96	16.15	5210.	3710.
		219.31	1.57	0.00	0.67	2.69	221.55	224.25		
86/ 5/17	87	14.95	0.11	0.00	0.05	0.18	15.10	15.28	4850.	3790.
		175.24	1.25	0.00	0.54	2.15	177.04	179.19		
86/ 3/ 3	36	6.45	0.05	0.00	0.02	0.08	6.52	6.59	4610.	4320.
		70.35	0.50	0.00	0.22	0.86	71.07	71.93		
86/ 2/16	64	5.49	0.04	0.00	0.02	0.07	5.55	5.61	4880.	4340.
		52.65	0.38	0.00	0.16	0.65	53.19	53.83		
86/ 4/ 3	8	4.33	0.03	0.00	0.01	0.05	4.38	4.43	3540.	3370.
		134.13	0.96	0.00	0.41	1.65	135.50	137.14		
86/ 4/26	76	3.89	0.03	0.00	0.01	0.05	3.93	3.98	6440.	5090.
		421.38	3.02	0.00	1.29	5.17	425.69	430.86		
86/ 2/ 3	121	3.57	0.03	0.00	0.01	0.04	3.61	3.65	6620.	4790.
		69.54	0.50	0.00	0.21	0.85	70.25	71.11		
86/ 5/ 3	77	3.53	0.03	0.00	0.01	0.04	3.56	3.61	7250.	5030.
		381.87	2.73	0.00	1.17	4.69	385.78	390.46		
86/ 5/ 4	80	3.40	0.02	0.00	1.E-2	0.04	3.44	3.48	7750.	4940.
		412.18	2.95	0.00	1.26	5.06	416.39	421.45		
86/ 5/ 6	78	3.16	0.02	0.00	1.E-2	0.04	3.19	3.23	6340.	5000.
		344.67	2.47	0.00	1.06	4.23	348.20	352.43		
86/ 5/12	77	2.43	0.02	0.00	7.E-3	0.03	2.46	2.49	6270.	5060.
		263.36	1.88	0.00	0.81	3.23	266.05	269.29		
86/ 4/20	68	2.13	0.01	0.00	7.E-3	0.03	2.15	2.18	6410.	5150.
		312.82	2.24	0.00	0.96	3.84	316.02	319.86		
86/ 3/27	64	1.45	1.E-2	0.00	4.E-3	0.02	1.46	1.48	6580.	5240.
		155.03	1.11	0.00	0.48	1.90	156.61	158.51		
86/ 2/22	64	1.10	8.E-3	0.00	3.E-3	0.01	1.11	1.12	7510.	5300.
		117.61	0.84	0.00	0.36	1.44	118.81	120.25		
86/ 2/19	65	0.95	7.E-3	0.00	3.E-3	0.01	0.96	0.97	7670.	5180.
		101.57	0.73	0.00	0.31	1.25	102.61	103.85		

First line shows STRANDED fish
Second line shows TRAPPED fish

First line shows STRANDED fish
Second line shows TRAPPED fish

First line shows STRANDED fish
Second line shows TRAPPED fish

Table 4 Gravel bar and pothole stranding and trapping estimates produced by SKAGMDL for 1985.

PARAMETERS FOR THIS RUN:

04/18/87
23:34:59

Slope categories:

0 to 5%
> 5% to 10%
> 10%

Substrate categories:

Less than 3 inches
Greater than 3 inches

Location codes:

Upper reach
Middle reach
Lower reach

Flow data was extracted for the following time periods:

YEAR	SEASON	BEGDATE	ENDDATE
85	1	201	531
85	2	715	930

Both gravel bars and potholes were run.
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

Chronological order

Season totals only

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Season Totals
 ======
 (Results of applying base year stranding data to the indicated flow regime)

Flow							Total	Salmon +	
Year	Season	GBType	Chinook	Pink	Chum	Coho	Steelhd	Salmon	Steelhd
85	1	1	431.37	0.00	34.62	0.00	5.49	466.00	471.48
85	1	2	541.50	0.00	43.46	0.00	9.41	584.96	594.37
85	1	3	2839.22	0.00	227.90	0.00	31.11	3047.12	3098.22
85	1	4	497.02	0.00	39.90	0.00	6.35	536.91	543.27
85	1	5	182.15	0.00	14.61	0.00	3.18	194.77	199.95
85	1	6	454.27	0.00	36.46	0.00	5.08	490.72	495.80
85	1	7	92.15	0.00	7.42	0.00	1.34	99.88	101.21
85	1	8	57.96	0.00	4.66	0.00	1.12	62.61	63.73
85	1	9	717.80	0.00	57.62	0.00	7.86	775.42	783.28
85	1	10	207.03	0.00	16.62	0.00	2.81	223.65	226.46
85	1	11	69.18	0.00	5.53	0.00	1.27	74.73	76.00
85	1	12	304.69	0.00	24.46	0.00	3.34	329.15	332.50
85	1	13	31.55	0.00	2.53	0.00	0.63	34.09	34.72
85	1	14	10.29	0.00	0.82	0.00	0.25	11.12	11.36
85	1	15	254.42	0.00	20.42	0.00	2.80	274.84	277.63
85	1	16	39.00	0.00	3.12	0.00	0.78	42.13	42.91
85	1	17	6.87	0.00	0.55	0.00	0.17	7.42	7.59
85	1	18	86.92	0.00	6.96	0.00	0.95	93.90	94.85
Season subtotals:			6823.7	0.0	547.7	0.0	83.9	7371.4	7455.3
85	2	1	0.00	0.00	0.00	3.42	423.56	3.42	426.97
85	2	2	0.00	0.00	0.00	5.85	726.09	5.85	731.94
85	2	3	0.00	0.00	0.00	22.82	2829.53	22.82	2852.35
85	2	4	0.00	0.00	0.00	19.24	2385.57	19.24	2404.81
85	2	5	0.00	0.00	0.00	9.62	1192.78	9.62	1202.40
85	2	6	0.00	0.00	0.00	1.10	135.47	1.10	136.56
85	2	7	0.00	0.00	0.00	6.12	758.79	6.12	764.91
85	2	8	0.00	0.00	0.00	5.10	632.32	5.10	637.42
85	2	9	0.00	0.00	0.00	2.97	368.60	2.97	371.57
85	2	10	0.00	0.00	0.00	0.67	84.23	0.67	84.91
85	2	11	0.00	0.00	0.00	0.31	37.92	0.31	38.22
85	2	12	0.00	0.00	0.00	1.31	162.53	1.31	163.84
85	2	13	0.00	0.00	0.00	1.75	216.88	1.75	218.63
85	2	14	0.00	0.00	0.00	0.70	86.75	0.70	87.45
85	2	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	2	16	0.00	0.00	0.00	3.37	417.82	3.37	421.19
85	2	17	0.00	0.00	0.00	0.72	90.35	0.72	91.07
85	2	18	0.00	0.00	0.00	0.17	23.50	0.19	23.68
Season subtotals:			0.0	0.0	0.0	85.3	10572.7	85.3	10657.7

Potholes Stranding and Trapping - Season Totals
~~~~~  
(Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
Second line shows TRAPPED fish

| Flow<br>Year # | Disconnect | Chinook | Pink | Chum  | Coho  | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|----------------|------------|---------|------|-------|-------|---------|-----------------|---------------------|
| 85             | 9980       | 2474.4  | 17.7 | 0.0   | 7.4   | 30.4    | 2499.6          | 2530.0              |
|                | 44095.6    | 315.6   | 0.0  | 135.3 | 541.0 | 44546.7 | 45087.7         |                     |

**PARAMETERS FOR THIS RUN:**

-----  
04/19/87  
9:47:12

**Slope categories:**

0 to 5%  
> 5% to 10%  
> 10%

**Substrate categories:**

Less than 3 inches  
Greater than 3 inches

**Location codes:**

Upper reach  
Middle reach  
Lower reach

**Flow data was extracted for the following time periods:**

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 85   | 1      | 201     | 531     |
| 85   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

**TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:**

-----  
**Chronological order**

**Monthly totals only**

**Tables will be written for gravel bars and/or potholes as selected.**

Gravel Bar Stranding - Monthly Detail with Subtotals  
 (Results of applying base year stranding data to the indicated flow regime)

| Flow         |    |      |         |      |       | Total | Salmon + |        |         |
|--------------|----|------|---------|------|-------|-------|----------|--------|---------|
| YR/MO        | GB | Type | Chinook | Pink | Chum  | Coho  | Steelhd  | Salmon | Steelhd |
| 85/ 2        | 1  |      | 49.18   | 0.00 | 3.95  | 0.00  | 0.88     | 53.13  | 54.01   |
| 85/ 2        | 2  |      | 52.09   | 0.00 | 4.18  | 0.00  | 1.51     | 56.27  | 57.78   |
| 85/ 2        | 3  |      | 146.16  | 0.00 | 11.73 | 0.00  | 5.05     | 157.89 | 162.94  |
| 85/ 2        | 4  |      | 56.54   | 0.00 | 4.54  | 0.00  | 1.02     | 61.08  | 62.09   |
| 85/ 2        | 5  |      | 17.54   | 0.00 | 1.41  | 0.00  | 0.51     | 18.94  | 19.45   |
| 85/ 2        | 6  |      | 22.73   | 0.00 | 1.82  | 0.00  | 0.79     | 24.35  | 25.34   |
| 85/ 2        | 7  |      | 9.00    | 0.00 | 0.79  | 0.00  | 0.21     | 10.47  | 10.88   |
| 85/ 2        | 8  |      | 5.69    | 0.00 | 0.46  | 0.00  | 0.17     | 6.14   | 6.31    |
| 85/ 2        | 9  |      | 37.01   | 0.00 | 2.97  | 0.00  | 1.28     | 39.98  | 41.25   |
| 85/ 2        | 10 |      | 22.85   | 0.00 | 1.83  | 0.00  | 0.44     | 24.69  | 25.13   |
| 85/ 2        | 11 |      | 6.72    | 0.00 | 0.54  | 0.00  | 0.20     | 7.26   | 7.46    |
| 85/ 2        | 12 |      | 15.65   | 0.00 | 1.26  | 0.00  | 0.54     | 16.91  | 17.45   |
| 85/ 2        | 13 |      | 2.66    | 0.00 | 0.21  | 0.00  | 0.09     | 2.87   | 2.96    |
| 85/ 2        | 14 |      | 1.06    | 0.00 | 0.08  | 0.00  | 0.04     | 1.15   | 1.19    |
| 85/ 2        | 15 |      | 13.07   | 0.00 | 1.05  | 0.00  | 0.45     | 14.11  | 14.57   |
| 85/ 2        | 16 |      | 3.29    | 0.00 | 0.26  | 0.00  | 0.11     | 3.55   | 3.66    |
| 85/ 2        | 17 |      | 0.71    | 0.00 | 0.06  | 0.00  | 0.02     | 0.77   | 0.79    |
| 85/ 2        | 18 |      | 4.51    | 0.00 | 0.36  | 0.00  | 0.16     | 4.87   | 5.03    |
| Month total: |    |      | 467.3   | 0.0  | 37.5  | 0.0   | 13.5     | 504.8  | 518.3   |

| Flow         |    |      |         |      |       | Total | Salmon + |         |         |
|--------------|----|------|---------|------|-------|-------|----------|---------|---------|
| YR/MO        | GB | Type | Chinook | Pink | Chum  | Coho  | Steelhd  | Salmon  | Steelhd |
| 85/ 3        | 1  |      | 182.71  | 0.00 | 14.67 | 0.00  | 2.38     | 197.38  | 199.75  |
| 85/ 3        | 2  |      | 233.34  | 0.00 | 18.73 | 0.00  | 4.07     | 252.07  | 256.14  |
| 85/ 3        | 3  |      | 1016.86 | 0.00 | 81.62 | 0.00  | 12.82    | 1098.48 | 1111.30 |
| 85/ 3        | 4  |      | 211.24  | 0.00 | 16.96 | 0.00  | 2.77     | 228.19  | 230.96  |
| 85/ 3        | 5  |      | 78.78   | 0.00 | 6.32  | 0.00  | 1.38     | 85.10   | 86.49   |
| 85/ 3        | 6  |      | 186.61  | 0.00 | 14.98 | 0.00  | 2.55     | 201.59  | 204.14  |
| 85/ 3        | 7  |      | 42.90   | 0.00 | 3.44  | 0.00  | 0.66     | 46.35   | 47.01   |
| 85/ 3        | 8  |      | 27.46   | 0.00 | 2.21  | 0.00  | 0.55     | 29.66   | 30.22   |
| 85/ 3        | 9  |      | 255.06  | 0.00 | 20.47 | 0.00  | 3.20     | 275.53  | 278.73  |
| 85/ 3        | 10 |      | 91.92   | 0.00 | 7.38  | 0.00  | 1.31     | 99.30   | 100.61  |
| 85/ 3        | 11 |      | 31.33   | 0.00 | 2.51  | 0.00  | 0.59     | 33.84   | 34.44   |
| 85/ 3        | 12 |      | 110.47  | 0.00 | 8.87  | 0.00  | 1.40     | 119.34  | 120.74  |
| 85/ 3        | 13 |      | 18.66   | 0.00 | 1.50  | 0.00  | 0.39     | 20.16   | 20.55   |
| 85/ 3        | 14 |      | 6.12    | 0.00 | 0.49  | 0.00  | 0.15     | 6.61    | 6.76    |
| 85/ 3        | 15 |      | 42.25   | 0.00 | 7.40  | 0.00  | 1.18     | 99.45   | 100.82  |
| 85/ 3        | 16 |      | 23.06   | 0.00 | 1.85  | 0.00  | 0.48     | 24.91   | 25.39   |
| 85/ 3        | 17 |      | 4.07    | 0.00 | 0.33  | 0.00  | 0.11     | 4.42    | 4.52    |
| 85/ 3        | 18 |      | 29.78   | 0.00 | 2.39  | 0.00  | 0.38     | 32.17   | 32.54   |
| Month total: |    |      | 2642.6  | 0.0  | 212.1 | 0.0   | 36.4     | 2854.7  | 2891.1  |

| Flow         |    |      |         |      |      | Total | Salmon + |        |         |
|--------------|----|------|---------|------|------|-------|----------|--------|---------|
| YR/MO        | GB | Type | Chinook | Pink | Chum | Coho  | Steelhd  | Salmon | Steelhd |
| 85/ 4        | 1  |      | 117.24  | 0.00 | 9.41 | 0.00  | 1.40     | 126.65 | 128.05  |
| Month total: |    |      | 117.24  | 0.00 | 9.41 | 0.00  | 1.40     | 126.65 | 128.05  |

|              |    |        |      |       |      |      |        |        |
|--------------|----|--------|------|-------|------|------|--------|--------|
| 85/ 4        | 3  | 821.55 | 0.00 | 65.94 | 0.00 | 8.20 | 887.49 | 895.69 |
| 85/ 4        | 4  | 134.82 | 0.00 | 10.82 | 0.00 | 1.61 | 145.64 | 147.25 |
| 85/ 4        | 5  | 62.60  | 0.00 | 5.02  | 0.00 | 0.81 | 67.63  | 68.44  |
| 85/ 4        | 6  | 140.44 | 0.00 | 11.27 | 0.00 | 1.15 | 151.71 | 152.86 |
| 85/ 4        | 7  | 23.80  | 0.00 | 1.91  | 0.00 | 0.31 | 25.71  | 26.01  |
| 85/ 4        | 8  | 18.67  | 0.00 | 1.50  | 0.00 | 0.26 | 20.19  | 20.45  |
| 85/ 4        | 9  | 206.94 | 0.00 | 16.61 | 0.00 | 2.08 | 223.55 | 225.64 |
| 85/ 4        | 10 | 54.76  | 0.00 | 4.40  | 0.00 | 0.68 | 59.16  | 59.83  |
| 85/ 4        | 11 | 23.05  | 0.00 | 1.85  | 0.00 | 0.30 | 24.90  | 25.21  |
| 85/ 4        | 12 | 88.67  | 0.00 | 7.12  | 0.00 | 0.87 | 95.79  | 96.66  |
| 85/ 4        | 13 | 6.70   | 0.00 | 0.54  | 0.00 | 0.11 | 7.23   | 7.34   |
| 85/ 4        | 14 | 2.68   | 0.00 | 0.21  | 0.00 | 0.05 | 2.89   | 2.94   |
| 85/ 4        | 15 | 74.04  | 0.00 | 5.94  | 0.00 | 0.73 | 79.98  | 80.71  |
| 85/ 4        | 16 | 8.27   | 0.00 | 0.66  | 0.00 | 0.14 | 8.94   | 9.08   |
| 85/ 4        | 17 | 1.79   | 0.00 | 0.14  | 0.00 | 0.03 | 1.93   | 1.96   |
| 85/ 4        | 18 | 24.65  | 0.00 | 1.98  | 0.00 | 0.26 | 26.62  | 26.88  |
| Month total: |    | 1997.2 | 0.0  | 160.3 | 0.0  | 21.4 | 2157.5 | 2178.9 |

| Flow         |        |         |      |       |      |         | Total  | Salmon + |
|--------------|--------|---------|------|-------|------|---------|--------|----------|
| YR/MO        | GBType | Chinook | Pink | Chum  | Coho | Steelhd | Salmon | Steelhd  |
| 85/ 5        | 1      | 82.24   | 0.00 | 6.60  | 0.00 | 0.83    | 88.84  | 89.67    |
| 85/ 5        | 2      | 69.52   | 0.00 | 5.58  | 0.00 | 1.43    | 75.10  | 76.53    |
| 85/ 5        | 3      | 854.66  | 0.00 | 68.60 | 0.00 | 5.04    | 923.26 | 928.30   |
| 85/ 5        | 4      | 94.42   | 0.00 | 7.58  | 0.00 | 0.95    | 102.00 | 102.95   |
| 85/ 5        | 5      | 23.23   | 0.00 | 1.86  | 0.00 | 0.48    | 25.10  | 25.58    |
| 85/ 5        | 6      | 104.49  | 0.00 | 8.39  | 0.00 | 0.59    | 112.87 | 113.46   |
| 85/ 5        | 7      | 15.87   | 0.00 | 1.27  | 0.00 | 0.16    | 17.15  | 17.31    |
| 85/ 5        | 8      | 6.12    | 0.00 | 0.49  | 0.00 | 0.13    | 6.61   | 6.75     |
| 85/ 5        | 9      | 218.80  | 0.00 | 17.56 | 0.00 | 1.29    | 236.36 | 237.66   |
| 85/ 5        | 10     | 37.49   | 0.00 | 3.01  | 0.00 | 0.38    | 40.50  | 40.88    |
| 85/ 5        | 11     | 8.08    | 0.00 | 0.65  | 0.00 | 0.17    | 8.73   | 8.90     |
| 85/ 5        | 12     | 89.90   | 0.00 | 7.22  | 0.00 | 0.53    | 97.12  | 97.65    |
| 85/ 5        | 13     | 3.54    | 0.00 | 0.28  | 0.00 | 0.04    | 3.82   | 3.86     |
| 85/ 5        | 14     | 0.43    | 0.00 | 0.03  | 0.00 | 1.E-2   | 0.46   | 0.48     |
| 85/ 5        | 15     | 75.07   | 0.00 | 6.03  | 0.00 | 0.44    | 81.09  | 81.54    |
| 85/ 5        | 16     | 4.37    | 0.00 | 0.35  | 0.00 | 0.05    | 4.72   | 4.77     |
| 85/ 5        | 17     | 0.29    | 0.00 | 0.02  | 0.00 | 1.E-2   | 0.31   | 0.32     |
| 85/ 5        | 18     | 27.98   | 0.00 | 2.25  | 0.00 | 0.17    | 30.23  | 30.40    |
| Month total: |        | 1716.5  | 0.0  | 137.8 | 0.0  | 12.7    | 1854.3 | 1867.0   |

| Flow  |        |         |      |      |      |         | Total  | Salmon + |
|-------|--------|---------|------|------|------|---------|--------|----------|
| YR/MO | GBType | Chinook | Pink | Chum | Coho | Steelhd | Salmon | Steelhd  |
| 85/ 7 | 1      | 0.00    | 0.00 | 0.00 | 0.58 | 72.40   | 0.58   | 72.98    |
| 85/ 7 | 2      | 0.00    | 0.00 | 0.00 | 1.00 | 124.10  | 1.00   | 125.10   |
| 85/ 7 | 3      | 0.00    | 0.00 | 0.00 | 4.59 | 568.95  | 4.59   | 573.53   |
| 85/ 7 | 4      | 0.00    | 0.00 | 0.00 | 4.22 | 522.91  | 4.22   | 527.13   |
| 85/ 7 | 5      | 0.00    | 0.00 | 0.00 | 2.11 | 261.45  | 2.11   | 263.56   |
| 85/ 7 | 6      | 0.00    | 0.00 | 0.00 | 0.19 | 23.90   | 0.19   | 24.09    |
| 85/ 7 | 7      | 0.00    | 0.00 | 0.00 | 1.17 | 145.06  | 1.17   | 146.23   |
| 85/ 7 | 8      | 0.00    | 0.00 | 0.00 | 0.97 | 120.88  | 0.97   | 121.86   |
| 85/ 7 | 9      | 0.00    | 0.00 | 0.00 | 0.40 | 74.49   | 0.40   | 75.09    |
| 85/ 7 | 10     | 0.00    | 0.00 | 0.00 | 0.10 | 12.28   | 0.10   | 12.38    |
| 85/ 7 | 11     | 0.00    | 0.00 | 0.00 | 0.04 | 5.53    | 0.04   | 5.57     |
| 85/ 7 | 12     | 0.00    | 0.00 | 0.00 | 0.21 | 25.77   | 0.21   | 25.97    |

|              |      |      |      |      |        |      |        |
|--------------|------|------|------|------|--------|------|--------|
| 85/ 7 13     | 0.00 | 0.00 | 0.00 | 0.39 | 48.22  | 0.39 | 48.61  |
| 85/ 7 14     | 0.00 | 0.00 | 0.00 | 0.15 | 19.29  | 0.15 | 19.44  |
| 85/ 7 15     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00   |
| 85/ 7 16     | 0.00 | 0.00 | 0.00 | 0.67 | 83.30  | 0.67 | 83.97  |
| 85/ 7 17     | 0.00 | 0.00 | 0.00 | 0.15 | 18.01  | 0.15 | 18.16  |
| 85/ 7 18     | 0.00 | 0.00 | 0.00 | 0.02 | 2.76   | 0.02 | 2.78   |
| Month total: | 0.0  | 0.0  | 0.0  | 17.2 | 2129.3 | 17.2 | 2146.4 |

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum | Coho  | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|--------|---------|------|------|-------|---------|-----------------|---------------------|
| 85/ 8 1       |        | 0.00    | 0.00 | 0.00 | 2.19  | 271.54  | 2.19            | 273.73              |
| 85/ 8 2       |        | 0.00    | 0.00 | 0.00 | 3.75  | 465.50  | 3.75            | 469.25              |
| 85/ 8 3       |        | 0.00    | 0.00 | 0.00 | 16.07 | 1995.29 | 16.07           | 2011.38             |
| 85/ 8 4       |        | 0.00    | 0.00 | 0.00 | 14.31 | 1774.08 | 14.31           | 1788.38             |
| 85/ 8 5       |        | 0.00    | 0.00 | 0.00 | 7.16  | 887.04  | 7.16            | 894.19              |
| 85/ 8 6       |        | 0.00    | 0.00 | 0.00 | 0.71  | 88.43   | 0.71            | 89.14               |
| 85/ 8 7       |        | 0.00    | 0.00 | 0.00 | 4.18  | 519.11  | 4.18            | 523.30              |
| 85/ 8 8       |        | 0.00    | 0.00 | 0.00 | 3.49  | 432.59  | 3.49            | 436.08              |
| 85/ 8 9       |        | 0.00    | 0.00 | 0.00 | 2.10  | 260.71  | 2.10            | 262.81              |
| 85/ 8 10      |        | 0.00    | 0.00 | 0.00 | 0.40  | 49.50   | 0.40            | 49.90               |
| 85/ 8 11      |        | 0.00    | 0.00 | 0.00 | 0.18  | 22.28   | 0.18            | 22.46               |
| 85/ 8 12      |        | 0.00    | 0.00 | 0.00 | 0.81  | 99.92   | 0.81            | 100.73              |
| 85/ 8 13      |        | 0.00    | 0.00 | 0.00 | 1.31  | 162.73  | 1.31            | 164.04              |
| 85/ 8 14      |        | 0.00    | 0.00 | 0.00 | 0.52  | 65.09   | 0.52            | 65.62               |
| 85/ 8 15      |        | 0.00    | 0.00 | 0.00 | 0.00  | 0.00    | 0.00            | 0.00                |
| 85/ 8 16      |        | 0.00    | 0.00 | 0.00 | 2.36  | 293.13  | 2.36            | 295.49              |
| 85/ 8 17      |        | 0.00    | 0.00 | 0.00 | 0.51  | 63.38   | 0.51            | 63.89               |
| 85/ 8 18      |        | 0.00    | 0.00 | 0.00 | 0.10  | 12.37   | 0.10            | 12.47               |
| Month total:  |        | 0.0     | 0.0  | 0.0  | 60.2  | 7462.7  | 60.2            | 7522.9              |

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum | Coho | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|--------|---------|------|------|------|---------|-----------------|---------------------|
| 85/ 9 1       |        | 0.00    | 0.00 | 0.00 | 0.64 | 79.62   | 0.64            | 80.25               |
| 85/ 9 2       |        | 0.00    | 0.00 | 0.00 | 1.10 | 136.48  | 1.10            | 137.58              |
| 85/ 9 3       |        | 0.00    | 0.00 | 0.00 | 2.14 | 265.29  | 2.14            | 267.43              |
| 85/ 9 4       |        | 0.00    | 0.00 | 0.00 | 0.72 | 88.58   | 0.72            | 89.30               |
| 85/ 9 5       |        | 0.00    | 0.00 | 0.00 | 0.35 | 44.29   | 0.35            | 44.65               |
| 85/ 9 6       |        | 0.00    | 0.00 | 0.00 | 0.19 | 23.14   | 0.19            | 23.33               |
| 85/ 9 7       |        | 0.00    | 0.00 | 0.00 | 0.76 | 94.62   | 0.76            | 95.38               |
| 85/ 9 8       |        | 0.00    | 0.00 | 0.00 | 0.64 | 78.85   | 0.64            | 79.48               |
| 85/ 9 9       |        | 0.00    | 0.00 | 0.00 | 0.27 | 33.40   | 0.27            | 33.68               |
| 85/ 9 10      |        | 0.00    | 0.00 | 0.00 | 0.18 | 22.45   | 0.18            | 22.64               |
| 85/ 9 11      |        | 0.00    | 0.00 | 0.00 | 0.08 | 10.11   | 0.08            | 10.19               |
| 85/ 9 12      |        | 0.00    | 0.00 | 0.00 | 0.30 | 36.84   | 0.30            | 37.14               |
| 85/ 9 13      |        | 0.00    | 0.00 | 0.00 | 0.05 | 5.93    | 0.05            | 5.98                |
| 85/ 9 14      |        | 0.00    | 0.00 | 0.00 | 0.02 | 2.37    | 0.02            | 2.39                |
| 85/ 9 15      |        | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00            | 0.00                |
| 85/ 9 16      |        | 0.00    | 0.00 | 0.00 | 0.33 | 41.39   | 0.33            | 41.73               |
| 85/ 9 17      |        | 0.00    | 0.00 | 0.00 | 0.07 | 8.95    | 0.07            | 9.02                |
| 85/ 9 18      |        | 0.00    | 0.00 | 0.00 | 0.07 | 8.37    | 0.07            | 8.43                |

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Month total:      0.0      0.0      0.0      7.9      980.7      7.9      988.6

Potholes Stranding and Trapping - Monthly Detail with Subtotals  
 \*\*\*\*\*  
 (Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO | 00isconn | Chinook  | Pink   | Chum | Coho  | Steelhd | Total Salmon + |          |
|---------------|----------|----------|--------|------|-------|---------|----------------|----------|
|               |          |          |        |      |       |         | Salmon         | Steelhd  |
| 85/ 2         | 2700     | 283.89   | 2.03   | 0.00 | 0.87  | 3.49    | 286.79         | 250.28   |
|               |          | 4311.19  | 45.17  | 0.00 | 19.36 | 77.44   | 6375.72        | 6453.16  |
| 85/ 3         | 3702     | 1110.02  | 7.94   | 0.00 | 3.40  | 13.62   | 1121.37        | 1134.99  |
|               |          | 20040.29 | 143.44 | 0.00 | 61.47 | 245.89  | 20245.20       | 20491.10 |
| 85/ 4         | 2205     | 731.98   | 5.24   | 0.00 | 2.25  | 8.98    | 739.46         | 748.44   |
|               |          | 12018.03 | 86.02  | 0.00 | 36.86 | 147.46  | 12140.92       | 12288.38 |
| 85/ 5         | 1373     | 348.46   | 2.49   | 0.00 | 1.07  | 4.27    | 352.03         | 355.30   |
|               |          | 5726.29  | 40.99  | 0.00 | 17.56 | 70.26   | 5784.85        | 5855.11  |
| Year totals:  |          | 2474.4   | 17.7   | 0.0  | 7.6   | 30.4    | 2499.7         | 2530.0   |
|               |          | 44095.8  | 315.6  | 0.0  | 135.3 | 541.1   | 44546.7        | 45087.8  |

PARAMETERS FOR THIS RUN:

-----  
04/19/87  
10:02:11

Slope categories:

0 to 5%  
> 5% to 10%  
> 10%

Substrate categories:

Less than 3 inches  
Greater than 3 inches

Location codes:

Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 85   | 1      | 201     | 531     |
| 85   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

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Chronological order

Daily detail report

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Tally Detail with Subtotals  
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(Results of applying base year stranding data to the indicated flow regime)

| Comment         | Flow<br>YR/MO/DY | Flow    |      |      |      |         |        | Total Salmon +<br>Steelhd | Ampl  | RampRate |
|-----------------|------------------|---------|------|------|------|---------|--------|---------------------------|-------|----------|
|                 |                  | Chinook | Pink | Chum | Coho | Steelhd | Salmon |                           |       |          |
|                 | 85/ 2/ 1         | 1.73    | 0.00 | 0.14 | 0.00 | 0.06    | 1.87   | 1.93                      | 3620. | 427.     |
|                 | 85/ 2/ 2         | 1.56    | 0.00 | 0.12 | 0.00 | 0.05    | 1.69   | 1.74                      | 1310. | 129.     |
| Daylight        | 85/ 2/ 3         | 3.47    | 0.00 | 0.28 | 0.00 | 0.03    | 3.74   | 3.78                      | 860.  | 75.      |
| Daylight        | 85/ 2/ 4         | 19.13   | 0.00 | 1.53 | 0.00 | 0.20    | 20.66  | 20.84                     | 1990. | 246.     |
| Daylight        | 85/ 2/ 5         | 14.60   | 0.00 | 1.17 | 0.00 | 0.15    | 15.77  | 15.93                     | 1410. | 146.     |
|                 | 85/ 2/ 6         | 8.68    | 0.00 | 0.70 | 0.00 | 0.30    | 9.38   | 9.58                      | 2000. | 222.     |
|                 | 85/ 2/ 7         | 5.47    | 0.00 | 0.44 | 0.00 | 0.19    | 5.91   | 6.10                      | 1310. | 162.     |
|                 | 85/ 2/ 8         | 11.60   | 0.00 | 0.93 | 0.00 | 0.40    | 12.53  | 12.74                     | 2020. | 112.     |
| Daylight        | 85/ 2/ 9         | 13.11   | 0.00 | 1.05 | 0.00 | 0.21    | 14.16  | 14.37                     | 1190. | 144.     |
|                 | 85/ 2/10         | 16.98   | 0.00 | 1.38 | 0.00 | 0.58    | 18.24  | 18.82                     | 3380. | 386.     |
|                 | 85/ 2/11         | 19.49   | 0.00 | 1.58 | 0.00 | 0.68    | 21.26  | 21.95                     | 3940. | 375.     |
|                 | 85/ 2/12         | 21.87   | 0.00 | 1.75 | 0.00 | 0.76    | 23.63  | 24.39                     | 4150. | 388.     |
|                 | 85/ 2/13         | 23.68   | 0.00 | 1.90 | 0.00 | 0.82    | 25.58  | 26.40                     | 4140. | 497.     |
|                 | 85/ 2/14         | 25.23   | 0.00 | 2.02 | 0.00 | 0.87    | 27.25  | 28.12                     | 4030. | 287.     |
| Daylight        | 85/ 2/15         | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00   | 0.00                      | 490.  | 42.      |
| No event        | 85/ 2/16         |         |      |      |      |         |        |                           |       |          |
|                 | 85/ 2/17         | 18.20   | 0.00 | 1.46 | 0.00 | 0.63    | 19.66  | 20.29                     | 1610. | 128.     |
|                 | 85/ 2/18         | 11.11   | 0.00 | 0.89 | 0.00 | 0.38    | 12.00  | 12.39                     | 1140. | 99.      |
|                 | 85/ 2/19         | 28.06   | 0.00 | 2.25 | 0.00 | 0.97    | 30.31  | 31.28                     | 2170. | 226.     |
|                 | 85/ 2/20         | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00   | 0.00                      | 350.  | 43.      |
|                 | 85/ 2/21         | 20.66   | 0.00 | 1.66 | 0.00 | 0.71    | 22.32  | 23.03                     | 1520. | 183.     |
|                 | 85/ 2/22         | 34.49   | 0.00 | 2.77 | 0.00 | 1.19    | 37.26  | 38.44                     | 2690. | 255.     |
|                 | 85/ 2/23         | 15.31   | 0.00 | 1.23 | 0.00 | 0.53    | 16.54  | 17.07                     | 1190. | 138.     |
| No event        | 85/ 2/24         |         |      |      |      |         |        |                           |       |          |
| No event        | 85/ 2/25         |         |      |      |      |         |        |                           |       |          |
| Daylight        | 85/ 2/26         | 81.24   | 0.00 | 6.52 | 0.00 | 1.28    | 87.76  | 89.04                     | 1980. | 188.     |
|                 | 85/ 2/27         | 36.98   | 0.00 | 2.97 | 0.00 | 1.28    | 39.95  | 41.23                     | 1920. | 237.     |
|                 | 85/ 2/28         | 34.57   | 0.00 | 2.78 | 0.00 | 1.20    | 37.34  | 38.54                     | 1780. | 159.     |
| Month subtotal: |                  | 467.3   | 0.0  | 37.5 | 0.0  | 13.5    | 504.8  | 518.3                     |       |          |

| Comment  | Flow<br>YR/MO/DY | Flow    |      |       |      |         |        | Total Salmon +<br>Steelhd | Ampl  | RampRate |
|----------|------------------|---------|------|-------|------|---------|--------|---------------------------|-------|----------|
|          |                  | Chinook | Pink | Chum  | Coho | Steelhd | Salmon |                           |       |          |
|          | 85/ 3/ 1         | 14.83   | 0.00 | 1.19  | 0.00 | 0.51    | 16.02  | 16.53                     | 1030. | 127.     |
| Daylight | 85/ 3/ 2         | 228.83  | 0.00 | 18.37 | 0.00 | 1.59    | 247.19 | 248.78                    | 2780. | 345.     |
|          | 85/ 3/ 3         | 6.15    | 0.00 | 0.49  | 0.00 | 0.21    | 6.65   | 6.86                      | 720.  | 71.      |
|          | 85/ 3/ 4         | 47.84   | 0.00 | 3.84  | 0.00 | 1.65    | 51.68  | 53.34                     | 3160. | 392.     |
| Daylight | 85/ 3/ 5         | 304.27  | 0.00 | 24.42 | 0.00 | 1.37    | 329.69 | 330.07                    | 1920. | 135.     |
|          | 85/ 3/ 6         | 46.53   | 0.00 | 3.73  | 0.00 | 1.61    | 50.26  | 51.87                     | 2900. | 214.     |
| No event | 85/ 3/ 7         |         |      |       |      |         |        |                           |       |          |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
"Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |        |      |       |      |       |        |        |       |      |
|-----------------|----------|--------|------|-------|------|-------|--------|--------|-------|------|
|                 | 85/ 3/ 8 | 52.51  | 0.00 | 4.21  | 0.00 | 1.81  | 56.73  | 58.54  | 4080. | 270. |
|                 | 85/ 3/ 9 | 52.61  | 0.00 | 4.22  | 0.00 | 1.82  | 56.84  | 58.65  | 4100. | 272. |
| Daylight        | 85/ 3/10 | 98.65  | 0.00 | 7.92  | 0.00 | 1.03  | 104.57 | 107.59 | 1560. | 114. |
|                 | 85/ 3/11 | 48.05  | 0.00 | 3.86  | 0.00 | 1.86  | 51.90  | 53.56  | 3200. | 136. |
| Daylight        | 85/ 3/12 | 180.05 | 0.00 | 14.45 | 0.00 | 1.64  | 194.49 | 196.14 | 3080. | 236. |
| Daylight        | 85/ 3/13 | 114.77 | 0.00 | 9.21  | 0.00 | 1.61  | 123.98 | 125.59 | 2900. | 181. |
| Daylight        | 85/ 3/14 | 205.70 | 0.00 | 16.51 | 0.00 | 0.93  | 222.21 | 223.14 | 1460. | 156. |
|                 | 85/ 3/15 | 44.80  | 0.00 | 3.60  | 0.00 | 1.55  | 48.40  | 49.95  | 2560. | 245. |
|                 | 85/ 3/16 | 22.66  | 0.00 | 1.82  | 0.00 | 0.78  | 24.48  | 25.26  | 1310. | 150. |
| Daylight        | 85/ 3/17 | 68.57  | 0.00 | 5.50  | 0.00 | 1.08  | 74.07  | 75.16  | 1620. | 136. |
| Daylight        | 85/ 3/18 | 81.42  | 0.00 | 6.53  | 0.00 | 0.37  | 87.96  | 88.33  | 880.  | 107. |
| Daylight        | 85/ 3/19 | 2.14   | 0.00 | 0.17  | 0.00 | 1.E-2 | 2.32   | 2.32   | 510.  | 51.  |
| Daylight        | 85/ 3/20 | 225.91 | 0.00 | 18.13 | 0.00 | 1.51  | 244.05 | 245.55 | 2330. | 284. |
|                 | 85/ 3/21 | 44.48  | 0.00 | 3.73  | 0.00 | 1.60  | 50.20  | 51.81  | 2890. | 350. |
| Daylight        | 85/ 3/22 | 237.77 | 0.00 | 17.08 | 0.00 | 1.83  | 256.85 | 258.68 | 4160. | 455. |
|                 | 85/ 3/23 | 45.66  | 0.00 | 3.67  | 0.00 | 1.58  | 49.33  | 50.91  | 2730. | 344. |
| Daylight        | 85/ 3/24 | 63.67  | 0.00 | 5.11  | 0.00 | 1.01  | 68.79  | 69.79  | 1540. | 187. |
|                 | 85/ 3/25 | 49.92  | 0.00 | 4.01  | 0.00 | 1.73  | 53.93  | 55.66  | 3570. | 430. |
|                 | 85/ 3/26 | 45.86  | 0.00 | 3.68  | 0.00 | 1.59  | 49.55  | 51.13  | 2770. | 340. |
| Daylight        | 85/ 3/27 | 228.95 | 0.00 | 18.38 | 0.00 | 1.59  | 247.34 | 248.92 | 2800. | 346. |
| Daylight        | 85/ 3/28 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00  | 0.00   | 0.00   | 210.  | 12.  |
| Daylight        | 85/ 3/29 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00  | 0.00   | 0.00   | 360.  | 24.  |
|                 | 85/ 3/30 | 52.56  | 0.00 | 4.22  | 0.00 | 1.82  | 56.78  | 58.60  | 4090. | 460. |
|                 | 85/ 3/31 | 25.46  | 0.00 | 2.04  | 0.00 | 0.88  | 27.50  | 28.38  | 1410. | 170. |
| Month subtotal: |          | 2642.6 | 0.0  | 212.1 | 0.0  | 36.4  | 2854.8 | 2891.1 |       |      |

| Comment  | YR/MO/DY | Flow    |      |       |      |         | Total Salmon | Salmon + Steelhd |          |      |
|----------|----------|---------|------|-------|------|---------|--------------|------------------|----------|------|
|          |          | Chinook | Pink | Chum  | Coho | Steelhd |              | Ampl             | RampRate |      |
| Daylight | 85/ 4/ 1 | 96.79   | 0.00 | 7.77  | 0.00 | 1.01    | 104.56       | 105.56           | 1540.    | 105. |
| Daylight | 85/ 4/ 2 | 0.00    | 0.00 | 0.00  | 0.00 | 0.00    | 0.00         | 0.00             | 470.     | 51.  |
| Daylight | 85/ 4/ 3 | 231.16  | 0.00 | 18.55 | 0.00 | 1.65    | 249.71       | 251.36           | 3140.    | 370. |
| Daylight | 85/ 4/ 4 | 231.16  | 0.00 | 18.55 | 0.00 | 1.65    | 249.71       | 251.36           | 3140.    | 294. |
|          | 85/ 4/ 5 | 20.42   | 0.00 | 1.64  | 0.00 | 0.70    | 22.06        | 22.76            | 1230.    | 125. |
|          | 85/ 4/ 6 | 16.78   | 0.00 | 1.35  | 0.00 | 0.58    | 18.13        | 18.71            | 1100.    | 132. |
|          | 85/ 4/ 7 | 17.90   | 0.00 | 1.44  | 0.00 | 0.62    | 19.34        | 19.96            | 1140.    | 140. |
| Daylight | 85/ 4/ 8 | 44.26   | 0.00 | 3.55  | 0.00 | 0.72    | 47.81        | 48.53            | 1240.    | 123. |
| No event | 85/ 4/ 9 |         |      |       |      |         |              |                  |          |      |
| Daylight | 85/ 4/10 | 0.00    | 0.00 | 0.00  | 0.00 | 0.00    | 0.00         | 0.00             | 320.     | 38.  |
| Daylight | 85/ 4/11 | 81.42   | 0.00 | 6.53  | 0.00 | 0.37    | 87.96        | 88.33            | 880.     | 108. |
| Daylight | 85/ 4/12 | 227.14  | 0.00 | 18.23 | 0.00 | 1.54    | 245.38       | 246.92           | 2520.    | 235. |
|          | 85/ 4/13 | 44.29   | 0.00 | 3.56  | 0.00 | 1.53    | 47.85        | 49.38            | 2460.    | 140. |
| No event | 85/ 4/14 |         |      |       |      |         |              |                  |          |      |
| No event | 85/ 4/15 |         |      |       |      |         |              |                  |          |      |
| Daylight | 85/ 4/16 | 0.00    | 0.00 | 0.00  | 0.00 | 0.00    | 0.00         | 0.00             | 350.     | 27.  |
|          | 85/ 4/17 | 1.12    | 0.00 | 0.09  | 0.00 | 0.04    | 1.21         | 1.25             | 540.     | 61.  |
|          | 85/ 4/18 | 42.57   | 0.00 | 3.41  | 0.00 | 1.47    | 45.99        | 47.46            | 2120.    | 118. |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |        |      |       |      |      |        |        |       |      |
|-----------------|----------|--------|------|-------|------|------|--------|--------|-------|------|
| Daylight        | 85/ 4/19 | 64.22  | 0.00 | 5.15  | 0.00 | 0.67 | 69.37  | 70.04  | 1190. | 107. |
| Daylight        | 85/ 4/20 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00   | 0.00   | 480.  | 50.  |
| No event        | 85/ 4/21 |        |      |       |      |      |        |        |       |      |
|                 | 85/ 4/22 | 44.90  | 0.00 | 3.60  | 0.00 | 1.55 | 48.51  | 50.06  | 2580. | 307. |
| Daylight        | 85/ 4/23 | 356.89 | 0.00 | 28.65 | 0.00 | 1.61 | 385.54 | 387.14 | 2913. | 257. |
|                 | 85/ 4/24 | 5.04   | 0.00 | 0.40  | 0.00 | 0.17 | 5.44   | 5.41   | 680.  | 81.  |
| Daylight        | 85/ 4/25 | 93.07  | 0.00 | 7.47  | 0.00 | 0.97 | 100.54 | 101.50 | 1500. | 168. |
|                 | 85/ 4/26 | 45.15  | 0.00 | 3.62  | 0.00 | 1.56 | 48.78  | 50.34  | 2630. | 248. |
| Daylight        | 85/ 4/27 | 226.11 | 0.00 | 18.15 | 0.00 | 1.51 | 244.25 | 245.77 | 2360. | 162. |
| Daylight        | 85/ 4/28 | 87.55  | 0.00 | 7.03  | 0.00 | 1.38 | 94.58  | 95.76  | 1930. | 153. |
| Daylight        | 85/ 4/29 | 19.28  | 0.00 | 1.55  | 0.00 | 0.09 | 20.83  | 20.92  | 590.  | 61.  |
| No event        | 85/ 4/30 |        |      |       |      |      |        |        |       |      |
| Month subtotal: |          | 1997.2 | 0.0  | 160.3 | 0.0  | 21.4 | 2157.6 | 2178.9 |       |      |

| Comment  | YR/MO/DY  | Flow    |      |       |      |         | Total Salmon | Salmon + Steelhd | Ampl  | RampRate |
|----------|-----------|---------|------|-------|------|---------|--------------|------------------|-------|----------|
|          |           | Chinook | Pink | Chum  | Coho | Steelhd |              |                  |       |          |
|          | 85/ 5/ 1  | 19.78   | 0.00 | 1.59  | 0.00 | 0.68    | 21.37        | 22.05            | 1230. | 93.      |
|          | 85/ 5/ 2  | 9.96    | 0.00 | 0.80  | 0.00 | 0.35    | 10.77        | 11.11            | 880.  | 77.      |
| Daylight | 85/ 5/ 3  | 205.97  | 0.00 | 16.33 | 0.00 | 1.40    | 222.50       | 223.90           | 2540. | 251.     |
| Daylight | 85/ 5/ 4  | 198.86  | 0.00 | 15.96 | 0.00 | 1.35    | 214.82       | 216.18           | 2540. | 246.     |
| No event | 85/ 5/ 5  |         |      |       |      |         |              |                  |       |          |
|          | 85/ 5/ 6  | 34.88   | 0.00 | 2.80  | 0.00 | 1.20    | 37.67        | 38.88            | 2190. | 104.     |
| Daylight | 85/ 5/ 7  | 23.99   | 0.00 | 1.93  | 0.00 | 0.25    | 25.92        | 26.17            | 830.  | 71.      |
| Daylight | 85/ 5/ 8  | 168.65  | 0.00 | 13.54 | 0.00 | 1.11    | 182.20       | 183.30           | 2170. | 163.     |
| Daylight | 85/ 5/ 9  | 112.58  | 0.00 | 9.04  | 0.00 | 0.73    | 121.62       | 122.35           | 1550. | 183.     |
| Daylight | 85/ 5/ 10 | 192.37  | 0.00 | 15.44 | 0.00 | 1.03    | 207.83       | 208.85           | 2230. | 282.     |
|          | 85/ 5/ 11 | 19.09   | 0.00 | 1.53  | 0.00 | 0.66    | 20.62        | 21.28            | 1540. | 85.      |
| Daylight | 85/ 5/ 12 | 36.20   | 0.00 | 2.91  | 0.00 | 0.19    | 39.11        | 39.30            | 820.  | 87.      |
| Daylight | 85/ 5/ 13 | 52.26   | 0.00 | 4.19  | 0.00 | 0.34    | 56.46        | 56.79            | 1090. | 134.     |
| Daylight | 85/ 5/ 14 | 158.92  | 0.00 | 12.75 | 0.00 | 0.85    | 171.68       | 172.53           | 2330. | 219.     |
| Daylight | 85/ 5/ 15 | 150.52  | 0.00 | 12.08 | 0.00 | 0.80    | 162.60       | 163.40           | 2360. | 275.     |
| No event | 85/ 5/ 16 |         |      |       |      |         |              |                  |       |          |
| Daylight | 85/ 5/ 17 | 131.68  | 0.00 | 10.57 | 0.00 | 0.70    | 142.24       | 142.95           | 2270. | 191.     |
| Daylight | 85/ 5/ 18 | 3.91    | 0.00 | 0.31  | 0.00 | 0.02    | 4.23         | 4.26             | 560.  | 36.      |
| Daylight | 85/ 5/ 19 | 33.08   | 0.00 | 2.66  | 0.00 | 0.15    | 35.73        | 35.88            | 880.  | 61.      |
| Daylight | 85/ 5/ 20 | 42.59   | 0.00 | 3.42  | 0.00 | 0.19    | 46.00        | 46.20            | 1030. | 96.      |
| Daylight | 85/ 5/ 21 | 18.88   | 0.00 | 1.51  | 0.00 | 0.19    | 20.59        | 20.59            | 1090. | 107.     |
| Daylight | 85/ 5/ 22 | 1.34    | 0.00 | 0.11  | 0.00 | 0.00    | 1.45         | 1.45             | 520.  | 34.      |
| Daylight | 85/ 5/ 23 | 0.00    | 0.00 | 0.00  | 0.00 | 0.00    | 0.00         | 0.00             | 320.  | 55.      |
| Daylight | 85/ 5/ 24 | 0.00    | 0.00 | 0.00  | 0.00 | 0.00    | 0.00         | 0.00             | 480.  | 59.      |
| Daylight | 85/ 5/ 25 | 33.28   | 0.00 | 2.67  | 0.00 | 0.15    | 35.95        | 36.10            | 1210. | 67.      |
| Daylight | 85/ 5/ 26 | 28.52   | 0.00 | 2.29  | 0.00 | 0.13    | 30.81        | 30.94            | 1210. | 79.      |
| No event | 85/ 5/ 27 |         |      |       |      |         |              |                  |       |          |
| Daylight | 85/ 5/ 28 | 15.96   | 0.00 | 1.28  | 0.00 | 0.08    | 17.24        | 17.33            | 1200. | 80.      |
| No event | 85/ 5/ 29 |         |      |       |      |         |              |                  |       |          |
| Daylight | 85/ 5/ 30 | 15.05   | 0.00 | 1.21  | 0.00 | 0.08    | 16.26        | 16.34            | 1820. | 153.     |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                        |               |            |              |            |             |               |               |       |      |
|------------------------|---------------|------------|--------------|------------|-------------|---------------|---------------|-------|------|
| Daylight 85/ 5/31      | 8.15          | 0.00       | 0.66         | 0.00       | 0.04        | 8.80          | 0.84          | 1940. | 198. |
| <b>Month subtotal:</b> | <b>1716.5</b> | <b>0.0</b> | <b>137.8</b> | <b>0.0</b> | <b>12.7</b> | <b>1854.3</b> | <b>1867.0</b> |       |      |

| Comment                | YR/MO/DY | Flow       |            |            |             |               | Total Salmon | Salmon + Steelhd | Ampl  | RampRate |
|------------------------|----------|------------|------------|------------|-------------|---------------|--------------|------------------|-------|----------|
|                        |          | Chinook    | Pink       | Chum       | Coho        | Steelhd       |              |                  |       |          |
|                        |          | 0.00       | 0.00       | 0.00       | 0.15        | 18.79         | 0.15         | 19.14            | 3280. | 299.     |
| 85/ 7/15               | 0.00     | 0.00       | 0.00       | 0.43       | 53.54       | 0.43          | 53.97        | 4040.            | 331.  |          |
| 85/ 7/16               | 0.00     | 0.00       | 0.00       | 0.41       | 50.82       | 0.41          | 51.23        | 3080.            | 274.  |          |
| 85/ 7/17               | 0.00     | 0.00       | 0.00       | 0.07       | 8.94        | 0.07          | 9.01         | 1070.            | 11.   |          |
| 85/ 7/18               | 0.00     | 0.00       | 0.00       | 0.95       | 118.49      | 0.95          | 119.45       | 3740.            | 152.  |          |
| 85/ 7/19               | 0.00     | 0.00       | 0.00       | 0.71       | 87.51       | 0.71          | 88.22        | 1850.            | 233.  |          |
| 85/ 7/20               | 0.00     | 0.00       | 0.00       | 0.00       | 0.00        | 0.00          | 0.00         | 410.             | 35.   |          |
| 85/ 7/21               | 0.00     | 0.00       | 0.00       | 1.98       | 245.39      | 1.98          | 247.37       | 4420.            | 519.  |          |
| 85/ 7/22               | 0.00     | 0.00       | 0.00       | 2.07       | 256.65      | 2.07          | 258.72       | 4210.            | 432.  |          |
| 85/ 7/23               | 0.00     | 0.00       | 0.00       | 0.18       | 22.35       | 0.18          | 22.53        | 1070.            | 182.  |          |
| 85/ 7/24               | 0.00     | 0.00       | 0.00       | 0.19       | 23.29       | 0.19          | 23.48        | 1040.            | 126.  |          |
| 85/ 7/25               | 0.00     | 0.00       | 0.00       | 0.08       | 9.41        | 0.08          | 9.49         | 700.             | 85.   |          |
| 85/ 7/26               | 0.00     | 0.00       | 0.00       | 0.06       | 7.14        | 0.06          | 7.19         | 640.             | 78.   |          |
| 85/ 7/27               | 0.00     | 0.00       | 0.00       | 1.22       | 151.16      | 1.22          | 152.38       | 2480.            | 304.  |          |
| 85/ 7/28               | 0.00     | 0.00       | 0.00       | 1.37       | 169.63      | 1.37          | 171.00       | 2530.            | 295.  |          |
| 85/ 7/29               | 0.00     | 0.00       | 0.00       | 3.05       | 377.53      | 3.05          | 380.57       | 3730.            | 398.  |          |
| 85/ 7/30               | 0.00     | 0.00       | 0.00       | 4.26       | 528.44      | 4.26          | 532.71       | 4460.            | 421.  |          |
| <b>Month subtotal:</b> |          | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> | <b>17.2</b> | <b>2129.3</b> | <b>17.2</b>  | <b>2146.5</b>    |       |          |

| Comment                | YR/MO/DY | Flow       |            |            |             |               | Total Salmon | Salmon + Steelhd | Ampl  | RampRate |
|------------------------|----------|------------|------------|------------|-------------|---------------|--------------|------------------|-------|----------|
|                        |          | Chinook    | Pink       | Chum       | Coho        | Steelhd       |              |                  |       |          |
|                        |          | 0.00       | 0.00       | 0.00       | 0.29        | 36.00         | 0.29         | 36.29            | 1010. | 105.     |
| 85/ 8/ 1               | 0.00     | 0.00       | 0.00       | 1.00       | 124.31      | 1.00          | 125.31       | 2100.            | 246.  |          |
| 85/ 8/ 2               | 0.00     | 0.00       | 0.00       | 3.86       | 478.18      | 3.86          | 482.03       | 4020.            | 498.  |          |
| 85/ 8/ 3               | 0.00     | 0.00       | 0.00       | 4.45       | 552.13      | 4.45          | 556.59       | 4420.            | 369.  |          |
| 85/ 8/ 4               | 0.00     | 0.00       | 0.00       | 3.89       | 481.87      | 3.89          | 485.76       | 4040.            | 247.  |          |
| 85/ 8/ 5               | 0.00     | 0.00       | 0.00       | 1.25       | 155.64      | 1.25          | 156.90       | 2270.            | 260.  |          |
| 85/ 8/ 6               | 0.00     | 0.00       | 0.00       | 1.14       | 140.90      | 1.14          | 142.03       | 2190.            | 220.  |          |
| 85/ 8/ 7               | 0.00     | 0.00       | 0.00       | 3.81       | 472.64      | 3.81          | 476.45       | 3990.            | 252.  |          |
| 85/ 8/ 8               | 0.00     | 0.00       | 0.00       | 3.99       | 494.82      | 3.99          | 498.81       | 4110.            | 498.  |          |
| 85/ 8/ 9               | 0.00     | 0.00       | 0.00       | 5.84       | 724.09      | 5.84          | 729.92       | 5350.            | 240.  |          |
| <b>Month subtotal:</b> |          | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> | <b>17.2</b> | <b>2129.3</b> | <b>17.2</b>  | <b>2146.5</b>    |       |          |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |      |      |      |        |        |        |        |       |     |
|-----------------|----------|------|------|------|--------|--------|--------|--------|-------|-----|
| 85/ 8/11        | 0.00     | 0.00 | 0.00 | 4.12 | 511.46 | 4.12   | 515.58 | 4200.  | 265.  |     |
| 85/ 8/12        | 0.00     | 0.00 | 0.00 | 1.25 | 155.64 | 1.25   | 156.90 | 2270.  | 167.  |     |
| 85/ 8/13        | 0.00     | 0.00 | 0.00 | 3.87 | 480.02 | 3.87   | 483.90 | 4030.  | 314.  |     |
| 85/ 8/14        | 0.00     | 0.00 | 0.00 | 3.84 | 476.33 | 3.84   | 480.17 | 4010.  | 352.  |     |
| 85/ 8/15        | 0.00     | 0.00 | 0.00 | 3.99 | 494.82 | 3.99   | 498.81 | 4810.  | 244.  |     |
| 85/ 8/16        | 0.00     | 0.00 | 0.00 | 0.96 | 118.78 | 0.96   | 119.74 | 2070.  | 247.  |     |
| 85/ 8/17        | 0.00     | 0.00 | 0.00 | 3.75 | 465.24 | 3.75   | 469.02 | 3950.  | 474.  |     |
| 85/ 8/18        | 0.00     | 0.00 | 0.00 | 3.93 | 487.42 | 3.93   | 491.35 | 4070.  | 252.  |     |
| 85/ 8/19        | 0.00     | 0.00 | 0.00 | 1.06 | 131.68 | 1.06   | 132.74 | 2140.  | 190.  |     |
| 85/ 8/20        | 0.00     | 0.00 | 0.00 | 0.81 | 100.94 | 0.81   | 101.75 | 1930.  | 129.  |     |
| 85/ 8/21        | 0.00     | 0.00 | 0.00 | 0.15 | 19.06  | 0.15   | 19.21  | 770.   | 58.   |     |
| 85/ 8/22        | 0.00     | 0.00 | 0.00 | 0.54 | 67.76  | 0.54   | 68.31  | 1460.  | 136.  |     |
| 85/ 8/23        | 0.00     | 0.00 | 0.00 | 0.56 | 69.88  | 0.56   | 70.44  | 1490.  | 123.  |     |
| 85/ 8/24        | 0.00     | 0.00 | 0.00 | 0.21 | 25.41  | 0.21   | 25.62  | 860.   | 47.   |     |
| 85/ 8/25        | 0.00     | 0.00 | 0.00 | 0.22 | 27.83  | 0.22   | 27.75  | 890.   | 75.   |     |
| 85/ 8/26        | 0.00     | 0.00 | 0.00 | 0.65 | 81.18  | 0.65   | 81.83  | 1650.  | 188.  |     |
| 85/ 8/27        | 0.00     | 0.00 | 0.00 | 0.00 | 0.00   | 0.00   | 0.00   | 190.   | 22.   |     |
| No event        | 85/ 8/28 |      |      |      |        |        |        |        |       |     |
| No event        | 85/ 8/29 |      |      |      |        |        |        |        |       |     |
|                 | 85/ 8/30 | 0.00 | 0.00 | 0.00 | 0.15   | 19.06  | 0.15   | 19.21  | 770.  | 47. |
|                 | 85/ 8/31 | 0.00 | 0.00 | 0.00 | 0.56   | 69.88  | 0.56   | 70.44  | 1490. | 88. |
| Month subtotal: |          | 0.0  | 0.0  | 0.0  | 60.1   | 7462.7 | 60.1   | 7522.9 |       |     |

| Comment  | Flow     |         |      |      |      |         | Total | Salmon + Steelhd | Ampl  | RampRate |
|----------|----------|---------|------|------|------|---------|-------|------------------|-------|----------|
|          | YR/MO/DY | Chinook | Pink | Chum | Coho | Steelhd |       |                  |       |          |
|          | 85/ 9/ 1 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00  | 0.00             | 370.  | 37.      |
|          | 85/ 9/ 2 | 0.00    | 0.00 | 0.00 | 0.05 | 5.94    | 0.05  | 5.99             | 590.  | 42.      |
|          | 85/ 9/ 3 | 0.00    | 0.00 | 0.00 | 0.89 | 110.62  | 0.89  | 111.51           | 2090. | 172.     |
|          | 85/ 9/ 4 | 0.00    | 0.00 | 0.00 | 0.53 | 65.78   | 0.53  | 66.31            | 1570. | 104.     |
|          | 85/ 9/ 5 | 0.00    | 0.00 | 0.00 | 0.13 | 16.58   | 0.13  | 16.71            | 780.  | 51.      |
| No event | 85/ 9/ 6 |         |      |      |      |         |       |                  |       |          |
|          | 85/ 9/ 7 | 0.00    | 0.00 | 0.00 | 1.12 | 139.04  | 1.12  | 140.17           | 2400. | 214.     |
|          | 85/ 9/ 8 | 0.00    | 0.00 | 0.00 | 0.28 | 35.09   | 0.28  | 35.37            | 1170. | 76.      |
|          | 85/ 9/ 9 | 0.00    | 0.00 | 0.00 | 0.08 | 10.52   | 0.08  | 10.60            | 710.  | 86.      |
| No event | 85/ 9/10 |         |      |      |      |         |       |                  |       |          |
|          | 85/ 9/11 | 0.00    | 0.00 | 0.00 | 0.44 | 54.65   | 0.44  | 55.09            | 1700. | 194.     |
|          | 85/ 9/12 | 0.00    | 0.00 | 0.00 | 0.49 | 61.00   | 0.49  | 61.49            | 1910. | 160.     |
|          | 85/ 9/13 | 0.00    | 0.00 | 0.00 | 0.98 | 121.41  | 0.98  | 122.38           | 2560. | 189.     |
|          | 85/ 9/14 | 0.00    | 0.00 | 0.00 | 0.12 | 15.48   | 0.12  | 15.61            | 900.  | 106.     |
|          | 85/ 9/15 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00  | 0.00             | 270.  | 31.      |
|          | 85/ 9/16 | 0.00    | 0.00 | 0.00 | 0.53 | 66.39   | 0.53  | 66.93            | 2170. | 154.     |
|          | 85/ 9/17 | 0.00    | 0.00 | 0.00 | 0.38 | 46.54   | 0.38  | 46.92            | 1960. | 93.      |
|          | 85/ 9/18 | 0.00    | 0.00 | 0.00 | 0.49 | 60.63   | 0.49  | 61.12            | 2210. | 170.     |
|          | 85/ 9/19 | 0.00    | 0.00 | 0.00 | 0.06 | 7.38    | 0.06  | 7.44             | 770.  | 92.      |
|          | 85/ 9/20 | 0.00    | 0.00 | 0.00 | 0.32 | 40.19   | 0.32  | 40.51            | 2040. | 174.     |
|          | 85/ 9/21 | 0.00    | 0.00 | 0.00 | 0.23 | 28.92   | 0.23  | 29.15            | 1770. | 168.     |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |      |      |      |      |       |      |       |       |      |
|-----------------|------|------|------|------|-------|------|-------|-------|------|
| 85/ 9/22        | 0.00 | 0.00 | 0.00 | 0.02 | 2.66  | 0.02 | 2.68  | 630.  | 77.  |
| 85/ 9/23        | 0.00 | 0.00 | 0.00 | 0.12 | 27.80 | 0.22 | 28.02 | 2010. | 171. |
| 85/ 9/24        | 0.00 | 0.00 | 0.00 | 0.12 | 14.82 | 0.12 | 14.94 | 1430. | 90.  |
| 85/ 9/25        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 490.  | 41.  |
| 85/ 9/26        | 0.00 | 0.00 | 0.00 | 0.27 | 34.32 | 0.27 | 34.60 | 2580. | 98.  |
| 85/ 9/27        | 0.00 | 0.00 | 0.00 | 0.00 | 11.75 | 0.09 | 11.84 | 1790. | 86.  |
| 85/ 9/28        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 450.  | 54.  |
| 85/ 9/29        | 0.00 | 0.00 | 0.00 | 0.02 | 3.19  | 0.02 | 3.21  | 1200. | 137. |
| Month subtotal: | 0.0  | 0.0  | 0.0  | 7.9  | 980.7 | 7.9  | 988.6 |       |      |

\*\*\*\*\*  
Year total: 6023.6 0.0 547.7 85.0 10656.6 7356.6 18113.2

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
"Daylight" = event endtime was after sunset; no comment indicates regular night-time event.

SUMMARY OF DAY/NIGHT EVENTS FOR SPRING SALMON ONLY  
FOR THE FOLLOWING FLOW REGIME YEARS:

YEAR

-----  
85

Daylight events

Number of events

60

Total chinook stranded

3564.08

Total pinks stranded

0.

Total chums stranded

446.57

Total cohos stranded

0.

Total salmon stranded (all species)

6010.68

Nighttime events

Number of events

47

Total chinook stranded

1259.37

Total pinks stranded

0.

Total chums stranded

101.09

Total cohos stranded

0.

Total salmon stranded (all species)

1360.71

**Potholes Stranding and Trapping - Daily Detail with Subtotals**  
\*\*\*\*\*  
**(results of applying base year data to the indicated flow regime)**

First line shows STRANDED fish  
Second line shows TRAPPED fish

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| 85/ 2/25         |    |         |       |      |       |       |         |         |       |        |
|------------------|----|---------|-------|------|-------|-------|---------|---------|-------|--------|
| No event         |    |         |       |      |       |       |         |         |       |        |
| 85/ 2/26         | 64 | 1.30    | 7.E-3 | 0.00 | 4.E-3 | 0.02  | 1.31    | 1.33    | 7510. | \$240. |
|                  |    | 138.97  | 0.00  | 0.00 | 0.43  | 1.71  | 140.41  | 142.12  |       |        |
| 85/ 2/27         | 58 | 0.83    | 6.E-3 | 0.00 | 3.E-3 | 1.E-2 | 0.83    | 0.85    | 7470. | \$ 90. |
|                  |    | 134.21  | 0.98  | 0.00 | 0.42  | 1.67  | 137.60  | 139.27  |       |        |
| 85/ 2/28         | 56 | 0.86    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.87    | 0.88    | 7550. | \$540. |
|                  |    | 141.25  | 1.01  | 0.00 | 0.43  | 1.73  | 142.69  | 144.43  |       |        |
| Month subtotals: |    | 283.89  | 2.03  | 0.00 | 0.87  | 3.49  | 286.79  | 290.28  |       |        |
|                  |    | 6311.19 | 45.17 | 0.00 | 19.34 | 77.44 | 6375.72 | 6433.16 |       |        |

| Flow<br>YR/MO/DY | #Discard | Total   |       |      |       |       |         | Salmon + |         |         |
|------------------|----------|---------|-------|------|-------|-------|---------|----------|---------|---------|
|                  |          | Chinook | Pink  | Chum | Coho  | Sthd  | Salmon  | Steelhd  | Bigflow | Endflow |
| 85/ 3/ 1         | 54       | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90    | 0.91     | 6970.   | \$710.  |
|                  |          | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62   | 84.64    |         |         |
| 85/ 3/ 2         | 174      | 43.09   | 0.31  | 0.00 | 0.13  | 0.53  | 43.53   | 44.06    | 6930.   | 4230.   |
|                  |          | 762.67  | 5.46  | 0.00 | 2.34  | 9.34  | 770.47  | 779.82   |         |         |
| 85/ 3/ 3         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00     | 5030.   | 5030.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00     |         |         |
| 85/ 3/ 4         | 121      | 34.52   | 0.25  | 0.00 | 0.11  | 0.42  | 34.88   | 35.30    | 6230.   | 4790.   |
|                  |          | 672.24  | 4.81  | 0.00 | 2.06  | 8.25  | 679.12  | 687.36   |         |         |
| 85/ 3/ 5         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00     | 8510.   | 7140.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00     |         |         |
| 85/ 3/ 6         | 94       | 9.22    | 0.07  | 0.00 | 0.03  | 0.11  | 9.32    | 9.43     | 8150.   | 4910.   |
|                  |          | 637.72  | 4.36  | 0.00 | 1.96  | 7.82  | 644.24  | 652.06   |         |         |
| 85/ 3/ 7         | No event |         |       |      |       |       |         |          |         |         |
| 85/ 3/ 8         | 218      | 70.51   | 0.50  | 0.00 | 0.22  | 0.87  | 71.23   | 72.09    | 7870.   | 3560.   |
|                  |          | 1208.97 | 8.65  | 0.00 | 3.71  | 14.83 | 1221.33 | 1236.16  |         |         |
| 85/ 3/ 9         | 218      | 70.51   | 0.50  | 0.00 | 0.22  | 0.87  | 71.23   | 72.09    | 7910.   | 3540.   |
|                  |          | 1208.97 | 8.65  | 0.00 | 3.71  | 14.83 | 1221.33 | 1236.16  |         |         |
| 85/ 3/10         | 137      | 54.14   | 0.39  | 0.00 | 0.17  | 0.66  | 54.69   | 55.35    | 5360.   | 3860.   |
|                  |          | 862.56  | 6.17  | 0.00 | 2.65  | 10.58 | 871.58  | 881.96   |         |         |
| 85/ 3/11         | 133      | 36.36   | 0.26  | 0.00 | 0.11  | 0.45  | 36.73   | 37.18    | 7990.   | 4550.   |
|                  |          | 691.85  | 4.93  | 0.00 | 2.12  | 8.49  | 698.92  | 707.41   |         |         |
| 85/ 3/12         | 182      | 43.48   | 0.31  | 0.00 | 0.13  | 0.53  | 43.93   | 44.46    | 7210.   | 4150.   |
|                  |          | 872.57  | 6.24  | 0.00 | 2.68  | 10.71 | 881.49  | 892.20   |         |         |
| 85/ 3/13         | 226      | 74.84   | 0.34  | 0.00 | 0.23  | 0.92  | 75.61   | 76.52    | 6020.   | 3260.   |
|                  |          | 1343.09 | 9.61  | 0.00 | 4.12  | 16.48 | 1356.83 | 1373.31  |         |         |
| 85/ 3/14         | 96       | 38.48   | 0.28  | 0.00 | 0.12  | 0.47  | 38.87   | 39.34    | 4580.   | 3210.   |
|                  |          | 652.55  | 4.47  | 0.00 | 2.00  | 8.01  | 659.22  | 667.23   |         |         |
| 85/ 3/15         | 223      | 70.51   | 0.50  | 0.00 | 0.22  | 0.87  | 71.23   | 72.09    | 5950.   | 3490.   |
|                  |          | 1208.97 | 8.65  | 0.00 | 3.71  | 14.83 | 1221.33 | 1236.16  |         |         |
| 85/ 3/16         | 116      | 32.43   | 0.23  | 0.00 | 0.10  | 0.40  | 32.76   | 33.16    | 6020.   | 4850.   |
|                  |          | 658.42  | 4.71  | 0.00 | 2.02  | 8.08  | 665.15  | 673.23   |         |         |
| 85/ 3/17         | 148      | 70.95   | 0.51  | 0.00 | 0.22  | 0.87  | 71.67   | 72.54    | 4940.   | 3370.   |
|                  |          | 918.88  | 6.58  | 0.00 | 2.82  | 11.27 | 928.28  | 939.55   |         |         |
| 85/ 3/18         | 104      | 39.59   | 0.28  | 0.00 | 0.12  | 0.49  | 40.00   | 40.48    | 4940.   | 4150.   |
|                  |          | 448.36  | 3.21  | 0.00 | 1.38  | 5.50  | 452.94  | 458.44   |         |         |
| 85/ 3/19         | 2        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00     | 4940.   | 4940.   |
|                  |          | 46.85   | 0.34  | 0.00 | 0.14  | 0.57  | 47.33   | 47.90    |         |         |

First line shows STRANDED fish  
Second line shows TRAPPED fish

|                  |     |          |        |      |       |        |          |          |       |       |
|------------------|-----|----------|--------|------|-------|--------|----------|----------|-------|-------|
| 85/ 3/20         | 156 | 38.48    | 0.28   | 0.00 | 0.12  | 0.47   | 38.88    | 39.35    | 6790. | 4370. |
|                  |     | 729.02   | 5.22   | 0.00 | 2.24  | 8.94   | 736.47   | 745.42   |       |       |
| 85/ 3/21         | 166 | 44.71    | 0.32   | 0.00 | 0.14  | 0.55   | 45.16    | 45.71    | 6970. | 4070. |
|                  |     | 891.64   | 6.38   | 0.00 | 2.73  | 10.94  | 900.76   | 911.70   |       |       |
| 85/ 3/22         | 225 | 74.84    | 0.54   | 0.00 | 0.23  | 0.92   | 75.61    | 76.52    | 7590. | 3440. |
|                  |     | 1343.07  | 9.61   | 0.00 | 4.12  | 16.48  | 1356.83  | 1373.31  |       |       |
| 85/ 3/23         | 116 | 32.43    | 0.23   | 0.00 | 0.10  | 0.40   | 32.76    | 33.16    | 7710. | 4680. |
|                  |     | 658.42   | 4.71   | 0.00 | 2.02  | 8.08   | 645.13   | 673.23   |       |       |
| 85/ 3/24         | 0   | 0.00     | 0.00   | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     | 7630. | 5920. |
|                  |     | 0.00     | 0.00   | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     |       |       |
| 85/ 3/25         | 166 | 44.71    | 0.32   | 0.00 | 0.14  | 0.55   | 45.16    | 45.71    | 7870. | 4070. |
|                  |     | 891.64   | 6.38   | 0.00 | 2.73  | 10.94  | 900.76   | 911.70   |       |       |
| 85/ 3/26         | 123 | 35.66    | 0.25   | 0.00 | 0.11  | 0.44   | 36.03    | 36.47    | 7630. | 4670. |
|                  |     | 672.41   | 4.81   | 0.00 | 2.06  | 8.25   | 679.28   | 687.53   |       |       |
| 85/ 3/27         | 130 | 36.36    | 0.26   | 0.00 | 0.11  | 0.45   | 36.73    | 37.18    | 7550. | 4580. |
|                  |     | 690.54   | 4.94   | 0.00 | 2.12  | 8.47   | 697.61   | 708.08   |       |       |
| 85/ 3/28         | 0   | 0.00     | 0.00   | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     | 7350. | 7350. |
|                  |     | 0.00     | 0.00   | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     |       |       |
| 85/ 3/29         | 0   | 0.00     | 0.00   | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     | 7630. | 7280. |
|                  |     | 0.00     | 0.00   | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     |       |       |
| 85/ 3/30         | 204 | 64.64    | 0.46   | 0.00 | 0.20  | 0.77   | 65.30    | 66.09    | 7830. | 3740. |
|                  |     | 1032.28  | 7.39   | 0.00 | 3.17  | 12.67  | 1042.83  | 1055.50  |       |       |
| 85/ 3/31         | 130 | 48.69    | 0.35   | 0.00 | 0.15  | 0.60   | 49.19    | 49.78    | 5270. | 3960. |
|                  |     | 853.83   | 6.11   | 0.00 | 2.62  | 10.48  | 862.56   | 873.03   |       |       |
| <hr/>            |     |          |        |      |       |        |          |          |       |       |
| Month subtotals: |     | 1110.02  | 7.94   | 0.00 | 3.40  | 13.62  | 1121.37  | 1134.99  |       |       |
|                  |     | 20040.27 | 143.44 | 0.00 | 61.47 | 245.89 | 20245.21 | 20491.10 |       |       |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

|                         |     |                 |              |             |              |               |                 |                 |        |       |
|-------------------------|-----|-----------------|--------------|-------------|--------------|---------------|-----------------|-----------------|--------|-------|
| 85/ 4/12                | 0   | 0.00            | 0.00         | 0.00        | 0.00         | 0.00          | 0.00            | 0.00            | 9070.  | 6090. |
|                         |     | 0.00            | 0.00         | 0.00        | 0.00         | 0.00          | 0.00            | 0.00            |        |       |
| 85/ 4/13                | 0   | 0.00            | 0.00         | 0.00        | 0.00         | 0.00          | 0.00            | 0.00            | 8350.  | 5850. |
|                         |     | 0.00            | 0.00         | 0.00        | 0.00         | 0.00          | 0.00            | 0.00            |        |       |
| 85/ 4/14                |     |                 |              |             |              |               |                 |                 |        |       |
| No event                |     |                 |              |             |              |               |                 |                 |        |       |
| 85/ 4/15                |     |                 |              |             |              |               |                 |                 |        |       |
| No event                |     |                 |              |             |              |               |                 |                 |        |       |
| 85/ 4/16                | 58  | 0.87            | 6.E-3        | 0.00        | 3.E-3        | 0.01          | 0.90            | 0.91            | 6160.  | 5420. |
|                         |     | 146.29          | 1.05         | 0.00        | 0.45         | 1.79          | 147.79          | 147.59          |        |       |
| 85/ 4/17                | 63  | 32.47           | 0.23         | 0.00        | 0.10         | 0.40          | 32.80           | 33.20           | 5000.  | 4490. |
|                         |     | 267.64          | 1.72         | 0.00        | 0.82         | 3.29          | 270.37          | 273.65          |        |       |
| 85/ 4/18                | 186 | 44.71           | 0.32         | 0.00        | 0.14         | 0.55          | 45.16           | 45.71           | 6440.  | 4090. |
|                         |     | 891.54          | 6.38         | 0.00        | 2.73         | 10.94         | 900.76          | 911.70          |        |       |
| 85/ 4/19                | 98  | 36.13           | 0.24         | 0.00        | 0.11         | 0.44          | 36.50           | 36.94           | 5570.  | 4400. |
|                         |     | 609.08          | 4.34         | 0.00        | 1.87         | 7.47          | 615.30          | 622.78          |        |       |
| 85/ 4/20                | 26  | 21.16           | 0.15         | 0.00        | 0.04         | 0.26          | 21.37           | 21.63           | 4150.  | 3660. |
|                         |     | 220.10          | 1.58         | 0.00        | 0.68         | 2.70          | 222.35          | 225.05          |        |       |
| 85/ 4/21                |     |                 |              |             |              |               |                 |                 |        |       |
| No event                |     |                 |              |             |              |               |                 |                 |        |       |
| 85/ 4/22                | 219 | 70.51           | 0.50         | 0.00        | 0.22         | 0.87          | 71.23           | 72.09           | 5880.  | 3510. |
|                         |     | 1200.97         | 8.65         | 0.00        | 3.71         | 14.83         | 1221.33         | 1236.16         |        |       |
| 85/ 4/23                | 150 | 70.95           | 0.51         | 0.00        | 0.22         | 0.87          | 71.67           | 72.54           | 5070.  | 2960. |
|                         |     | 921.72          | 6.60         | 0.00        | 2.83         | 11.31         | 931.14          | 942.45          |        |       |
| 85/ 4/24                | 68  | 34.78           | 0.25         | 0.00        | 0.11         | 0.43          | 35.13           | 35.56           | 5330.  | 4640. |
|                         |     | 536.38          | 3.84         | 0.00        | 1.84         | 6.58          | 541.86          | 548.45          |        |       |
| 85/ 4/25                | 110 | 42.41           | 0.30         | 0.00        | 0.13         | 0.52          | 42.85           | 43.37           | 4850.  | 3370. |
|                         |     | 684.67          | 4.90         | 0.00        | 2.10         | 8.40          | 691.67          | 700.08          |        |       |
| 85/ 4/26                | 170 | 43.09           | 0.31         | 0.00        | 0.13         | 0.53          | 43.53           | 44.06           | 6230.  | 4290. |
|                         |     | 758.89          | 5.43         | 0.00        | 2.33         | 9.31          | 766.65          | 775.97          |        |       |
| 85/ 4/27                | 0   | 0.00            | 0.00         | 0.00        | 0.00         | 0.00          | 0.00            | 0.00            | 10700. | 7370. |
|                         |     | 0.00            | 0.00         | 0.00        | 0.00         | 0.00          | 0.00            | 0.00            |        |       |
| 85/ 4/28                | 126 | 35.66           | 0.25         | 0.00        | 0.11         | 0.44          | 36.03           | 36.47           | 6720.  | 4440. |
|                         |     | 682.67          | 4.89         | 0.00        | 2.09         | 8.38          | 689.66          | 698.03          |        |       |
| 85/ 4/29                | 51  | 7.43            | 0.05         | 0.00        | 0.02         | 0.09          | 7.50            | 7.59            | 4670.  | 4260. |
|                         |     | 90.26           | 0.65         | 0.00        | 0.28         | 1.11          | 91.18           | 92.29           |        |       |
| 85/ 4/30                |     |                 |              |             |              |               |                 |                 |        |       |
| No event                |     |                 |              |             |              |               |                 |                 |        |       |
| <b>Month subtotals:</b> |     | <b>731.98</b>   | <b>5.24</b>  | <b>0.00</b> | <b>2.25</b>  | <b>8.98</b>   | <b>739.46</b>   | <b>749.44</b>   |        |       |
|                         |     | <b>12010.03</b> | <b>86.02</b> | <b>0.00</b> | <b>36.86</b> | <b>147.46</b> | <b>12140.92</b> | <b>12288.38</b> |        |       |

| FLOW     | YR/MO/DY | NDisconn | Chinook | Pink | Chum | Coho | Sthd   | Total Salmon | Salmon + Steelhd | Begflow | Endflow |
|----------|----------|----------|---------|------|------|------|--------|--------------|------------------|---------|---------|
|          |          |          |         |      |      |      |        |              |                  |         |         |
| 85/ 5/ 1 | 48       | 7.20     | 0.05    | 0.00 | 0.02 | 0.09 | 7.27   | 7.36         | 4760.            | 4290.   |         |
|          |          | 83.79    | 0.60    | 0.00 | 0.26 | 1.03 | 84.64  | 85.67        |                  |         |         |
| 85/ 5/ 2 | 30       | 7.29     | 0.05    | 0.00 | 0.02 | 0.09 | 7.36   | 7.45         | 5300.            | 4910.   |         |
|          |          | 452.52   | 3.24    | 0.00 | 1.39 | 5.55 | 457.15 | 462.70       |                  |         |         |
| 85/ 5/ 3 | 124      | 38.42    | 0.28    | 0.00 | 0.12 | 0.47 | 38.82  | 39.29        | 5600.            | 4180.   |         |
|          |          | 648.66   | 4.64    | 0.00 | 1.99 | 7.76 | 653.27 | 663.25       |                  |         |         |
| 85/ 5/ 4 | 143      | 47.37    | 0.34    | 0.00 | 0.14 | 0.58 | 47.85  | 48.43        | 5540.            | 3810.   |         |
|          |          | 767.96   | 5.50    | 0.00 | 2.36 | 9.42 | 775.81 | 785.23       |                  |         |         |

First line shows STRANDED fish  
Second line shows TRAPPED fish

| 85/ 5/ 5  |     |        |       |      |       |       |        |        |        |        |  |
|-----------|-----|--------|-------|------|-------|-------|--------|--------|--------|--------|--|
| No event  |     |        |       |      |       |       |        |        |        |        |  |
| 85/ 5/ 6  | 154 | 56.11  | 0.40  | 0.00 | 0.17  | 0.69  | 56.67  | 57.38  | 5180.  | 3510.  |  |
|           |     | 836.33 | 6.13  | 0.00 | 2.63  | 10.51 | 865.08 | 875.59 |        |        |  |
| 85/ 5/ 7  | 14  | 7.97   | 0.06  | 0.00 | 0.02  | 0.10  | 8.05   | 8.15   | 3590.  | 3420.  |  |
|           |     | 176.34 | 1.26  | 0.00 | 0.54  | 2.17  | 178.35 | 180.51 |        |        |  |
| 85/ 5/ 8  | 31  | 23.81  | 0.17  | 0.00 | 0.07  | 0.29  | 24.05  | 24.35  | 4230.  | 3440.  |  |
|           |     | 435.32 | 3.12  | 0.00 | 1.34  | 5.34  | 439.77 | 445.11 |        |        |  |
| 85/ 5/ 9  | 40  | 21.66  | 0.16  | 0.00 | 0.07  | 0.27  | 21.88  | 22.15  | 4070.  | 3370.  |  |
|           |     | 324.48 | 2.32  | 0.00 | 0.00  | 3.98  | 327.80 | 331.78 |        |        |  |
| 85/ 5/ 10 | 140 | 43.45  | 0.31  | 0.00 | 0.13  | 0.53  | 43.89  | 44.42  | 5210.  | 3690.  |  |
|           |     | 603.11 | 4.32  | 0.00 | 1.85  | 7.40  | 609.28 | 616.68 |        |        |  |
| 85/ 5/ 11 | 40  | 19.77  | 0.14  | 0.00 | 0.06  | 0.24  | 19.98  | 20.22  | 4070.  | 3230.  |  |
|           |     | 296.27 | 2.12  | 0.00 | 0.91  | 3.63  | 299.30 | 302.93 |        |        |  |
| 85/ 5/ 12 | 0   | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   | 3210.  | 3120.  |  |
|           |     | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   |        |        |  |
| 85/ 5/ 13 | 39  | 17.87  | 0.13  | 0.00 | 0.05  | 0.22  | 18.08  | 18.30  | 4090.  | 3440.  |  |
|           |     | 268.05 | 1.92  | 0.00 | 0.82  | 3.29  | 270.79 | 274.08 |        |        |  |
| 85/ 5/ 14 | 100 | 22.04  | 0.16  | 0.00 | 0.07  | 0.27  | 22.26  | 22.53  | 4640.  | 3350.  |  |
|           |     | 371.49 | 2.66  | 0.00 | 1.14  | 4.56  | 375.28 | 379.84 |        |        |  |
| 85/ 5/ 15 | 115 | 27.14  | 0.17  | 0.00 | 0.08  | 0.33  | 27.44  | 27.77  | 4910.  | 3860.  |  |
|           |     | 285.70 | 2.05  | 0.00 | 0.88  | 3.51  | 288.62 | 292.13 |        |        |  |
| 85/ 5/ 16 |     |        |       |      |       |       |        |        |        |        |  |
| No event  |     |        |       |      |       |       |        |        |        |        |  |
| 85/ 5/ 17 | 0   | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   | 9590.  | 7430.  |  |
|           |     | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   |        |        |  |
| 85/ 5/ 18 | 0   | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   | 8990.  | 7350.  |  |
|           |     | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   |        |        |  |
| 85/ 5/ 19 | 0   | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   | 7670.  | 6410.  |  |
|           |     | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   |        |        |  |
| 85/ 5/ 20 | 54  | 0.33   | 2.E-3 | 0.00 | 1.E-3 | 4.E-3 | 0.34   | 0.34   | 5880.  | 5640.  |  |
|           |     | 31.04  | 0.22  | 0.00 | 0.09  | 0.38  | 31.36  | 31.74  |        |        |  |
| 85/ 5/ 21 | 0   | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   | 7710.  | 7710.  |  |
|           |     | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   |        |        |  |
| 85/ 5/ 22 | 0   | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   | 8470.  | 8470.  |  |
|           |     | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   |        |        |  |
| 85/ 5/ 23 | 0   | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   | 10700. | 10600. |  |
|           |     | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   |        |        |  |
| 85/ 5/ 24 | 0   | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   | 9930.  | 9150.  |  |
|           |     | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   |        |        |  |
| 85/ 5/ 25 | 0   | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   | 9390.  | 8310.  |  |
|           |     | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   |        |        |  |
| 85/ 5/ 26 | 0   | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   | 7250.  | 7250.  |  |
|           |     | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   |        |        |  |
| 85/ 5/ 27 |     |        |       |      |       |       |        |        |        |        |  |
| No event  |     |        |       |      |       |       |        |        |        |        |  |
| 85/ 5/ 28 | 75  | 4.43   | 0.03  | 0.00 | 0.01  | 0.05  | 4.48   | 4.53   | 5480.  | 4550.  |  |
|           |     | 68.19  | 0.49  | 0.00 | 0.21  | 0.84  | 68.89  | 69.73  |        |        |  |
| 85/ 5/ 29 |     |        |       |      |       |       |        |        |        |        |  |
| No event  |     |        |       |      |       |       |        |        |        |        |  |
| 85/ 5/ 30 | 78  | 2.18   | 0.02  | 0.00 | 7.E-3 | 0.03  | 2.20   | 2.23   | 5210.  | 4460.  |  |
|           |     | 33.55  | 0.24  | 0.00 | 0.10  | 0.41  | 33.89  | 34.31  |        |        |  |
| 85/ 5/ 31 | 128 | 1.37   | 1.E-2 | 0.00 | 4.E-3 | 0.02  | 1.38   | 1.40   | 5420.  | 4120.  |  |
|           |     | 23.29  | 0.17  | 0.00 | 0.07  | 0.29  | 23.53  | 23.82  |        |        |  |

First line shows STRANDED fish  
Second line shows TRAILED fish

-----  
Month subtotals:      348.46      2.50      0.00      1.07      4.27      352.03      356.30  
                        5726.29      40.99      0.00      17.56      70.26      5784.85      5855.11

-----  
Year totals:      2474.4      17.7      0.0      7.6      30.4      2499.7      2530.0  
                        44095.8      315.6      0.0      135.3      541.0      44546.7      45087.7

PARAMETERS FOR THIS RUN:

04/19/87  
10:16:58

Slope categories:

0 to 5%  
> 5% to 10%  
> 10%

Substrate categories:

Less than 3 inches  
Greater than 3 inches

Location codes:

Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 85   | 1      | 201     | 531     |
| 85   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

Rank by stranding using the database column --  
TOTSTR

Daily detail report

Tables will be written for gravel bars and/or potholes as selected.

**Gravel Bar Stranding - Daily Detail with Stranding Ranking**  
 ======  
 (Results from applying base year stranding data to the indicated flow regime)

| Comment  | Flow<br>YR/MO/DY | Flow    |      |       |      |         |        | Total<br>Salmon | Salmon +<br>Steelhd | Ampl | RampRate |
|----------|------------------|---------|------|-------|------|---------|--------|-----------------|---------------------|------|----------|
|          |                  | Chinook | Pink | Chum  | Coho | Steelhd |        |                 |                     |      |          |
| Daylight | 85/ 4/23         | 356.89  | 0.00 | 28.65 | 0.00 | 1.61    | 385.54 | 387.14          | 2913.               | 257. |          |
| Daylight | 85/ 3/ 5         | 304.27  | 0.00 | 24.42 | 0.00 | 1.37    | 328.69 | 330.07          | 1920.               | 135. |          |
| Daylight | 85/ 3/22         | 237.77  | 0.00 | 19.08 | 0.00 | 1.83    | 256.85 | 258.68          | 4160.               | 455. |          |
| Daylight | 85/ 4/ 4         | 231.16  | 0.00 | 18.55 | 0.00 | 1.65    | 249.71 | 251.36          | 3140.               | 294. |          |
| Daylight | 85/ 4/ 3         | 231.16  | 0.00 | 18.55 | 0.00 | 1.65    | 249.71 | 251.36          | 3140.               | 370. |          |
| Daylight | 85/ 3/27         | 228.95  | 0.00 | 18.38 | 0.00 | 1.59    | 247.34 | 248.92          | 2800.               | 346. |          |
| Daylight | 85/ 3/ 2         | 228.83  | 0.00 | 18.37 | 0.00 | 1.59    | 247.19 | 248.78          | 2780.               | 345. |          |
| Daylight | 85/ 4/12         | 227.14  | 0.00 | 18.23 | 0.00 | 1.54    | 245.38 | 246.92          | 2520.               | 235. |          |
| Daylight | 85/ 4/27         | 226.11  | 0.00 | 18.15 | 0.00 | 1.51    | 244.25 | 245.77          | 2360.               | 162. |          |
| Daylight | 85/ 3/20         | 225.91  | 0.00 | 18.13 | 0.00 | 1.51    | 244.05 | 245.55          | 2330.               | 284. |          |
| Daylight | 85/ 3/ 3         | 205.97  | 0.00 | 16.53 | 0.00 | 1.40    | 222.50 | 223.90          | 2540.               | 251. |          |
| Daylight | 85/ 3/14         | 205.70  | 0.00 | 16.51 | 0.00 | 0.73    | 222.21 | 223.14          | 1460.               | 156. |          |
| Daylight | 85/ 3/ 4         | 198.86  | 0.00 | 15.96 | 0.00 | 1.35    | 211.82 | 216.18          | 2540.               | 246. |          |
| Daylight | 85/ 3/10         | 192.39  | 0.00 | 15.44 | 0.00 | 1.03    | 207.83 | 208.85          | 2230.               | 282. |          |
| Daylight | 85/ 3/12         | 180.05  | 0.00 | 14.45 | 0.00 | 1.64    | 194.49 | 196.14          | 3080.               | 236. |          |
| Daylight | 85/ 5/ 8         | 168.45  | 0.00 | 13.54 | 0.00 | 1.11    | 182.20 | 183.30          | 2170.               | 163. |          |
| Daylight | 85/ 5/14         | 158.92  | 0.00 | 12.75 | 0.00 | 0.85    | 171.68 | 172.53          | 2330.               | 219. |          |
| Daylight | 85/ 5/15         | 150.52  | 0.00 | 12.08 | 0.00 | 0.80    | 162.60 | 163.40          | 2360.               | 235. |          |
| Daylight | 85/ 5/17         | 131.68  | 0.00 | 10.57 | 0.00 | 0.70    | 142.24 | 142.95          | 2270.               | 191. |          |
| Daylight | 85/ 3/13         | 114.77  | 0.00 | 9.21  | 0.00 | 1.61    | 123.98 | 125.59          | 2900.               | 181. |          |
| Daylight | 85/ 5/ 9         | 112.58  | 0.00 | 9.04  | 0.00 | 0.73    | 121.62 | 122.35          | 1550.               | 183. |          |
| Daylight | 85/ 3/10         | 98.65   | 0.00 | 7.92  | 0.00 | 1.03    | 106.57 | 107.59          | 1560.               | 114. |          |
| Daylight | 85/ 4/ 1         | 96.79   | 0.00 | 7.77  | 0.00 | 1.01    | 104.56 | 105.56          | 1540.               | 105. |          |
| Daylight | 85/ 4/25         | 93.07   | 0.00 | 7.47  | 0.00 | 0.97    | 100.54 | 101.50          | 1500.               | 168. |          |
| Daylight | 85/ 4/28         | 87.55   | 0.00 | 7.03  | 0.00 | 1.38    | 94.58  | 95.96           | 1930.               | 153. |          |
| Daylight | 85/ 2/26         | 81.24   | 0.00 | 6.52  | 0.00 | 1.28    | 87.76  | 89.04           | 1980.               | 188. |          |
| Daylight | 85/ 4/11         | 81.42   | 0.00 | 6.53  | 0.00 | 0.37    | 87.96  | 88.33           | 880.                | 108. |          |
| Daylight | 85/ 3/18         | 81.42   | 0.00 | 6.53  | 0.00 | 0.37    | 87.96  | 88.33           | 880.                | 107. |          |
| Daylight | 85/ 3/17         | 68.57   | 0.00 | 5.50  | 0.00 | 1.08    | 74.07  | 75.16           | 1620.               | 136. |          |
| Daylight | 85/ 4/19         | 64.22   | 0.00 | 5.15  | 0.00 | 0.67    | 69.37  | 70.04           | 1190.               | 107. |          |
| Daylight | 85/ 3/24         | 63.67   | 0.00 | 5.11  | 0.00 | 1.01    | 68.79  | 69.79           | 1540.               | 187. |          |
| 85/ 3/ 9 | 52.61            | 0.00    | 4.22 | 0.00  | 1.82 | 56.84   | 58.65  | 4100.           | 272.                |      |          |
| 85/ 3/30 | 52.55            | 0.00    | 4.22 | 0.00  | 1.82 | 56.78   | 58.60  | 4090.           | 460.                |      |          |
| 85/ 3/ 8 | 52.51            | 0.00    | 4.21 | 0.00  | 1.81 | 56.73   | 58.54  | 4080.           | 270.                |      |          |
| Daylight | 85/ 5/13         | 52.26   | 0.00 | 4.19  | 0.00 | 0.34    | 56.46  | 56.79           | 1090.               | 134. |          |
| 85/ 3/25 | 49.72            | 0.00    | 4.01 | 0.00  | 1.73 | 53.93   | 55.66  | 3570.           | 430.                |      |          |
| 85/ 3/11 | 48.05            | 0.00    | 3.86 | 0.00  | 1.66 | 51.90   | 53.56  | 3200.           | 136.                |      |          |
| 85/ 3/ 4 | 47.84            | 0.00    | 3.84 | 0.00  | 1.65 | 51.68   | 53.34  | 3160.           | 392.                |      |          |
| 85/ 3/ 6 | 46.53            | 0.00    | 3.73 | 0.00  | 1.61 | 50.26   | 51.87  | 2900.           | 214.                |      |          |
| 85/ 3/21 | 46.48            | 0.00    | 3.73 | 0.00  | 1.60 | 50.20   | 51.81  | 2890.           | 350.                |      |          |
| 85/ 3/26 | 45.86            | 0.00    | 3.68 | 0.00  | 1.59 | 49.55   | 51.13  | 2770.           | 340.                |      |          |
| 85/ 3/23 | 45.66            | 0.00    | 3.67 | 0.00  | 1.58 | 49.33   | 50.91  | 2730.           | 334.                |      |          |
| 85/ 4/26 | 45.15            | 0.00    | 3.62 | 0.00  | 1.54 | 48.78   | 50.34  | 2630.           | 248.                |      |          |
| 85/ 4/22 | 44.90            | 0.00    | 3.60 | 0.00  | 1.55 | 48.51   | 50.06  | 2580.           | 307.                |      |          |
| 85/ 3/15 | 44.80            | 0.00    | 3.60 | 0.00  | 1.55 | 48.40   | 49.95  | 2560.           | 245.                |      |          |
| 85/ 4/13 | 44.29            | 0.00    | 3.56 | 0.00  | 1.53 | 47.85   | 49.38  | 2460.           | 140.                |      |          |
| Daylight | 85/ 4/ 8         | 44.26   | 0.00 | 3.55  | 0.00 | 0.72    | 47.81  | 48.53           | 1240.               | 123. |          |
| 85/ 4/10 | 42.97            | 0.00    | 3.41 | 0.00  | 1.47 | 45.99   | 47.46  | 2120.           | 118.                |      |          |
| Daylight | 85/ 3/20         | 42.39   | 0.00 | 3.42  | 0.00 | 0.19    | 46.00  | 46.20           | 1030.               | 96.  |          |
| 85/ 2/27 | 36.98            | 0.00    | 2.97 | 0.00  | 1.28 | 39.95   | 41.23  | 1920.           | 237.                |      |          |
| Daylight | 85/ 5/12         | 36.20   | 0.00 | 2.91  | 0.00 | 0.19    | 39.11  | 39.30           | 820.                | 87.  |          |

|          |          |       |      |      |      |       |       |       |       |      |
|----------|----------|-------|------|------|------|-------|-------|-------|-------|------|
|          | 85/ 5/ 6 | 34.88 | 0.00 | 2.80 | 0.00 | 1.20  | 37.67 | 38.88 | 2190. | 104. |
|          | 85/ 2/28 | 34.57 | 0.00 | 2.78 | 0.00 | 1.20  | 37.34 | 38.54 | 1780. | 159. |
|          | 85/ 2/22 | 34.49 | 0.00 | 2.77 | 0.00 | 1.19  | 37.26 | 38.44 | 2690. | 255. |
| Daylight | 85/ 1/25 | 33.28 | 0.00 | 2.67 | 0.00 | 0.15  | 35.95 | 36.10 | 1210. | 67.  |
| Daylight | 85/ 5/19 | 33.08 | 0.00 | 2.66 | 0.00 | 0.15  | 35.73 | 35.88 | 880.  | 61.  |
|          | 85/ 2/19 | 28.06 | 0.00 | 2.25 | 0.00 | 0.97  | 30.31 | 31.28 | 2170. | 226. |
| Daylight | 85/ 5/26 | 28.52 | 0.00 | 2.29 | 0.00 | 0.13  | 30.81 | 30.94 | 1210. | 79.  |
|          | 85/ 3/31 | 25.46 | 0.00 | 2.04 | 0.00 | 0.88  | 27.50 | 28.38 | 1410. | 170. |
|          | 85/ 1/14 | 25.23 | 0.00 | 2.02 | 0.00 | 0.87  | 27.25 | 28.12 | 4030. | 267. |
|          | 85/ 1/13 | 25.68 | 0.00 | 1.90 | 0.00 | 0.82  | 25.58 | 26.40 | 4140. | 497. |
| Daylight | 85/ 5/ 7 | 23.99 | 0.00 | 1.73 | 0.00 | 0.25  | 25.92 | 26.17 | 830.  | 71.  |
|          | 85/ 3/16 | 22.64 | 0.00 | 1.82 | 0.00 | 0.78  | 24.48 | 25.28 | 1310. | 150. |
|          | 85/ 2/12 | 21.87 | 0.00 | 1.75 | 0.00 | 0.76  | 23.63 | 24.39 | 4150. | 388. |
|          | 85/ 2/21 | 20.66 | 0.00 | 1.66 | 0.00 | 0.71  | 22.32 | 23.03 | 1520. | 183. |
|          | 85/ 4/ 5 | 20.42 | 0.00 | 1.64 | 0.00 | 0.70  | 22.06 | 22.74 | 1230. | 123. |
|          | 85/ 5/ 1 | 19.78 | 0.00 | 1.59 | 0.00 | 0.68  | 21.37 | 22.05 | 1230. | 93.  |
|          | 85/ 2/11 | 19.69 | 0.00 | 1.58 | 0.00 | 0.68  | 21.26 | 21.95 | 3960. | 375. |
|          | 85/ 5/11 | 19.09 | 0.00 | 1.53 | 0.00 | 0.66  | 20.62 | 21.20 | 1540. | 85.  |
| Daylight | 85/ 4/29 | 19.28 | 0.00 | 1.55 | 0.00 | 0.69  | 20.83 | 20.72 | 590.  | 61.  |
| Daylight | 85/ 2/ 4 | 19.13 | 0.00 | 1.53 | 0.00 | 0.20  | 20.66 | 20.86 | 1990. | 246. |
| Daylight | 85/ 5/21 | 18.88 | 0.00 | 1.51 | 0.00 | 0.17  | 20.39 | 20.59 | 1090. | 107. |
|          | 85/ 2/17 | 18.20 | 0.00 | 1.44 | 0.00 | 0.63  | 19.66 | 20.29 | 1410. | 128. |
|          | 85/ 4/ 7 | 17.70 | 0.00 | 1.44 | 0.00 | 0.62  | 19.34 | 19.76 | 1140. | 140. |
|          | 85/ 2/10 | 16.88 | 0.00 | 1.36 | 0.00 | 0.58  | 18.24 | 18.82 | 3380. | 386. |
|          | 85/ 4/ 6 | 16.78 | 0.00 | 1.35 | 0.00 | 0.58  | 18.13 | 18.71 | 1100. | 132. |
| Daylight | 85/ 5/28 | 15.94 | 0.00 | 1.28 | 0.00 | 0.09  | 17.24 | 17.33 | 1200. | 80.  |
|          | 85/ 2/23 | 15.31 | 0.00 | 1.23 | 0.00 | 0.53  | 16.54 | 17.07 | 1190. | 138. |
|          | 85/ 3/ 1 | 14.83 | 0.00 | 1.19 | 0.00 | 0.51  | 16.02 | 16.53 | 1030. | 127. |
| Daylight | 85/ 5/30 | 15.05 | 0.00 | 1.21 | 0.00 | 0.08  | 16.26 | 16.34 | 1820. | 153. |
| Daylight | 85/ 2/ 5 | 14.80 | 0.00 | 1.17 | 0.00 | 0.15  | 15.77 | 15.73 | 1410. | 146. |
| Daylight | 85/ 2/ 9 | 13.11 | 0.00 | 1.05 | 0.00 | 0.21  | 14.16 | 14.37 | 1190. | 144. |
|          | 85/ 2/ 8 | 11.60 | 0.00 | 0.93 | 0.00 | 0.40  | 12.53 | 12.54 | 2020. | 112. |
|          | 85/ 2/18 | 11.11 | 0.00 | 0.89 | 0.00 | 0.58  | 12.00 | 12.39 | 1140. | 97.  |
|          | 85/ 5/ 2 | 9.98  | 0.00 | 0.80 | 0.00 | 0.35  | 10.77 | 11.11 | 880.  | 77.  |
|          | 85/ 2/ 6 | 8.68  | 0.00 | 0.70 | 0.00 | 0.30  | 9.38  | 9.68  | 2000. | 222. |
| Daylight | 85/ 5/31 | 8.15  | 0.00 | 0.66 | 0.00 | 0.04  | 8.80  | 8.84  | 1940. | 198. |
|          | 85/ 3/ 3 | 6.15  | 0.00 | 0.49 | 0.00 | 0.21  | 6.65  | 6.86  | 720.  | 71.  |
|          | 85/ 2/ 7 | 5.47  | 0.00 | 0.44 | 0.00 | 0.19  | 5.91  | 6.10  | 1310. | 162. |
|          | 85/ 4/24 | 5.04  | 0.00 | 0.40 | 0.00 | 0.17  | 5.44  | 5.61  | 680.  | 81.  |
| Daylight | 85/ 5/18 | 3.91  | 0.00 | 0.31 | 0.00 | 0.02  | 4.23  | 4.26  | 360.  | 56.  |
| Daylight | 85/ 2/ 3 | 3.47  | 0.00 | 0.28 | 0.00 | 0.03  | 3.74  | 3.78  | 860.  | 75.  |
| Daylight | 85/ 3/19 | 2.14  | 0.00 | 0.17 | 0.00 | 1.E-2 | 2.32  | 2.32  | 510.  | 51.  |
|          | 85/ 2/ 1 | 1.73  | 0.00 | 0.14 | 0.00 | 0.06  | 1.87  | 1.93  | 3420. | 427. |
|          | 85/ 2/ 2 | 1.56  | 0.00 | 0.12 | 0.00 | 0.05  | 1.89  | 1.74  | 1310. | 129. |
| Daylight | 85/ 5/22 | 1.34  | 0.00 | 0.11 | 0.00 | 0.00  | 1.45  | 1.45  | 320.  | 34.  |
|          | 85/ 4/17 | 1.12  | 0.00 | 0.09 | 0.00 | 0.04  | 1.21  | 1.25  | 540.  | 61.  |
| Daylight | 85/ 3/28 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 210.  | 12.  |
| Daylight | 85/ 3/29 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 360.  | 24.  |
| Daylight | 85/ 4/10 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 320.  | 38.  |
| Daylight | 85/ 5/23 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 320.  | 53.  |
| Daylight | 85/ 4/16 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 350.  | 27.  |
| Daylight | 85/ 2/15 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 490.  | 42.  |
| Daylight | 85/ 4/20 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 480.  | 50.  |
| Daylight | 85/ 4/ 2 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 470.  | 51.  |
| Daylight | 85/ 5/24 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 480.  | 59.  |
|          | 85/ 2/20 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 350.  | 45.  |

|          |      |      |      |      |       |      |       |       |      |
|----------|------|------|------|------|-------|------|-------|-------|------|
| 85/ 9/ 8 | 0.00 | 0.00 | 0.00 | 0.28 | 35.07 | 0.28 | 35.37 | 1170. | 76.  |
| 85/ 9/26 | 0.00 | 0.00 | 0.00 | 0.27 | 34.32 | 0.27 | 34.60 | 2580. | 98.  |
| 85/ 9/21 | 0.00 | 0.00 | 0.00 | 0.23 | 28.92 | 0.23 | 29.15 | 1770. | 168. |
| 85/ 9/23 | 0.00 | 0.00 | 0.00 | 0.22 | 27.80 | 0.22 | 28.02 | 2010. | 171. |
| 85/ 9/25 | 0.00 | 0.00 | 0.00 | 0.22 | 27.53 | 0.22 | 27.75 | 890.  | 75.  |
| 85/ 9/24 | 0.00 | 0.00 | 0.00 | 0.21 | 25.41 | 0.21 | 25.62 | 840.  | 47.  |
| 85/ 7/25 | 0.00 | 0.00 | 0.00 | 0.19 | 23.29 | 0.19 | 23.46 | 1040. | 126. |
| 85/ 7/24 | 0.00 | 0.00 | 0.00 | 0.18 | 22.35 | 0.18 | 22.53 | 1070. | 182. |
| 85/ 8/30 | 0.00 | 0.00 | 0.00 | 0.15 | 19.06 | 0.15 | 19.21 | 770.  | 47.  |
| 85/ 8/21 | 0.00 | 0.00 | 0.00 | 0.15 | 19.04 | 0.15 | 19.21 | 770.  | 58.  |
| 85/ 7/15 | 0.00 | 0.00 | 0.00 | 0.15 | 18.99 | 0.15 | 19.14 | 3280. | 299. |
| 85/ 9/ 5 | 0.00 | 0.00 | 0.00 | 0.13 | 16.58 | 0.13 | 16.71 | 780.  | 51.  |
| 85/ 9/14 | 0.00 | 0.00 | 0.00 | 0.12 | 15.48 | 0.12 | 15.61 | 900.  | 106. |
| 85/ 9/24 | 0.00 | 0.00 | 0.00 | 0.12 | 14.82 | 0.12 | 14.94 | 1430. | 90.  |
| 85/ 9/27 | 0.00 | 0.00 | 0.00 | 0.09 | 11.75 | 0.09 | 11.84 | 1790. | 86.  |
| 85/ 9/ 9 | 0.00 | 0.00 | 0.00 | 0.08 | 10.52 | 0.08 | 10.60 | 710.  | 86.  |
| 85/ 7/26 | 0.00 | 0.00 | 0.00 | 0.08 | 9.41  | 0.08 | 9.49  | 700.  | 85.  |
| 85/ 7/18 | 0.00 | 0.00 | 0.00 | 0.07 | 8.94  | 0.07 | 9.01  | 1070. | 11.  |
| 85/ 9/19 | 0.00 | 0.00 | 0.00 | 0.06 | 7.38  | 0.06 | 7.44  | 770.  | 92.  |
| 85/ 7/27 | 0.00 | 0.00 | 0.00 | 0.06 | 7.14  | 0.06 | 7.19  | 640.  | 78.  |
| 85/ 9/ 2 | 0.00 | 0.00 | 0.00 | 0.05 | 5.74  | 0.05 | 5.77  | 590.  | 42.  |
| 85/ 9/29 | 0.00 | 0.00 | 0.00 | 0.02 | 3.19  | 0.02 | 3.21  | 1200. | 139. |
| 85/ 9/22 | 0.00 | 0.00 | 0.00 | 0.02 | 2.66  | 0.02 | 2.68  | 630.  | 77.  |
| 85/ 9/ 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 370.  | 37.  |
| 85/ 9/15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 270.  | 31.  |
| 85/ 8/27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 190.  | 22.  |
| 85/ 7/21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 410.  | 35.  |
| 85/ 9/28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 450.  | 54.  |
| 85/ 9/25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 490.  | 41.  |

**Potholes Stranding and Trapping - Daily Detail with Stranding Ranking**  
**(Results of applying base year data to the indicate flow regime)**

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Disconnect | Total   |      |      |      |       |         | Salmon + |         |         |
|------------------|-------------|---------|------|------|------|-------|---------|----------|---------|---------|
|                  |             | Chinook | Pink | Chum | Coho | Sthd  | Salmon  | Steelhd  | Bigflow | Endflow |
| 85/ 3/13         | 226         | 74.84   | 0.54 | 0.00 | 0.23 | 0.92  | 75.61   | 76.52    | 6020.   | 3240.   |
|                  |             | 1343.09 | 9.61 | 0.00 | 4.12 | 16.48 | 1356.83 | 1373.31  |         |         |
| 85/ 3/22         | 225         | 74.84   | 0.54 | 0.00 | 0.23 | 0.92  | 75.61   | 76.52    | 7590.   | 3440.   |
|                  |             | 1343.09 | 9.61 | 0.00 | 4.12 | 16.48 | 1356.83 | 1373.31  |         |         |
| 85/ 3/17         | 148         | 70.95   | 0.51 | 0.00 | 0.22 | 0.87  | 71.67   | 72.54    | 4940.   | 3370.   |
|                  |             | 918.88  | 6.58 | 0.00 | 2.82 | 11.27 | 928.28  | 939.55   |         |         |
| 85/ 4/23         | 150         | 70.95   | 0.51 | 0.00 | 0.22 | 0.87  | 71.67   | 72.54    | 5090.   | 2960.   |
|                  |             | 921.72  | 6.60 | 0.00 | 2.83 | 11.31 | 931.14  | 942.45   |         |         |
| 85/ 3/15         | 223         | 70.51   | 0.50 | 0.00 | 0.22 | 0.87  | 71.23   | 72.09    | 5950.   | 3490.   |
|                  |             | 1208.97 | 8.65 | 0.00 | 3.1  | 14.83 | 1221.33 | 1236.14  |         |         |
| 85/ 3/ 8         | 218         | 70.51   | 0.50 | 0.00 | 0.22 | 0.87  | 71.23   | 72.09    | 7870.   | 3560.   |
|                  |             | 1208.97 | 8.65 | 0.00 | 3.71 | 14.83 | 1221.33 | 1236.14  |         |         |
| 85/ 3/ 9         | 218         | 70.51   | 0.50 | 0.00 | 0.22 | 0.87  | 71.23   | 72.09    | 7910.   | 3540.   |
|                  |             | 1208.97 | 8.65 | 0.00 | 3.71 | 14.83 | 1221.33 | 1236.14  |         |         |
| 85/ 4/22         | 219         | 70.51   | 0.50 | 0.00 | 0.22 | 0.87  | 71.23   | 72.09    | 5880.   | 3510.   |
|                  |             | 1208.97 | 8.65 | 0.00 | 3.71 | 14.83 | 1221.33 | 1236.14  |         |         |
| 85/ 3/30         | 204         | 64.64   | 0.46 | 0.00 | 0.20 | 0.79  | 65.30   | 66.09    | 7830.   | 3740.   |
|                  |             | 1032.28 | 7.39 | 0.00 | 3.17 | 12.67 | 1042.83 | 1053.50  |         |         |
| 85/ 5/ 6         | 154         | 56.11   | 0.40 | 0.00 | 0.17 | 0.69  | 56.69   | 57.38    | 5180.   | 3510.   |
|                  |             | 856.33  | 6.13 | 0.00 | 2.63 | 10.51 | 865.08  | 875.54   |         |         |
| 85/ 3/10         | 137         | 54.14   | 0.37 | 0.00 | 0.17 | 0.66  | 54.69   | 55.35    | 5360.   | 3860.   |
|                  |             | 862.56  | 8.17 | 0.00 | 2.65 | 10.58 | 871.38  | 881.96   |         |         |
| 85/ 4/ 1         | 132         | 53.58   | 0.38 | 0.00 | 0.16 | 0.66  | 54.13   | 54.78    | 5180.   | 3840.   |
|                  |             | 853.83  | 6.11 | 0.00 | 2.62 | 10.48 | 862.56  | 873.03   |         |         |
| 85/ 3/31         | 130         | 48.69   | 0.35 | 0.00 | 0.15 | 0.60  | 49.19   | 49.78    | 5270.   | 3960.   |
|                  |             | 853.83  | 6.11 | 0.00 | 2.62 | 10.48 | 862.56  | 873.03   |         |         |
| 85/ 5/ 4         | 143         | 47.37   | 0.34 | 0.00 | 0.14 | 0.58  | 47.85   | 48.43    | 5540.   | 3810.   |
|                  |             | 767.96  | 5.50 | 0.00 | 2.36 | 9.42  | 775.81  | 785.23   |         |         |
| 85/ 3/21         | 186         | 44.71   | 0.32 | 0.00 | 0.14 | 0.55  | 45.16   | 45.71    | 6970.   | 4070.   |
|                  |             | 891.64  | 6.38 | 0.00 | 2.73 | 10.74 | 900.76  | 911.70   |         |         |
| 85/ 4/18         | 186         | 44.71   | 0.32 | 0.00 | 0.14 | 0.55  | 45.16   | 45.71    | 6440.   | 4070.   |
|                  |             | 891.64  | 6.38 | 0.00 | 2.73 | 10.74 | 900.76  | 911.70   |         |         |
| 85/ 3/25         | 186         | 44.71   | 0.32 | 0.00 | 0.14 | 0.55  | 45.16   | 45.71    | 7870.   | 4070.   |
|                  |             | 891.64  | 6.38 | 0.00 | 2.73 | 10.74 | 900.76  | 911.70   |         |         |
| 85/ 3/12         | 182         | 43.48   | 0.31 | 0.00 | 0.13 | 0.53  | 43.93   | 44.46    | 7210.   | 4150.   |
|                  |             | 872.57  | 6.24 | 0.00 | 2.68 | 10.71 | 881.49  | 892.20   |         |         |
| 85/ 5/10         | 140         | 43.45   | 0.31 | 0.00 | 0.13 | 0.53  | 43.89   | 44.42    | 5210.   | 3690.   |
|                  |             | 603.11  | 4.32 | 0.00 | 1.85 | 7.40  | 609.28  | 616.68   |         |         |
| 85/ 4/ 7         | 122         | 43.26   | 0.31 | 0.00 | 0.13 | 0.53  | 43.70   | 44.23    | 5240.   | 4120.   |
|                  |             | 736.61  | 5.27 | 0.00 | 2.26 | 9.04  | 744.15  | 753.18   |         |         |
| 85/ 3/ 2         | 174         | 43.09   | 0.31 | 0.00 | 0.13 | 0.53  | 43.53   | 44.06    | 6920.   | 4230.   |
|                  |             | 762.67  | 5.46 | 0.00 | 2.34 | 9.36  | 770.47  | 779.82   |         |         |
| 85/ 4/ 4         | 175         | 43.09   | 0.31 | 0.00 | 0.13 | 0.53  | 43.53   | 44.06    | 7550.   | 4200.   |
|                  |             | 762.67  | 5.46 | 0.00 | 2.34 | 9.36  | 770.47  | 779.82   |         |         |
| 85/ 4/26         | 170         | 43.09   | 0.31 | 0.00 | 0.13 | 0.53  | 43.53   | 44.06    | 6220.   | 4290.   |
|                  |             | 758.89  | 5.43 | 0.00 | 2.35 | 9.31  | 766.45  | 775.97   |         |         |
| 85/ 4/25         | 110         | 42.41   | 0.30 | 0.00 | 0.13 | 0.52  | 42.85   | 43.37    | 4850.   | 3370.   |
|                  |             | 684.67  | 4.90 | 0.00 | 2.10 | 8.40  | 691.67  | 700.08   |         |         |

| Comment | Flow<br>YR/MO/DY | Flow    |      |      |      |         |        | Total<br>Salmon | Salmon +<br>Steelhd | Ampl | RampRate |
|---------|------------------|---------|------|------|------|---------|--------|-----------------|---------------------|------|----------|
|         |                  | Chinook | Pink | Chum | Coho | Steelhd | Salmon |                 |                     |      |          |
|         | 85/ 8/10         | 0.00    | 0.00 | 0.00 | 5.84 | 724.09  | 5.84   | 729.92          | 5350.               | 240. |          |
|         | 85/ 8/ 4         | 0.00    | 0.00 | 0.00 | 4.45 | 552.13  | 4.45   | 556.57          | 4420.               | 349. |          |
|         | 85/ 7/31         | 0.00    | 0.00 | 0.00 | 4.26 | 528.44  | 4.26   | 532.71          | 4460.               | 421. |          |
|         | 85/ 8/11         | 0.00    | 0.00 | 0.00 | 4.12 | 511.46  | 4.12   | 515.58          | 4200.               | 265. |          |
|         | 85/ 8/ 7         | 0.00    | 0.00 | 0.00 | 3.99 | 494.82  | 3.99   | 498.81          | 4110.               | 498. |          |
|         | 85/ 8/15         | 0.00    | 0.00 | 0.00 | 3.99 | 494.82  | 3.99   | 498.81          | 4110.               | 244. |          |
|         | 85/ 8/18         | 0.00    | 0.00 | 0.00 | 3.93 | 497.42  | 3.93   | 491.35          | 4070.               | 252. |          |
|         | 85/ 8/ 5         | 0.00    | 0.00 | 0.00 | 3.89 | 481.87  | 3.89   | 485.76          | 4040.               | 247. |          |
|         | 85/ 8/13         | 0.00    | 0.00 | 0.00 | 3.87 | 480.02  | 3.87   | 483.90          | 4030.               | 314. |          |
|         | 85/ 8/ 3         | 0.00    | 0.00 | 0.00 | 3.86 | 478.18  | 3.86   | 482.03          | 4020.               | 498. |          |
|         | 85/ 8/14         | 0.00    | 0.00 | 0.00 | 3.84 | 476.33  | 3.84   | 480.17          | 4010.               | 352. |          |
|         | 85/ 8/ 8         | 0.00    | 0.00 | 0.00 | 3.81 | 472.64  | 3.81   | 476.45          | 3990.               | 252. |          |
|         | 85/ 8/17         | 0.00    | 0.00 | 0.00 | 3.75 | 465.26  | 3.75   | 469.02          | 3950.               | 474. |          |
|         | 85/ 7/30         | 0.00    | 0.00 | 0.00 | 3.05 | 377.53  | 3.05   | 380.57          | 3730.               | 398. |          |
|         | 85/ 7/23         | 0.00    | 0.00 | 0.00 | 2.07 | 256.65  | 2.07   | 258.72          | 4210.               | 432. |          |
|         | 85/ 7/22         | 0.00    | 0.00 | 0.00 | 1.98 | 245.59  | 1.98   | 247.37          | 4420.               | 519. |          |
|         | 85/ 7/29         | 0.00    | 0.00 | 0.00 | 1.37 | 169.63  | 1.37   | 171.00          | 2530.               | 295. |          |
|         | 85/ 8/12         | 0.00    | 0.00 | 0.00 | 1.25 | 155.64  | 1.25   | 156.90          | 2270.               | 167. |          |
|         | 85/ 8/ 6         | 0.00    | 0.00 | 0.00 | 1.25 | 155.64  | 1.25   | 156.90          | 2270.               | 260. |          |
|         | 85/ 7/28         | 0.00    | 0.00 | 0.00 | 1.22 | 151.16  | 1.22   | 152.38          | 2480.               | 304. |          |
|         | 85/ 8/ 7         | 0.00    | 0.00 | 0.00 | 1.14 | 140.90  | 1.14   | 142.03          | 2190.               | 220. |          |
|         | 85/ 8/ 7         | 0.00    | 0.00 | 0.00 | 1.12 | 139.04  | 1.12   | 140.17          | 2400.               | 214. |          |
|         | 85/ 8/19         | 0.00    | 0.00 | 0.00 | 1.06 | 131.68  | 1.06   | 132.74          | 2140.               | 180. |          |
|         | 85/ 8/ 2         | 0.00    | 0.00 | 0.00 | 1.00 | 124.31  | 1.00   | 125.31          | 2100.               | 246. |          |
|         | 85/ 9/13         | 0.00    | 0.00 | 0.00 | 0.98 | 121.41  | 0.98   | 122.38          | 2560.               | 189. |          |
|         | 85/ 8/16         | 0.00    | 0.00 | 0.00 | 0.96 | 118.78  | 0.96   | 119.74          | 2070.               | 247. |          |
|         | 85/ 7/19         | 0.00    | 0.00 | 0.00 | 0.95 | 118.49  | 0.95   | 119.45          | 3740.               | 152. |          |
|         | 85/ 9/ 3         | 0.00    | 0.00 | 0.00 | 0.89 | 110.62  | 0.89   | 111.51          | 2090.               | 172. |          |
|         | 85/ 8/20         | 0.00    | 0.00 | 0.00 | 0.81 | 100.94  | 0.81   | 101.75          | 1930.               | 128. |          |
|         | 85/ 7/20         | 0.00    | 0.00 | 0.00 | 0.71 | 87.51   | 0.71   | 88.22           | 2850.               | 233. |          |
|         | 85/ 8/26         | 0.00    | 0.00 | 0.00 | 0.65 | 81.18   | 0.65   | 81.83           | 1650.               | 188. |          |
|         | 85/ 8/31         | 0.00    | 0.00 | 0.00 | 0.56 | 49.88   | 0.56   | 70.44           | 1490.               | 88.  |          |
|         | 85/ 8/23         | 0.00    | 0.00 | 0.00 | 0.56 | 69.88   | 0.56   | 70.44           | 1490.               | 123. |          |
|         | 85/ 8/22         | 0.00    | 0.00 | 0.00 | 0.54 | 67.76   | 0.54   | 68.31           | 1460.               | 136. |          |
|         | 85/ 9/16         | 0.00    | 0.00 | 0.00 | 0.53 | 66.39   | 0.53   | 66.93           | 2170.               | 154. |          |
|         | 85/ 9/ 4         | 0.00    | 0.00 | 0.00 | 0.53 | 65.78   | 0.53   | 66.31           | 1570.               | 104. |          |
|         | 85/ 9/12         | 0.00    | 0.00 | 0.00 | 0.49 | 61.00   | 0.49   | 61.44           | 1910.               | 160. |          |
|         | 85/ 9/10         | 0.00    | 0.00 | 0.00 | 0.49 | 60.63   | 0.49   | 61.12           | 2210.               | 170. |          |
|         | 85/ 9/11         | 0.00    | 0.00 | 0.00 | 0.44 | 54.63   | 0.44   | 55.09           | 1700.               | 174. |          |
|         | 85/ 7/16         | 0.00    | 0.00 | 0.00 | 0.43 | 53.54   | 0.43   | 53.97           | 4040.               | 331. |          |
|         | 85/ 7/17         | 0.00    | 0.00 | 0.00 | 0.41 | 50.82   | 0.41   | 51.23           | 3090.               | 274. |          |
|         | 85/ 9/17         | 0.00    | 0.00 | 0.00 | 0.38 | 46.54   | 0.38   | 46.92           | 1960.               | 93.  |          |
|         | 85/ 9/20         | 0.00    | 0.00 | 0.00 | 0.32 | 40.19   | 0.32   | 40.51           | 2040.               | 174. |          |
|         | 85/ 8/ 1         | 0.00    | 0.00 | 0.00 | 0.29 | 36.00   | 0.29   | 36.29           | 1010.               | 105. |          |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Discard | Chinook | Pink  | Chum | Coho  | Sthd | Total<br>Salmon | Salmon +<br>Steelhd | Begflow | Endflow |
|------------------|----------|---------|-------|------|-------|------|-----------------|---------------------|---------|---------|
| 85/ 3/ 7         | 40       | 2.66    | 0.16  | 0.00 | 0.07  | 0.27 | 21.88           | 22.15               | 4070.   | 3370.   |
|                  |          | 324.48  | 2.32  | 0.00 | 0.00  | 3.98 | 327.80          | 331.78              |         |         |
| 85/ 4/ 20        | 26       | 21.16   | 0.15  | 0.00 | 0.06  | 0.28 | 21.37           | 21.63               | 4150.   | 3660.   |
|                  |          | 2.0.10  | 1.58  | 0.00 | 0.48  | 2.70 | 222.35          | 225.05              |         |         |
| 85/ 2/ 17        | 123      | 20.91   | 0.15  | 0.00 | 0.06  | 0.26 | 21.12           | 21.38               | 6410.   | 4730.   |
|                  |          | 394.17  | 2.82  | 0.00 | 1.21  | 4.84 | 398.20          | 403.04              |         |         |
| 85/ 2/ 11        | 197      | 20.87   | 0.15  | 0.00 | 0.06  | 0.26 | 21.08           | 21.34               | 7870.   | 3840.   |
|                  |          | 382.67  | 2.74  | 0.00 | 1.17  | 4.70 | 386.58          | 391.28              |         |         |
| 85/ 5/ 11        | 40       | 19.77   | 0.14  | 0.00 | 0.06  | 0.24 | 19.98           | 20.22               | 4070.   | 3230.   |
|                  |          | 296.27  | 2.12  | 0.00 | 0.91  | 3.63 | 299.30          | 302.93              |         |         |
| 85/ 5/ 13        | 39       | 17.89   | 0.13  | 0.00 | 0.05  | 0.22 | 18.08           | 18.30               | 4090.   | 3440.   |
|                  |          | 268.05  | 1.92  | 0.00 | 0.82  | 3.29 | 270.79          | 274.08              |         |         |
| 85/ 2/ 8         | 195      | 15.18   | 0.11  | 0.00 | 0.05  | 0.19 | 15.33           | 15.52               | 5950.   | 3910.   |
|                  |          | 278.30  | 1.99  | 0.00 | 0.85  | 3.41 | 281.15          | 284.57              |         |         |
| 85/ 2/ 10        | 160      | 14.52   | 0.10  | 0.00 | 0.05  | 0.18 | 14.67           | 14.85               | 7950.   | 4340.   |
|                  |          | 257.42  | 1.84  | 0.00 | 0.79  | 3.16 | 260.05          | 263.21              |         |         |
| 85/ 2/ 9         | 87       | 11.01   | 0.08  | 0.00 | 0.03  | 0.14 | 11.12           | 11.26               | 5600.   | 4490.   |
|                  |          | 189.02  | 1.35  | 0.00 | 0.58  | 2.32 | 190.96          | 193.28              |         |         |
| 85/ 2/ 15        | 31       | 10.25   | 0.07  | 0.00 | 0.03  | 0.13 | 10.35           | 10.48               | 3860.   | 3350.   |
|                  |          | 172.88  | 1.24  | 0.00 | 0.53  | 2.12 | 174.65          | 176.77              |         |         |
| 85/ 3/ 6         | 94       | 9.22    | 0.07  | 0.00 | 0.03  | 0.11 | 9.32            | 9.43                | 8150.   | 4910.   |
|                  |          | 637.72  | 4.56  | 0.00 | 1.76  | 7.82 | 644.24          | 652.06              |         |         |
| 85/ 5/ 7         | 14       | 7.97    | 0.06  | 0.00 | 0.02  | 0.10 | 8.05            | 8.15                | 5590.   | 3420.   |
|                  |          | 176.54  | 1.21  | 0.00 | 0.54  | 2.17 | 178.35          | 180.51              |         |         |
| 85/ 4/ 29        | 51       | 7.43    | 0.05  | 0.00 | 0.02  | 0.09 | 7.50            | 7.59                | 4670.   | 4260.   |
|                  |          | 90.26   | 0.65  | 0.00 | 0.28  | 1.11 | 91.18           | 92.29               |         |         |
| 85/ 5/ 2         | 30       | 7.29    | 0.05  | 0.00 | 0.02  | 0.09 | 7.36            | 7.45                | 5300.   | 4910.   |
|                  |          | 452.52  | 3.24  | 0.00 | 1.39  | 5.55 | 457.15          | 462.70              |         |         |
| 85/ 5/ 1         | 48       | 7.20    | 0.05  | 0.00 | 0.02  | 0.09 | 7.27            | 7.36                | 4760.   | 4290.   |
|                  |          | 83.79   | 0.60  | 0.00 | 0.26  | 1.03 | 84.64           | 85.67               |         |         |
| 85/ 2/ 21        | 94       | 6.48    | 0.05  | 0.00 | 0.02  | 0.08 | 6.75            | 6.83                | 6370.   | 4910.   |
|                  |          | 461.80  | 3.31  | 0.00 | 1.42  | 5.67 | 466.52          | 472.18              |         |         |
| 85/ 4/ 2         | 30       | 6.22    | 0.05  | 0.00 | 0.02  | 0.08 | 6.29            | 6.36                | 4370.   | 4090.   |
|                  |          | 162.62  | 1.16  | 0.00 | 0.50  | 2.00 | 164.28          | 166.28              |         |         |
| 85/ 2/ 20        | 53       | 5.75    | 0.04  | 0.00 | 0.02  | 0.07 | 5.81            | 5.88                | 4520.   | 4120.   |
|                  |          | 137.79  | 0.99  | 0.00 | 0.42  | 1.69 | 139.20          | 140.89              |         |         |
| 85/ 5/ 28        | 75       | 4.43    | 0.03  | 0.00 | 0.01  | 0.05 | 4.48            | 4.53                | 5480.   | 4550.   |
|                  |          | 68.19   | 0.49  | 0.00 | 0.21  | 0.84 | 69.89           | 69.73               |         |         |
| 85/ 2/ 3         | 63       | 3.58    | 0.02  | 0.00 | 1.E-2 | 0.04 | 3.42            | 3.46                | 4320.   | 3390.   |
|                  |          | 61.04   | 0.44  | 0.00 | 0.19  | 0.75 | 61.67           | 62.42               |         |         |
| 85/ 2/ 2         | 99       | 2.70    | 0.02  | 0.00 | 8.E-3 | 0.03 | 2.73            | 2.76                | 4610.   | 3390.   |
|                  |          | 45.55   | 0.33  | 0.00 | 0.14  | 0.56 | 46.01           | 46.57               |         |         |
| 85/ 2/ 1         | 224      | 2.58    | 0.02  | 0.00 | 8.E-3 | 0.03 | 2.61            | 2.64                | 7040.   | 3470.   |
|                  |          | 46.31   | 0.53  | 0.00 | 0.14  | 0.57 | 46.79           | 47.35               |         |         |
| 85/ 2/ 18        | 78       | 2.41    | 0.02  | 0.00 | 7.E-3 | 0.03 | 2.44            | 2.47                | 6160.   | 4470.   |
|                  |          | 263.30  | 1.88  | 0.00 | 0.81  | 3.23 | 266.00          | 267.23              |         |         |
| 85/ 5/ 30        | 70       | 2.18    | 0.02  | 0.00 | 7.E-3 | 0.03 | 2.20            | 2.23                | 5210.   | 4460.   |
|                  |          | 33.55   | 0.24  | 0.00 | 0.10  | 0.41 | 32.89           | 34.31               |         |         |
| 85/ 5/ 31        | 128      | 1.37    | 1.E-2 | 0.00 | 4.E-3 | 0.02 | 1.38            | 1.40                | 5420.   | 4120.   |
|                  |          | 23.29   | 0.17  | 0.00 | 0.07  | 0.29 | 23.53           | 23.82               |         |         |
| 85/ 2/ 26        | 64       | 1.30    | 9.E-3 | 0.00 | 4.E-3 | 0.02 | 1.31            | 1.33                | 7510.   | 5240.   |
|                  |          | 138.99  | 0.00  | 0.00 | 0.43  | 1.71 | 140.41          | 142.12              |         |         |

|                 |      |      |      |      |        |      |        |       |       |
|-----------------|------|------|------|------|--------|------|--------|-------|-------|
| 84/ 9/21        | 0.00 | 0.00 | 0.00 | 0.33 | 41.53  | 0.33 | 41.86  | 2124. | 1062. |
| 84/ 9/22        | 0.00 | 0.00 | 0.00 | .24  | 30.02  | 0.24 | 30.26  | 1965. | 685.  |
| 84/ 9/23        | 0.00 | 0.00 | 0.00 | 0.16 | 19.60  | 0.16 | 19.76  | 1576. | 715.  |
| 84/ 9/24        | 0.00 | 0.00 | 0.00 | 0.31 | 38.80  | 0.31 | 39.12  | 2358. | 900.  |
| 84/ 9/25        | 0.00 | 0.00 | 0.00 | 0.15 | 19.18  | 0.15 | 19.33  | 1904. | 902.  |
| 84/ 9/26        | 0.00 | 0.00 | 0.00 | 0.20 | 25.13  | 0.20 | 25.34  | 2271. | 1011. |
| 84/ 9/27        | 0.00 | 0.00 | 0.00 | 0.16 | 20.25  | 0.16 | 20.41  | 2277. | 1006. |
| 84/ 9/28        | 0.00 | 0.00 | 0.00 | 0.02 | 2.48   | 0.02 | 2.70   | 873.  | 353.  |
| -----           |      |      |      |      |        |      |        |       |       |
| Month subtotal: | 0.0  | 0.0  | 0.0  | 12.4 | 1539.4 | 12.4 | 1551.8 |       |       |

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 Year total: 5886.3 2812.0 468.5 47.1 5908.5 9214.2 15122.7

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Discern | Total   |      |      |      |      |        | Salmon + |         |         |
|------------------|----------|---------|------|------|------|------|--------|----------|---------|---------|
|                  |          | Chinook | Pink | Chum | Coho | Sthd | Salmon | Steelhd  | Bogflow | Endflow |
| 85/ 2/22         | 197      | 41.74   | 0.30 | 0.00 | 0.13 | 0.51 | 42.17  | 42.68    | 6440.   | 3840.   |
|                  |          | 765.34  | 5.48 | 0.00 | 2.35 | 9.39 | 773.16 | 782.55   |         |         |
| 85/ 2/23         | 194      | 39.76   | 0.28 | 0.00 | 0.12 | 0.49 | 40.17  | 40.65    | 6510.   | 3990.   |
|                  |          | 800.13  | 5.73 | 0.00 | 2.45 | 9.82 | 808.31 | 818.12   |         |         |
| 85/ 3/18         | 104      | 39.57   | 0.28 | 0.00 | 0.12 | 0.49 | 40.00  | 40.48    | 4940.   | 4150.   |
|                  |          | 440.36  | 3.21 | 0.00 | 1.38 | 5.50 | 452.94 | 458.44   |         |         |
| 85/ 3/20         | 156      | 38.48   | 0.28 | 0.00 | 0.12 | 0.47 | 38.88  | 39.35    | 6790.   | 4370.   |
|                  |          | 729.02  | 5.22 | 0.00 | 2.24 | 8.94 | 736.47 | 745.42   |         |         |
| 85/ 3/14         | 96       | 38.48   | 0.28 | 0.00 | 0.12 | 0.47 | 38.87  | 39.34    | 4580.   | 3210.   |
|                  |          | 652.55  | 4.67 | 0.00 | 2.00 | 8.01 | 659.22 | 667.23   |         |         |
| 85/ 5/ 3         | 124      | 38.42   | 0.28 | 0.00 | 0.12 | 0.47 | 38.82  | 39.29    | 5600.   | 4180.   |
|                  |          | 648.66  | 4.64 | 0.00 | 1.99 | 7.96 | 655.29 | 663.25   |         |         |
| 85/ 4/ 5         | 102      | 37.59   | 0.27 | 0.00 | 0.12 | 0.46 | 37.98  | 38.44    | 5600.   | 4370.   |
|                  |          | 646.25  | 4.63 | 0.00 | 1.98 | 7.93 | 652.86 | 660.78   |         |         |
| 85/ 3/11         | 133      | 36.36   | 0.26 | 0.00 | 0.11 | 0.45 | 36.73  | 37.18    | 7990.   | 4550.   |
|                  |          | 691.85  | 4.95 | 0.00 | 2.12 | 8.49 | 698.92 | 707.41   |         |         |
| 85/ 3/27         | 130      | 36.36   | 0.26 | 0.00 | 0.11 | 0.45 | 36.73  | 37.18    | 7550.   | 4580.   |
|                  |          | 690.54  | 4.94 | 0.00 | 2.12 | 8.47 | 697.61 | 706.08   |         |         |
| 85/ 4/ 3         | 133      | 36.36   | 0.26 | 0.00 | 0.11 | 0.45 | 36.73  | 37.18    | 7950.   | 4520.   |
|                  |          | 691.85  | 4.95 | 0.00 | 2.12 | 8.49 | 698.92 | 707.41   |         |         |
| 85/ 4/19         | 98       | 36.13   | 0.26 | 0.00 | 0.11 | 0.44 | 36.50  | 36.94    | 5570.   | 4400.   |
|                  |          | 609.08  | 4.36 | 0.00 | 1.87 | 7.47 | 615.30 | 622.78   |         |         |
| 85/ 4/ 6         | 94       | 36.13   | 0.26 | 0.00 | 0.11 | 0.44 | 36.50  | 36.94    | 5420.   | 4400.   |
|                  |          | 545.55  | 3.90 | 0.00 | 1.67 | 6.69 | 551.13 | 557.83   |         |         |
| 85/ 3/26         | 123      | 35.66   | 0.25 | 0.00 | 0.11 | 0.44 | 36.03  | 36.47    | 7630.   | 4670.   |
|                  |          | 672.41  | 4.81 | 0.00 | 2.04 | 8.25 | 679.20 | 687.53   |         |         |
| 85/ 4/28         | 126      | 35.66   | 0.25 | 0.00 | 0.11 | 0.44 | 36.03  | 36.47    | 5720.   | 4640.   |
|                  |          | 682.57  | 4.89 | 0.00 | 2.09 | 8.38 | 689.66 | 698.03   |         |         |
| 85/ 4/ 8         | 88       | 35.57   | 0.25 | 0.00 | 0.11 | 0.44 | 35.93  | 36.37    | 5300.   | 4430.   |
|                  |          | 536.02  | 3.84 | 0.00 | 1.65 | 6.59 | 542.31 | 548.90   |         |         |
| 85/ 4/24         | 68       | 34.78   | 0.25 | 0.00 | 0.11 | 0.43 | 35.13  | 35.58    | 5330.   | 4640.   |
|                  |          | 536.38  | 3.84 | 0.00 | 1.64 | 6.58 | 541.86 | 548.45   |         |         |
| 85/ 3/ 4         | 121      | 34.52   | 0.25 | 0.00 | 0.11 | 0.42 | 34.88  | 35.30    | 8230.   | 4790.   |
|                  |          | 672.24  | 4.81 | 0.00 | 2.04 | 8.25 | 679.12 | 687.36   |         |         |
| 85/ 4/17         | 63       | 32.47   | 0.23 | 0.00 | 0.10 | 0.40 | 32.80  | 33.20    | 5000.   | 4490.   |
|                  |          | 267.64  | 1.92 | 0.00 | 0.82 | 3.28 | 270.37 | 273.65   |         |         |
| 85/ 3/16         | 116      | 32.43   | 0.23 | 0.00 | 0.10 | 0.40 | 32.74  | 33.16    | 6020.   | 4850.   |
|                  |          | 658.42  | 4.71 | 0.00 | 2.02 | 8.08 | 665.15 | 673.23   |         |         |
| 85/ 3/23         | 116      | 32.43   | 0.23 | 0.00 | 0.10 | 0.40 | 32.76  | 33.16    | 7710.   | 4880.   |
|                  |          | 658.42  | 4.71 | 0.00 | 2.02 | 8.08 | 665.15 | 673.23   |         |         |
| 85/ 2/13         | 204      | 28.98   | 0.21 | 0.00 | 0.09 | 0.36 | 29.27  | 29.53    | 8030.   | 3740.   |
|                  |          | 462.74  | 3.31 | 0.00 | 1.42 | 5.68 | 467.48 | 475.15   |         |         |
| 85/ 2/19         | 174      | 28.23   | 0.20 | 0.00 | 0.09 | 0.35 | 28.52  | 28.87    | 6480.   | 4230.   |
|                  |          | 497.68  | 3.58 | 0.00 | 1.53 | 6.13 | 504.79 | 510.92   |         |         |
| 85/ 5/15         | 115      | 27.16   | 0.19 | 0.00 | 0.08 | 0.33 | 27.44  | 27.77    | 4910.   | 3860.   |
|                  |          | 285.70  | 2.05 | 0.00 | 0.88 | 3.51 | 288.62 | 292.13   |         |         |
| 85/ 2/14         | 194      | 24.20   | 0.17 | 0.00 | 0.07 | 0.30 | 24.45  | 24.75    | 7870.   | 3940.   |
|                  |          | 487.03  | 3.49 | 0.00 | 1.49 | 5.98 | 492.01 | 497.99   |         |         |
| 85/ 5/ 8         | 51       | 23.81   | 0.17 | 0.00 | 0.07 | 0.29 | 24.05  | 24.35    | 4230.   | 3440.   |
|                  |          | 435.32  | 3.12 | 0.00 | 1.34 | 5.34 | 439.77 | 445.11   |         |         |
| 85/ 5/14         | 100      | 22.04   | 0.16 | 0.00 | 0.07 | 0.27 | 22.26  | 22.53    | 4640.   | 3350.   |
|                  |          | 371.47  | 2.66 | 0.00 | 1.14 | 4.56 | 375.20 | 379.84   |         |         |

First line shows STRANDED fish  
Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Disconnect | Chinook | Pink | Chum | Coho | Sthd | Total<br>Salmon | Salmon +<br>Steelhd | Begflow | Endflow |
|------------------|-------------|---------|------|------|------|------|-----------------|---------------------|---------|---------|
| 85/ 5/25         | 0           | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00            | 0.00                | 9390.   | 8310.   |
|                  |             | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00            | 0.00                |         |         |
| 85/ 5/26         | 0           | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00            | 0.00                | 7250.   | 7250.   |
|                  |             | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00            | 0.00                |         |         |
| 85/ 5/19         | 0           | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00            | 0.00                | 7870.   | 6410.   |
|                  |             | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00            | 0.00                |         |         |
| 85/ 4/12         | 0           | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00            | 0.00                | 9070.   | 6090.   |
|                  |             | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00            | 0.00                |         |         |
| 85/ 3/19         | 2           | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00            | 0.00                | 4940.   | 4940.   |
|                  |             | 46.85   | 0.34 | 0.00 | 0.14 | 0.57 | 47.33           | 47.90               |         |         |

SUMMARY OF DAY/NIGHT EVENTS FOR SPRING SALMON ONLY  
FOR THE FOLLOWING FLOW REGIME YEARS:

YEAR

-----

84

Daylight events

-----

Number of events

63

Total chinook stranded

5189.48

Total pinks stranded

2479.08

Total chums stranded

413.12

Total cohos stranded

0.

Total salmon stranded (all species)

8001.82

Nighttime events

-----

Number of events

36

Total chinook stranded

696.87

Total pinks stranded

332.9

Total chums stranded

55.43

Total cohos stranded

0.

Total salmon stranded (all species)

1085.26

**Pathogen Stranding and Trapping - Daily Detail with Subtotals**  
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**(Results of applying base year data to the indicated flow regime)**

First line shows STRANDED fish  
Second line shows TRAPPED fish

First line shows STRANDED fish  
Second line shows TRAPPED fish

|                         |   |        |      |      |      |      |        |        |      |       |       |
|-------------------------|---|--------|------|------|------|------|--------|--------|------|-------|-------|
| <b>84/ 2/25</b>         |   |        |      |      |      |      |        |        |      |       |       |
| No event                |   |        |      |      |      |      |        |        |      |       |       |
| <b>84/ 2/26</b>         |   |        |      |      |      |      |        |        |      |       |       |
| No event                |   |        |      |      |      |      |        |        |      |       |       |
| <b>84/ 2/27</b>         | 0 | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00   | 0.00 | 9390. | £230. |
|                         |   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00   | 0.00 |       |       |
| <b>84/ 2/28</b>         |   |        |      |      |      |      |        |        |      |       |       |
| No event                |   |        |      |      |      |      |        |        |      |       |       |
| <b>84/ 2/29</b>         | 0 | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00   | 0.00 | 8750. | 7035. |
|                         |   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00   | 0.00 |       |       |
| <b>-----</b>            |   |        |      |      |      |      |        |        |      |       |       |
| <b>Month subtotals:</b> |   | 27.01  | 0.19 | 0.00 | 0.08 | 0.33 | 27.29  | 27.62  |      |       |       |
|                         |   | 508.26 | 3.64 | 0.00 | 1.56 | 6.24 | 513.46 | 519.70 |      |       |       |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

|                  |     |          |        |      |       |        |          |          |       |       |
|------------------|-----|----------|--------|------|-------|--------|----------|----------|-------|-------|
| 84/ 4/11         | 190 | 45.49    | 0.33   | 0.00 | 0.14  | 0.56   | 45.95    | 46.51    | 8470. | 4042. |
|                  |     | 935.26   | 6.69   | 0.00 | 2.87  | 11.48  | 944.82   | 956.30   |       |       |
| 84/ 4/12         | 64  | 1.45     | 1.E-2  | 0.00 | 4.E-3 | 0.04   | 1.46     | 1.48     | 8510. | 5240. |
|                  |     | 155.03   | 1.11   | 0.00 | 0.48  | 1.90   | 156.61   | 158.51   |       |       |
| 84/ 4/13         | 186 | 44.71    | 0.32   | 0.00 | 0.14  | 0.55   | 45.16    | 45.71    | 6370. | 4068. |
|                  |     | 891.64   | 6.38   | 0.00 | 2.73  | 10.94  | 900.76   | 911.70   |       |       |
| 84/ 4/14         | 94  | 37.20    | 0.28   | 0.00 | 0.12  | 0.44   | 39.60    | 40.08    | 5060. | 4288. |
|                  |     | 337.52   | 2.42   | 0.00 | 1.03  | 4.1    | 340.97   | 345.11   |       |       |
| 84/ 4/15         |     |          |        |      |       |        |          |          |       |       |
| No event         |     |          |        |      |       |        |          |          |       |       |
| 84/ 4/16         | 126 | 35.66    | 0.23   | 0.00 | 0.11  | 0.44   | 36.03    | 36.47    | 7470. | 4640. |
|                  |     | 682.67   | 4.89   | 0.00 | 2.09  | 8.38   | 689.66   | 698.03   |       |       |
| 84/ 4/17         | 0   | 0.00     | 0.00   | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     | 6265. | 5810. |
|                  |     | 0.00     | 0.00   | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     |       |       |
| 84/ 4/18         | 171 | 43.09    | 0.31   | 0.00 | 0.13  | 0.53   | 43.53    | 44.06    | 6860. | 4288. |
|                  |     | 758.89   | 5.43   | 0.00 | 2.33  | 9.31   | 766.65   | 775.97   |       |       |
| 84/ 4/19         | 194 | 50.13    | 0.36   | 0.00 | 0.15  | 0.62   | 50.45    | 51.26    | 6510. | 3938. |
|                  |     | 1008.85  | 7.22   | 0.00 | 3.10  | 12.38  | 1019.17  | 1031.55  |       |       |
| 84/ 4/20         | 24  | 3.00     | 0.02   | 0.00 | 9.E-3 | 0.04   | 3.04     | 3.07     | 5670. | 5000. |
|                  |     | 341.44   | 2.44   | 0.00 | 1.05  | 4.19   | 344.93   | 349.12   |       |       |
| 84/ 4/21         | 116 | 46.24    | 0.33   | 0.00 | 0.14  | 0.57   | 46.72    | 47.28    | 5000. | 3990. |
|                  |     | 584.44   | 4.18   | 0.00 | 1.79  | 7.17   | 590.62   | 597.79   |       |       |
| 84/ 4/22         | 160 | 42.11    | 0.30   | 0.00 | 0.13  | 0.52   | 42.54    | 43.06    | 6825. | 4344. |
|                  |     | 746.51   | 5.34   | 0.00 | 2.29  | 9.16   | 754.14   | 763.30   |       |       |
| 84/ 4/23         | 195 | 55.02    | 0.39   | 0.00 | 0.17  | 0.68   | 55.59    | 56.26    | 6895. | 3886. |
|                  |     | 1008.85  | 7.22   | 0.00 | 3.10  | 12.38  | 1019.17  | 1031.55  |       |       |
| 84/ 4/24         | 194 | 50.13    | 0.36   | 0.00 | 0.15  | 0.62   | 50.65    | 51.26    | 6865. | 3990. |
|                  |     | 1008.85  | 7.22   | 0.00 | 3.10  | 12.38  | 1019.17  | 1031.55  |       |       |
| 84/ 4/25         | 194 | 50.13    | 0.36   | 0.00 | 0.15  | 0.62   | 50.65    | 51.26    | 6825. | 3938. |
|                  |     | 1008.85  | 7.22   | 0.00 | 3.10  | 12.38  | 1019.17  | 1031.55  |       |       |
| 84/ 4/26         | 171 | 43.09    | 0.31   | 0.00 | 0.13  | 0.53   | 43.53    | 44.06    | 6160. | 4288. |
|                  |     | 758.89   | 5.43   | 0.00 | 2.33  | 9.31   | 766.65   | 775.97   |       |       |
| 84/ 4/27         | 140 | 49.25    | 0.35   | 0.00 | 0.15  | 0.60   | 49.75    | 50.35    | 5600. | 3964. |
|                  |     | 926.08   | 6.63   | 0.00 | 2.84  | 11.34  | 935.55   | 946.91   |       |       |
| 84/ 4/28         |     |          |        |      |       |        |          |          |       |       |
| No event         |     |          |        |      |       |        |          |          |       |       |
| 84/ 4/29         | 66  | 13.74    | 0.10   | 0.00 | 0.04  | 0.17   | 13.88    | 14.05    | 4640. | 4016. |
|                  |     | 325.93   | 2.33   | 0.00 | 1.00  | 4.00   | 329.27   | 333.27   |       |       |
| 84/ 4/30         | 190 | 45.49    | 0.33   | 0.00 | 0.14  | 0.56   | 45.95    | 46.51    | 7315. | 4042. |
|                  |     | 935.26   | 6.69   | 0.00 | 2.87  | 11.48  | 944.82   | 956.30   |       |       |
| Month subtotals: |     | 747.57   | 5.35   | 0.00 | 2.29  | 9.17   | 755.22   | 764.39   |       |       |
|                  |     | 14666.38 | 104.97 | 0.00 | 44.99 | 179.96 | 14816.34 | 14996.30 |       |       |

| Flow<br>YR/MO/DY | #Discn | Chinook | Pink | Chum | Coho | Sthd | Total  | Salmon | Steelhd | Regflow | Endflow |
|------------------|--------|---------|------|------|------|------|--------|--------|---------|---------|---------|
| 84/ 5/ 1         | 162    | 40.80   | 0.29 | 0.00 | 0.13 | 0.50 | 41.22  | 41.72  | 6790.   | 4316.   |         |
|                  |        | 729.49  | 5.22 | 0.00 | 2.24 | 8.95 | 736.95 | 745.90 |         |         |         |
| 84/ 5/ 2         | 116    | 30.40   | 0.22 | 0.00 | 0.09 | 0.37 | 30.71  | 31.08  | 7750.   | 4880.   |         |
|                  |        | 617.27  | 4.42 | 0.00 | 1.89 | 7.57 | 623.58 | 631.15 |         |         |         |
| 84/ 5/ 3         | 76     | 3.53    | 0.03 | 0.00 | 0.01 | 0.04 | 3.56   | 3.81   | 6335.   | 5090.   |         |
|                  |        | 381.87  | 2.73 | 0.00 | 1.17 | 4.69 | 385.78 | 390.46 |         |         |         |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

|                  |     |         |       |      |       |       |         |         |        |       |
|------------------|-----|---------|-------|------|-------|-------|---------|---------|--------|-------|
| 84/ 3/17         | 0   | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    | 8770.  | 6615. |
|                  |     | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    |        |       |
| 84/ 3/20         | 0   | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    | 10470. | 7170. |
|                  |     | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    |        |       |
| 84/ 3/21         | 0   | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    | 10520. | 8830. |
|                  |     | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    |        |       |
| 84/ 3/22         | 0   | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    | 7795.  | 7150. |
|                  |     | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    |        |       |
| 84/ 3/23         | 0   | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    | 7670.  | 7630. |
|                  |     | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    |        |       |
| 84/ 3/24         |     |         |       |      |       |       |         |         |        |       |
| No event         |     |         |       |      |       |       |         |         |        |       |
| 84/ 3/25         | 0   | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    | 7170.  | 8030. |
|                  |     | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    |        |       |
| 84/ 3/26         | 123 | 35.44   | 0.25  | 0.00 | 0.11  | 0.44  | 36.03   | 36.47   | 8670.  | 4730. |
|                  |     | 672.41  | 4.81  | 0.00 | 2.06  | 8.25  | 679.28  | 687.53  |        |       |
| 84/ 3/27         | 162 | 42.11   | 0.30  | 0.00 | 0.13  | 0.52  | 42.54   | 43.06   | 6650.  | 4316. |
|                  |     | 753.03  | 5.39  | 0.00 | 2.31  | 9.24  | 760.73  | 769.97  |        |       |
| 84/ 3/28         | 171 | 43.09   | 0.31  | 0.00 | 0.13  | 0.53  | 43.53   | 44.06   | 7910.  | 4288. |
|                  |     | 758.89  | 5.43  | 0.00 | 2.33  | 9.31  | 766.65  | 775.97  |        |       |
| 84/ 3/29         | 64  | 1.45    | 1.E-2 | 0.00 | 4.E-3 | 0.02  | 1.46    | 1.46    | 7790.  | 5240. |
|                  |     | 155.03  | 1.11  | 0.00 | 0.48  | 1.90  | 156.61  | 158.51  |        |       |
| 84/ 3/30         | 0   | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    | 7710.  | 6965. |
|                  |     | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    |        |       |
| 84/ 3/31         | 190 | 45.49   | 0.33  | 0.00 | 0.14  | 0.56  | 45.95   | 46.51   | 8265.  | 4042. |
|                  |     | 935.26  | 6.69  | 0.00 | 2.87  | 11.48 | 944.82  | 956.30  |        |       |
|                  |     |         |       |      |       |       |         |         |        |       |
| Month subtotals: |     | 252.06  | 1.80  | 0.00 | 0.77  | 3.10  | 254.64  | 257.73  |        |       |
|                  |     | 5270.30 | 37.72 | 0.00 | 16.17 | 64.67 | 5324.19 | 5388.86 |        |       |

| Flow<br>YR/MO/DY | #Disconn | Total   |       |      |       |       |        | Salmon +<br>Steelhd Begflow Endflow |         |         |
|------------------|----------|---------|-------|------|-------|-------|--------|-------------------------------------|---------|---------|
|                  |          | Chinook | Pink  | Chum | Coho  | Sthd  | Salmon | Steelhd                             | Begflow | Endflow |
| 84/ 4/ 1         | 190      | 45.49   | 0.33  | 0.00 | 0.14  | 0.56  | 45.95  | 46.51                               | 8440.   | 4042.   |
|                  |          | 935.26  | 6.69  | 0.00 | 2.87  | 11.48 | 944.82 | 956.30                              |         |         |
| 84/ 4/ 2         | 156      | 38.48   | 0.28  | 0.00 | 0.12  | 0.47  | 38.88  | 39.35                               | 8630.   | 4372.   |
|                  |          | 729.02  | 5.22  | 0.00 | 2.24  | 8.94  | 736.47 | 745.42                              |         |         |
| 84/ 4/ 3         | 54       | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90   | 0.91                                | 8590.   | 5705.   |
|                  |          | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62  | 84.64                               |         |         |
| 84/ 4/ 4         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00                                | 8990.   | 6825.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00                                |         |         |
| 84/ 4/ 5         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00                                | 9070.   | 6825.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00                                |         |         |
| 84/ 4/ 6         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00                                | 8470.   | 6650.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00                                |         |         |
| 84/ 4/ 7         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00                                | 7175.   | 7175.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00                                |         |         |
| 84/ 4/ 8         | 54       | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90   | 0.91                                | 8470.   | 5670.   |
|                  |          | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62  | 84.64                               |         |         |
| 84/ 4/ 9         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00                                | 8830.   | 6580.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00                                |         |         |
| 84/ 4/10         | 77       | 3.89    | 0.03  | 0.00 | 0.01  | 0.05  | 3.93   | 3.98                                | 8630.   | 5060.   |
|                  |          | 421.38  | 3.02  | 0.00 | 1.29  | 5.17  | 425.67 | 430.86                              |         |         |

First line shows STRANDED fish  
Second line shows TRAPPED fish

First line shows STRANDED fish  
Second line shows TRAPPED fish

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Month subtotals: 234.46 1.68 0.00 0.72 2.88 234.86 239.73  
5041.58 33.08 0.00 15.46 61.86 5093.13 5154.99

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Year totals: 1261.1 7.0 0.0 3.9 19.3 1274.0 1289.5  
25486.5 182.4 0.0 78.2 312.7 25747.1 26059.8

Gravel Bar Stranding - Daily Detail with Stranding Ranking  
 ======  
 (Results from applying base year stranding data to the indicated flow regime)

| Comment           | Flow<br>MM/MQ/DY | Flow    |       |      |      |         |        | Total Salmon | Salmon + Steelhd | Ampl | RampRate |
|-------------------|------------------|---------|-------|------|------|---------|--------|--------------|------------------|------|----------|
|                   |                  | Chinook | Pink  | Chum | Coho | Steelhd |        |              |                  |      |          |
| Daylight 84/ 4/29 | 207.90           | 137.53  | 22.92 | 0.00 | 1.32 | 440.36  | 449.68 | 16104.       | 7938.            |      |          |
| Daylight 84/ 5/ 2 | 236.51           | 112.98  | 18.83 | 0.00 | 1.08 | 368.33  | 369.41 | 3002.        | 1041.            |      |          |
| Daylight 84/ 4/11 | 167.49           | 80.01   | 13.34 | 0.00 | 1.33 | 260.84  | 262.17 | 4387.        | 689.             |      |          |
| Daylight 84/ 3/10 | 167.38           | 79.96   | 13.33 | 0.00 | 1.32 | 260.67  | 261.99 | 4382.        | 1220.            |      |          |
| Daylight 84/ 4/ 2 | 167.29           | 79.91   | 13.32 | 0.00 | 1.32 | 260.53  | 261.85 | 4342.        | 1446.            |      |          |
| Daylight 84/ 3/28 | 164.03           | 78.36   | 13.06 | 0.00 | 1.23 | 255.45  | 256.68 | 3623.        | 1001.            |      |          |
| Daylight 84/ 4/30 | 162.77           | 77.76   | 12.76 | 0.00 | 1.20 | 253.48  | 254.68 | 3345.        | 1202.            |      |          |
| Daylight 84/ 4/23 | 160.89           | 76.86   | 12.81 | 0.00 | 1.15 | 250.56  | 251.71 | 2932.        | 845.             |      |          |
| Daylight 84/ 4/24 | 159.49           | 76.19   | 12.70 | 0.00 | 1.11 | 248.38  | 249.48 | 2622.        | 661.             |      |          |
| Daylight 84/ 3/18 | 158.84           | 75.88   | 12.64 | 0.00 | 1.09 | 247.36  | 248.45 | 2478.        | 1230.            |      |          |
| Daylight 84/ 4/ 1 | 158.80           | 75.86   | 12.65 | 0.00 | 1.09 | 247.31  | 248.40 | 2471.        | 1082.            |      |          |
| Daylight 84/ 3/27 | 158.11           | 75.53   | 12.59 | 0.00 | 1.07 | 246.23  | 247.29 | 2318.        | 775.             |      |          |
| Daylight 84/ 3/31 | 158.08           | 75.51   | 12.59 | 0.00 | 1.07 | 246.18  | 247.25 | 2311.        | 960.             |      |          |
| Daylight 84/ 4/ 5 | 157.82           | 75.39   | 12.57 | 0.00 | 1.06 | 245.77  | 246.83 | 2254.        | 1127.            |      |          |
| Daylight 84/ 4/ 4 | 157.28           | 75.14   | 12.52 | 0.00 | 1.04 | 244.94  | 245.99 | 2136.        | 1068.            |      |          |
| Daylight 84/ 4/ 9 | 156.67           | 74.84   | 12.47 | 0.00 | 1.03 | 243.98  | 245.01 | 2000.        | 901.             |      |          |
| Daylight 84/ 5/ 1 | 155.31           | 74.19   | 12.37 | 0.00 | 1.09 | 241.87  | 242.96 | 2804.        | 719.             |      |          |
| Daylight 84/ 3/30 | 154.67           | 73.89   | 12.31 | 0.00 | 0.71 | 240.87  | 241.57 | 1531.        | 352.             |      |          |
| Daylight 84/ 5/ 3 | 126.71           | 60.53   | 10.08 | 0.00 | 0.58 | 197.33  | 197.90 | 1432.        | 391.             |      |          |
| Daylight 84/ 3/ 9 | 120.01           | 57.33   | 9.55  | 0.00 | 0.79 | 186.87  | 187.68 | 1649.        | 786.             |      |          |
| Daylight 84/ 5/ 4 | 118.72           | 56.71   | 9.45  | 0.00 | 1.33 | 184.89  | 186.22 | 6001.        | 2142.            |      |          |
| Daylight 84/ 3/ 5 | 106.28           | 50.77   | 8.46  | 0.00 | 1.07 | 165.52  | 166.59 | 2326.        | 1142.            |      |          |
| Daylight 84/ 3/23 | 93.11            | 44.48   | 7.41  | 0.00 | 0.98 | 145.00  | 145.98 | 1929.        | 945.             |      |          |
| Daylight 84/ 4/ 7 | 92.04            | 43.97   | 7.33  | 0.00 | 0.73 | 143.34  | 144.08 | 6934.        | 3220.            |      |          |
| Daylight 84/ 3/ 6 | 91.02            | 43.48   | 7.25  | 0.00 | 0.96 | 141.75  | 142.71 | 1897.        | 900.             |      |          |
| Daylight 84/ 3/ 7 | 85.96            | 41.06   | 6.84  | 0.00 | 0.39 | 133.87  | 134.26 | 1073.        | 526.             |      |          |
| Daylight 84/ 4/22 | 77.96            | 37.24   | 6.21  | 0.00 | 1.12 | 121.41  | 122.54 | 2766.        | 791.             |      |          |
| Daylight 84/ 4/20 | 77.71            | 37.12   | 6.19  | 0.00 | 0.35 | 121.02  | 121.37 | 1018.        | 509.             |      |          |
| Daylight 84/ 4/27 | 74.86            | 35.77   | 5.96  | 0.00 | 0.79 | 116.59  | 117.38 | 1649.        | 456.             |      |          |
| Daylight 84/ 3/21 | 74.47            | 35.57   | 5.93  | 0.00 | 0.49 | 115.97  | 116.46 | 1213.        | 606.             |      |          |
| Daylight 84/ 4/19 | 73.43            | 35.08   | 5.84  | 0.00 | 1.09 | 114.36  | 115.45 | 2512.        | 495.             |      |          |
| Daylight 84/ 4/26 | 65.30            | 31.19   | 5.20  | 0.00 | 1.04 | 101.69  | 102.72 | 2036.        | 493.             |      |          |
| Daylight 84/ 5/15 | 64.20            | 30.67   | 5.11  | 0.00 | 0.42 | 99.98   | 100.40 | 1657.        | 525.             |      |          |
| Daylight 84/ 5/18 | 62.60            | 29.90   | 4.98  | 0.00 | 0.41 | 97.49   | 97.90  | 1870.        | 715.             |      |          |
| Daylight 84/ 4/ 6 | 56.45            | 26.97   | 4.49  | 0.00 | 0.90 | 87.92   | 88.82  | 1817.        | 689.             |      |          |
| Daylight 84/ 5/20 | 55.81            | 26.66   | 4.44  | 0.00 | 0.37 | 86.92   | 87.28  | 1925.        | 836.             |      |          |
| Daylight 84/ 3/21 | 54.30            | 25.94   | 4.32  | 0.00 | 0.37 | 84.56   | 84.93  | 2286.        | 927.             |      |          |
| Daylight 84/ 4/21 | 47.11            | 22.51   | 3.75  | 0.00 | 0.50 | 73.36   | 73.86  | 1223.        | 595.             |      |          |
| Daylight 84/ 2/18 | 45.04            | 21.52   | 3.59  | 0.00 | 0.67 | 70.15   | 70.83  | 2464.        | 513.             |      |          |
| 84/ 3/ 3          | 39.94            | 19.08   | 3.18  | 0.00 | 1.40 | 62.20   | 63.60  | 4975.        | 1948.            |      |          |
| Daylight 84/ 5/12 | 40.24            | 19.22   | 3.20  | 0.00 | 0.64 | 62.67   | 63.31  | 2005.        | 326.             |      |          |
| Daylight 84/ 5/24 | 39.46            | 18.85   | 3.14  | 0.00 | 0.26 | 61.46   | 61.72  | 2260.        | 614.             |      |          |
| Daylight 84/ 5/ 7 | 37.15            | 17.75   | 2.96  | 0.00 | 0.17 | 57.86   | 58.03  | 817.         | 202.             |      |          |
| 84/ 3/17          | 36.35            | 17.36   | 2.87  | 0.00 | 1.27 | 56.61   | 57.88  | 3964.        | 1316.            |      |          |
| 84/ 3/26          | 35.91            | 17.15   | 2.86  | 0.00 | 1.26 | 55.91   | 57.17  | 3038.        | 775.             |      |          |
| 84/ 4/10          | 34.71            | 16.58   | 2.76  | 0.00 | 1.22 | 54.06   | 55.27  | 3502.        | 894.             |      |          |
| 84/ 4/12          | 34.15            | 16.32   | 2.72  | 0.00 | 1.20 | 53.19   | 54.38  | 3345.        | 814.             |      |          |
| 84/ 4/ 3          | 33.27            | 15.89   | 2.65  | 0.00 | 1.17 | 51.81   | 52.98  | 3076.        | 1233.            |      |          |
| Daylight 84/ 3/ 1 | 33.05            | 15.79   | 2.63  | 0.00 | 0.53 | 51.47   | 51.99  | 1271.        | 600.             |      |          |
| 84/ 4/25          | 32.49            | 15.52   | 2.59  | 0.00 | 1.14 | 50.60   | 51.74  | 2877.        | 688.             |      |          |
| 84/ 4/16          | 32.20            | 15.38   | 2.56  | 0.00 | 1.13 | 50.15   | 51.28  | 2796.        | 530.             |      |          |

**PARAMETERS FOR THIS RUN:**

04/18/87  
21:09:54

Slope categories:  
0 to 5%  
> 5% to 10%  
> 10%

Substrate categories:  
Less than 3 inches  
Greater than 3 inches

Location codes:  
Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 84   | 1      | 201     | 531     |
| 84   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

**TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:**

Rank by stranding using the database column --  
TOTSTR

Daily detail report

Tables will be written for gravel bars and/or potholes as selected.

|                   |       |       |      |      |      |       |       |       |       |
|-------------------|-------|-------|------|------|------|-------|-------|-------|-------|
| 84/ 4/ 8          | 31.69 | 15.14 | 2.52 | 0.00 | 1.11 | 49.35 | 50.46 | 2651. | 611.  |
| 84/ 3/29          | 31.57 | 15.08 | 2.51 | 0.00 | 1.10 | 49.16 | 50.27 | 2617. | 939.  |
| 84/ 4/18          | 31.41 | 15.01 | 2.50 | 0.00 | 1.10 | 48.92 | 50.02 | 2573. | 537.  |
| 84/ 3/ 8          | 31.23 | 14.92 | 2.49 | 0.00 | 1.10 | 48.64 | 49.73 | 2523. | 1227. |
| Daylight 84/ 4/14 | 31.54 | 15.07 | 2.51 | 0.00 | 0.33 | 49.11 | 49.44 | 984.  | 312.  |
| 84/ 3/19          | 30.61 | 14.62 | 2.43 | 0.00 | 1.07 | 47.66 | 48.73 | 2346. | 1142. |
| 84/ 4/13          | 30.56 | 14.60 | 2.43 | 0.00 | 1.07 | 47.60 | 48.67 | 2334. | 519.  |
| 84/ 3/ 2          | 30.28 | 14.47 | 2.41 | 0.00 | 1.06 | 47.14 | 48.22 | 2285. | 1127. |
| Daylight 84/ 2/23 | 30.29 | 14.47 | 2.41 | 0.00 | 0.48 | 47.17 | 47.66 | 1391. | 604.  |
| Daylight 84/ 5/14 | 20.08 | 13.41 | 2.24 | 0.00 | 0.19 | 43.73 | 43.92 | 978.  | 489.  |
| 84/ 2/29          | 22.93 | 10.95 | 1.82 | 0.00 | 0.80 | 35.71 | 34.52 | 1671. | 493.  |
| 84/ 3/20          | 22.41 | 10.70 | 1.78 | 0.00 | 0.78 | 34.89 | 35.60 | 1644. | 708.  |
| Daylight 84/ 3/17 | 21.93 | 10.48 | 1.74 | 0.00 | 0.14 | 34.16 | 34.30 | 948.  | 467.  |
| 84/ 3/11          | 21.19 | 10.12 | 1.67 | 0.00 | 0.74 | 33.00 | 33.74 | 1502. | 791.  |
| 84/ 2/20          | 20.54 | 9.81  | 1.63 | 0.00 | 0.72 | 31.98 | 32.70 | 2113. | 645.  |
| 84/ 3/11          | 19.75 | 9.44  | 1.57 | 0.00 | 0.69 | 30.77 | 31.46 | 2205. | 443.  |
| Daylight 84/ 2/ 3 | 19.61 | 9.37  | 1.56 | 0.00 | 0.09 | 30.55 | 30.64 | 1764. | 596.  |
| Daylight 84/ 5/29 | 18.90 | 9.03  | 1.50 | 0.00 | 0.11 | 29.44 | 29.55 | 2094. | 442.  |
| 84/ 2/19          | 18.50 | 8.84  | 1.47 | 0.00 | 0.65 | 28.81 | 29.46 | 1942. | 893.  |
| Daylight 84/ 5/16 | 18.12 | 8.56  | 1.44 | 0.00 | 0.12 | 28.22 | 28.34 | 847.  | 423.  |
| Daylight 84/ 3/12 | 17.27 | 8.25  | 1.37 | 0.00 | 0.28 | 26.90 | 27.18 | 903.  | 451.  |
| Daylight 84/ 3/13 | 16.37 | 7.82  | 1.30 | 0.00 | 0.24 | 25.50 | 25.76 | 882.  | 430.  |
| 84/ 2/15          | 15.47 | 7.39  | 1.23 | 0.00 | 0.34 | 24.10 | 24.64 | 2131. | 831.  |
| Daylight 84/ 3/23 | 15.07 | 7.20  | 1.20 | 0.00 | 0.24 | 23.47 | 23.71 | 1750. | 505.  |
| Daylight 84/ 5/ 9 | 14.27 | 6.83  | 1.14 | 0.00 | 0.23 | 22.26 | 22.49 | 964.  | 305.  |
| Daylight 84/ 5/10 | 13.98 | 6.68  | 1.11 | 0.00 | 0.15 | 21.77 | 21.91 | 812.  | 177.  |
| 84/ 2/11          | 12.95 | 6.18  | 1.03 | 0.00 | 0.45 | 20.16 | 20.62 | 3340. | 1098. |
| Daylight 84/ 5/13 | 10.61 | 5.07  | 0.84 | 0.00 | 0.17 | 16.53 | 16.70 | 917.  | 458.  |
| 84/ 3/25          | 10.36 | 4.95  | 0.82 | 0.00 | 0.36 | 16.13 | 16.50 | 1029. | 493.  |
| 84/ 5/19          | 10.30 | 4.92  | 0.82 | 0.00 | 0.36 | 16.04 | 16.41 | 1795. | 483.  |
| Daylight 84/ 5/30 | 10.24 | 4.89  | 0.81 | 0.00 | 0.08 | 15.74 | 16.02 | 3572. | 1027. |
| 84/ 2/27          | 9.92  | 4.74  | 0.79 | 0.00 | 0.35 | 15.45 | 15.80 | 1044. | 262.  |
| Daylight 84/ 2/ 4 | 5.10  | 2.44  | 0.41 | 0.00 | 0.08 | 7.94  | 8.02  | 1362. | 539.  |
| Daylight 84/ 5/26 | 4.81  | 2.30  | 0.38 | 0.00 | 0.05 | 7.49  | 7.55  | 894.  | 364.  |
| 84/ 3/22          | 4.39  | 2.10  | 0.35 | 0.00 | 0.15 | 6.83  | 6.98  | 724.  | 350.  |
| Daylight 84/ 2/10 | 4.27  | 2.04  | 0.34 | 0.00 | 0.07 | 6.65  | 6.72  | 789.  | 220.  |
| 84/ 2/ 6          | 4.12  | 1.97  | 0.33 | 0.00 | 0.14 | 6.41  | 6.55  | 1516. | 380.  |
| Daylight 84/ 5/27 | 4.11  | 1.97  | 0.33 | 0.00 | 0.03 | 6.40  | 6.43  | 752.  | 378.  |
| 84/ 5/25          | 3.46  | 1.66  | 0.27 | 0.00 | 0.12 | 5.37  | 5.51  | 1300. | 256.  |
| Daylight 84/ 2/ 1 | 2.57  | 1.23  | 0.20 | 0.00 | 0.04 | 4.01  | 4.05  | 2581. | 724.  |
| 84/ 2/ 2          | 2.14  | 1.02  | 0.17 | 0.00 | 0.07 | 3.34  | 3.41  | 2475. | 1102. |
| 84/ 5/22          | 1.51  | 0.72  | 0.12 | 0.00 | 0.05 | 2.35  | 2.41  | 747.  | 373.  |
| 84/ 5/31          | 0.50  | 0.24  | 0.04 | 0.00 | 0.02 | 0.78  | 0.80  | 1321. | 290.  |
| 84/ 2/24          | 0.06  | 0.03  | 0.00 | 0.00 | 0.00 | 0.10  | 0.10  | 504.  | 252.  |
| 84/ 2/ 7          | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 131.  | 65.   |
| 84/ 3/15          | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 274.  | 115.  |
| Daylight 84/ 4/17 | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 381.  | 174.  |
| 84/ 2/17          | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 385.  | 192.  |

| Comment | YR/MO/DY | Flow    |      |      |      |         | Total Salmon | Salmon + Steelhd |          |       |
|---------|----------|---------|------|------|------|---------|--------------|------------------|----------|-------|
|         |          | Chinook | Pink | Chum | Coho | Steelhd |              | Ampl             | RampRate |       |
|         | 84/ 8/15 | 0.00    | 0.00 | 0.00 | 5.30 | 657.34  | 5.30         | 662.64           | 4989.    | 1884. |
|         | 84/ 7/25 | 0.00    | 0.00 | 0.00 | 3.54 | 439.56  | 3.54         | 443.10           | 5324.    | 2343. |
|         | 84/ 8/ 6 | 0.00    | 0.00 | 0.00 | 3.19 | 395.96  | 3.19         | 399.16           | 3574.    | 827.  |
|         | 84/ 8/30 | 0.00    | 0.00 | 0.00 | 2.04 | 255.16  | 2.06         | 257.22           | 2810.    | 1266. |
|         | 84/ 8/31 | 0.00    | 0.00 | 0.00 | 2.02 | 250.37  | 2.02         | 252.39           | 2784.    | 817.  |
|         | 84/ 7/31 | 0.00    | 0.00 | 0.00 | 1.90 | 235.74  | 1.90         | 237.84           | 2781.    | 1023. |
|         | 84/ 8/ 7 | 0.00    | 0.00 | 0.00 | 1.79 | 221.80  | 1.79         | 223.60           | 2627.    | 1013. |
|         | 84/ 8/27 | 0.00    | 0.00 | 0.00 | 1.65 | 205.22  | 1.65         | 206.87           | 2539.    | 1101. |
|         | 84/ 7/30 | 0.00    | 0.00 | 0.00 | 1.59 | 197.81  | 1.59         | 199.41           | 2633.    | 708.  |
|         | 84/ 9/ 1 | 0.00    | 0.00 | 0.00 | 1.53 | 189.32  | 1.53         | 190.85           | 2407.    | 1234. |
|         | 84/ 7/23 | 0.00    | 0.00 | 0.00 | 1.45 | 179.74  | 1.45         | 181.19           | 3376.    | 1304. |
|         | 84/ 7/27 | 0.00    | 0.00 | 0.00 | 1.35 | 167.85  | 1.35         | 169.00           | 2605.    | 870.  |
|         | 84/ 7/17 | 0.00    | 0.00 | 0.00 | 1.08 | 133.35  | 1.08         | 134.42           | 5761.    | 2880. |
|         | 84/ 9/13 | 0.00    | 0.00 | 0.00 | 0.94 | 116.16  | 0.94         | 117.10           | 2511.    | 1033. |
|         | 84/ 9/ 6 | 0.00    | 0.00 | 0.00 | 0.88 | 109.17  | 0.88         | 110.05           | 2160.    | 1032. |
|         | 84/ 9/ 5 | 0.00    | 0.00 | 0.00 | 0.87 | 107.51  | 0.87         | 108.38           | 2121.    | 935.  |
|         | 84/ 9/15 | 0.00    | 0.00 | 0.00 | 0.83 | 103.54  | 0.83         | 104.38           | 2514.    | 1029. |
|         | 84/ 8/28 | 0.00    | 0.00 | 0.00 | 0.75 | 93.10   | 0.75         | 93.86            | 1819.    | 364.  |
|         | 84/ 7/20 | 0.00    | 0.00 | 0.00 | 0.74 | 91.20   | 0.74         | 91.93            | 2910.    | 1113. |
|         | 84/ 9/ 4 | 0.00    | 0.00 | 0.00 | 0.70 | 86.93   | 0.70         | 87.63            | 1914.    | 443.  |
|         | 84/ 9/12 | 0.00    | 0.00 | 0.00 | 0.70 | 86.36   | 0.70         | 87.05            | 2190.    | 973.  |
|         | 84/ 9/14 | 0.00    | 0.00 | 0.00 | 0.69 | 85.35   | 0.69         | 86.04            | 2270.    | 841.  |
|         | 84/ 9/18 | 0.00    | 0.00 | 0.00 | 0.60 | 74.14   | 0.60         | 74.75            | 2385.    | 1025. |
|         | 84/ 7/28 | 0.00    | 0.00 | 0.00 | 0.57 | 70.39   | 0.57         | 70.95            | 1782.    | 658.  |
|         | 84/ 9/10 | 0.00    | 0.00 | 0.00 | 0.45 | 55.71   | 0.45         | 56.15            | 1645.    | 697.  |
|         | 84/ 8/23 | 0.00    | 0.00 | 0.00 | 0.43 | 53.15   | 0.43         | 53.58            | 1253.    | 608.  |
|         | 84/ 9/19 | 0.00    | 0.00 | 0.00 | 0.41 | 51.12   | 0.41         | 51.53            | 2142.    | 1033. |
|         | 84/ 8/24 | 0.00    | 0.00 | 0.00 | 0.41 | 50.82   | 0.41         | 51.23            | 1220.    | 454.  |
|         | 84/ 9/20 | 0.00    | 0.00 | 0.00 | 0.41 | 50.78   | 0.41         | 51.19            | 2202.    | 1101. |
|         | 84/ 8/ 5 | 0.00    | 0.00 | 0.00 | 0.41 | 50.19   | 0.41         | 50.59            | 1211.    | 605.  |
|         | 84/ 9/ 9 | 0.00    | 0.00 | 0.00 | 0.40 | 49.94   | 0.40         | 50.35            | 1497.    | 748.  |
|         | 84/ 7/26 | 0.00    | 0.00 | 0.00 | 0.40 | 49.08   | 0.40         | 49.48            | 1543.    | 679.  |
|         | 84/ 8/20 | 0.00    | 0.00 | 0.00 | 0.36 | 44.89   | 0.36         | 45.26            | 1136.    | 316.  |
|         | 84/ 9/17 | 0.00    | 0.00 | 0.00 | 0.36 | 44.79   | 0.36         | 45.15            | 1905.    | 897.  |
|         | 84/ 8/25 | 0.00    | 0.00 | 0.00 | 0.34 | 41.72   | 0.34         | 42.05            | 1091.    | 361.  |
|         | 84/ 9/21 | 0.00    | 0.00 | 0.00 | 0.33 | 41.53   | 0.33         | 41.86            | 2124.    | 1062. |
|         | 84/ 9/ 7 | 0.00    | 0.00 | 0.00 | 0.33 | 41.31   | 0.33         | 41.65            | 1256.    | 628.  |
|         | 84/ 8/11 | 0.00    | 0.00 | 0.00 | 0.33 | 41.01   | 0.33         | 41.34            | 1081.    | 534.  |
|         | 84/ 8/21 | 0.00    | 0.00 | 0.00 | 0.33 | 40.94   | 0.33         | 41.27            | 1080.    | 529.  |
|         | 84/ 8/12 | 0.00    | 0.00 | 0.00 | 0.33 | 40.45   | 0.33         | 40.77            | 1073.    | 528.  |
|         | 84/ 8/22 | 0.00    | 0.00 | 0.00 | 0.32 | 39.95   | 0.32         | 40.27            | 1066.    | 528.  |
|         | 84/ 9/24 | 0.00    | 0.00 | 0.00 | 0.31 | 38.80   | 0.31         | 39.12            | 2358.    | 900.  |
|         | 84/ 7/11 | 0.00    | 0.00 | 0.00 | 0.31 | 38.21   | 0.31         | 38.52            | 1337.    | 410.  |
|         | 84/ 8/ 1 | 0.00    | 0.00 | 0.00 | 0.30 | 37.13   | 0.30         | 37.43            | 1026.    | 485.  |
|         | 84/ 7/19 | 0.00    | 0.00 | 0.00 | 0.30 | 37.04   | 0.30         | 37.34            | 2149.    | 587.  |
|         | 84/ 8/10 | 0.00    | 0.00 | 0.00 | 0.25 | 31.41   | 0.25         | 31.66            | 945.     | 245.  |
|         | 84/ 8/16 | 0.00    | 0.00 | 0.00 | 0.25 | 30.92   | 0.25         | 31.17            | 938.     | 401.  |
|         | 84/ 9/22 | 0.00    | 0.00 | 0.00 | 0.24 | 30.02   | 0.24         | 30.26            | 1965.    | 685.  |
|         | 84/ 7/18 | 0.00    | 0.00 | 0.00 | 0.21 | 26.60   | 0.21         | 26.81            | 2075.    | 875.  |
|         | 84/ 9/26 | 0.00    | 0.00 | 0.00 | 0.20 | 25.13   | 0.20         | 25.34            | 2271.    | 1011. |
|         | 84/ 7/21 | 0.00    | 0.00 | 0.00 | 0.20 | 25.09   | 0.20         | 25.29            | 1414.    | 699.  |
|         | 84/ 9/ 3 | 0.00    | 0.00 | 0.00 | 0.18 | 22.70   | 0.18         | 22.88            | 856.     | 428.  |
|         | 84/ 9/16 | 0.00    | 0.00 | 0.00 | 0.17 | 21.52   | 0.17         | 21.69            | 1130.    | 565.  |
|         | 84/ 8/ 9 | 0.00    | 0.00 | 0.00 | 0.17 | 21.18   | 0.17         | 21.35            | 800.     | 228.  |
|         | 84/ 9/27 | 0.00    | 0.00 | 0.00 | 0.16 | 20.25   | 0.16         | 20.41            | 2277.    | 1006. |

|          |      |      |      |      |       |      |       |       |      |
|----------|------|------|------|------|-------|------|-------|-------|------|
| 84/ 9/23 | 0.00 | 0.00 | 0.00 | 0.16 | 19.60 | 0.16 | 19.76 | 1576. | 715. |
| 84/ 9/25 | 0.00 | 0.00 | 0.00 | 0.15 | 19.18 | 0.15 | 19.33 | 1904. | 902. |
| 84/ 9/ 2 | 0.00 | 0.00 | 0.00 | 0.13 | 16.52 | 0.13 | 16.65 | 734.  | 357. |
| 84/ 9/ 8 | 0.00 | 0.00 | 0.00 | 0.10 | 12.14 | 0.10 | 12.24 | 672.  | 328. |
| 84/ 7/24 | 0.00 | 0.00 | 0.00 | 0.07 | 9.25  | 0.07 | 9.33  | 736.  | 230. |
| 84/ 7/22 | 0.00 | 0.00 | 0.00 | 0.07 | 8.06  | 0.07 | 8.13  | 757.  | 251. |
| 84/ 9/ 8 | 0.00 | 0.00 | 0.00 | 0.06 | 7.65  | 0.06 | 7.71  | 646.  | 317. |
| 84/ 9/28 | 0.00 | 0.00 | 0.00 | 0.02 | 2.68  | 0.02 | 2.70  | 893.  | 353. |
| 84/ 7/15 | 0.00 | 0.00 | 0.00 | 0.02 | 2.17  | 0.02 | 2.19  | 1055. | 527. |
| 84/ 9/ 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 324.  | 162. |
| 84/ 8/18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 420.  | 202. |
| 84/ 8/14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 342.  | 171. |
| 84/ 7/16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 243.  | 32.  |

Potholes Stranding and Trapping - Daily Detail with Stranding Ranking

(Results of applying base year data to the indicate flow regime)

First line shows STRANDED fish  
Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Discn | Total   |      |      |      |       |         | Salmon + |         |         |
|------------------|--------|---------|------|------|------|-------|---------|----------|---------|---------|
|                  |        | Chinook | Pink | Chum | Coho | Sthd  | Salmon  | Steelhd  | Bigflow | Endflow |
| 84/ 4/23         | 195    | 55.02   | 0.39 | 0.00 | 0.17 | 0.68  | 55.59   | 56.26    | 6895.   | 3806.   |
|                  |        | 1008.85 | 7.22 | 0.00 | 3.10 | 12.38 | 1019.17 | 1031.55  |         |         |
| 84/ 4/24         | 194    | 50.13   | 0.36 | 0.00 | 0.15 | 0.62  | 50.65   | 51.26    | 6685.   | 3990.   |
|                  |        | 1008.85 | 7.22 | 0.00 | 3.10 | 12.38 | 1019.17 | 1031.55  |         |         |
| 84/ 4/25         | 194    | 50.13   | 0.36 | 0.00 | 0.15 | 0.62  | 50.65   | 51.26    | 6825.   | 3938.   |
|                  |        | 1008.85 | 7.22 | 0.00 | 3.10 | 12.38 | 1019.17 | 1031.55  |         |         |
| 84/ 4/19         | 194    | 50.13   | 0.36 | 0.00 | 0.15 | 0.62  | 50.65   | 51.26    | 6510.   | 3938.   |
|                  |        | 1008.85 | 7.22 | 0.00 | 3.10 | 12.38 | 1019.17 | 1031.55  |         |         |
| 84/ 4/27         | 140    | 49.25   | 0.35 | 0.00 | 0.15 | 0.60  | 49.75   | 50.35    | 5600.   | 3944.   |
|                  |        | 926.08  | 6.63 | 0.00 | 2.84 | 11.36 | 935.55  | 946.91   |         |         |
| 84/ 5/ 4         | 195    | 48.15   | 0.34 | 0.00 | 0.15 | 0.59  | 48.64   | 49.23    | 5880.   | 3886.   |
|                  |        | 882.75  | 6.32 | 0.00 | 2.71 | 10.83 | 891.77  | 902.60   |         |         |
| 84/ 4/21         | 116    | 46.24   | 0.33 | 0.00 | 0.14 | 0.57  | 46.72   | 47.28    | 5000.   | 3990.   |
|                  |        | 584.64  | 4.18 | 0.00 | 1.79 | 7.17  | 590.62  | 597.79   |         |         |
| 84/ 4/ 1         | 190    | 45.49   | 0.33 | 0.00 | 0.14 | 0.56  | 45.95   | 46.51    | 6440.   | 4042.   |
|                  |        | 935.26  | 6.69 | 0.00 | 2.87 | 11.48 | 944.82  | 956.30   |         |         |
| 84/ 4/11         | 190    | 45.49   | 0.33 | 0.00 | 0.14 | 0.56  | 45.95   | 46.51    | 8470.   | 4042.   |
|                  |        | 935.26  | 6.69 | 0.00 | 2.87 | 11.48 | 944.82  | 956.30   |         |         |
| 84/ 4/30         | 190    | 45.49   | 0.33 | 0.00 | 0.14 | 0.56  | 45.95   | 46.51    | 7315.   | 4042.   |
|                  |        | 935.26  | 6.69 | 0.00 | 2.87 | 11.48 | 944.82  | 956.30   |         |         |
| 84/ 3/31         | 190    | 45.49   | 0.33 | 0.00 | 0.14 | 0.56  | 45.95   | 46.51    | 6265.   | 4042.   |
|                  |        | 935.26  | 6.69 | 0.00 | 2.87 | 11.48 | 944.82  | 956.30   |         |         |
| 84/ 4/13         | 186    | 44.71   | 0.32 | 0.00 | 0.14 | 0.55  | 45.16   | 45.71    | 6370.   | 4068.   |
|                  |        | 891.64  | 6.38 | 0.00 | 2.73 | 10.94 | 900.76  | 911.70   |         |         |
| 84/ 3/ 3         | 186    | 44.71   | 0.32 | 0.00 | 0.14 | 0.55  | 45.16   | 45.71    | 9270.   | 4094.   |
|                  |        | 891.64  | 6.38 | 0.00 | 2.73 | 10.94 | 900.76  | 911.70   |         |         |
| 84/ 3/28         | 171    | 43.09   | 0.31 | 0.00 | 0.13 | 0.53  | 43.53   | 44.06    | 7910.   | 4288.   |
|                  |        | 758.89  | 5.43 | 0.00 | 2.33 | 9.31  | 766.45  | 775.97   |         |         |
| 84/ 4/26         | 171    | 43.09   | 0.31 | 0.00 | 0.13 | 0.53  | 43.53   | 44.06    | 6160.   | 4288.   |
|                  |        | 758.89  | 5.43 | 0.00 | 2.33 | 9.31  | 766.45  | 775.97   |         |         |
| 84/ 4/18         | 171    | 43.09   | 0.31 | 0.00 | 0.13 | 0.53  | 43.53   | 44.06    | 6860.   | 4288.   |
|                  |        | 758.89  | 5.43 | 0.00 | 2.33 | 9.31  | 766.45  | 775.97   |         |         |
| 84/ 4/22         | 160    | 42.11   | 0.30 | 0.00 | 0.13 | 0.52  | 42.54   | 43.06    | 6825.   | 4344.   |
|                  |        | 746.51  | 5.34 | 0.00 | 2.29 | 9.16  | 754.14  | 763.50   |         |         |
| 84/ 3/27         | 162    | 42.11   | 0.30 | 0.00 | 0.13 | 0.52  | 42.54   | 43.06    | 6650.   | 4316.   |
|                  |        | 753.03  | 5.39 | 0.00 | 2.31 | 9.24  | 760.73  | 769.97   |         |         |
| 84/ 5/ 1         | 162    | 40.80   | 0.29 | 0.00 | 0.13 | 0.50  | 41.22   | 41.72    | 6790.   | 4316.   |
|                  |        | 729.49  | 5.22 | 0.00 | 2.24 | 8.95  | 736.95  | 745.90   |         |         |
| 84/ 4/14         | 94     | 39.20   | 0.28 | 0.00 | 0.12 | 0.48  | 39.60   | 40.08    | 5060.   | 4288.   |
|                  |        | 337.52  | 2.42 | 0.00 | 1.03 | 4.14  | 340.97  | 345.11   |         |         |
| 84/ 4/ 2         | 156    | 38.48   | 0.28 | 0.00 | 0.12 | 0.47  | 38.88   | 39.35    | 8630.   | 4372.   |
|                  |        | 729.02  | 5.22 | 0.00 | 2.24 | 8.94  | 736.47  | 745.42   |         |         |
| 84/ 4/16         | 126    | 35.66   | 0.25 | 0.00 | 0.11 | 0.44  | 36.03   | 36.47    | 7470.   | 4440.   |
|                  |        | 682.67  | 4.89 | 0.00 | 2.07 | 8.38  | 699.66  | 698.03   |         |         |
| 84/ 3/26         | 123    | 35.66   | 0.25 | 0.00 | 0.11 | 0.44  | 36.03   | 36.47    | 8670.   | 4730.   |
|                  |        | 672.41  | 4.81 | 0.00 | 2.06 | 8.25  | 679.28  | 687.53   |         |         |
| 84/ 3/10         | 126    | 35.66   | 0.25 | 0.00 | 0.11 | 0.44  | 36.03   | 36.47    | 8910.   | 4610.   |
|                  |        | 682.67  | 4.89 | 0.00 | 2.09 | 8.38  | 689.66  | 698.03   |         |         |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Discard | Chinook | Pink  | Chum | Coho  | Sthd  | Total<br>Salmon | Salmon +<br>Steelhd | Begflow | Endflow |
|------------------|----------|---------|-------|------|-------|-------|-----------------|---------------------|---------|---------|
| 84/ 5/ 2         | 116      | 30.40   | 0.22  | 0.00 | 0.09  | 0.37  | 30.71           | 31.08               | 7750.   | 4880.   |
|                  |          | 617.27  | 4.42  | 0.00 | 1.89  | 7.57  | 623.58          | 631.15              |         |         |
| 84/ 5/ 9         | 105      | 28.46   | 0.20  | 0.00 | 0.09  | 0.35  | 28.75           | 29.10               | 5060.   | 4140.   |
|                  |          | 324.29  | 2.32  | 0.00 | 0.00  | 3.98  | 327.61          | 331.59              |         |         |
| 84/ 5/ 7         | 56       | 22.18   | 0.16  | 0.00 | 0.07  | 0.27  | 22.41           | 22.68               | 4316.   | 3538.   |
|                  |          | 356.20  | 2.55  | 0.00 | 1.09  | 4.37  | 359.85          | 364.22              |         |         |
| 84/ 5/18         | 156      | 16.83   | 0.12  | 0.00 | 0.05  | 0.21  | 17.01           | 17.21               | 4230.   | 4372.   |
|                  |          | 318.95  | 2.28  | 0.00 | 0.98  | 3.91  | 322.21          | 326.12              |         |         |
| 84/ 2/11         | 141      | 13.79   | 0.10  | 0.00 | 0.04  | 0.17  | 13.93           | 14.10               | 7830.   | 4490.   |
|                  |          | 262.42  | 1.88  | 0.00 | 0.81  | 3.22  | 265.11          | 268.33              |         |         |
| 84/ 4/29         | 66       | 13.74   | 0.10  | 0.00 | 0.04  | 0.17  | 13.88           | 14.05               | 4640.   | 4016.   |
|                  |          | 325.93  | 2.33  | 0.00 | 1.00  | 4.00  | 329.27          | 333.27              |         |         |
| 84/ 5/21         | 123      | 12.26   | 0.09  | 0.00 | 0.04  | 0.15  | 12.39           | 12.53               | 7105.   | 4670.   |
|                  |          | 231.14  | 1.65  | 0.00 | 0.71  | 2.84  | 233.50          | 236.34              |         |         |
| 84/ 5/24         | 152      | 9.25    | 0.07  | 0.00 | 0.03  | 0.11  | 9.35            | 9.46                | 6790.   | 4400.   |
|                  |          | 172.96  | 1.24  | 0.00 | 0.53  | 2.12  | 174.73          | 176.85              |         |         |
| 84/ 5/10         | 70       | 8.44    | 0.06  | 0.00 | 0.03  | 0.10  | 8.53            | 8.63                | 4850.   | 4074.   |
|                  |          | 160.34  | 1.15  | 0.00 | 0.47  | 1.97  | 161.98          | 163.95              |         |         |
| 84/ 5/25         | 130      | 7.95    | 0.06  | 0.00 | 0.02  | 0.10  | 8.04            | 8.13                | 5845.   | 4580.   |
|                  |          | 151.06  | 1.08  | 0.00 | 0.46  | 1.85  | 152.60          | 154.46              |         |         |
| 84/ 2/ 6         | 122      | 7.38    | 0.05  | 0.00 | 0.02  | 0.09  | 7.45            | 7.55                | 6300.   | 4760.   |
|                  |          | 139.12  | 0.00  | 0.00 | 0.43  | 1.71  | 140.54          | 142.25              |         |         |
| 84/ 2/ 4         | 108      | 5.69    | 0.04  | 0.00 | 0.02  | 0.07  | 5.74            | 5.81                | 5635.   | 4316.   |
|                  |          | 92.45   | 0.66  | 0.00 | 0.28  | 1.13  | 93.39           | 94.53               |         |         |
| 84/ 3/17         | 77       | 3.89    | 0.03  | 0.00 | 0.01  | 0.03  | 3.93            | 3.98                | 8990.   | 5030.   |
|                  |          | 421.38  | 3.02  | 0.00 | 1.29  | 5.17  | 425.69          | 430.86              |         |         |
| 84/ 4/10         | 77       | 3.89    | 0.03  | 0.00 | 0.01  | 0.03  | 3.93            | 3.98                | 8630.   | 5060.   |
|                  |          | 421.38  | 3.02  | 0.00 | 1.29  | 5.17  | 425.69          | 430.86              |         |         |
| 84/ 5/ 3         | 76       | 3.53    | 0.03  | 0.00 | 0.01  | 0.04  | 3.54            | 3.61                | 6335.   | 5090.   |
|                  |          | 381.87  | 2.73  | 0.00 | 1.17  | 4.69  | 385.78          | 390.46              |         |         |
| 84/ 4/20         | 24       | 3.00    | 0.02  | 0.00 | 9.E-3 | 0.04  | 3.04            | 3.07                | 5670.   | 5000.   |
|                  |          | 341.44  | 2.44  | 0.00 | 1.05  | 4.19  | 344.93          | 349.12              |         |         |
| 84/ 5/12         | 80       | 2.43    | 0.02  | 0.00 | 7.E-3 | 0.03  | 2.46            | 2.49                | 7105.   | 4940.   |
|                  |          | 294.41  | 2.11  | 0.00 | 0.90  | 3.61  | 297.42          | 301.04              |         |         |
| 84/ 4/12         | 64       | 1.45    | 1.E-2 | 0.00 | 4.E-3 | 0.02  | 1.44            | 1.48                | 8510.   | 5240.   |
|                  |          | 155.03  | 1.11  | 0.00 | 0.48  | 1.90  | 156.61          | 158.51              |         |         |
| 84/ 3/29         | 64       | 1.45    | 1.E-2 | 0.00 | 4.E-3 | 0.02  | 1.44            | 1.48                | 7790.   | 5240.   |
|                  |          | 155.03  | 1.11  | 0.00 | 0.48  | 1.90  | 156.61          | 158.51              |         |         |
| 84/ 5/11         | 65       | 0.95    | 7.E-3 | 0.00 | 3.E-3 | 0.01  | 0.96            | 0.97                | 6685.   | 5180.   |
|                  |          | 101.74  | 0.73  | 0.00 | 0.31  | 1.25  | 102.78          | 104.03              |         |         |
| 84/ 4/ 3         | 54       | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 8590.   | 5705.   |
|                  |          | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62           | 84.64               |         |         |
| 84/ 4/ 8         | 54       | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 8470.   | 5470.   |
|                  |          | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62           | 84.64               |         |         |
| 84/ 5/26         | 77       | 0.73    | 5.E-3 | 0.00 | 2.E-3 | 9.E-3 | 0.74            | 0.75                | 6020.   | 5060.   |
|                  |          | 79.01   | 0.56  | 0.00 | 0.24  | 0.97  | 79.82           | 80.77               |         |         |
| 84/ 5/15         | 54       | 0.47    | 3.E-3 | 0.00 | 1.E-3 | 6.E-3 | 0.48            | 0.48                | 7350.   | 5570.   |
|                  |          | 43.97   | 0.31  | 0.00 | 0.14  | 0.54  | 44.42           | 44.96               |         |         |
| 84/ 5/27         | 23       | 0.47    | 3.E-3 | 0.00 | 1.E-3 | 6.E-3 | 0.47            | 0.48                | 5635.   | 5030.   |
|                  |          | 52.91   | 0.38  | 0.00 | 0.16  | 0.65  | 53.45           | 54.10               |         |         |
| 84/ 5/17         | 58       | 0.42    | 3.E-3 | 0.00 | 1.E-3 | 5.E-3 | 0.42            | 0.43                | 6545.   | 5510.   |
|                  |          | 68.57   | 0.47  | 0.00 | 0.21  | 0.84  | 69.28           | 70.12               |         |         |

First line shows STRANDED fish  
Second line shows TRAPPED fish

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Disconnect | Chinook       | Pink          | Chum         | Coho          | Sthd          | Total<br>Salmon | Salmon +<br>Steelhd | Bagflow | Endflow |
|------------------|-------------|---------------|---------------|--------------|---------------|---------------|-----------------|---------------------|---------|---------|
| 84/ 5/23         | 64          | 0.41<br>43.60 | 3.E-3<br>0.31 | 0.00<br>0.00 | 1.E-3<br>0.13 | 5.E-3<br>0.54 | 0.41<br>44.05   | 0.42<br>44.58       | 7175.   | 5240.   |
| 84/ 5/20         | 54          | 0.33<br>31.04 | 2.E-3<br>0.22 | 0.00<br>0.00 | 1.E-3<br>0.07 | 4.E-3<br>0.38 | 0.34<br>31.34   | 0.34<br>31.74       | 7630.   | 5570.   |
| 84/ 2/ 3         | 54          | 0.09<br>0.56  | 1.E-3<br>0.06 | 0.00<br>0.00 | 0.00<br>0.03  | 1.E-3<br>0.10 | 0.09<br>6.65    | 0.09<br>0.76        | 6370.   | 5705.   |
| 84/ 2/ 2         | 54          | 0.06<br>5.71  | 0.00<br>0.04  | 0.00<br>0.00 | 0.00<br>0.02  | 1.E-3<br>0.07 | 0.06<br>5.77    | 0.06<br>5.84        | 8190.   | 5470.   |
| 84/ 3/19         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 8970.   | 6415.   |
| 84/ 3/ 5         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 9070.   | 6650.   |
| 84/ 3/ 2         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 8790.   | 6790.   |
| 84/ 4/ 5         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 9070.   | 6825.   |
| 84/ 3/30         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 7710.   | 6945.   |
| 84/ 3/ 1         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 7630.   | 6405.   |
| 84/ 4/ 9         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 8830.   | 6580.   |
| 84/ 3/25         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 9190.   | 8030.   |
| 84/ 4/ 7         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 7175.   | 7175.   |
| 84/ 4/ 4         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 8970.   | 6825.   |
| 84/ 2/ 1         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 8470.   | 5775.   |
| 84/ 4/ 6         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 8470.   | 6850.   |
| 84/ 3/11         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 7750.   | 6265.   |
| 84/ 4/17         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 6265.   | 5810.   |
| 84/ 3/23         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 9670.   | 7630.   |
| 84/ 2/ 7         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 5480.   | 5330.   |
| 84/ 3/21         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 10520.  | 8830.   |
| 84/ 3/ 8         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 9150.   | 6545.   |
| 84/ 2/15         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 9430.   | 7105.   |
| 84/ 3/20         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 10470.  | 7190.   |
| 84/ 2/18         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 8790.   | 6230.   |
| 84/ 2/19         | 0           | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00 | 0.00<br>0.00  | 0.00<br>0.00  | 0.00<br>0.00    | 0.00<br>0.00        | 6895.   | 6895.   |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| YR/MO/DY | #Disconnect | Flow    |       |      |       |       |        | Total Salmon | Salmon + Steelhd | Bagflow | Endflow |
|----------|-------------|---------|-------|------|-------|-------|--------|--------------|------------------|---------|---------|
|          |             | Chinook | Pink  | Chum | Coho  | Sthd  |        |              |                  |         |         |
| 85/ 2/ 7 | 78          | 0.94    | 7.E-3 | 0.00 | 3.E-3 | 0.01  | 0.95   | 0.96         | 670.             | 4970.   |         |
|          |             | 102.40  | 0.73  | 0.00 | 0.31  | 1.26  | 103.44 | 104.70       |                  |         |         |
| 85/ 4/16 | 58          | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90   | 0.91         | 6160.            | 5420.   |         |
|          |             | 146.29  | 1.05  | 0.00 | 0.45  | 1.79  | 147.79 | 149.59       |                  |         |         |
| 85/ 5/ 1 | 54          | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90   | 0.91         | 670.             | 5710.   |         |
|          |             | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62  | 84.64        |                  |         |         |
| 85/ 2/28 | 56          | 0.86    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.87   | 0.88         | 7350.            | 5540.   |         |
|          |             | 141.29  | 1.01  | 0.00 | 0.43  | 1.73  | 142.69 | 144.43       |                  |         |         |
| 85/ 2/27 | 58          | 0.87    | 6.E-3 | 0.00 | 3.E-3 | 1.E-2 | 0.83   | 0.85         | 7670.            | 5390.   |         |
|          |             | 136.21  | 0.98  | 0.00 | 0.42  | 1.67  | 137.60 | 139.27       |                  |         |         |
| 85/ 2/ 6 | 77          | 0.81    | 5.E-3 | 0.00 | 2.E-3 | 1.E-2 | 0.81   | 0.82         | 7110.            | 5060.   |         |
|          |             | 87.18   | 0.67  | 0.00 | 0.27  | 1.07  | 88.07  | 89.14        |                  |         |         |
| 85/ 5/20 | 54          | 0.33    | 2.E-3 | 0.00 | 1.E-3 | 4.E-3 | 0.34   | 0.34         | 5880.            | 5640.   |         |
|          |             | 31.04   | 0.22  | 0.00 | 0.09  | 0.38  | 31.36  | 31.74        |                  |         |         |
| 85/ 2/ 4 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 8270.            | 5200.   |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 2/12 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 8150.            | 5850.   |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 4/10 | 4           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 5570.            | 5330.   |         |
|          |             | 63.52   | 0.46  | 0.00 | 0.19  | 0.78  | 64.17  | 64.75        |                  |         |         |
| 85/ 4/13 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 8350.            | 5850.   |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 5/28 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 7750.            | 7350.   |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 2/ 5 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 7550.            | 5510.   |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 7/24 | 0           | 0.00    | 0.10  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 7670.            | 5920.   |         |
|          |             | 0.00    | 0.10  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 5/12 | 0           | 0.00    | 0.10  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 3210.            | 3120.   |         |
|          |             | 0.00    | 0.10  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 3/ 3 | 0           | 0.00    | 0.10  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 5030.            | 5030.   |         |
|          |             | 0.00    | 0.10  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 3/29 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 7870.            | 7280.   |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 4/27 | 0           | 0.00    | 0.10  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 10900.           | 7790.   |         |
|          |             | 0.00    | 0.10  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 5/17 | 0           | 0.00    | 0.30  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 9590.            | 7430.   |         |
|          |             | 0.00    | 0.30  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 5/18 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 8990.            | 7750.   |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 4/11 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 7000.            | 7000.   |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 3/ 5 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 8510.            | 7140.   |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 5/21 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 7710.            | 7710.   |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 5/22 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 8470.            | 8470.   |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 5/23 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 10700.           | 10600.  |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |
| 85/ 3/24 | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         | 9930.            | 9150.   |         |
|          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00         |                  |         |         |

Table 5 Gravel bar and pothole stranding and trapping estimates produced by SKAGMDL for 1984.

PARAMETERS FOR THIS RUN:

-----  
04/18/87  
20:22:30

Slope categories:  
0 to 5%

> 5% to 10%

> 10%

Substrate categories:  
Less than 3 inches

Greater than 3 inches

Location codes:

Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 84   | 1      | 201     | 531     |
| 84   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

-----  
Chronological order

Season totals only

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Season Totals  
 \*\*\*\*\*  
 (Results of applying base year stranding data to the indicated flow regime)

| Flow | Year              | Season | GBType | Chinook | Pink    | Chum   | Coho  | Steelhd | Total Salmon | Salmon + Steelhd |
|------|-------------------|--------|--------|---------|---------|--------|-------|---------|--------------|------------------|
|      | 84                | 1      | 1      | 333.43  | 139.28  | 26.55  | 0.00  | 4.10    | 519.25       | 523.36           |
|      | 84                | 1      | 2      | 377.99  | 180.56  | 30.09  | 0.00  | 7.03    | 588.55       | 595.68           |
|      | 84                | 1      | 3      | 2337.01 | 1116.41 | 186.07 | 0.00  | 23.01   | 3639.49      | 3662.49          |
|      | 84                | 1      | 4      | 385.15  | 183.99  | 30.66  | 0.00  | 4.76    | 599.80       | 604.55           |
|      | 84                | 1      | 5      | 127.17  | 60.76   | 10.12  | 0.00  | 2.38    | 198.05       | 200.43           |
|      | 84                | 1      | 6      | 428.04  | 204.48  | 34.08  | 0.00  | 4.11    | 666.61       | 670.73           |
|      | 84                | 1      | 7      | 77.82   | 37.17   | 6.19   | 0.00  | 1.04    | 121.19       | 122.23           |
|      | 84                | 1      | 8      | 41.74   | 19.94   | 3.32   | 0.00  | 0.86    | 65.02        | 65.89            |
|      | 84                | 1      | 9      | 642.14  | 306.76  | 51.13  | 0.00  | 6.16    | 1000.02      | 1006.18          |
|      | 84                | 1      | 10     | 249.82  | 119.34  | 19.89  | 0.00  | 2.53    | 389.04       | 391.57           |
|      | 84                | 1      | 11     | 86.27   | 41.21   | 6.86   | 0.00  | 1.13    | 134.35       | 135.48           |
|      | 84                | 1      | 12     | 300.04  | 143.33  | 23.88  | 0.00  | 2.74    | 467.25       | 470.01           |
|      | 84                | 1      | 13     | 55.59   | 26.55   | 4.42   | 0.00  | 0.62    | 86.56        | 87.19            |
|      | 84                | 1      | 14     | 16.94   | 8.09    | 1.35   | 0.00  | 0.25    | 26.38        | 26.63            |
|      | 84                | 1      | 15     | 214.19  | 102.32  | 17.05  | 0.00  | 2.10    | 333.55       | 335.45           |
|      | 84                | 1      | 16     | 109.71  | 52.41   | 8.73   | 0.00  | 0.76    | 170.85       | 171.81           |
|      | 84                | 1      | 17     | 20.18   | 9.64    | 1.61   | 0.00  | 0.20    | 31.44        | 31.64            |
|      | 84                | 1      | 18     | 83.21   | 39.76   | 6.63   | 0.00  | 0.77    | 129.59       | 130.37           |
|      | Season subtotals: |        |        | 5886.4  | 2812.0  | 468.6  | 0.0   | 64.8    | 9167.1       | 9231.9           |
|      | 84                | 2      | 1      | 0.00    | 0.00    | 0.00   | 2.61  | 323.66  | 2.61         | 326.27           |
|      | 84                | 2      | 2      | 0.00    | 0.00    | 0.00   | 4.47  | 554.85  | 4.47         | 559.52           |
|      | 84                | 2      | 3      | 0.00    | 0.00    | 0.00   | 12.66 | 1570.07 | 12.66        | 1582.73          |
|      | 84                | 2      | 4      | 0.00    | 0.00    | 0.00   | 8.28  | 1023.66 | 8.28         | 1031.91          |
|      | 84                | 2      | 5      | 0.00    | 0.00    | 0.00   | 4.13  | 511.83  | 4.13         | 515.96           |
|      | 84                | 2      | 6      | 0.00    | 0.00    | 0.00   | 0.79  | 98.37   | 0.79         | 99.16            |
|      | 84                | 2      | 7      | 0.00    | 0.00    | 0.00   | 3.82  | 473.18  | 3.82         | 477.00           |
|      | 84                | 2      | 8      | 0.00    | 0.00    | 0.00   | 3.18  | 394.32  | 3.18         | 397.50           |
|      | 84                | 2      | 9      | 0.00    | 0.00    | 0.00   | 1.63  | 201.97  | 1.63         | 203.60           |
|      | 84                | 2      | 10     | 0.00    | 0.00    | 0.00   | 0.64  | 79.07   | 0.64         | 79.71            |
|      | 84                | 2      | 11     | 0.00    | 0.00    | 0.00   | 0.28  | 35.60   | 0.28         | 35.89            |
|      | 84                | 2      | 12     | 0.00    | 0.00    | 0.00   | 1.11  | 138.17  | 1.11         | 139.29           |
|      | 84                | 2      | 13     | 0.00    | 0.00    | 0.00   | 0.71  | 88.35   | 0.71         | 89.06            |
|      | 84                | 2      | 14     | 0.00    | 0.00    | 0.00   | 0.28  | 35.34   | 0.28         | 35.63            |
|      | 84                | 2      | 15     | 0.00    | 0.00    | 0.00   | 0.00  | 0.00    | 0.00         | 0.00             |
|      | 84                | 2      | 16     | 0.00    | 0.00    | 0.00   | 1.91  | 236.77  | 1.91         | 238.48           |
|      | 84                | 2      | 17     | 0.00    | 0.00    | 0.00   | 0.41  | 51.20   | 0.41         | 51.61            |
|      | 84                | 2      | 18     | 0.00    | 0.00    | 0.00   | 0.22  | 27.34   | 0.22         | 27.56            |
|      | Season subtotals: |        |        | 0.0     | 0.0     | 0.0    | 47.1  | 5843.8  | 47.1         | 5870.9           |

Potholes Stranding and Trapping - Season Totals

\*\*\*\*\*

(Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
Second line shows TRAPPED fish

| Flow |          |         |       |      |      | Total   | Salmon + |         |
|------|----------|---------|-------|------|------|---------|----------|---------|
| Year | #Discern | Chinook | Pink  | Chum | Coho | Steelhd | Salmon   | Steelhd |
| 84   | 4400     | 1261.1  | 9.0   | 0.0  | 3.9  | 15.5    | 1274.0   | 1289.5  |
|      |          | 25486.5 | 182.4 | 0.0  | 70.2 | 312.7   | 25747.1  | 26059.8 |

**PARAMETERS FOR THIS RUN:**

-----  
04/18/87  
20:38:41

**Slope categories:**

0 to 5%  
> 5% to 10%  
> 10%

**Substrate categories:**

Less than 3 inches  
Greater than 3 inches

**Location codes:**

Upper reach  
Middle reach  
Lower reach

**Flow data was extracted for the following time periods:**

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 84   | 1      | 201     | 531     |
| 84   | 2      | 715     | 930     |

**Both gravel bars and potholes were run.**  
(using maximum ramp rate for gravel bar simulation)

**TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:**

-----  
**Chronological order**

**Monthly totals only**

**Tables will be written for gravel bars and/or potholes as selected.**

Gravel Bar Stranding - Monthly Detail with Subtotals  
 (Results of applying base year stranding data to the indicated flow regime)

| Flow<br>YR/MO | GBTypr | Chinook | Pink  | Chum  | Coho | Total<br>Steelhd | Salmon | Salmon +<br>Steelhd |
|---------------|--------|---------|-------|-------|------|------------------|--------|---------------------|
| 84/ 2         | 1      | 27.54   | 13.16 | 2.19  | 0.00 | 0.34             | 42.89  | 43.23               |
| 84/ 2         | 2      | 18.48   | 8.83  | 1.47  | 0.00 | 0.58             | 28.78  | 29.36               |
| 84/ 2         | 3      | 65.86   | 31.46 | 5.24  | 0.00 | 2.06             | 102.57 | 104.63              |
| 84/ 2         | 4      | 31.62   | 15.10 | 2.52  | 0.00 | 0.39             | 49.24  | 49.63               |
| 84/ 2         | 5      | 6.18    | 2.95  | 0.49  | 0.00 | 0.19             | 9.63   | 9.82                |
| 84/ 2         | 6      | 7.34    | 3.52  | 0.59  | 0.00 | 0.23             | 11.47  | 11.71               |
| 84/ 2         | 7      | 5.33    | 2.54  | 0.42  | 0.00 | 0.07             | 8.30   | 8.36                |
| 84/ 2         | 8      | 1.67    | 0.81  | 0.13  | 0.00 | 0.05             | 2.64   | 2.69                |
| 84/ 2         | 9      | 16.92   | 8.08  | 1.35  | 0.00 | 0.53             | 26.35  | 26.88               |
| 84/ 2         | 10     | 12.57   | 6.00  | 1.00  | 0.00 | 0.15             | 19.57  | 19.72               |
| 84/ 2         | 11     | 2.19    | 1.04  | 0.17  | 0.00 | 0.07             | 3.41   | 3.48                |
| 84/ 2         | 12     | 6.89    | 3.29  | 0.55  | 0.00 | 0.22             | 10.73  | 10.94               |
| 84/ 2         | 13     | 1.20    | 0.57  | 0.09  | 0.00 | 1.E-2            | 1.87   | 1.88                |
| 84/ 2         | 14     | 0.14    | 0.08  | 1.E-2 | 0.00 | 0.00             | 0.24   | 0.25                |
| 84/ 2         | 15     | 5.73    | 2.73  | 0.46  | 0.00 | 0.18             | 8.96   | 9.14                |
| 84/ 2         | 16     | 1.48    | 0.71  | 0.12  | 0.00 | 0.02             | 2.31   | 2.32                |
| 84/ 2         | 17     | 0.10    | 0.05  | 1.E-2 | 0.00 | 0.00             | 0.16   | 0.17                |
| 84/ 2         | 18     | 2.19    | 1.05  | 0.17  | 0.00 | 0.07             | 3.42   | 3.49                |
| Month total:  |        | 213.5   | 102.0 | 17.0  | 0.0  | 5.2              | 332.5  | 337.7               |

| Flow<br>YR/MO | GBTypr | Chinook | Pink   | Chum  | Coho | Total<br>Steelhd | Salmon  | Salmon +<br>Steelhd |
|---------------|--------|---------|--------|-------|------|------------------|---------|---------------------|
| 84/ 3         | 1      | 106.47  | 50.87  | 8.48  | 0.00 | 1.47             | 165.84  | 167.31              |
| 84/ 3         | 2      | 159.78  | 76.33  | 12.72 | 0.00 | 2.52             | 248.83  | 251.35              |
| 84/ 3         | 3      | 800.44  | 302.38 | 63.73 | 0.00 | 8.23             | 1246.55 | 1254.78             |
| 84/ 3         | 4      | 122.50  | 58.52  | 9.75  | 0.00 | 1.71             | 190.77  | 192.47              |
| 84/ 3         | 5      | 53.64   | 25.63  | 4.27  | 0.00 | 0.85             | 83.57   | 84.42               |
| 84/ 3         | 6      | 139.55  | 66.67  | 11.11 | 0.00 | 1.43             | 217.33  | 218.76              |
| 84/ 3         | 7      | 21.79   | 10.41  | 1.74  | 0.00 | 0.38             | 33.93   | 34.30               |
| 84/ 3         | 8      | 16.35   | 7.81   | 1.30  | 0.00 | 0.31             | 25.47   | 25.78               |
| 84/ 3         | 9      | 201.40  | 96.21  | 16.03 | 0.00 | 2.07             | 313.64  | 315.71              |
| 84/ 3         | 10     | 49.93   | 23.85  | 3.98  | 0.00 | 0.77             | 77.76   | 78.54               |
| 84/ 3         | 11     | 19.96   | 9.53   | 1.59  | 0.00 | 0.35             | 31.08   | 31.43               |
| 84/ 3         | 12     | 86.55   | 41.35  | 6.89  | 0.00 | 0.89             | 134.78  | 135.67              |
| 84/ 3         | 13     | 6.32    | 3.02   | 0.50  | 0.00 | 0.19             | 9.04    | 10.04               |
| 84/ 3         | 14     | 2.53    | 1.21   | 0.20  | 0.00 | 0.08             | 3.94    | 4.01                |
| 84/ 3         | 15     | 72.27   | 34.53  | 3.75  | 0.00 | 0.74             | 112.54  | 113.29              |
| 84/ 3         | 16     | 7.81    | 3.73   | 0.62  | 0.00 | 0.24             | 12.17   | 12.40               |
| 84/ 3         | 17     | 1.69    | 0.81   | 0.13  | 0.00 | 0.05             | 2.63    | 2.68                |
| 84/ 3         | 18     | 23.84   | 11.40  | 1.90  | 0.00 | 0.25             | 37.15   | 37.40               |
| Month total:  |        | 1892.9  | 904.3  | 150.7 | 0.0  | 22.5             | 2947.8  | 2970.3              |

| Flow<br>YR/MO | GBTypr | Chinook | Pink  | Chum | Coho | Total<br>Steelhd | Salmon | Salmon +<br>Steelhd |
|---------------|--------|---------|-------|------|------|------------------|--------|---------------------|
| 84/ 4         | 1      | 123.97  | 59.22 | 9.87 | 0.00 | 1.67             | 193.06 | 194.73              |
| 84/ 4         | 2      | 123.90  | 59.12 | 9.86 | 0.00 | 1.64             | 192.97 | 194.70              |

|              |    |        |        |       |      |      |         |         |
|--------------|----|--------|--------|-------|------|------|---------|---------|
| 84/ 4        | 3  | 976.70 | 466.57 | 77.76 | 0.00 | 9.25 | 1521.03 | 1530.20 |
| 84/ 4        | 4  | 142.79 | 68.30  | 11.38 | 0.00 | 1.74 | 222.67  | 224.61  |
| 84/ 4        | 5  | 41.73  | 19.94  | 3.32  | 0.00 | 0.97 | 64.70   | 65.95   |
| 84/ 4        | 6  | 209.13 | 99.90  | 16.65 | 0.00 | 1.85 | 325.69  | 327.55  |
| 84/ 4        | 7  | 28.65  | 13.68  | 2.28  | 0.00 | 0.44 | 44.61   | 45.05   |
| 84/ 4        | 8  | 14.81  | 7.07   | 1.18  | 0.00 | 0.37 | 23.07   | 23.44   |
| 84/ 4        | 9  | 298.34 | 142.52 | 23.75 | 0.00 | 2.68 | 464.60  | 467.29  |
| 84/ 4        | 10 | 144.45 | 69.00  | 11.50 | 0.00 | 1.28 | 224.96  | 226.23  |
| 84/ 4        | 11 | 53.96  | 25.78  | 4.30  | 0.00 | 0.57 | 84.03   | 84.61   |
| 84/ 4        | 12 | 153.90 | 73.56  | 12.26 | 0.00 | 1.28 | 239.80  | 241.08  |
| 84/ 4        | 13 | 34.21  | 16.34  | 2.72  | 0.00 | 0.34 | 53.28   | 53.62   |
| 84/ 4        | 14 | 12.29  | 5.87   | 0.78  | 0.00 | 0.14 | 19.14   | 19.27   |
| 84/ 4        | 15 | 92.23  | 44.06  | 7.34  | 0.00 | 0.87 | 143.62  | 144.49  |
| 84/ 4        | 16 | 83.29  | 39.77  | 6.63  | 0.00 | 0.62 | 129.71  | 130.32  |
| 84/ 4        | 17 | 17.08  | 8.14   | 1.36  | 0.00 | 0.13 | 26.59   | 26.73   |
| 84/ 4        | 18 | 41.64  | 19.89  | 3.32  | 0.00 | 0.36 | 64.84   | 65.20   |
| Month total: |    | 2593.3 | 1238.8 | 206.5 | 0.0  | 27.6 | 4038.4  | 4066.2  |

| Flow<br>YR/MO | GBType | Chinook | Pink   | Chum  | Coho | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|--------|---------|--------|-------|------|---------|-----------------|---------------------|
| 84/ 5         | 1      | 75.43   | 36.03  | 6.01  | 0.00 | 0.62    | 117.46          | 118.08              |
| 84/ 5         | 2      | 75.85   | 36.23  | 6.04  | 0.00 | 1.06    | 118.12          | 119.18              |
| 84/ 5         | 3      | 494.01  | 235.99 | 39.33 | 0.00 | 3.47    | 769.33          | 772.80              |
| 84/ 5         | 4      | 88.04   | 42.06  | 7.01  | 0.00 | 0.72    | 137.11          | 137.83              |
| 84/ 5         | 5      | 25.60   | 12.23  | 2.04  | 0.00 | 0.36    | 39.87           | 40.23               |
| 84/ 5         | 6      | 71.99   | 34.39  | 5.73  | 0.00 | 0.60    | 112.11          | 112.71              |
| 84/ 5         | 7      | 22.06   | 10.54  | 1.75  | 0.00 | 0.16    | 34.35           | 34.51               |
| 84/ 5         | 8      | 8.89    | 4.24   | 0.70  | 0.00 | 0.13    | 13.85           | 13.98               |
| 84/ 5         | 9      | 125.47  | 59.95  | 7.99  | 0.00 | 0.88    | 195.43          | 196.30              |
| 84/ 5         | 10     | 42.86   | 20.48  | 3.41  | 0.00 | 0.32    | 66.75           | 67.08               |
| 84/ 5         | 11     | 10.16   | 4.85   | 0.81  | 0.00 | 0.14    | 15.83           | 15.97               |
| 84/ 5         | 12     | 52.62   | 25.14  | 4.19  | 0.00 | 0.37    | 81.94           | 82.32               |
| 84/ 5         | 13     | 13.85   | 6.62   | 1.10  | 0.00 | 0.08    | 21.57           | 21.65               |
| 84/ 5         | 14     | 1.76    | 0.94   | 0.16  | 0.00 | 0.03    | 3.06            | 3.09                |
| 84/ 5         | 15     | 43.74   | 20.99  | 3.50  | 0.00 | 0.31    | 68.43           | 68.73               |
| 84/ 5         | 16     | 17.12   | 8.18   | 1.36  | 0.00 | 0.10    | 26.66           | 26.76               |
| 84/ 5         | 17     | 1.31    | 0.63   | 0.10  | 0.00 | 0.02    | 2.05            | 2.06                |
| 84/ 5         | 18     | 15.52   | 7.42   | 1.24  | 0.00 | 0.10    | 24.17           | 24.28               |
| Month total:  |        | 1186.7  | 566.9  | 94.5  | 0.0  | 9.5     | 1848.1          | 1857.6              |

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum | Coho | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|--------|---------|------|------|------|---------|-----------------|---------------------|
| 84/ 7         | 1      | 0.00    | 0.00 | 0.00 | 0.58 | 71.43   | 0.58            | 72.01               |
| 84/ 7         | 2      | 0.00    | 0.00 | 0.00 | 0.99 | 122.46  | 0.99            | 123.44              |
| 84/ 7         | 3      | 0.00    | 0.00 | 0.00 | 3.61 | 447.93  | 3.61            | 451.54              |
| 84/ 7         | 4      | 0.00    | 0.00 | 0.00 | 2.73 | 362.81  | 2.73            | 365.74              |
| 84/ 7         | 5      | 0.00    | 0.00 | 0.00 | 1.46 | 181.41  | 1.46            | 182.87              |
| 84/ 7         | 6      | 0.00    | 0.00 | 0.00 | 0.18 | 22.59   | 0.18            | 22.77               |
| 84/ 7         | 7      | 0.00    | 0.00 | 0.00 | 0.99 | 122.70  | 0.99            | 123.69              |
| 84/ 7         | 8      | 0.00    | 0.00 | 0.00 | 0.83 | 102.25  | 0.83            | 103.07              |
| 84/ 7         | 9      | 0.00    | 0.00 | 0.00 | 0.47 | 58.22   | 0.47            | 58.69               |
| 84/ 7         | 10     | 0.00    | 0.00 | 0.00 | 0.12 | 14.93   | 0.12            | 15.05               |
| 84/ 7         | 11     | 0.00    | 0.00 | 0.00 | 0.05 | 6.72    | 0.05            | 6.78                |
| 84/ 7         | 12     | 0.00    | 0.00 | 0.00 | 0.23 | 28.10   | 0.23            | 28.33               |

|              |      |      |      |      |        |      |        |
|--------------|------|------|------|------|--------|------|--------|
| 84/ 7 13     | 0.00 | 0.00 | 0.00 | 0.26 | 32.75  | 0.26 | 33.01  |
| 84/ 7 14     | 0.00 | 0.00 | 0.00 | 0.10 | 13.10  | 0.10 | 13.20  |
| 84/ 7 15     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00   |
| 84/ 7 16     | 0.00 | 0.00 | 0.00 | 0.54 | 66.39  | 0.54 | 66.92  |
| 84/ 7 17     | 0.00 | 0.00 | 0.00 | 0.12 | 14.35  | 0.12 | 14.47  |
| 84/ 7 18     | 0.00 | 0.00 | 0.00 | 0.04 | 4.78   | 0.04 | 4.82   |
| Month total: | 0.0  | 0.0  | 0.0  | 13.5 | 1672.9 | 13.5 | 1686.4 |

| Flow<br>YR/MO GBType | Chinook | Pink | Chum | Coho | Steelhd | Total | Salmon +<br>Steelhd |
|----------------------|---------|------|------|------|---------|-------|---------------------|
| 84/ 8 1              | 0.00    | 0.00 | 0.00 | 1.07 | 134.90  | 1.07  | 135.99              |
| 84/ 8 2              | 0.00    | 0.00 | 0.00 | 1.86 | 231.26  | 1.86  | 233.12              |
| 84/ 8 3              | 0.00    | 0.00 | 0.00 | 3.49 | 706.23  | 3.49  | 711.93              |
| 84/ 8 4              | 0.00    | 0.00 | 0.00 | 4.00 | 496.62  | 4.00  | 500.63              |
| 84/ 8 5              | 0.00    | 0.00 | 0.00 | 2.00 | 248.31  | 2.00  | 250.31              |
| 84/ 8 6              | 0.00    | 0.00 | 0.00 | 0.33 | 41.45   | 0.33  | 41.78               |
| 84/ 8 7              | 0.00    | 0.00 | 0.00 | 1.66 | 206.56  | 1.66  | 208.22              |
| 84/ 8 8              | 0.00    | 0.00 | 0.00 | 1.39 | 172.13  | 1.39  | 173.52              |
| 84/ 8 9              | 0.00    | 0.00 | 0.00 | 0.73 | 91.15   | 0.73  | 91.89               |
| 84/ 8 10             | 0.00    | 0.00 | 0.00 | 0.26 | 31.67   | 0.26  | 31.93               |
| 84/ 8 11             | 0.00    | 0.00 | 0.00 | 0.11 | 14.26   | 0.11  | 14.37               |
| 84/ 8 12             | 0.00    | 0.00 | 0.00 | 0.45 | 56.36   | 0.45  | 56.82               |
| 84/ 8 13             | 0.00    | 0.00 | 0.00 | 0.35 | 43.60   | 0.35  | 43.95               |
| 84/ 8 14             | 0.00    | 0.00 | 0.00 | 0.14 | 17.44   | 0.14  | 17.58               |
| 84/ 8 15             | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00  | 0.00                |
| 84/ 8 16             | 0.00    | 0.00 | 0.00 | 0.86 | 105.91  | 0.86  | 106.76              |
| 84/ 8 17             | 0.00    | 0.00 | 0.00 | 0.18 | 22.90   | 0.18  | 23.08               |
| 84/ 8 18             | 0.00    | 0.00 | 0.00 | 0.09 | 10.63   | 0.09  | 10.72               |
| Month total:         | 0.0     | 0.0  | 0.0  | 21.2 | 2631.4  | 21.2  | 2652.6              |

| Flow<br>YR/MO GBType | Chinook | Pink | Chum | Coho | Steelhd | Total | Salmon +<br>Steelhd |
|----------------------|---------|------|------|------|---------|-------|---------------------|
| 84/ 9 1              | 0.00    | 0.00 | 0.00 | 0.95 | 117.33  | 0.95  | 118.27              |
| 84/ 9 2              | 0.00    | 0.00 | 0.00 | 1.62 | 201.13  | 1.62  | 202.75              |
| 84/ 9 3              | 0.00    | 0.00 | 0.00 | 3.35 | 415.90  | 3.35  | 419.26              |
| 84/ 9 4              | 0.00    | 0.00 | 0.00 | 1.32 | 164.22  | 1.32  | 165.55              |
| 84/ 9 5              | 0.00    | 0.00 | 0.00 | 0.66 | 82.11   | 0.66  | 82.77               |
| 84/ 9 6              | 0.00    | 0.00 | 0.00 | 0.28 | 34.32   | 0.28  | 34.60               |
| 84/ 9 7              | 0.00    | 0.00 | 0.00 | 1.16 | 143.93  | 1.16  | 145.09              |
| 84/ 9 8              | 0.00    | 0.00 | 0.00 | 0.97 | 119.94  | 0.97  | 120.91              |
| 84/ 9 9              | 0.00    | 0.00 | 0.00 | 0.42 | 52.59   | 0.42  | 53.01               |
| 84/ 9 10             | 0.00    | 0.00 | 0.00 | 0.24 | 32.47   | 0.24  | 32.73               |
| 84/ 9 11             | 0.00    | 0.00 | 0.00 | 0.12 | 14.62   | 0.12  | 14.74               |
| 84/ 9 12             | 0.00    | 0.00 | 0.00 | 0.43 | 53.70   | 0.43  | 54.14               |
| 84/ 9 13             | 0.00    | 0.00 | 0.00 | 0.10 | 12.00   | 0.10  | 12.10               |
| 84/ 9 14             | 0.00    | 0.00 | 0.00 | 0.04 | 4.80    | 0.04  | 4.84                |
| 84/ 9 15             | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00  | 0.00                |
| 84/ 9 16             | 0.00    | 0.00 | 0.00 | 0.52 | 64.48   | 0.52  | 65.00               |
| 84/ 9 17             | 0.00    | 0.00 | 0.00 | 0.11 | 13.94   | 0.11  | 14.05               |
| 84/ 9 18             | 0.00    | 0.00 | 0.00 | 0.10 | 11.93   | 0.10  | 12.02               |

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Month totals:      0.0      0.0      0.0      12.4      1539.4      12.4      155..8

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Potholes Stranding and Trapping - Monthly Detail with Subtotals  
 (Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO       | #Disconn |                |              |            |             |              | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------------|----------|----------------|--------------|------------|-------------|--------------|-----------------|---------------------|
|                     |          | Chinook        | Pink         | Chum       | Coho        | Steelhd      |                 |                     |
| 84/ 2               | 479      | 27.01          | 0.19         | 0.00       | 0.00        | 0.33         | 27.29           | 27.62               |
|                     |          | 508.26         | 3.64         | 0.00       | 1.56        | 6.24         | 513.46          | 519.70              |
| 84/ 3               | 1059     | 252.06         | 1.80         | 0.00       | 0.77        | 3.09         | 254.64          | 257.73              |
|                     |          | 3270.30        | 37.72        | 0.00       | 16.17       | 64.67        | 5324.19         | 5388.86             |
| 84/ 4               | 3006     | 747.57         | 5.35         | 0.00       | 2.29        | 9.17         | 755.22          | 764.39              |
|                     |          | 14666.38       | 104.97       | 0.00       | 44.99       | 179.96       | 14816.34        | 14996.30            |
| 84/ 5               | 1816     | 234.46         | 1.68         | 0.00       | 0.72        | 2.08         | 236.86          | 239.73              |
|                     |          | 5041.58        | 34.08        | 0.00       | 15.46       | 61.86        | 5093.13         | 5154.99             |
| <b>Year totals:</b> |          | <b>1261.1</b>  | <b>9.0</b>   | <b>0.0</b> | <b>3.9</b>  | <b>15.5</b>  | <b>1274.0</b>   | <b>1289.5</b>       |
|                     |          | <b>25486.5</b> | <b>182.4</b> | <b>0.0</b> | <b>78.2</b> | <b>312.7</b> | <b>25747.1</b>  | <b>26059.8</b>      |

**PARAMETERS FOR THIS RUN:**

-----  
04/18/87  
20:53:54

**Slope categories:**

0 to 5%  
> 5% to 10%  
> 10%

**Substrate categories:**

Less than 3 inches  
Greater than 3 inches

**Location codes:**

Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 84   | 1      | 201     | 531     |
| 84   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

**TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:**

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Chronological order

Daily detail report

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Daily Detail with Subtotals  
 (Results of applying base year stranding data to the indicated flow regime)

| Comment         | Flow<br>YR/MO/DY | Total   |       |      |      |         |        | Salmon + |       |          |
|-----------------|------------------|---------|-------|------|------|---------|--------|----------|-------|----------|
|                 |                  | Chinook | Pink  | Chum | Coho | Steelhd | Salmon | Steelhd  | Ampl  | RampRate |
| Daylight        | 84/ 2/ 1         | 2.57    | 1.23  | 0.20 | 0.00 | 0.04    | 4.01   | 4.05     | 2581. | 724.     |
|                 | 84/ 2/ 2         | 2.14    | 1.02  | 0.17 | 0.00 | 0.07    | 3.34   | 3.41     | 2475. | 1102.    |
| Daylight        | 84/ 2/ 3         | 19.61   | 9.37  | 1.56 | 0.00 | 0.09    | 30.55  | 30.64    | 1764. | 596.     |
| Daylight        | 84/ 2/ 4         | 5.10    | 2.44  | 0.41 | 0.00 | 0.08    | 7.94   | 8.02     | 1362. | 319.     |
| No event        | 84/ 2/ 5         |         |       |      |      |         |        |          |       |          |
|                 | 84/ 2/ 6         | 4.12    | 1.97  | 0.33 | 0.00 | 0.14    | 6.41   | 6.55     | 1516. | 380.     |
|                 | 84/ 2/ 7         | 0.00    | 0.00  | 0.00 | 0.00 | 0.00    | 0.00   | 0.00     | 131.  | 65.      |
| No event        | 84/ 2/ 8         |         |       |      |      |         |        |          |       |          |
| No event        | 84/ 2/ 9         |         |       |      |      |         |        |          |       |          |
| Daylight        | 84/ 2/10         | 4.27    | 2.04  | 0.34 | 0.00 | 0.07    | 6.65   | 6.72     | 789.  | 220.     |
|                 | 84/ 2/11         | 12.95   | 6.18  | 1.03 | 0.00 | 0.45    | 20.16  | 20.62    | 3340. | 1098.    |
| No event        | 84/ 2/12         |         |       |      |      |         |        |          |       |          |
| No event        | 84/ 2/13         |         |       |      |      |         |        |          |       |          |
| No event        | 84/ 2/14         |         |       |      |      |         |        |          |       |          |
|                 | 84/ 2/15         | 15.47   | 7.39  | 1.23 | 0.00 | 0.54    | 24.10  | 24.64    | 2151. | 831.     |
| No event        | 84/ 2/16         |         |       |      |      |         |        |          |       |          |
|                 | 84/ 2/17         | 0.00    | 0.00  | 0.00 | 0.00 | 0.00    | 0.00   | 0.00     | 385.  | 192.     |
| Daylight        | 84/ 2/18         | 45.04   | 21.52 | 3.59 | 0.00 | 0.67    | 70.15  | 70.83    | 2464. | 513.     |
|                 | 84/ 2/19         | 18.50   | 8.84  | 1.47 | 0.00 | 0.45    | 28.81  | 29.46    | 1942. | 893.     |
|                 | 84/ 2/20         | 20.54   | 9.81  | 1.63 | 0.00 | 0.72    | 31.98  | 32.70    | 2113. | 665.     |
| No event        | 84/ 2/21         |         |       |      |      |         |        |          |       |          |
| No event        | 84/ 2/22         |         |       |      |      |         |        |          |       |          |
| Daylight        | 84/ 2/23         | 30.29   | 14.47 | 2.41 | 0.00 | 0.48    | 47.17  | 47.66    | 1391. | 684.     |
|                 | 84/ 2/24         | 0.06    | 0.03  | 0.00 | 0.00 | 0.00    | 0.10   | 0.10     | 504.  | 252.     |
| No event        | 84/ 2/25         |         |       |      |      |         |        |          |       |          |
| No event        | 84/ 2/26         |         |       |      |      |         |        |          |       |          |
|                 | 84/ 2/27         | 9.92    | 4.74  | 0.79 | 0.00 | 0.35    | 15.45  | 15.80    | 1044. | 262.     |
| No event        | 84/ 2/28         |         |       |      |      |         |        |          |       |          |
|                 | 84/ 2/29         | 22.93   | 10.95 | 1.82 | 0.00 | 0.80    | 35.71  | 36.52    | 1671. | 483.     |
| Month subtotal: |                  | 213.5   | 102.0 | 17.0 | 0.0  | 3.2     | 332.5  | 337.7    |       |          |

| Comment  | Flow<br>YR/MO/DY | Total   |       |      |      |         |        | Salmon + |       |          |
|----------|------------------|---------|-------|------|------|---------|--------|----------|-------|----------|
|          |                  | Chinook | Pink  | Chum | Coho | Steelhd | Salmon | Steelhd  | Ampl  | RampRate |
| Daylight | 84/ 3/ 1         | 33.05   | 15.79 | 2.63 | 0.00 | 0.53    | 51.47  | 51.99    | 1271. | 600.     |
|          | 84/ 3/ 2         | 30.28   | 14.47 | 2.41 | 0.00 | 1.06    | 47.16  | 48.22    | 2255. | 1127.    |
|          | 84/ 3/ 3         | 39.94   | 19.08 | 3.18 | 0.00 | 1.40    | 62.20  | 63.60    | 4975. | 1948.    |
| No event | 84/ 3/ 4         |         |       |      |      |         |        |          |       |          |
| Daylight | 84/ 3/ 5         | 106.28  | 50.77 | 8.46 | 0.00 | 1.07    | 165.52 | 166.59   | 2326. | 1142.    |
| Daylight | 84/ 3/ 6         | 91.02   | 43.48 | 7.25 | 0.00 | 0.96    | 141.75 | 142.71   | 1897. | 900.     |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event midtime was after sunrise; no comment indicates regular night-time event.

|                 |          |        |       |       |      |      |        |        |       |       |
|-----------------|----------|--------|-------|-------|------|------|--------|--------|-------|-------|
| Daylight        | 84/ 3/ 7 | 85.96  | 41.06 | 6.84  | 0.00 | 0.39 | 133.87 | 134.26 | 1073. | 526.  |
|                 | 84/ 3/ 8 | 31.23  | 14.92 | 2.49  | 0.00 | 1.10 | 48.64  | 49.73  | 2523. | 1227. |
| Daylight        | 84/ 3/ 9 | 120.01 | 57.33 | 9.55  | 0.00 | 0.79 | 184.87 | 187.68 | 1649. | 786.  |
| Daylight        | 84/ 3/10 | 167.38 | 79.96 | 13.33 | 0.00 | 1.32 | 260.67 | 261.99 | 4362. | 1220. |
|                 | 84/ 3/11 | 21.19  | 10.12 | 1.69  | 0.00 | 0.74 | 33.00  | 33.74  | 1582. | 791.  |
| Daylight        | 84/ 3/12 | 17.47  | 8.25  | 1.37  | 0.00 | 0.28 | 26.90  | 27.18  | 903.  | 451.  |
| Daylight        | 84/ 3/13 | 16.37  | 7.82  | 1.30  | 0.00 | 0.26 | 25.50  | 25.76  | 882.  | 430.  |
| No event        | 84/ 3/14 |        |       |       |      |      |        |        |       |       |
|                 | 84/ 3/15 | 0.00   | 0.00  | 0.00  | 0.00 | 0.00 | 0.00   | 0.00   | 274.  | 115.  |
| No event        | 84/ 3/16 |        |       |       |      |      |        |        |       |       |
|                 | 84/ 3/17 | 34.75  | 17.38 | 2.87  | 0.00 | 1.27 | 56.61  | 57.88  | 3964. | 1316. |
| Daylight        | 84/ 3/18 | 150.84 | 75.88 | 12.44 | 0.00 | 1.09 | 247.34 | 248.45 | 2478. | 1230. |
|                 | 84/ 3/19 | 30.61  | 14.42 | 2.43  | 0.00 | 1.07 | 47.66  | 48.73  | 2346. | 1142. |
|                 | 84/ 3/20 | 22.41  | 10.70 | 1.78  | 0.00 | 0.78 | 34.89  | 35.68  | 1644. | 708.  |
| Daylight        | 84/ 3/21 | 74.47  | 35.57 | 5.93  | 0.00 | 0.49 | 115.97 | 116.46 | 1213. | 606.  |
|                 | 84/ 3/22 | 4.39   | 2.10  | 0.35  | 0.00 | 0.15 | 6.83   | 6.98   | 724.  | 350.  |
| Daylight        | 84/ 3/23 | 93.11  | 44.48 | 7.41  | 0.00 | 0.98 | 145.00 | 145.98 | 1929. | 945.  |
| No event        | 84/ 3/24 |        |       |       |      |      |        |        |       |       |
|                 | 84/ 3/25 | 10.36  | 4.95  | 0.82  | 0.00 | 0.36 | 16.13  | 16.50  | 1029. | 493.  |
|                 | 84/ 3/26 | 35.91  | 17.15 | 2.86  | 0.00 | 1.26 | 55.91  | 57.17  | 3838. | 775.  |
| Daylight        | 84/ 3/27 | 158.11 | 75.53 | 12.59 | 0.00 | 1.07 | 246.23 | 247.29 | 2318. | 775.  |
| Daylight        | 84/ 3/28 | 164.03 | 78.36 | 13.06 | 0.00 | 1.23 | 255.45 | 256.68 | 3623. | 1001. |
|                 | 84/ 3/29 | 31.57  | 15.08 | 2.51  | 0.00 | 1.10 | 49.16  | 50.27  | 2617. | 939.  |
| Daylight        | 84/ 3/30 | 154.67 | 73.89 | 12.31 | 0.00 | 0.71 | 240.87 | 241.57 | 1531. | 352.  |
| Daylight        | 84/ 3/31 | 150.08 | 75.51 | 12.57 | 0.00 | 1.07 | 246.18 | 247.25 | 2311. | 960.  |
| Month subtotal: |          | 1892.9 | 904.2 | 150.7 | 0.0  | 22.5 | 2947.8 | 2970.3 |       |       |

| Comment  | YR/MO/DY | Flow    |       |       |      |         | Total Salmon | Salmon + Steelhd | Ampl  | RampRate |
|----------|----------|---------|-------|-------|------|---------|--------------|------------------|-------|----------|
|          |          | Chinook | Pink  | Chum  | Coho | Steelhd |              |                  |       |          |
| Daylight | 84/ 4/ 1 | 158.80  | 75.86 | 12.65 | 0.00 | 1.07    | 247.31       | 248.40           | 2471. | 1082.    |
| Daylight | 84/ 4/ 2 | 167.29  | 79.91 | 13.32 | 0.00 | 1.32    | 260.53       | 261.85           | 4342. | 1446.    |
|          | 84/ 4/ 3 | 33.27   | 15.89 | 2.65  | 0.00 | 1.17    | 51.81        | 52.98            | 3096. | 1233.    |
| Daylight | 84/ 4/ 4 | 157.28  | 75.14 | 12.52 | 0.00 | 1.04    | 244.94       | 245.97           | 2136. | 1068.    |
| Daylight | 84/ 4/ 5 | 157.82  | 75.39 | 12.57 | 0.00 | 1.06    | 245.77       | 246.83           | 2254. | 1127.    |
| Daylight | 84/ 4/ 6 | 56.45   | 26.97 | 4.49  | 0.00 | 0.90    | 87.92        | 88.82            | 1817. | 689.     |
| Daylight | 84/ 4/ 7 | 92.04   | 43.97 | 7.33  | 0.00 | 0.73    | 143.34       | 144.08           | 6934. | 3220.    |
|          | 84/ 4/ 8 | 31.67   | 15.14 | 2.52  | 0.00 | 1.11    | 49.35        | 50.46            | 2651. | 611.     |
| Daylight | 84/ 4/ 9 | 156.67  | 74.84 | 12.47 | 0.00 | 1.03    | 243.98       | 245.01           | 2000. | 981.     |
|          | 84/ 4/10 | 34.71   | 16.58 | 2.76  | 0.00 | 1.22    | 54.06        | 55.27            | 3502. | 894.     |
| Daylight | 84/ 4/11 | 167.49  | 80.01 | 13.34 | 0.00 | 1.33    | 260.84       | 262.17           | 4387. | 689.     |
|          | 84/ 4/12 | 34.15   | 16.32 | 2.72  | 0.00 | 1.20    | 53.19        | 54.38            | 3345. | 814.     |
|          | 84/ 4/13 | 30.56   | 14.60 | 2.43  | 0.00 | 1.07    | 47.60        | 48.67            | 2334. | 519.     |
| Daylight | 84/ 4/14 | 31.54   | 15.07 | 2.51  | 0.00 | 0.33    | 49.11        | 49.44            | 984.  | 312.     |
| No event | 84/ 4/15 |         |       |       |      |         |              |                  |       |          |
|          | 84/ 4/16 | 32.20   | 15.38 | 2.56  | 0.00 | 1.13    | 50.15        | 51.28            | 2796. | 530.     |
| Daylight | 84/ 4/17 | 0.00    | 0.00  | 0.00  | 0.00 | 0.00    | 0.00         | 0.00             | 381.  | 174.     |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |        |        |       |      |      |        |        |        |       |
|-----------------|----------|--------|--------|-------|------|------|--------|--------|--------|-------|
|                 | 84/ 4/18 | 31.41  | 15.01  | 2.50  | 0.00 | 1.10 | 48.92  | 50.02  | 2573.  | 537.  |
| Daylight        | 84/ 4/19 | 73.43  | 35.08  | 5.84  | 0.00 | 1.09 | 114.36 | 115.45 | 2512.  | 495.  |
| Daylight        | 84/ 4/20 | 77.71  | 37.12  | 6.19  | 0.00 | 0.35 | 121.02 | 121.37 | 1018.  | 509.  |
| Daylight        | 84/ 4/21 | 47.11  | 22.51  | 3.75  | 0.00 | 0.50 | 73.34  | 73.86  | 1223.  | 395.  |
| Daylight        | 84/ 4/22 | 77.96  | 37.24  | 6.21  | 0.00 | 1.12 | 121.41 | 122.54 | 2766.  | 791.  |
| Daylight        | 84/ 4/23 | 160.89 | 76.86  | 12.81 | 0.00 | 1.15 | 250.56 | 251.71 | 2932.  | 845.  |
| Daylight        | 84/ 4/24 | 159.49 | 76.19  | 12.70 | 0.00 | 1.11 | 248.38 | 249.48 | 2622.  | 661.  |
|                 | 84/ 4/25 | 32.49  | 15.52  | 2.59  | 0.00 | 1.14 | 50.60  | 51.74  | 2877.  | 600.  |
| Daylight        | 84/ 4/26 | 65.30  | 31.19  | 5.20  | 0.00 | 1.04 | 101.49 | 102.72 | 2056.  | 493.  |
| Daylight        | 84/ 4/27 | 74.86  | 35.77  | 5.96  | 0.00 | 0.79 | 116.59 | 117.38 | 1649.  | 436.  |
| No event        | 84/ 4/28 |        |        |       |      |      |        |        |        |       |
| Daylight        | 84/ 4/29 | 287.90 | 137.53 | 22.92 | 0.00 | 1.32 | 448.36 | 449.68 | 16104. | 7938. |
| Daylight        | 84/ 4/30 | 162.77 | 77.76  | 12.96 | 0.00 | 1.20 | 253.48 | 254.68 | 3345.  | 1202. |
| Month subtotal: |          | 2593.3 | 1238.9 | 206.5 | 0.0  | 27.6 | 4038.4 | 4066.3 |        |       |

| Comment  | Flow<br>YR/MO/DY | Flow    |        |       |      |         | Total<br>Salmon | Salmon +<br>Steelhead |          |       |
|----------|------------------|---------|--------|-------|------|---------|-----------------|-----------------------|----------|-------|
|          |                  | Chinook | Pink   | Chum  | Coho | Steelhd |                 | Ampl                  | RampRate |       |
| Daylight | 84/ 5/ 1         | 155.31  | 74.19  | 12.37 | 0.00 | 1.09    | 241.87          | 242.96                | 2806.    | 719.  |
| Daylight | 84/ 5/ 2         | 236.51  | 112.78 | 18.83 | 0.00 | 1.00    | 348.33          | 349.41                | 3002.    | 1041. |
| Daylight | 84/ 5/ 3         | 126.71  | 60.53  | 10.08 | 0.00 | 0.58    | 197.33          | 197.90                | 1432.    | 391.  |
| Daylight | 84/ 5/ 4         | 110.72  | 56.71  | 9.45  | 0.00 | 1.33    | 184.89          | 186.22                | 3301.    | 2142. |
| No event | 84/ 5/ 5         |         |        |       |      |         |                 |                       |          |       |
| No event | 84/ 5/ 6         |         |        |       |      |         |                 |                       |          |       |
| Daylight | 84/ 5/ 7         | 37.15   | 17.75  | 2.96  | 0.00 | 0.17    | 57.86           | 58.03                 | 817.     | 202.  |
| No event | 84/ 5/ 8         |         |        |       |      |         |                 |                       |          |       |
| Daylight | 84/ 5/ 9         | 14.29   | 6.83   | 1.14  | 0.00 | 0.23    | 22.26           | 22.49                 | 964.     | 205.  |
| Daylight | 84/ 5/ 10        | 13.98   | 6.68   | 1.11  | 0.00 | 0.15    | 21.77           | 21.91                 | 812.     | 177.  |
|          | 84/ 5/ 11        | 19.75   | 9.44   | 1.57  | 0.00 | 0.69    | 30.77           | 31.46                 | 2205.    | 443.  |
| Daylight | 84/ 5/ 12        | 40.24   | 19.22  | 3.20  | 0.00 | 0.64    | 62.67           | 63.31                 | 2005.    | 326.  |
| Daylight | 84/ 5/ 13        | 10.41   | 5.07   | 0.84  | 0.00 | 0.17    | 16.53           | 16.70                 | 917.     | 458.  |
| Daylight | 84/ 5/ 14        | 28.08   | 13.41  | 2.24  | 0.00 | 0.19    | 43.73           | 43.92                 | 978.     | 189.  |
| Daylight | 84/ 5/ 15        | 64.20   | 30.67  | 5.11  | 0.00 | 0.42    | 99.98           | 100.40                | 1657.    | 525.  |
| Daylight | 84/ 5/ 16        | 18.12   | 8.56   | 1.44  | 0.00 | 0.12    | 28.22           | 28.34                 | 847.     | 423.  |
| Daylight | 84/ 5/ 17        | 21.93   | 10.48  | 1.74  | 0.00 | 0.14    | 34.16           | 34.30                 | 948.     | 467.  |
| Daylight | 84/ 5/ 18        | 62.60   | 29.70  | 4.98  | 0.00 | 0.41    | 97.49           | 97.90                 | 1870.    | 715.  |
|          | 84/ 5/ 19        | 10.30   | 4.72   | 0.82  | 0.00 | 0.36    | 16.04           | 16.41                 | 1795.    | 483.  |
| Daylight | 84/ 5/ 20        | 55.81   | 26.66  | 4.44  | 0.00 | 0.37    | 86.92           | 87.28                 | 1925.    | 836.  |
| Daylight | 84/ 5/ 21        | 54.30   | 25.74  | 4.32  | 0.00 | 0.37    | 84.56           | 84.93                 | 2386.    | 927.  |
|          | 84/ 5/ 22        | 1.51    | 0.72   | 0.12  | 0.00 | 0.05    | 2.35            | 2.41                  | 747.     | 373.  |
| Daylight | 84/ 5/ 23        | 15.07   | 7.20   | 1.20  | 0.00 | 0.24    | 23.47           | 23.71                 | 1750.    | 505.  |
| Daylight | 84/ 5/ 24        | 39.46   | 18.85  | 3.14  | 0.00 | 0.26    | 61.46           | 61.72                 | 2260.    | 614.  |
|          | 84/ 5/ 25        | 3.46    | 1.66   | 0.27  | 0.00 | 0.12    | 5.39            | 5.51                  | 1308.    | 256.  |
| Daylight | 84/ 5/ 26        | 4.81    | 2.30   | 0.38  | 0.00 | 0.05    | 7.49            | 7.55                  | 894.     | 384.  |
| Daylight | 84/ 5/ 27        | 4.11    | 1.97   | 0.33  | 0.00 | 0.03    | 6.40            | 6.43                  | 752.     | 376.  |
| No event | 84/ 5/ 28        |         |        |       |      |         |                 |                       |          |       |
| Daylight | 84/ 5/ 29        | 18.90   | 9.03   | 1.50  | 0.00 | 0.11    | 29.44           | 29.55                 | 2894.    | 442.  |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                        |               |              |             |            |            |               |               |       |       |
|------------------------|---------------|--------------|-------------|------------|------------|---------------|---------------|-------|-------|
| Daylight 84/ 5/30      | 10.24         | 4.89         | 0.81        | 0.00       | 0.08       | 15.94         | 16.02         | 3572. | 1027. |
| 84/ 5/31               | 0.50          | 0.24         | 0.04        | 0.00       | 0.02       | 0.78          | 0.80          | 1321. | 290.  |
| <b>Month subtotal:</b> | <b>1186.7</b> | <b>566.9</b> | <b>94.4</b> | <b>0.0</b> | <b>9.5</b> | <b>1848.1</b> | <b>1857.4</b> |       |       |

| Comment                | Flow<br>YR/MO/DY | Flow       |            |            |             |               | Total<br>Salmon | Salmon +<br>Steelhd | Ampl  | RampRate |
|------------------------|------------------|------------|------------|------------|-------------|---------------|-----------------|---------------------|-------|----------|
|                        |                  | Chinook    | Pink       | Chum       | Coho        | Steelhd       |                 |                     |       |          |
|                        | 84/ 7/15         | 0.00       | 0.00       | 0.00       | 0.02        | 2.17          | 0.02            | 2.19                | 1055. | 527.     |
|                        | 84/ 7/16         | 0.00       | 0.00       | 0.00       | 0.00        | 0.00          | 0.00            | 0.00                | 243.  | 32.      |
|                        | 84/ 7/17         | 0.00       | 0.00       | 0.00       | 1.08        | 133.35        | 1.08            | 134.42              | 5761. | 2880.    |
|                        | 84/ 7/18         | 0.00       | 0.00       | 0.00       | 0.21        | 26.60         | 0.21            | 26.81               | 2075. | 875.     |
|                        | 84/ 7/19         | 0.00       | 0.00       | 0.00       | 0.30        | 37.04         | 0.30            | 37.34               | 2149. | 567.     |
|                        | 84/ 7/20         | 0.00       | 0.00       | 0.00       | 0.74        | 91.20         | 0.74            | 91.93               | 2910. | 1115.    |
|                        | 84/ 7/21         | 0.00       | 0.00       | 0.00       | 0.20        | 25.09         | 0.20            | 25.29               | 1414. | 699.     |
|                        | 84/ 7/22         | 0.00       | 0.00       | 0.00       | 0.07        | 8.06          | 0.07            | 8.13                | 757.  | 251.     |
|                        | 84/ 7/23         | 0.00       | 0.00       | 0.00       | 1.45        | 179.74        | 1.45            | 181.19              | 3376. | 1304.    |
|                        | 84/ 7/24         | 0.00       | 0.00       | 0.00       | 0.07        | 7.23          | 0.07            | 7.33                | 736.  | 230.     |
|                        | 84/ 7/25         | 0.00       | 0.00       | 0.00       | 3.54        | 439.56        | 3.54            | 443.10              | 5324. | 2543.    |
|                        | 84/ 7/26         | 0.00       | 0.00       | 0.00       | 0.40        | 49.08         | 0.40            | 49.48               | 1543. | 679.     |
|                        | 84/ 7/27         | 0.00       | 0.00       | 0.00       | 1.35        | 167.65        | 1.35            | 169.00              | 2685. | 870.     |
|                        | 84/ 7/28         | 0.00       | 0.00       | 0.00       | 0.57        | 70.38         | 0.57            | 70.95               | 1782. | 658.     |
| No event               | 84/ 7/29         |            |            |            |             |               |                 |                     |       |          |
|                        | 84/ 7/30         | 0.00       | 0.00       | 0.00       | 1.59        | 197.81        | 1.59            | 199.41              | 2633. | 708.     |
|                        | 84/ 7/31         | 0.00       | 0.00       | 0.00       | 1.90        | 235.94        | 1.90            | 237.84              | 2781. | 1023.    |
| <b>Month subtotal:</b> |                  | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> | <b>13.5</b> | <b>1672.9</b> | <b>13.5</b>     | <b>1686.4</b>       |       |          |

| Comment  | Flow<br>YR/MO/DY | Flow    |      |      |      |         | Total<br>Salmon | Salmon +<br>Steelhd | Ampl  | RampRate |
|----------|------------------|---------|------|------|------|---------|-----------------|---------------------|-------|----------|
|          |                  | Chinook | Pink | Chum | Coho | Steelhd |                 |                     |       |          |
|          | 84/ 8/ 1         | 0.00    | 0.00 | 0.00 | 0.30 | 37.13   | 0.30            | 37.43               | 1026. | 485.     |
|          | 84/ 8/ 2         | 0.00    | 0.00 | 0.00 | 0.13 | 16.52   | 0.13            | 16.65               | 734.  | 357.     |
| No event | 84/ 8/ 3         |         |      |      |      |         |                 |                     |       |          |
| No event | 84/ 8/ 4         |         |      |      |      |         |                 |                     |       |          |
|          | 84/ 8/ 5         | 0.00    | 0.00 | 0.00 | 0.41 | 50.19   | 0.41            | 50.59               | 1211. | 605.     |
|          | 84/ 8/ 6         | 0.00    | 0.00 | 0.00 | 3.19 | 395.96  | 3.19            | 399.16              | 3574. | 829.     |
|          | 84/ 8/ 7         | 0.00    | 0.00 | 0.00 | 1.79 | 221.80  | 1.79            | 223.40              | 2629. | 1013.    |
|          | 84/ 8/ 8         | 0.00    | 0.00 | 0.00 | 0.10 | 12.14   | 0.10            | 12.24               | 672.  | 328.     |
|          | 84/ 8/ 9         | 0.00    | 0.00 | 0.00 | 0.17 | 21.18   | 0.17            | 21.35               | 800.  | 228.     |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|  |                 |          |      |      |      |      |        |      |        |       |       |
|--|-----------------|----------|------|------|------|------|--------|------|--------|-------|-------|
|  |                 | 84/ 8/10 | 0.00 | 0.00 | 0.00 | 0.25 | 31.41  | 0.25 | 31.66  | 945.  | 245.  |
|  |                 | 84/ 8/11 | 0.00 | 0.00 | 0.00 | 0.31 | 41.01  | 0.33 | 41.34  | 1081. | 534.  |
|  |                 | 84/ 8/12 | 0.00 | 0.00 | 0.00 | 0.33 | 40.45  | 0.33 | 40.77  | 1073. | 528.  |
|  | No event        | 84/ 8/13 |      |      |      |      |        |      |        |       |       |
|  |                 | 84/ 8/14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00   | 342.  | 171.  |
|  |                 | 84/ 8/15 | 0.00 | 0.00 | 0.00 | 5.30 | 67.34  | 5.30 | 662.64 | 4989. | 1804. |
|  |                 | 84/ 8/16 | 0.00 | 0.00 | 0.00 | 0.25 | 30.92  | 0.25 | 31.17  | 938.  | 401.  |
|  | No event        | 84/ 8/17 |      |      |      |      |        |      |        |       |       |
|  |                 | 84/ 8/18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00   | 420.  | 202.  |
|  | No event        | 84/ 8/19 |      |      |      |      |        |      |        |       |       |
|  |                 | 84/ 8/20 | 0.00 | 0.00 | 0.00 | 0.36 | 4.89   | 0.36 | 45.26  | 1136. | 316.  |
|  |                 | 84/ 8/21 | 0.00 | 0.00 | 0.00 | 0.33 | 40.94  | 0.33 | 41.27  | 1080. | 529.  |
|  |                 | 84/ 8/22 | 0.00 | 0.00 | 0.00 | 0.32 | 39.95  | 0.32 | 40.27  | 1064. | 528.  |
|  |                 | 84/ 8/23 | 0.00 | 0.00 | 0.00 | 0.43 | 53.15  | 0.43 | 53.58  | 1253. | 608.  |
|  |                 | 84/ 8/24 | 0.00 | 0.00 | 0.00 | 0.41 | 50.82  | 0.41 | 51.23  | 1220. | 454.  |
|  |                 | 84/ 8/25 | 0.00 | 0.00 | 0.00 | 0.34 | 41.72  | 0.34 | 42.05  | 1091. | 361.  |
|  | No event        | 84/ 8/26 |      |      |      |      |        |      |        |       |       |
|  |                 | 84/ 8/27 | 0.00 | 0.00 | 0.00 | 1.45 | 205.22 | 1.45 | 206.87 | 2539. | 1101. |
|  |                 | 84/ 8/28 | 0.00 | 0.00 | 0.00 | 0.75 | 93.10  | 0.75 | 93.86  | 1819. | 364.  |
|  | No event        | 84/ 8/29 |      |      |      |      |        |      |        |       |       |
|  |                 | 84/ 8/30 | 0.00 | 0.00 | 0.00 | 2.06 | 255.16 | 2.06 | 257.22 | 2810. | 1266. |
|  |                 | 84/ 8/31 | 0.00 | 0.00 | 0.00 | 2.02 | 250.37 | 2.02 | 252.39 | 2784. | 817.  |
|  | Month subtotal: |          | 0.0  | 0.0  | 0.0  | 21.2 | 2631.4 | 21.2 | 2652.6 |       |       |

| Comment | YR/MO/DY | Flow    |      |      |      |         | Total Salmon | Salmon + Steelhd |         |       | Ampl | RampRate |
|---------|----------|---------|------|------|------|---------|--------------|------------------|---------|-------|------|----------|
|         |          | Chinook | Pink | Chum | Coho | Steelhd |              | Salmon           | Steelhd |       |      |          |
|         | 84/ 9/ 1 | 0.00    | 0.00 | 0.00 | 1.53 | 189.32  | 1.53         | 190.85           | 2487.   | 1234. |      |          |
|         | 84/ 9/ 2 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00             | 0.00    | 324.  | 162. |          |
|         | 84/ 9/ 3 | 0.00    | 0.00 | 0.00 | 0.18 | 22.70   | 0.18         | 22.88            | 856.    | 428.  |      |          |
|         | 84/ 9/ 4 | 0.00    | 0.00 | 0.00 | 0.70 | 86.93   | 0.70         | 87.63            | 1914.   | 443.  |      |          |
|         | 84/ 9/ 5 | 0.00    | 0.00 | 0.00 | 0.87 | 107.51  | 0.87         | 108.38           | 2121.   | 935.  |      |          |
|         | 84/ 9/ 6 | 0.00    | 0.00 | 0.00 | 0.88 | 109.17  | 0.88         | 110.05           | 2160.   | 1032. |      |          |
|         | 84/ 9/ 7 | 0.00    | 0.00 | 0.00 | 0.33 | 41.31   | 0.33         | 41.65            | 1256.   | 628.  |      |          |
|         | 84/ 9/ 8 | 0.00    | 0.00 | 0.00 | 0.06 | 7.65    | 0.06         | 7.71             | 646.    | 317.  |      |          |
|         | 84/ 9/ 9 | 0.00    | 0.00 | 0.00 | 0.40 | 49.94   | 0.40         | 50.35            | 1497.   | 748.  |      |          |
|         | 84/ 9/10 | 0.00    | 0.00 | 0.00 | 0.45 | 55.71   | 0.45         | 56.15            | 1665.   | 697.  |      |          |
|         | 84/ 9/11 | 0.00    | 0.00 | 0.00 | 0.31 | 38.21   | 0.31         | 38.52            | 1339.   | 410.  |      |          |
|         | 84/ 9/12 | 0.00    | 0.00 | 0.00 | 0.70 | 86.36   | 0.70         | 87.05            | 2190.   | 973.  |      |          |
|         | 84/ 9/13 | 0.00    | 0.00 | 0.00 | 0.94 | 116.16  | 0.94         | 117.10           | 2511.   | 1033. |      |          |
|         | 84/ 9/14 | 0.00    | 0.00 | 0.00 | 0.67 | 85.35   | 0.67         | 86.04            | 2270.   | 841.  |      |          |
|         | 84/ 9/15 | 0.00    | 0.00 | 0.00 | 0.83 | 103.54  | 0.83         | 104.38           | 2514.   | 1029. |      |          |
|         | 84/ 9/16 | 0.00    | 0.00 | 0.00 | 0.17 | 21.52   | 0.17         | 21.69            | 1130.   | 565.  |      |          |
|         | 84/ 9/17 | 0.00    | 0.00 | 0.00 | 0.36 | 44.79   | 0.36         | 45.15            | 1905.   | 897.  |      |          |
|         | 84/ 9/18 | 0.00    | 0.00 | 0.00 | 0.60 | 74.16   | 0.60         | 74.73            | 2383.   | 1025. |      |          |
|         | 84/ 9/19 | 0.00    | 0.00 | 0.00 | 0.41 | 51.12   | 0.41         | 51.53            | 2142.   | 1033. |      |          |
|         | 84/ 9/20 | 0.00    | 0.00 | 0.00 | 0.41 | 50.78   | 0.41         | 51.19            | 2202.   | 1101. |      |          |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

Table 6 Gravel bar and pothole stranding and trapping estimates produced by SKAGMDL for 1983.

PARAMETERS FOR THIS RUN:

-----  
04/10/87  
18:01:06

Slope categories:  
0 to 5%  
> 5% to 10%  
> 10%

Substrate categories:  
Less than 3 inches  
Greater than 3 inches

Location codes:  
Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:  
YEAR      SEASON      BEGDATE      ENDDATE

-----  
83            1            201            531  
83            2            715            930

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

-----  
Chronological order

Season totals only

Tables will be written for gravel bars and/or potholes as selected.

**Gravel Bar Stranding - Season Totals**

(Results of applying base year stranding data to the indicated flow regime)

| Flow<br>Year      | Season | GBType | Chinook | Pink | Chum   | Coho  | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|-------------------|--------|--------|---------|------|--------|-------|---------|-----------------|---------------------|
| 83                | 1      | 1      | 478.45  | 0.00 | 38.40  | 0.00  | 7.17    | 516.85          | 524.02              |
| 83                | 1      | 2      | 877.84  | 0.00 | 70.46  | 0.00  | 12.30   | 948.31          | 960.60              |
| 83                | 1      | 3      | 5077.74 | 0.00 | 407.57 | 0.00  | 38.32   | 5485.32         | 5523.64             |
| 83                | 1      | 4      | 553.19  | 0.00 | 44.40  | 0.00  | 8.37    | 597.59          | 605.96              |
| 83                | 1      | 5      | 297.29  | 0.00 | 23.87  | 0.00  | 4.18    | 321.15          | 325.33              |
| 83                | 1      | 6      | 1152.40 | 0.00 | 92.50  | 0.00  | 7.93    | 1244.90         | 1252.83             |
| 83                | 1      | 7      | 112.92  | 0.00 | 9.06   | 0.00  | 2.04    | 121.99          | 124.03              |
| 83                | 1      | 8      | 111.25  | 0.00 | 8.93   | 0.00  | 1.71    | 120.18          | 121.88              |
| 83                | 1      | 9      | 1255.78 | 0.00 | 100.80 | 0.00  | 9.56    | 1356.38         | 1366.15             |
| 83                | 1      | 10     | 246.15  | 0.00 | 19.76  | 0.00  | 4.03    | 265.91          | 269.95              |
| 83                | 1      | 11     | 123.01  | 0.00 | 9.87   | 0.00  | 1.81    | 132.89          | 134.70              |
| 83                | 1      | 12     | 564.41  | 0.00 | 45.30  | 0.00  | 4.22    | 609.71          | 613.93              |
| 83                | 1      | 13     | 51.54   | 0.00 | 4.14   | 0.00  | 1.25    | 55.68           | 56.93               |
| 83                | 1      | 14     | 28.52   | 0.00 | 2.29   | 0.00  | 0.50    | 30.81           | 31.31               |
| 83                | 1      | 15     | 471.05  | 0.00 | 37.81  | 0.00  | 3.53    | 508.85          | 512.36              |
| 83                | 1      | 16     | 64.05   | 0.00 | 5.14   | 0.00  | 1.55    | 69.19           | 70.74               |
| 83                | 1      | 17     | 19.06   | 0.00 | 1.83   | 0.00  | 0.33    | 20.59           | 20.93               |
| 83                | 1      | 18     | 136.47  | 0.00 | 10.96  | 0.00  | 1.08    | 147.44          | 148.51              |
| Season subtotals: |        |        | 11621.1 | 0.0  | 932.8  | 0.0   | 109.9   | 12553.7         | 12663.8             |
| 83                | 2      | 1      | 0.00    | 0.00 | 0.00   | 3.82  | 474.03  | 3.82            | 477.85              |
| 83                | 2      | 2      | 0.00    | 0.00 | 0.00   | 6.56  | 812.61  | 6.56            | 819.17              |
| 83                | 2      | 3      | 0.00    | 0.00 | 0.00   | 26.13 | 3239.41 | 26.13           | 3265.54             |
| 83                | 2      | 4      | 0.00    | 0.00 | 0.00   | 22.32 | 2767.97 | 22.32           | 2790.29             |
| 83                | 2      | 5      | 0.00    | 0.00 | 0.00   | 11.16 | 1383.99 | 11.16           | 1395.14             |
| 83                | 2      | 6      | 0.00    | 0.00 | 0.00   | 1.23  | 152.25  | 1.23            | 153.47              |
| 83                | 2      | 7      | 0.00    | 0.00 | 0.00   | 6.95  | 862.30  | 6.95            | 869.26              |
| 83                | 2      | 8      | 0.00    | 0.00 | 0.00   | 5.79  | 718.58  | 5.79            | 724.38              |
| 83                | 2      | 9      | 0.00    | 0.00 | 0.00   | 3.41  | 422.31  | 3.41            | 425.72              |
| 83                | 2      | 10     | 0.00    | 0.00 | 0.00   | 0.74  | 92.48   | 0.74            | 93.22               |
| 83                | 2      | 11     | 0.00    | 0.00 | 0.00   | 0.33  | 41.63   | 0.33            | 41.94               |
| 83                | 2      | 12     | 0.00    | 0.00 | 0.00   | 1.45  | 180.18  | 1.45            | 181.64              |
| 83                | 2      | 13     | 0.00    | 0.00 | 0.00   | 2.03  | 252.22  | 2.03            | 254.25              |
| 83                | 2      | 14     | 0.00    | 0.00 | 0.00   | 0.82  | 100.89  | 0.82            | 101.70              |
| 83                | 2      | 15     | 0.00    | 0.00 | 0.00   | 0.00  | 0.00    | 0.00            | 0.00                |
| 83                | 2      | 16     | 0.00    | 0.00 | 0.00   | 3.85  | 477.74  | 3.85            | 481.60              |
| 83                | 2      | 17     | 0.00    | 0.00 | 0.00   | 0.83  | 103.29  | 0.83            | 104.12              |
| 83                | 2      | 18     | 0.00    | 0.00 | 0.00   | 0.20  | 24.31   | 0.20            | 24.51               |
| Season subtotals: |        |        | 0.0     | 0.0  | 0.0    | 97.6  | 12106.2 | 97.6            | 12203.8             |

**Potholes Stranding and Trapping - Season Totals**

=====

(Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
Second line shows TRAPPED fish

| Flow<br>Year | #Disconnects | Chinook | Pink  | Chum | Coho | Steelhd | Total Salmon | Salmon +<br>Steelhd |
|--------------|--------------|---------|-------|------|------|---------|--------------|---------------------|
| 83           | 6817         | 1477.0  | 10.6  | 0.0  | 4.5  | 18.1    | 1492.1       | 1510.2              |
|              |              | 29043.0 | 207.9 | 0.0  | 89.1 | 356.4   | 29339.9      | 29696.3             |

PARAMETERS FOR THIS RUN:

-----

04/18/87

18:31:27

Slope categories:

- 0 to 5%
- > 5% to 10%
- > 10%

Substrate categories:

- Less than 3 inches
- Greater than 3 inches

Location codes:

- Upper reach
- Middle reach
- Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 83   | 1      | 201     | 531     |
| 83   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

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Chronological order

Monthly totals only

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Monthly Detail with Subtotals  
 -----  
 (Results of applying base year stranding data to the indicated flow regime)

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum  | Coho | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|--------|---------|------|-------|------|---------|-----------------|---------------------|
| 83/ 2         | 1      | 63.12   | 0.00 | 5.07  | 0.00 | 0.91    | 68.19           | 69.09               |
| 83/ 2         | 2      | 89.27   | 0.00 | 7.17  | 0.00 | 1.35    | 96.43           | 97.99               |
| 83/ 2         | 3      | 483.23  | 0.00 | 38.79 | 0.00 | 4.97    | 522.02          | 527.00              |
| 83/ 2         | 4      | 72.62   | 0.00 | 5.83  | 0.00 | 1.04    | 78.45           | 79.50               |
| 83/ 2         | 5      | 30.00   | 0.00 | 2.41  | 0.00 | 0.53    | 32.41           | 32.94               |
| 83/ 2         | 6      | 113.62  | 0.00 | 9.12  | 0.00 | 0.95    | 122.74          | 123.69              |
| 83/ 2         | 7      | 13.35   | 0.00 | 1.07  | 0.00 | 0.24    | 14.42           | 14.67               |
| 83/ 2         | 8      | 9.37    | 0.00 | 0.75  | 0.00 | 0.20    | 10.12           | 10.32               |
| 83/ 2         | 9      | 119.87  | 0.00 | 9.62  | 0.00 | 1.27    | 129.49          | 130.76              |
| 83/ 2         | 10     | 34.89   | 0.00 | 2.80  | 0.00 | 0.51    | 37.69           | 38.20               |
| 83/ 2         | 11     | 11.57   | 0.00 | 0.93  | 0.00 | 0.23    | 12.50           | 12.73               |
| 83/ 2         | 12     | 54.23   | 0.00 | 4.35  | 0.00 | 0.55    | 58.58           | 59.14               |
| 83/ 2         | 13     | 6.22    | 0.00 | 0.50  | 0.00 | 0.14    | 6.72            | 6.87                |
| 83/ 2         | 14     | 1.66    | 0.00 | 0.13  | 0.00 | 0.06    | 1.80            | 1.86                |
| 83/ 2         | 15     | 45.05   | 0.00 | 3.62  | 0.00 | 0.45    | 48.66           | 49.12               |
| 83/ 2         | 16     | 0.04    | 0.00 | 0.45  | 0.00 | 0.10    | 0.69            | 0.87                |
| 83/ 2         | 17     | 1.12    | 0.00 | 0.09  | 0.00 | 0.04    | 1.21            | 1.25                |
| 83/ 2         | 18     | 12.92   | 0.00 | 1.04  | 0.00 | 0.15    | 13.96           | 14.11               |
| Month total:  |        | 1170.2  | 0.0  | 93.9  | 0.0  | 14.0    | 1264.1          | 1278.1              |

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum   | Coho | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|--------|---------|------|--------|------|---------|-----------------|---------------------|
| 83/ 3         | 1      | 122.30  | 0.00 | 9.81   | 0.00 | 2.74    | 132.11          | 134.85              |
| 83/ 3         | 2      | 278.51  | 0.00 | 22.35  | 0.00 | 4.67    | 300.87          | 305.56              |
| 83/ 3         | 3      | 1536.12 | 0.00 | 123.30 | 0.00 | 13.93   | 1659.42         | 1673.55             |
| 83/ 3         | 4      | 142.05  | 0.00 | 11.40  | 0.00 | 3.21    | 153.45          | 156.67              |
| 83/ 3         | 5      | 95.10   | 0.00 | 7.63   | 0.00 | 1.60    | 102.72          | 104.33              |
| 83/ 3         | 6      | 454.23  | 0.00 | 36.46  | 0.00 | 3.41    | 490.69          | 494.09              |
| 83/ 3         | 7      | 32.15   | 0.00 | 2.58   | 0.00 | 0.87    | 34.73           | 35.60               |
| 83/ 3         | 8      | 41.96   | 0.00 | 3.36   | 0.00 | 0.73    | 45.33           | 46.06               |
| 83/ 3         | 9      | 370.75  | 0.00 | 29.76  | 0.00 | 3.42    | 400.50          | 403.93              |
| 83/ 3         | 10     | 65.41   | 0.00 | 5.25   | 0.00 | 1.63    | 70.66           | 72.30               |
| 83/ 3         | 11     | 43.01   | 0.00 | 3.45   | 0.00 | 0.74    | 46.46           | 47.20               |
| 83/ 3         | 12     | 176.59  | 0.00 | 14.17  | 0.00 | 1.56    | 190.77          | 192.33              |
| 83/ 3         | 13     | 17.35   | 0.00 | 1.39   | 0.00 | 0.60    | 18.74           | 19.34               |
| 83/ 3         | 14     | 13.55   | 0.00 | 1.09   | 0.00 | 0.24    | 14.63           | 14.87               |
| 83/ 3         | 15     | 147.46  | 0.00 | 11.83  | 0.00 | 1.31    | 159.29          | 160.59              |
| 83/ 3         | 16     | 21.44   | 0.00 | 1.72   | 0.00 | 0.74    | 23.16           | 23.90               |
| 83/ 3         | 17     | 7.05    | 0.00 | 0.73   | 0.00 | 0.16    | 9.77            | 9.93                |
| 83/ 3         | 18     | 35.29   | 0.00 | 2.83   | 0.00 | 0.36    | 38.12           | 38.48               |
| Month total:  |        | 3602.3  | 0.0  | 289.1  | 0.0  | 41.9    | 3891.4          | 3933.4              |

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum  | Coho | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|--------|---------|------|-------|------|---------|-----------------|---------------------|
| 83/ 4         | 1      | 239.46  | 0.00 | 19.22 | 0.00 | 2.18    | 258.68          | 260.86              |
| 83/ 4         | 2      | 348.67  | 0.00 | 28.79 | 0.00 | 3.74    | 387.47          | 391.18              |

|              |    |         |      |        |      |       |         |         |
|--------------|----|---------|------|--------|------|-------|---------|---------|
| 83/ 4        | 3  | 1667.71 | 0.00 | 133.86 | 0.00 | 12.40 | 1801.58 | 1813.97 |
| 83/ 4        | 4  | 276.30  | 0.00 | 22.18  | 0.00 | 2.53  | 298.48  | 301.00  |
| 83/ 4        | 5  | 120.78  | 0.00 | 9.70   | 0.00 | 1.24  | 130.47  | 131.73  |
| 83/ 4        | 6  | 261.78  | 0.00 | 21.03  | 0.00 | 2.01  | 283.01  | 285.02  |
| 83/ 4        | 7  | 53.39   | 0.00 | 4.27   | 0.00 | 0.53  | 57.67   | 58.20   |
| 83/ 4        | 8  | 39.55   | 0.00 | 3.18   | 0.00 | 0.44  | 42.73   | 43.17   |
| 83/ 4        | 9  | 422.04  | 0.00 | 33.88  | 0.00 | 3.13  | 455.91  | 459.05  |
| 83/ 4        | 10 | 117.24  | 0.00 | 9.41   | 0.00 | 1.11  | 126.67  | 127.79  |
| 83/ 4        | 11 | 46.54   | 0.00 | 3.73   | 0.00 | 0.50  | 50.27   | 50.77   |
| 83/ 4        | 12 | 178.70  | 0.00 | 14.34  | 0.00 | 1.33  | 193.04  | 194.37  |
| 83/ 4        | 13 | 20.44   | 0.00 | 1.64   | 0.00 | 0.25  | 22.08   | 22.33   |
| 83/ 4        | 14 | 7.61    | 0.00 | 0.61   | 0.00 | 0.10  | 8.21    | 8.31    |
| 83/ 4        | 15 | 149.22  | 0.00 | 11.97  | 0.00 | 1.11  | 161.17  | 162.30  |
| 83/ 4        | 16 | 25.26   | 0.00 | 2.03   | 0.00 | 0.31  | 27.29   | 27.57   |
| 83/ 4        | 17 | 5.08    | 0.00 | 0.41   | 0.00 | 0.06  | 5.49    | 5.53    |
| 83/ 4        | 18 | 51.33   | 0.00 | 4.12   | 0.00 | 0.38  | 55.45   | 55.83   |
| Month total: |    | 4041.3  | 0.0  | 324.4  | 0.0  | 33.4  | 4365.6  | 4399.0  |

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum   | Coho | Steelhd | Total   | Salmon +<br>Steelhd |
|---------------|--------|---------|------|--------|------|---------|---------|---------------------|
| 83/ 5         | 1      | 53.57   | 0.00 | 4.30   | 0.00 | 1.34    | 57.87   | 59.22               |
| 83/ 5         | 2      | 151.41  | 0.00 | 12.15  | 0.00 | 2.31    | 163.57  | 165.87              |
| 83/ 5         | 3      | 1390.67 | 0.00 | 111.62 | 0.00 | 7.02    | 1502.30 | 1509.32             |
| 83/ 5         | 4      | 62.22   | 0.00 | 4.99   | 0.00 | 1.57    | 67.21   | 68.78               |
| 83/ 5         | 5      | 51.41   | 0.00 | 4.13   | 0.00 | 0.78    | 55.54   | 56.33               |
| 83/ 5         | 6      | 322.57  | 0.00 | 25.89  | 0.00 | 1.56    | 348.46  | 350.03              |
| 83/ 5         | 7      | 14.03   | 0.00 | 1.13   | 0.00 | 0.40    | 15.16   | 15.56               |
| 83/ 5         | 8      | 20.37   | 0.00 | 1.64   | 0.00 | 0.34    | 22.00   | 22.34               |
| 83/ 5         | 9      | 343.13  | 0.00 | 27.54  | 0.00 | 1.74    | 370.67  | 372.41              |
| 83/ 5         | 10     | 28.57   | 0.00 | 2.30   | 0.00 | 0.77    | 30.89   | 31.67               |
| 83/ 5         | 11     | 21.89   | 0.00 | 1.76   | 0.00 | 0.35    | 23.65   | 24.00               |
| 83/ 5         | 12     | 154.88  | 0.00 | 12.43  | 0.00 | 0.78    | 167.31  | 168.09              |
| 83/ 5         | 13     | 7.53    | 0.00 | 0.61   | 0.00 | 0.26    | 8.13    | 8.39                |
| 83/ 5         | 14     | 5.70    | 0.00 | 0.46   | 0.00 | 0.10    | 6.16    | 6.26                |
| 83/ 5         | 15     | 129.32  | 0.00 | 10.38  | 0.00 | 0.45    | 139.70  | 140.36              |
| 83/ 5         | 16     | 9.30    | 0.00 | 0.74   | 0.00 | 0.32    | 10.05   | 10.37               |
| 83/ 5         | 17     | 3.81    | 0.00 | 0.30   | 0.00 | 0.07    | 4.12    | 4.18                |
| 83/ 5         | 18     | 36.94   | 0.00 | 2.97   | 0.00 | 0.19    | 39.90   | 40.09               |
| Month total:  |        | 2807.3  | 0.0  | 225.3  | 0.0  | 20.6    | 3032.7  | 3053.3              |

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum | Coho | Steelhd | Total | Salmon +<br>Steelhd |
|---------------|--------|---------|------|------|------|---------|-------|---------------------|
| 83/ 7         | 1      | 0.00    | 0.00 | 0.00 | 0.46 | 57.04   | 0.46  | 57.50               |
| 83/ 7         | 2      | 0.00    | 0.00 | 0.00 | 0.79 | 97.78   | 0.79  | 98.57               |
| 83/ 7         | 3      | 0.00    | 0.00 | 0.00 | 3.21 | 397.55  | 3.21  | 400.75              |
| 83/ 7         | 4      | 0.00    | 0.00 | 0.00 | 2.77 | 343.53  | 2.77  | 346.30              |
| 83/ 7         | 5      | 0.00    | 0.00 | 0.00 | 1.38 | 171.77  | 1.38  | 173.15              |
| 83/ 7         | 6      | 0.00    | 0.00 | 0.00 | 0.15 | 18.37   | 0.15  | 18.54               |
| 83/ 7         | 7      | 0.00    | 0.00 | 0.00 | 0.85 | 105.15  | 0.85  | 106.00              |
| 83/ 7         | 8      | 0.00    | 0.00 | 0.00 | 0.71 | 87.63   | 0.71  | 88.34               |
| 83/ 7         | 9      | 0.00    | 0.00 | 0.00 | 0.42 | 51.86   | 0.42  | 52.28               |
| 83/ 7         | 10     | 0.00    | 0.00 | 0.00 | 0.09 | 10.94   | 0.09  | 11.03               |
| 83/ 7         | 11     | 0.00    | 0.00 | 0.00 | 0.04 | 4.93    | 0.04  | 4.97                |
| 83/ 7         | 12     | 0.00    | 0.00 | 0.00 | 0.17 | 21.50   | 0.17  | 21.67               |

|              |      |      |      |      |        |      |        |
|--------------|------|------|------|------|--------|------|--------|
| 83/ 7 13     | 0.00 | 0.00 | 0.00 | 0.25 | 31.36  | 0.25 | 31.61  |
| 83/ 7 14     | 0.00 | 0.00 | 0.00 | 0.10 | 12.55  | 0.10 | 12.65  |
| 83/ 7 15     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00   |
| 83/ 7 16     | 0.00 | 0.00 | 0.00 | 0.47 | 58.57  | 0.47 | 59.04  |
| 83/ 7 17     | 0.00 | 0.00 | 0.00 | 0.10 | 12.44  | 0.10 | 12.76  |
| 83/ 7 18     | 0.00 | 0.00 | 0.00 | 0.02 | 2.79   | 0.02 | 2.81   |
| Month total: | 0.0  | 0.0  | 0.0  | 12.0 | 1486.0 | 12.0 | 1498.0 |

| Flow<br>YR/MO | BBType | Chinook | Pink | Chum | Coho  | Steelhd | Total | Salmon +<br>Steelhd |
|---------------|--------|---------|------|------|-------|---------|-------|---------------------|
| 83/ 8 1       |        | 0.00    | 0.00 | 0.00 | 2.05  | 254.05  | 2.05  | 256.10              |
| 83/ 8 2       |        | 0.00    | 0.00 | 0.00 | 3.51  | 435.52  | 3.51  | 439.03              |
| 83/ 8 3       |        | 0.00    | 0.00 | 0.00 | 13.01 | 1612.71 | 13.01 | 1625.71             |
| 83/ 8 4       |        | 0.00    | 0.00 | 0.00 | 10.62 | 1316.85 | 10.62 | 1327.47             |
| 83/ 8 5       |        | 0.00    | 0.00 | 0.00 | 5.31  | 658.43  | 5.31  | 663.73              |
| 83/ 8 6       |        | 0.00    | 0.00 | 0.00 | 0.65  | 80.52   | 0.65  | 81.17               |
| 83/ 8 7       |        | 0.00    | 0.00 | 0.00 | 3.55  | 439.92  | 3.55  | 443.46              |
| 83/ 8 8       |        | 0.00    | 0.00 | 0.00 | 2.96  | 366.60  | 2.96  | 369.55              |
| 83/ 8 9       |        | 0.00    | 0.00 | 0.00 | 1.69  | 209.72  | 1.69  | 211.41              |
| 83/ 8 10      |        | 0.00    | 0.00 | 0.00 | 0.43  | 52.62   | 0.43  | 53.05               |
| 83/ 8 11      |        | 0.00    | 0.00 | 0.00 | 0.19  | 23.49   | 0.19  | 23.88               |
| 83/ 8 12      |        | 0.00    | 0.00 | 0.00 | 0.80  | 97.48   | 0.80  | 100.29              |
| 83/ 8 13      |        | 0.00    | 0.00 | 0.00 | 0.76  | 119.04  | 0.76  | 120.01              |
| 83/ 8 14      |        | 0.00    | 0.00 | 0.00 | 0.39  | 47.62   | 0.39  | 48.00               |
| 83/ 8 15      |        | 0.00    | 0.00 | 0.00 | 0.00  | 0.00    | 0.00  | 0.00                |
| 83/ 8 16      |        | 0.00    | 0.00 | 0.00 | 1.93  | 238.84  | 1.93  | 240.77              |
| 83/ 8 17      |        | 0.00    | 0.00 | 0.00 | 0.42  | 51.64   | 0.42  | 52.05               |
| 83/ 8 18      |        | 0.00    | 0.00 | 0.00 | 0.12  | 14.60   | 0.12  | 14.71               |
| Month total:  |        | 0.0     | 0.0  | 0.0  | 48.6  | 4021.9  | 48.6  | 4070.4              |

| Flow<br>YR/MO | BBType | Chinook | Pink | Chum | Coho | Steelhd | Total | Salmon +<br>Steelhd |
|---------------|--------|---------|------|------|------|---------|-------|---------------------|
| 83/ 9 1       |        | 0.00    | 0.00 | 0.00 | 1.31 | 162.94  | 1.31  | 164.25              |
| 83/ 9 2       |        | 0.00    | 0.00 | 0.00 | 2.25 | 279.32  | 2.25  | 281.57              |
| 83/ 9 3       |        | 0.00    | 0.00 | 0.00 | 9.91 | 1229.16 | 9.91  | 1239.07             |
| 83/ 9 4       |        | 0.00    | 0.00 | 0.00 | 8.93 | 1107.59 | 8.93  | 1116.52             |
| 83/ 9 5       |        | 0.00    | 0.00 | 0.00 | 4.46 | 553.80  | 4.46  | 558.26              |
| 83/ 9 6       |        | 0.00    | 0.00 | 0.00 | 0.43 | 53.34   | 0.43  | 53.77               |
| 83/ 9 7       |        | 0.00    | 0.00 | 0.00 | 2.56 | 317.23  | 2.56  | 319.79              |
| 83/ 9 8       |        | 0.00    | 0.00 | 0.00 | 2.13 | 264.36  | 2.13  | 266.49              |
| 83/ 9 9       |        | 0.00    | 0.00 | 0.00 | 1.30 | 160.73  | 1.30  | 162.03              |
| 83/ 9 10      |        | 0.00    | 0.00 | 0.00 | 0.23 | 28.91   | 0.23  | 29.14               |
| 83/ 9 11      |        | 0.00    | 0.00 | 0.00 | 0.10 | 13.01   | 0.10  | 13.12               |
| 83/ 9 12      |        | 0.00    | 0.00 | 0.00 | 0.48 | 59.20   | 0.48  | 59.68               |
| 83/ 9 13      |        | 0.00    | 0.00 | 0.00 | 0.82 | 101.81  | 0.82  | 102.63              |
| 83/ 9 14      |        | 0.00    | 0.00 | 0.00 | 0.33 | 40.73   | 0.33  | 41.05               |
| 83/ 9 15      |        | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00  | 0.00                |
| 83/ 9 16      |        | 0.00    | 0.00 | 0.00 | 1.45 | 180.33  | 1.45  | 181.77              |
| 83/ 9 17      |        | 0.00    | 0.00 | 0.00 | 0.31 | 38.99   | 0.31  | 39.30               |
| 83/ 9 18      |        | 0.00    | 0.00 | 0.00 | 0.06 | 6.92    | 0.06  | 6.98                |

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Month total: 0.0 0.0 0.0 37.1 4589.4 37.1 4635.4

Potholes Stranding and Trapping - Monthly Detail with Subtotals  
 (Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO | #Discern | Chinook            | Pink          | Chum         | Coho          | Steelhd        | Total<br>Salmon    | Salmon +<br>Steelhd |
|---------------|----------|--------------------|---------------|--------------|---------------|----------------|--------------------|---------------------|
| 83/ 2         | 135      | 4.18<br>499.46     | 0.03<br>3.57  | 0.00<br>0.00 | 1.E-2<br>1.53 | 0.05<br>6.13   | 4.22<br>504.57     | 4.27<br>510.70      |
| 83/ 3         | 1602     | 393.56<br>7841.04  | 2.81<br>56.12 | 0.00<br>0.00 | 1.21<br>24.05 | 4.83<br>76.21  | 397.58<br>7921.22  | 402.41<br>8017.43   |
| 83/ 4         | 2080     | 561.91<br>10355.94 | 4.02<br>74.12 | 0.00<br>0.00 | 1.72<br>31.77 | 6.89<br>127.07 | 567.65<br>10461.83 | 574.54<br>10589.90  |
| 83/ 5         | 3000     | 517.33<br>10346.53 | 3.70<br>74.05 | 0.00<br>0.00 | 1.59<br>31.74 | 6.35<br>126.95 | 521.62<br>10452.32 | 528.76<br>10577.27  |
| Year totals:  |          | 1477.0<br>29043.0  | 10.6<br>207.7 | 0.0<br>0.0   | 4.5<br>87.1   | 18.1<br>356.4  | 1492.1<br>29339.9  | 1510.2<br>29696.3   |

**PARAMETERS FOR THIS RUN:**

-----  
04/18/87  
18:43:39

**Slope categories:**

0 to 5%  
> 5% to 10%  
> 10%

**Substrate categories:**

Less than 3 inches  
Greater than 3 inches

**Location codes:**

Upper reach  
Middle reach  
Lower reach

**Flow data was extracted for the following time periods:**

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 83   | 1      | 201     | 531     |
| 83   | 2      | 715     | 930     |

**Both gravel bars and potholes were run.**  
(using maximum ramp rate for gravel bar simulation)

**TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:**

-----  
**Chronological order**

**Daily detail report**

**Tables will be written for gravel bars and/or potholes as selected.**

Gravel Bar Stranding - Daily Detail with Subtotals  
 -----  
 (Results of applying base year stranding data to the indicated flow regime)

| Comment         | Flow<br>YR/MO/DY | Total   |      |       |      |         |        | Salmon + |       | RampRate |
|-----------------|------------------|---------|------|-------|------|---------|--------|----------|-------|----------|
|                 |                  | Chinook | Pink | Chum  | Coho | Steelhd | Salmon | Steelhd  | Ampl  |          |
| No event        | 83/ 2/ 1         |         |      |       |      |         |        |          |       |          |
|                 | 83/ 2/ 2         | 1.28    | 0.00 | 0.10  | 0.00 | 0.04    | 1.39   | 1.43     | 1165. | 582.     |
|                 | 83/ 2/ 3         | 4.39    | 0.00 | 0.35  | 0.00 | 0.15    | 4.75   | 4.90     | 2101. | 799.     |
| Daylight        | 83/ 2/ 4         | 13.73   | 0.00 | .10   | 0.00 | 0.14    | 14.83  | 14.97    | 6484. | 3177.    |
| No event        | 83/ 2/ 5         |         |      |       |      |         |        |          |       |          |
| No event        | 83/ 2/ 6         |         |      |       |      |         |        |          |       |          |
| No event        | 83/ 2/ 7         |         |      |       |      |         |        |          |       |          |
| No event        | 83/ 2/ 8         |         |      |       |      |         |        |          |       |          |
| No event        | 83/ 2/ 9         |         |      |       |      |         |        |          |       |          |
| Daylight        | 83/ 2/10         | 2.34    | 0.00 | 0.19  | 0.00 | 0.02    | 2.53   | 2.56     | 573.  | 243.     |
|                 | 83/ 2/11         | 16.17   | 0.00 | 1.30  | 0.00 | 0.36    | 17.47  | 18.03    | 2133. | 611.     |
| Daylight        | 83/ 2/12         | 94.60   | 0.00 | 7.59  | 0.00 | 0.65    | 102.20 | 102.86   | 2750. | 1011.    |
|                 | 83/ 2/13         | 3.86    | 0.00 | 0.31  | 0.00 | 0.13    | 4.17   | 4.30     | 808.  | 404.     |
| Daylight        | 83/ 2/14         | 8.17    | 0.00 | 0.66  | 0.00 | 0.03    | 8.83   | 8.86     | 579.  | 289.     |
|                 | 83/ 2/15         | 9.14    | 0.00 | 0.73  | 0.00 | 0.32    | 9.88   | 10.19    | 1132. | 283.     |
|                 | 83/ 2/16         | 5.25    | 0.00 | 0.42  | 0.00 | 0.18    | 5.67   | 5.85     | 840.  | 420.     |
| Daylight        | 83/ 2/17         | 0.00    | 0.00 | 0.00  | 0.00 | 0.00    | 0.00   | 0.00     | 138.  | 57.      |
|                 | 83/ 2/18         | 16.87   | 0.00 | 1.35  | 0.00 | 0.58    | 18.25  | 18.83    | 1473. | 679.     |
| Daylight        | 83/ 2/19         | 24.23   | 0.00 | 1.94  | 0.00 | 0.38    | 26.17  | 26.55    | 1104. | 541.     |
|                 | 83/ 2/20         | 25.25   | 0.00 | 2.03  | 0.00 | 0.87    | 27.28  | 28.15    | 1809. | 376.     |
| Daylight        | 83/ 2/21         | 101.12  | 0.00 | 8.11  | 0.00 | 1.05    | 109.23 | 110.28   | 2001. | 551.     |
|                 | 83/ 2/22         | 38.46   | 0.00 | 3.09  | 0.00 | 1.33    | 41.55  | 42.88    | 3724. | 1338.    |
| Daylight        | 83/ 2/23         | 90.27   | 0.00 | 7.25  | 0.00 | 0.94    | 97.52  | 98.46    | 1723. | 495.     |
|                 | 83/ 2/24         | 41.56   | 0.00 | 3.33  | 0.00 | 1.43    | 44.89  | 46.33    | 3627. | 1537.    |
| Daylight        | 83/ 2/25         | 204.90  | 0.00 | 16.61 | 0.00 | 1.63    | 223.51 | 225.14   | 4505. | 1766.    |
| Daylight        | 83/ 2/26         | 31.23   | 0.00 | 2.51  | 0.00 | 0.49    | 33.74  | 34.23    | 1069. | 378.     |
| Daylight        | 83/ 2/27         | 217.86  | 0.00 | 17.49 | 0.00 | 1.61    | 235.35 | 236.95   | 3578. | 1584.    |
| Daylight        | 83/ 2/28         | 217.45  | 0.00 | 17.46 | 0.00 | 1.44    | 234.90 | 236.35   | 2223. | 1080.    |
| Month subtotal: |                  | 1170.1  | 0.0  | 93.7  | 0.0  | 14.0    | 1264.1 | 1278.1   |       |          |

| Comment  | Flow<br>YR/MO/DY | Total   |      |       |      |         |        | Salmon + |       | RampRate |
|----------|------------------|---------|------|-------|------|---------|--------|----------|-------|----------|
|          |                  | Chinook | Pink | Chum  | Coho | Steelhd | Salmon | Steelhd  | Ampl  |          |
|          | 83/ 3/ 1         | 42.73   | 0.00 | 3.43  | 0.00 | 1.48    | 46.16  | 47.64    | 2152. | 1030.    |
| Daylight | 83/ 3/ 2         | 230.18  | 0.00 | 18.47 | 0.00 | 1.62    | 248.65 | 250.27   | 2988. | 1374.    |
|          | 83/ 3/ 3         | 47.43   | 0.00 | 3.81  | 0.00 | 1.64    | 51.23  | 52.87    | 3078. | 1386.    |
| Daylight | 83/ 3/ 4         | 234.23  | 0.00 | 18.80 | 0.00 | 1.74    | 253.03 | 254.77   | 3614. | 1537.    |
| Daylight | 83/ 3/ 5         | 236.35  | 0.00 | 18.97 | 0.00 | 1.79    | 255.33 | 257.12   | 3942. | 1421.    |
| Daylight | 83/ 3/ 6         | 235.72  | 0.00 | 18.92 | 0.00 | 1.77    | 254.64 | 256.41   | 3844. | 1470.    |
|          | 83/ 3/ 7         | 48.42   | 0.00 | 3.89  | 0.00 | 1.67    | 52.30  | 53.98    | 3273. | 1290.    |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |        |      |       |      |      |        |        |       |       |
|-----------------|----------|--------|------|-------|------|------|--------|--------|-------|-------|
|                 | 83/ 3/ 8 | 48.58  | 0.00 | 3.91  | 0.00 | 1.68 | 52.59  | 54.27  | 3325. | 1473. |
| Daylight        | 83/ 3/ 9 | 235.34 | 0.00 | 18.89 | 0.00 | 1.76 | 254.24 | 256.00 | 3786. | 1521. |
|                 | 83/ 3/10 | 50.08  | 0.00 | 4.02  | 0.00 | 1.73 | 54.10  | 55.83  | 3601. | 1444. |
|                 | 83/ 3/11 | 47.96  | 0.00 | 3.85  | 0.00 | 1.66 | 51.81  | 53.47  | 3183. | 1271. |
| Daylight        | 83/ 3/12 | 30.31  | 0.00 | 2.44  | 0.00 | 0.48 | 32.74  | 33.22  | 995.  | 486.  |
|                 | 83/ 3/13 | 46.02  | 0.00 | 3.69  | 0.00 | 1.59 | 49.72  | 51.31  | 2801. | 1196. |
|                 | 83/ 3/14 | 45.94  | 0.00 | 3.69  | 0.00 | 1.59 | 49.62  | 51.21  | 2784. | 1144. |
| Daylight        | 83/ 3/15 | 228.56 | 0.00 | 18.35 | 0.00 | 1.58 | 246.91 | 248.49 | 2739. | 1275. |
| Daylight        | 83/ 3/16 | 129.46 | 0.00 | 10.39 | 0.00 | 1.34 | 139.85 | 141.19 | 1891. | 729.  |
|                 | 83/ 3/17 | 51.48  | 0.00 | 4.13  | 0.00 | 1.78 | 55.61  | 57.39  | 3877. | 1029. |
| Daylight        | 83/ 3/18 | 240.23 | 0.00 | 19.28 | 0.00 | 1.90 | 259.51 | 261.41 | 4540. | 1106. |
|                 | 83/ 3/19 | 49.71  | 0.00 | 3.99  | 0.00 | 1.72 | 53.70  | 55.42  | 3528. | 965.  |
|                 | 83/ 3/20 | 43.91  | 0.00 | 3.52  | 0.00 | 1.52 | 47.44  | 48.95  | 2385. | 653.  |
| Daylight        | 83/ 3/21 | 80.60  | 0.00 | 6.47  | 0.00 | 0.84 | 87.06  | 87.90  | 1366. | 262.  |
| Daylight        | 83/ 3/22 | 226.37 | 0.00 | 18.97 | 0.00 | 1.79 | 255.34 | 257.13 | 3944. | 1184. |
|                 | 83/ 3/23 | 32.34  | 0.00 | 2.60  | 0.00 | 1.12 | 34.93  | 36.05  | 1656. | 828.  |
| Daylight        | 83/ 3/24 | 231.18 | 0.00 | 18.56 | 0.00 | 1.65 | 249.73 | 251.39 | 3143. | 963.  |
| Daylight        | 83/ 3/25 | 72.22  | 0.00 | 5.79  | 0.00 | 0.75 | 78.02  | 78.77  | 1276. | 617.  |
| Daylight        | 83/ 3/26 | 297.73 | 0.00 | 23.90 | 0.00 | 1.70 | 321.62 | 323.32 | 3420. | 918.  |
|                 | 83/ 3/27 | 2.21   | 0.00 | 0.18  | 0.00 | 0.08 | 2.39   | 2.46   | 579.  | 289.  |
| Daylight        | 83/ 3/28 | 326.95 | 0.00 | 26.24 | 0.00 | 1.98 | 353.17 | 355.14 | 5003. | 1620. |
| Daylight        | 83/ 3/29 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00   | 0.00   | 322.  | 80.   |
| Daylight        | 83/ 3/30 | 0.00   | 0.00 | 0.00  | 0.00 | 0.09 | 0.00   | 0.00   | 322.  | 80.   |
| Daylight        | 83/ 3/31 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00   | 0.00   | 368.  | 184.  |
| Month subtotal: |          | 3602.3 | 0.0  | 289.1 | 0.0  | 42.0 | 3891.4 | 3933.4 |       |       |

| Comment  | YR/MO/DY | Flow    |      |       |      |         | Total Salmon | Salmon + Steelhd |         |       | Ampl | RampRate |
|----------|----------|---------|------|-------|------|---------|--------------|------------------|---------|-------|------|----------|
|          |          | Chinook | Pink | Chum  | Coho | Steelhd |              | Salmon           | Steelhd |       |      |          |
| Daylight | 83/ 4/ 1 | 224.23  | 0.00 | 18.00 | 0.00 | 1.46    | 242.22       | 243.69           | 2070.   | 1012. |      |          |
|          | 83/ 4/ 2 | 40.31   | 0.00 | 3.23  | 0.00 | 1.39    | 43.54        | 44.94            | 1941.   | 750.  |      |          |
|          | 83/ 4/ 3 | 47.29   | 0.00 | 3.79  | 0.00 | 1.63    | 51.09        | 52.72            | 3051.   | 564.  |      |          |
|          | 83/ 4/ 4 | 0.00    | 0.00 | 0.00  | 0.00 | 0.00    | 0.00         | 0.00             | 464.    | 135.  |      |          |
| No event | 83/ 4/ 5 |         |      |       |      |         |              |                  |         |       |      |          |
| No event | 83/ 4/ 6 |         |      |       |      |         |              |                  |         |       |      |          |
| No event | 83/ 4/ 7 |         |      |       |      |         |              |                  |         |       |      |          |
| Daylight | 83/ 4/ 8 | 393.96  | 0.00 | 31.62 | 0.00 | 1.78    | 425.58       | 427.35           | 3867.   | 1429. |      |          |
| No event | 83/ 4/ 9 |         |      |       |      |         |              |                  |         |       |      |          |
| Daylight | 83/ 4/10 | 293.13  | 0.00 | 23.53 | 0.00 | 1.32    | 316.66       | 317.98           | 1868.   | 759.  |      |          |
| Daylight | 83/ 4/11 | 101.54  | 0.00 | 8.15  | 0.00 | 1.51    | 109.70       | 111.21           | 2381.   | 612.  |      |          |
| Daylight | 83/ 4/12 | 311.56  | 0.00 | 25.01 | 0.00 | 1.40    | 336.56       | 337.97           | 1954.   | 945.  |      |          |
| Daylight | 83/ 4/13 | 276.63  | 0.00 | 22.20 | 0.00 | 1.25    | 298.83       | 300.08           | 1791.   | 523.  |      |          |
| Daylight | 83/ 4/14 | 224.86  | 0.00 | 18.05 | 0.00 | 1.48    | 242.90       | 244.38           | 2167.   | 961.  |      |          |
| Daylight | 83/ 4/15 | 68.32   | 0.00 | 5.48  | 0.00 | 0.44    | 73.81        | 74.25            | 958.    | 437.  |      |          |
|          | 83/ 4/16 | 51.62   | 0.00 | 4.14  | 0.00 | 1.79    | 55.76        | 57.55            | 3905.   | 628.  |      |          |
| Daylight | 83/ 4/17 | 225.58  | 0.00 | 18.11 | 0.00 | 1.50    | 243.68       | 245.18           | 2278.   | 1052. |      |          |
| Daylight | 83/ 4/18 | 219.85  | 0.00 | 17.65 | 0.00 | 0.99    | 237.49       | 238.49           | 1526.   | 763.  |      |          |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |        |      |       |      |      |        |        |       |       |
|-----------------|----------|--------|------|-------|------|------|--------|--------|-------|-------|
| Daylight        | 83/ 4/19 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00   | 0.00   | 287.  | 136.  |
|                 | 83/ 4/20 | 3.34   | 0.00 | 3.48  | 0.00 | 1.49 | 46.81  | 48.31  | 2271. | 665.  |
| Daylight        | 83/ 4/21 | 236.48 | 0.00 | 18.98 | 0.00 | 1.79 | 255.46 | 257.25 | 3961. | 586.  |
| Daylight        | 83/ 4/22 | 369.36 | 0.00 | 29.65 | 0.00 | 1.67 | 399.01 | 400.67 | 3234. | 1179. |
| Daylight        | 83/ 4/23 | 103.77 | 0.00 | 8.33  | 0.00 | 1.08 | 112.10 | 113.18 | 1615. | 499.  |
| Daylight        | 83/ 4/24 | 55.84  | 0.00 | 4.48  | 0.00 | 0.88 | 60.32  | 61.20  | 1412. | 497.  |
|                 | 83/ 4/25 | 43.98  | 0.00 | 3.53  | 0.00 | 1.52 | 47.51  | 49.03  | 2398. | 894.  |
|                 | 83/ 4/26 | 30.95  | 0.00 | 4.09  | 0.00 | 1.74 | 55.04  | 56.80  | 3772. | 621.  |
|                 | 83/ 4/27 | 44.99  | 0.00 | 3.61  | 0.00 | 1.56 | 48.60  | 50.16  | 2598. | 814.  |
| Daylight        | 83/ 4/28 | 324.25 | 0.00 | 26.03 | 0.00 | 1.46 | 350.28 | 351.74 | 2073. | 984.  |
| Daylight        | 83/ 4/29 | 228.67 | 0.00 | 18.35 | 0.00 | 1.58 | 247.03 | 248.61 | 2756. | 1070. |
| Daylight        | 83/ 4/30 | 60.77  | 0.00 | 4.88  | 0.00 | 0.63 | 65.65  | 66.28  | 1153. | 498.  |
| Month subtotal: |          | 4041.3 | 0.0  | 324.4 | 0.0  | 33.4 | 4365.6 | 4399.0 |       |       |

| Comment  | Flow     | YR/MO/DY | Chinook |       |      |         |        | Total  | Salmon + |       |          |
|----------|----------|----------|---------|-------|------|---------|--------|--------|----------|-------|----------|
|          |          |          | Pink    | Chum  | Coho | Steelhd | Salmon |        | Steelhd  | Ampl  | RampRate |
| Daylight | 83/ 5/ 1 | 128.77   | 0.00    | 10.34 | 0.00 | 0.83    | 139.10 | 139.94 | 1391.    | 695.  |          |
| Daylight | 83/ 5/ 2 | 166.13   | 0.00    | 13.33 | 0.00 | 0.75    | 179.47 | 180.21 | 1327.    | 398.  |          |
| Daylight | 83/ 5/ 3 | 214.67   | 0.00    | 17.23 | 0.00 | 1.63    | 231.90 | 233.54 | 4023.    | 840.  |          |
| Daylight | 83/ 5/ 4 | 198.97   | 0.00    | 15.97 | 0.00 | 1.35    | 214.95 | 216.30 | 2560.    | 757.  |          |
| Daylight | 83/ 5/ 5 | 191.06   | 0.00    | 15.34 | 0.00 | 1.28    | 206.40 | 207.68 | 2412.    | 394.  |          |
| Daylight | 83/ 5/ 6 | 196.15   | 0.00    | 15.74 | 0.00 | 1.56    | 211.90 | 213.47 | 4724.    | 810.  |          |
| Daylight | 83/ 5/ 7 | 178.86   | 0.00    | 14.36 | 0.00 | 1.24    | 193.21 | 194.46 | 2797.    | 1066. |          |
| Daylight | 83/ 5/ 8 | 23.46    | 0.00    | 1.88  | 0.00 | 0.11    | 25.35  | 25.45  | 646.     | 297.  |          |
| Daylight | 83/ 5/ 9 | 165.97   | 0.00    | 13.32 | 0.00 | 1.18    | 179.30 | 180.47 | 3103.    | 789.  |          |
|          | 83/ 5/10 | 12.92    | 0.00    | 1.04  | 0.00 | 0.45    | 13.96  | 14.41  | 1172.    | 518.  |          |
|          | 83/ 5/11 | 1.96     | 0.00    | 0.16  | 0.00 | 0.07    | 2.12   | 2.19   | 607.     | 283.  |          |
| Daylight | 83/ 5/12 | 148.26   | 0.00    | 11.90 | 0.00 | 1.13    | 160.16 | 161.29 | 4074.    | 1295. |          |
| Daylight | 83/ 5/13 | 177.94   | 0.00    | 14.28 | 0.00 | 1.02    | 192.22 | 193.24 | 3526.    | 1171. |          |
| Daylight | 83/ 5/14 | 130.68   | 0.00    | 10.48 | 0.00 | 0.95    | 141.17 | 142.12 | 3319.    | 1252. |          |
| Daylight | 83/ 5/15 | 121.06   | 0.00    | 9.72  | 0.00 | 0.83    | 130.78 | 131.61 | 2634.    | 812.  |          |
| Daylight | 83/ 5/16 | 115.99   | 0.00    | 9.31  | 0.00 | 0.84    | 125.30 | 126.14 | 3267.    | 1222. |          |
| Daylight | 83/ 5/17 | 109.77   | 0.00    | 8.81  | 0.00 | 0.81    | 118.58 | 119.39 | 3605.    | 1396. |          |
|          | 83/ 5/18 | 21.94    | 0.00    | 1.76  | 0.00 | 0.76    | 23.70  | 24.46  | 3613.    | 489.  |          |
| Daylight | 83/ 5/19 | 91.93    | 0.00    | 7.38  | 0.00 | 0.62    | 99.31  | 99.93  | 2389.    | 548.  |          |
| Daylight | 83/ 5/20 | 25.79    | 0.00    | 2.07  | 0.00 | 0.42    | 27.86  | 28.28  | 1650.    | 230.  |          |
| Daylight | 83/ 5/21 | 19.07    | 0.00    | 1.53  | 0.00 | 0.20    | 20.60  | 20.79  | 1096.    | 244.  |          |
| Daylight | 83/ 5/22 | 66.75    | 0.00    | 5.36  | 0.00 | 0.35    | 72.11  | 72.47  | 1680.    | 825.  |          |
|          | 83/ 5/23 | 10.83    | 0.00    | 0.87  | 0.00 | 0.37    | 11.70  | 12.08  | 1877.    | 700.  |          |
| Daylight | 83/ 5/24 | 72.89    | 0.00    | 5.85  | 0.00 | 0.41    | 78.74  | 79.15  | 3086.    | 1332. |          |
| Daylight | 83/ 5/25 | 51.80    | 0.00    | 4.16  | 0.00 | 0.40    | 55.96  | 56.35  | 4011.    | 1732. |          |
| Daylight | 83/ 5/26 | 43.64    | 0.00    | 3.50  | 0.00 | 0.32    | 47.14  | 47.46  | 3383.    | 1007. |          |
| Daylight | 83/ 5/27 | 47.63    | 0.00    | 3.83  | 0.00 | 0.28    | 51.46  | 51.73  | 3807.    | 1409. |          |
| Daylight | 83/ 5/28 | 23.27    | 0.00    | 1.87  | 0.00 | 0.10    | 25.14  | 25.25  | 1369.    | 342.  |          |
| Daylight | 83/ 5/29 | 28.55    | 0.00    | 2.29  | 0.00 | 0.16    | 30.84  | 31.01  | 3790.    | 1285. |          |
| Daylight | 83/ 5/30 | 20.21    | 0.00    | 1.62  | 0.00 | 0.12    | 21.83  | 21.96  | 4811.    | 1336. |          |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                   |        |      |       |      |      |        |        |      |      |
|-------------------|--------|------|-------|------|------|--------|--------|------|------|
| Daylight 83/ 5/31 | 0.41   | 0.00 | 0.03  | 0.00 | 0.00 | 0.44   | 0.45   | 714. | 346. |
| Month subtotal:   | 2807.3 | 0.0  | 225.3 | 0.0  | 20.5 | 3032.7 | 3053.3 |      |      |

| Comment         | YR/MO/DY | Flow    |      |      |      |         | Total Salmon | Salmon + Steelhd | Ampl  | RampRate |
|-----------------|----------|---------|------|------|------|---------|--------------|------------------|-------|----------|
|                 |          | Chinook | Pink | Chum | Coho | Steelhd |              |                  |       |          |
| No event        | 83/ 7/15 |         |      |      |      |         |              |                  |       |          |
|                 | 83/ 7/16 | 0.00    | 0.00 | 0.00 | 0.78 | 96.49   | 0.78         | 97.27            | 6130. | 1163.    |
| No event        | 83/ 7/17 |         |      |      |      |         |              |                  |       |          |
|                 | 83/ 7/18 | 0.00    | 0.00 | 0.00 | 0.18 | 23.00   | 0.18         | 23.18            | 1966. | 585.     |
| No event        | 83/ 7/19 |         |      |      |      |         |              |                  |       |          |
|                 | 83/ 7/20 | 0.00    | 0.00 | 0.00 | 0.14 | 17.58   | 0.14         | 17.72            | 1247. | 115.     |
|                 | 83/ 7/21 | 0.00    | 0.00 | 0.00 | 0.00 | 0.11    | 0.00         | 0.11             | 504.  | 84.      |
|                 | 83/ 7/22 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00             | 336.  | 168.     |
|                 | 83/ 7/23 | 0.00    | 0.00 | 0.00 | 0.02 | 2.56    | 0.02         | 2.38             | 567.  | 105.     |
| No event        | 83/ 7/24 |         |      |      |      |         |              |                  |       |          |
|                 | 83/ 7/25 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00             | 345.  | 138.     |
|                 | 83/ 7/26 | 0.00    | 0.00 | 0.00 | 0.15 | 18.73   | 0.15         | 18.88            | 898.  | 189.     |
|                 | 83/ 7/27 | 0.00    | 0.00 | 0.00 | 2.64 | 327.64  | 2.64         | 330.28           | 3887. | 1052.    |
|                 | 83/ 7/28 | 0.00    | 0.00 | 0.00 | 2.59 | 320.87  | 2.59         | 323.46           | 3664. | 1090.    |
|                 | 83/ 7/29 | 0.00    | 0.00 | 0.00 | 3.08 | 381.73  | 3.08         | 384.81           | 3911. | 821.     |
|                 | 83/ 7/30 | 0.00    | 0.00 | 0.00 | 1.53 | 189.30  | 1.53         | 190.82           | 2581. | 1217.    |
|                 | 83/ 7/31 | 0.00    | 0.00 | 0.00 | 0.87 | 108.18  | 0.87         | 109.05           | 2047. | 995.     |
| Month subtotal: |          | 0.0     | 0.0  | 0.0  | 12.0 | 1486.0  | 12.0         | 1498.0           |       |          |

| Comment  | YR/MO/DY | Flow    |      |      |      |         | Total Salmon | Salmon + Steelhd | Ampl  | RampRate |
|----------|----------|---------|------|------|------|---------|--------------|------------------|-------|----------|
|          |          | Chinook | Pink | Chum | Coho | Steelhd |              |                  |       |          |
|          | 83/ 8/ 1 | 0.00    | 0.00 | 0.00 | 2.39 | 296.45  | 2.39         | 298.84           | 3034. | 929.     |
| No event | 83/ 8/ 2 |         |      |      |      |         |              |                  |       |          |
| No event | 83/ 8/ 3 |         |      |      |      |         |              |                  |       |          |
|          | 83/ 8/ 4 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00             | 333.  | 166.     |
|          | 83/ 8/ 5 | 0.00    | 0.00 | 0.00 | 0.86 | 106.98  | 0.86         | 107.85           | 2006. | 468.     |
|          | 83/ 8/ 6 | 0.00    | 0.00 | 0.00 | 0.56 | 68.96   | 0.56         | 69.52            | 1477. | 468.     |
|          | 83/ 8/ 7 | 0.00    | 0.00 | 0.00 | 0.10 | 12.28   | 0.10         | 12.38            | 674.  | 216.     |
|          | 83/ 8/ 8 | 0.00    | 0.00 | 0.00 | 1.74 | 216.28  | 1.74         | 218.02           | 2599. | 770.     |
|          | 83/ 8/ 9 | 0.00    | 0.00 | 0.00 | 2.37 | 294.23  | 2.37         | 296.61           | 3022. | 892.     |
|          | 83/ 8/10 | 0.00    | 0.00 | 0.00 | 2.65 | 329.07  | 2.65         | 331.72           | 3211. | 882.     |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |      |      |      |      |        |      |        |       |       |
|-----------------|----------|------|------|------|------|--------|------|--------|-------|-------|
|                 | 83/ 8/11 | 0.00 | 0.00 | 0.00 | 0.18 | 22.45  | 0.18 | 22.63  | 818.  | 162.  |
|                 | 83/ 8/12 | 0.00 | 0.00 | 0.00 | 0.60 | 74.75  | 0.60 | 75.35  | 1559. | 176.  |
| No event        | 83/ 8/13 |      |      |      |      |        |      |        |       |       |
|                 | 83/ 8/14 | 0.00 | 0.00 | 0.00 | 2.00 | 248.16 | 2.00 | 250.16 | 2772. | 981.  |
|                 | 83/ 8/15 | 0.00 | 0.00 | 0.00 | 4.23 | 524.77 | 4.23 | 529.00 | 4272. | 811.  |
|                 | 83/ 8/16 | 0.00 | 0.00 | 0.00 | 2.82 | 349.15 | 2.82 | 351.97 | 3320. | 1415. |
|                 | 83/ 8/17 | 0.00 | 0.00 | 0.00 | 2.97 | 368.32 | 2.97 | 371.29 | 3424. | 715.  |
|                 | 83/ 8/18 | 0.00 | 0.00 | 0.00 | 3.10 | 384.35 | 3.10 | 387.45 | 3511. | 1280. |
|                 | 83/ 8/19 | 0.00 | 0.00 | 0.00 | 0.68 | 84.70  | 0.68 | 85.39  | 1700. | 506.  |
|                 | 83/ 8/20 | 0.00 | 0.00 | 0.00 | 0.97 | 120.99 | 0.97 | 121.97 | 2082. | 951.  |
|                 | 83/ 8/21 | 0.00 | 0.00 | 0.00 | 0.48 | 59.29  | 0.48 | 59.77  | 1340. | 280.  |
|                 | 83/ 8/22 | 0.00 | 0.00 | 0.00 | 0.48 | 59.93  | 0.48 | 60.41  | 1349. | 614.  |
|                 | 83/ 8/23 | 0.00 | 0.00 | 0.00 | 2.96 | 366.66 | 2.96 | 369.62 | 3415. | 694.  |
|                 | 83/ 8/24 | 0.00 | 0.00 | 0.00 | 4.03 | 499.81 | 4.03 | 503.84 | 4137. | 1150. |
|                 | 83/ 8/25 | 0.00 | 0.00 | 0.00 | 2.37 | 294.23 | 2.37 | 296.61 | 3022. | 960.  |
|                 | 83/ 8/26 | 0.00 | 0.00 | 0.00 | 2.06 | 254.79 | 2.06 | 256.85 | 2808. | 577.  |
|                 | 83/ 8/27 | 0.00 | 0.00 | 0.00 | 0.38 | 47.22  | 0.38 | 47.60  | 1169. | 566.  |
| No event        | 83/ 8/28 |      |      |      |      |        |      |        |       |       |
|                 | 83/ 8/29 | 0.00 | 0.00 | 0.00 | 2.11 | 261.80 | 2.11 | 263.91 | 2846. | 774.  |
|                 | 83/ 8/30 | 0.00 | 0.00 | 0.00 | 2.86 | 354.13 | 2.86 | 356.99 | 3347. | 1391. |
|                 | 83/ 8/31 | 0.00 | 0.00 | 0.00 | 2.60 | 322.06 | 2.60 | 324.66 | 3173. | 694.  |
| Month subtotal: |          | 0.0  | 0.0  | 0.0  | 48.5 | 6021.8 | 48.5 | 6070.4 |       |       |

| Comment | Flow<br>YR/MO/DY | Chinook | Pink | Chum | Coho | Steelhd | Total<br>Salmon | Total<br>Steelhd | Ampl  | RampRate |
|---------|------------------|---------|------|------|------|---------|-----------------|------------------|-------|----------|
|         | 83/ 9/ 1         | 0.00    | 0.00 | 0.00 | 2.81 | 347.88  | 2.81            | 350.69           | 3376. | 1325.    |
|         | 83/ 9/ 2         | 0.00    | 0.00 | 0.00 | 4.12 | 511.32  | 4.12            | 515.45           | 4390. | 1357.    |
|         | 83/ 9/ 3         | 0.00    | 0.00 | 0.00 | 2.42 | 299.89  | 2.42            | 302.30           | 3227. | 1156.    |
|         | 83/ 9/ 4         | 0.00    | 0.00 | 0.00 | 1.57 | 194.95  | 1.57            | 196.52           | 2640. | 970.     |
|         | 83/ 9/ 5         | 0.00    | 0.00 | 0.00 | 2.03 | 252.19  | 2.03            | 254.22           | 3057. | 895.     |
|         | 83/ 9/ 6         | 0.00    | 0.00 | 0.00 | 2.03 | 251.55  | 2.03            | 253.58           | 3118. | 1158.    |
|         | 83/ 9/ 7         | 0.00    | 0.00 | 0.00 | 1.89 | 235.07  | 1.89            | 236.97           | 3073. | 757.     |
|         | 83/ 9/ 8         | 0.00    | 0.00 | 0.00 | 3.30 | 409.92  | 3.30            | 413.23           | 4422. | 1451.    |
|         | 83/ 9/ 9         | 0.00    | 0.00 | 0.00 | 2.11 | 261.39  | 2.11            | 263.50           | 3424. | 1504.    |
|         | 83/ 9/10         | 0.00    | 0.00 | 0.00 | 2.97 | 367.89  | 2.97            | 370.86           | 4371. | 1291.    |
|         | 83/ 9/11         | 0.00    | 0.00 | 0.00 | 1.19 | 147.38  | 1.19            | 148.57           | 2665. | 693.     |
|         | 83/ 9/12         | 0.00    | 0.00 | 0.00 | 0.33 | 41.01   | 0.33            | 41.34            | 1448. | 554.     |
|         | 83/ 9/13         | 0.00    | 0.00 | 0.00 | 1.50 | 185.93  | 1.50            | 187.43           | 3163. | 1114.    |
|         | 83/ 9/14         | 0.00    | 0.00 | 0.00 | 2.50 | 309.98  | 2.50            | 312.48           | 4491. | 1652.    |
|         | 83/ 9/15         | 0.00    | 0.00 | 0.00 | 2.35 | 290.89  | 2.35            | 293.23           | 4482. | 1365.    |
|         | 83/ 9/16         | 0.00    | 0.00 | 0.00 | 1.56 | 193.29  | 1.56            | 194.85           | 3593. | 820.     |
|         | 83/ 9/17         | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00            | 0.00             | 221.  | 110.     |
|         | 83/ 9/18         | 0.00    | 0.00 | 0.00 | 0.72 | 89.23   | 0.72            | 89.95            | 2580. | 1157.    |
|         | 83/ 9/19         | 0.00    | 0.00 | 0.00 | 0.15 | 18.25   | 0.15            | 18.40            | 1168. | 575.     |
|         | 83/ 9/20         | 0.00    | 0.00 | 0.00 | 0.33 | 40.71   | 0.33            | 41.04            | 2048. | 976.     |
|         | 83/ 9/21         | 0.00    | 0.00 | 0.00 | 0.24 | 29.14   | 0.24            | 29.38            | 1780. | 732.     |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |         |      |       |      |         |         |         |       |      |
|-----------------|---------|------|-------|------|---------|---------|---------|-------|------|
| 83/ 9/22        | 0.00    | 0.00 | 0.00  | 0.17 | 20.33   | 0.17    | 20.49   | 1492. | 606. |
| 83/ 9/23        | 0.00    | 0.00 | 0.00  | 0.06 | 7.83    | 0.06    | 7.90    | 930.  | 405. |
| 83/ 9/24        | 0.00    | 0.00 | 0.00  | 0.14 | 17.72   | 0.14    | 17.87   | 1612. | 666. |
| 83/ 9/25        | 0.00    | 0.00 | 0.00  | 0.14 | 16.79   | 0.14    | 16.93   | 1729. | 463. |
| 83/ 9/26        | 0.00    | 0.00 | 0.00  | ^13  | 16.60   | 0.13    | 16.73   | 1958. | 830. |
| 83/ 9/27        | 0.00    | 0.00 | 0.00  | 0.12 | 15.02   | 0.12    | 15.14   | 2057. | 966. |
| 83/ 9/28        | 0.00    | 0.00 | 0.00  | 0.08 | 10.11   | 0.08    | 10.19   | 1980. | 850. |
| 83/ 9/29        | 0.00    | 0.00 | 0.00  | 0.13 | 16.08   | 0.13    | 16.21   | 2778. | 772. |
| -----           |         |      |       |      |         |         |         |       |      |
| Month subtotal: | 0.0     | 0.0  | 0.0   | 37.1 | 4598.3  | 37.1    | 4635.5  |       |      |
| =====           |         |      |       |      |         |         |         |       |      |
| Year total:     | 11621.1 | 0.0  | 932.8 | 97.6 | 12216.0 | 12651.5 | 24867.6 |       |      |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

SUMMARY OF DAY/NIGHT EVENTS FOR SPRING SALMON ONLY  
FOR THE FOLLOWING FLOW REGIME YEARS:

YEAR

-----  
83

Daylight events

-----  
Number of events  
75  
Total chinook stranded  
10531.79  
Total pinks stranded  
0.  
Total chums stranded  
845.35  
Total cohos stranded  
0.  
Total salmon stranded (all species)  
11377.15

Nighttime events

-----  
Number of events  
35  
Total chinook stranded  
1089.29  
Total pinks stranded  
0.  
Total chums stranded  
87.42  
Total cohos stranded  
0.  
Total salmon stranded (all species)  
1176.73

Potholes Stranding and Trapping - Daily Detail with Subtotals  
 =====  
 (Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Disconnects | Chinook |      |      |      |         | Total Salmon | Salmon + Steelhead |        | Beginflow | Endflow |
|------------------|--------------|---------|------|------|------|---------|--------------|--------------------|--------|-----------|---------|
|                  |              | Pink    | Chum | Coho | Sthd | Steelhd |              |                    |        |           |         |
| 83/ 2/ 1         |              |         |      |      |      |         |              |                    |        |           |         |
| No event         |              |         |      |      |      |         |              |                    |        |           |         |
| 83/ 2/ 2         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 8350.  | 7070.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/ 3         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 8390.  | 6300.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/ 4         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 7790.  | 6230.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/ 5         |              |         |      |      |      |         |              |                    |        |           |         |
| No event         |              |         |      |      |      |         |              |                    |        |           |         |
| 83/ 2/ 6         |              |         |      |      |      |         |              |                    |        |           |         |
| No event         |              |         |      |      |      |         |              |                    |        |           |         |
| 83/ 2/ 7         |              |         |      |      |      |         |              |                    |        |           |         |
| No event         |              |         |      |      |      |         |              |                    |        |           |         |
| 83/ 2/ 8         |              |         |      |      |      |         |              |                    |        |           |         |
| No event         |              |         |      |      |      |         |              |                    |        |           |         |
| 83/ 2/ 9         |              |         |      |      |      |         |              |                    |        |           |         |
| No event         |              |         |      |      |      |         |              |                    |        |           |         |
| 83/ 2/10         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 8070.  | 7470.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/11         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 8070.  | 7990.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/12         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 10200. | 7140.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/13         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 9510.  | 8750.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/14         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 9350.  | 8670.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/15         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 8550.  | 7470.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/16         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 8910.  | 8110.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/17         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 10470. | 10160.    |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/18         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 9750.  | 8030.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/19         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 9390.  | 8230.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/20         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 8590.  | 6685.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/21         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 9230.  | 7140.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/22         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 9470.  | 6055.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/23         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 10430. | 8790.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |
| 83/ 2/24         | 0            | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               | 10520. | 6755.     |         |
|                  |              | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00         | 0.00               |        |           |         |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

|                  |    |        |       |      |       |       |        |        |       |       |
|------------------|----|--------|-------|------|-------|-------|--------|--------|-------|-------|
| 83/ 2/25         | 77 | 3.36   | 0.02  | 0.00 | 1.E-2 | 0.04  | 3.39   | 3.43   | 9710. | 5060. |
|                  |    | 363.26 | 2.60  | 0.00 | 1.11  | 4.46  | 366.97 | 371.70 |       |       |
| 83/ 2/26         | 0  | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   | 9190. | 8110. |
|                  |    | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   |       |       |
| 83/ 2/27         | 58 | 0.83   | 6.E-3 | 0.00 | 3.E-3 | 1.E-2 | 0.83   | 0.85   | 7950. | 5510. |
|                  |    | 136.21 | 0.98  | 0.00 | 0.42  | 1.67  | 137.60 | 139.27 |       |       |
| 83/ 2/28         | 0  | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   | 9930. | 6545. |
|                  |    | 0.00   | 0.00  | 0.00 | 0.00  | 0.00  | 0.00   | 0.00   |       |       |
| <hr/>            |    |        |       |      |       |       |        |        |       |       |
| Month subtotals: |    | 4.18   | 0.03  | 0.00 | 0.01  | 0.05  | 4.22   | 4.28   |       |       |
|                  |    | 499.46 | 3.57  | 0.00 | 1.53  | 6.13  | 504.57 | 510.70 |       |       |

| Flow<br>YR/MO/DY | #Discard | Chinook | Pink  | Chum | Coho  | Sthd  | Total<br>Salmon | Salmon +<br>Steelhd | Beqflow | Endflow |
|------------------|----------|---------|-------|------|-------|-------|-----------------|---------------------|---------|---------|
| 83/ 3/ 1         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                | 7310.   | 6965.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                |         |         |
| 83/ 3/ 2         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                | 8790.   | 5810.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                |         |         |
| 83/ 3/ 3         | 54       | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 8790.   | 5740.   |
|                  |          | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62           | 84.64               |         |         |
| 83/ 3/ 4         | 77       | 3.89    | 0.03  | 0.00 | 0.01  | 0.05  | 3.93            | 3.98                | 8710.   | 5060.   |
|                  |          | 421.38  | 3.02  | 0.00 | 1.29  | 5.17  | 425.69          | 430.86              |         |         |
| 83/ 3/ 5         | 123      | 35.66   | 0.25  | 0.00 | 0.11  | 0.44  | 36.03           | 36.47               | 8550.   | 4670.   |
|                  |          | 672.41  | 4.81  | 0.00 | 2.06  | 8.25  | 679.28          | 687.53              |         |         |
| 83/ 3/ 6         | 123      | 35.66   | 0.25  | 0.00 | 0.11  | 0.44  | 36.03           | 36.47               | 8550.   | 4730.   |
|                  |          | 672.41  | 4.81  | 0.00 | 2.06  | 8.25  | 679.28          | 687.53              |         |         |
| 83/ 3/ 7         | 56       | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 8750.   | 5540.   |
|                  |          | 146.29  | 1.05  | 0.00 | 0.45  | 1.79  | 147.79          | 149.59              |         |         |
| 83/ 3/ 8         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                | 10020.  | 7280.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                |         |         |
| 83/ 3/ 9         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                | 8750.   | 6825.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                |         |         |
| 83/ 3/10         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                | 10700.  | 6930.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                |         |         |
| 83/ 3/11         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                | 8750.   | 6370.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                |         |         |
| 83/ 3/12         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                | 8750.   | 8670.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                |         |         |
| 83/ 3/13         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                | 9030.   | 6300.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                |         |         |
| 83/ 3/14         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                | 8950.   | 6335.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                |         |         |
| 83/ 3/15         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                | 8670.   | 6020.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                |         |         |
| 83/ 3/16         | 0        | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                | 8590.   | 6825.   |
|                  |          | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00            | 0.00                |         |         |
| 83/ 3/17         | 126      | 35.66   | 0.25  | 0.00 | 0.11  | 0.44  | 36.03           | 36.47               | 8470.   | 4610.   |
|                  |          | 682.67  | 4.89  | 0.00 | 2.09  | 8.38  | 689.66          | 698.03              |         |         |
| 83/ 3/18         | 199      | 55.02   | 0.39  | 0.00 | 0.17  | 0.68  | 55.59           | 56.26               | 8270.   | 3810.   |
|                  |          | 1023.96 | 7.33  | 0.00 | 3.14  | 12.56 | 1034.43         | 1047.00             |         |         |
| 83/ 3/19         | 54       | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 7070.   | 5740.   |
|                  |          | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62           | 84.64               |         |         |

First line shows STRANDED fish  
second line shows TRAPPED fish

|                         |     |               |             |             |             |             |               |               |        |       |
|-------------------------|-----|---------------|-------------|-------------|-------------|-------------|---------------|---------------|--------|-------|
| 83/ 3/20                | 122 | 35.66         | 0.25        | 0.00        | 0.11        | 0.44        | 36.03         | 36.47         | 6965.  | 4760. |
|                         |     | 672.41        | 4.81        | 0.00        | 2.06        | 8.25        | 679.28        | 687.53        |        |       |
| 83/ 3/21                | 0   | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          | 7910.  | 6720. |
|                         |     | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          |        |       |
| 83/ 3/22                | 174 | 43.09         | 0.31        | 0.00        | 0.13        | 0.53        | 43.53         | 44.06         | 7990.  | 4204. |
|                         |     | 762.67        | 5.46        | 0.00        | 2.34        | 9.36        | 770.47        | 779.82        |        |       |
| 83/ 3/23                | 0   | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          | 8070.  | 6475. |
|                         |     | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          |        |       |
| 83/ 3/24                | 215 | 70.51         | 0.50        | 0.00        | 0.22        | 0.87        | 71.23         | 72.09         | 6545.  | 3562. |
|                         |     | 1195.44       | 8.56        | 0.00        | 3.67        | 14.67       | 1207.66       | 1222.33       |        |       |
| 83/ 3/25                | 54  | 0.89          | 6.E-3       | 0.00        | 3.E-3       | 0.01        | 0.90          | 0.91          | 6930.  | 5670. |
|                         |     | 82.77         | 0.59        | 0.00        | 0.25        | 1.02        | 83.62         | 84.64         |        |       |
| 83/ 3/26                | 225 | 74.84         | 0.54        | 0.00        | 0.23        | 0.92        | 75.61         | 76.52         | 6720.  | 3466. |
|                         |     | 1343.09       | 9.61        | 0.00        | 4.12        | 16.48       | 1356.83       | 1373.31       |        |       |
| 83/ 3/27                | 0   | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          | 8550.  | 8550. |
|                         |     | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          |        |       |
| 83/ 3/28                | 0   | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          | 14650. | 9230. |
|                         |     | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          |        |       |
| 83/ 3/29                | 0   | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          | 9550.  | 9150. |
|                         |     | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          |        |       |
| 83/ 3/30                | 0   | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          | 9930.  | 9550. |
|                         |     | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          |        |       |
| 83/ 3/31                | 0   | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          | 9310.  | 9230. |
|                         |     | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00          | 0.00          |        |       |
| <b>Month subtotals:</b> |     | <b>393.56</b> | <b>2.82</b> | <b>0.00</b> | <b>1.21</b> | <b>4.83</b> | <b>397.58</b> | <b>402.41</b> |        |       |
|                         |     | 7841.04       | 56.12       | 0.00        | 24.05       | 96.21       | 7921.22       | 8017.43       |        |       |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

|                  |     |          |       |      |       |        |          |          |       |       |
|------------------|-----|----------|-------|------|-------|--------|----------|----------|-------|-------|
| 83/ 4/12         | 0   | 0.00     | 0.00  | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     | 8270. | 6335. |
|                  |     | 0.00     | 0.00  | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     |       |       |
| 83/ 4/13         | 0   | 0.00     | 0.00  | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     | 8190. | 6405. |
|                  |     | 0.00     | 0.00  | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     |       |       |
| 83/ 4/14         | 0   | 0.00     | 0.00  | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     | 8270. | 6020. |
|                  |     | 0.00     | 0.00  | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     |       |       |
| 83/ 4/15         | 0   | 0.00     | 0.00  | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     | 8350. | 7280. |
|                  |     | 0.00     | 0.00  | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     |       |       |
| 83/ 4/16         | 211 | 64.64    | 0.46  | 0.00 | 0.20  | 0.79   | 65.30    | 66.09    | 7280. | 3635. |
|                  |     | 1117.12  | 8.00  | 0.00 | 3.43  | 13.71  | 1128.54  | 1142.25  |       |       |
| 83/ 4/17         | 203 | 64.31    | 0.46  | 0.00 | 0.20  | 0.79   | 64.97    | 65.76    | 5950. | 3760. |
|                  |     | 1032.28  | 7.39  | 0.00 | 3.17  | 12.67  | 1042.83  | 1055.50  |       |       |
| 83/ 4/18         | 58  | 0.89     | 6.E-3 | 0.00 | 3.E-3 | 0.01   | 0.90     | 0.91     | 6650. | 5330. |
|                  |     | 146.29   | 1.05  | 0.00 | 0.45  | 1.79   | 147.79   | 149.59   |       |       |
| 83/ 4/19         | 4   | 0.00     | 0.00  | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     | 5600. | 5360. |
|                  |     | 63.52    | 0.46  | 0.00 | 0.19  | 0.78   | 64.17    | 64.95    |       |       |
| 83/ 4/20         | 54  | 0.89     | 6.E-3 | 0.00 | 3.E-3 | 0.01   | 0.90     | 0.91     | 7710. | 5635. |
|                  |     | 82.77    | 0.59  | 0.00 | 0.25  | 1.02   | 83.62    | 84.64    |       |       |
| 83/ 4/21         | 123 | 35.66    | 0.25  | 0.00 | 0.11  | 0.44   | 36.03    | 36.47    | 8670. | 4700. |
|                  |     | 672.41   | 4.81  | 0.00 | 2.06  | 8.25   | 679.28   | 687.53   |       |       |
| 83/ 4/22         | 58  | 0.89     | 6.E-3 | 0.00 | 3.E-3 | 0.01   | 0.90     | 0.91     | 8590. | 5450. |
|                  |     | 146.29   | 1.05  | 0.00 | 0.45  | 1.79   | 147.79   | 149.59   |       |       |
| 83/ 4/23         | 134 | 44.60    | 0.32  | 0.00 | 0.14  | 0.55   | 45.06    | 45.60    | 5540. | 4042. |
|                  |     | 788.96   | 5.65  | 0.00 | 2.42  | 9.68   | 797.03   | 806.71   |       |       |
| 83/ 4/24         | 162 | 42.11    | 0.30  | 0.00 | 0.13  | 0.52   | 42.54    | 43.06    | 5845. | 4316. |
|                  |     | 753.03   | 5.39  | 0.00 | 2.31  | 9.24   | 760.73   | 769.97   |       |       |
| 83/ 4/25         | 0   | 0.00     | 0.00  | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     | 8710. | 6440. |
|                  |     | 0.00     | 0.00  | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     |       |       |
| 83/ 4/26         | 211 | 64.64    | 0.46  | 0.00 | 0.20  | 0.79   | 65.30    | 66.09    | 7350. | 3635. |
|                  |     | 1117.12  | 8.00  | 0.00 | 3.43  | 13.71  | 1128.54  | 1142.25  |       |       |
| 83/ 4/27         | 121 | 34.52    | 0.25  | 0.00 | 0.11  | 0.42   | 34.88    | 35.30    | 7000. | 4790. |
|                  |     | 672.24   | 4.81  | 0.00 | 2.06  | 8.25   | 679.12   | 687.36   |       |       |
| 83/ 4/28         | 77  | 3.89     | 0.03  | 0.00 | 0.01  | 0.05   | 3.93     | 3.98     | 6825. | 5030. |
|                  |     | 421.38   | 3.02  | 0.00 | 1.29  | 5.17   | 425.69   | 430.86   |       |       |
| 83/ 4/29         | 199 | 55.02    | 0.39  | 0.00 | 0.17  | 0.68   | 55.59    | 56.26    | 6265. | 3810. |
|                  |     | 1023.96  | 7.33  | 0.00 | 3.14  | 12.56  | 1034.43  | 1047.00  |       |       |
| 83/ 4/30         | 117 | 51.13    | 0.37  | 0.00 | 0.16  | 0.63   | 51.65    | 52.28    | 4970. | 3912. |
|                  |     | 584.64   | 4.18  | 0.00 | 1.79  | 7.17   | 590.62   | 597.79   |       |       |
| <hr/>            |     |          |       |      |       |        |          |          |       |       |
| Month subtotals: |     | 561.91   | 4.02  | 0.00 | 1.72  | 6.89   | 567.65   | 574.54   |       |       |
|                  |     | 10355.94 | 74.12 | 0.00 | 31.77 | 127.07 | 10461.83 | 10588.90 |       |       |

| Flow     | YR/MO/DY | #Disconnect | Chinook | Pink  | Chum | Coho  | Sthd  | Total Salmon | Steelhd | Begflow | Endflow |
|----------|----------|-------------|---------|-------|------|-------|-------|--------------|---------|---------|---------|
|          |          |             |         |       |      |       |       |              |         |         |         |
| 83/ 5/ 1 |          | 124         | 41.26   | 0.29  | 0.00 | 0.13  | 0.51  | 41.69        | 42.19   | 5390.   | 4148.   |
|          |          |             | 703.58  | 5.04  | 0.00 | 2.16  | 8.63  | 710.77       | 719.41  |         |         |
| 83/ 5/ 2 |          | 56          | 0.83    | 6.E-3 | 0.00 | 3.E-3 | 1.E-2 | 0.84         | 0.85    | 6755.   | 5540.   |
|          |          |             | 137.15  | 0.98  | 0.00 | 0.42  | 1.68  | 138.55       | 140.24  |         |         |
| 83/ 5/ 3 |          | 225         | 67.82   | 0.49  | 0.00 | 0.21  | 0.83  | 68.52        | 69.35   | 7140.   | 3394.   |
|          |          |             | 1217.18 | 8.71  | 0.00 | 3.73  | 14.94 | 1229.62      | 1244.56 |         |         |
| 83/ 5/ 4 |          | 211         | 56.56   | 0.41  | 0.00 | 0.17  | 0.69  | 57.14        | 57.83   | 5740.   | 3586.   |
|          |          |             | 977.48  | 7.00  | 0.00 | 3.00  | 11.99 | 987.47       | 999.47  |         |         |

First line shows STRANDED fish  
Second line shows TRAPPED fish

First line shows STRANDED fish  
Second line shows TRAPPED fish

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|                  |          |       |      |       |        |          |          |
|------------------|----------|-------|------|-------|--------|----------|----------|
| Month subtotals: | 517.55   | 5.70  | 0.00 | 1.59  | 6.35   | 522.62   | 528.96   |
|                  | 10346.55 | 74.06 | 0.00 | 31.74 | 126.95 | 10452.32 | 10579.27 |

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|              |         |       |     |      |       |         |         |
|--------------|---------|-------|-----|------|-------|---------|---------|
| Year totals: | 1477.0  | 10.6  | 0.0 | 4.5  | 18.1  | 1492.1  | 1510.2  |
|              | 29043.0 | 207.9 | 0.0 | 89.1 | 356.4 | 29339.9 | 29696.3 |

PARAMETERS FOR THIS RUN:

-----  
04/18/87  
19:01:31

Slope categories:

0 to 5%  
> 5% to 10%  
> 10%

Substrate categories:

Less than 3 inches  
Greater than 3 inches

Location codes:

Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 83   | 1      | 201     | 531     |
| 83   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

-----  
Rank by stranding using the database column --  
TOTSTR

Daily detail report

Tables will be written for gravel bars and/or potholes as selected.

**Gravel Bar Stranding - Daily Detail with Stranding Ranking**

=====

(Results from applying base year stranding data to the indicated flow regime)

| Comment  | Flow<br>YR/MO/DY | Total   |      |       |      |         |        | Salmon + |       | RampRate |
|----------|------------------|---------|------|-------|------|---------|--------|----------|-------|----------|
|          |                  | Chinook | Pink | Chum  | Coho | Steelhd | Salmon | Steelhd  | Aapl  |          |
| Daylight | 83/ 4/ 8         | 393.95  | 0.00 | 31.62 | 0.00 | 1.78    | 425.58 | 427.35   | 3867. | 1429.    |
| Daylight | 83/ 4/22         | 369.36  | 0.00 | 29.65 | 0.00 | 1.67    | 399.01 | 400.67   | 3234. | 1179.    |
| Daylight | 83/ 3/28         | 326.93  | 0.00 | 26.24 | 0.00 | 1.98    | 353.17 | 355.14   | 5003. | 1620.    |
| Daylight | 83/ 4/28         | 324.25  | 0.00 | 26.03 | 0.00 | 1.46    | 350.28 | 351.74   | 2073. | 984.     |
| Daylight | 83/ 4/12         | 311.56  | 0.00 | 25.01 | 0.00 | 1.40    | 336.56 | 337.97   | 1954. | 965.     |
| Daylight | 83/ 3/26         | 297.73  | 0.00 | 23.90 | 0.00 | 1.70    | 321.62 | 323.32   | 3420. | 918.     |
| Daylight | 83/ 4/10         | 293.13  | 0.00 | 23.52 | 0.00 | 1.32    | 316.66 | 317.98   | 1868. | 759.     |
| Daylight | 83/ 4/13         | 276.63  | 0.00 | 22.20 | 0.00 | 1.25    | 298.83 | 300.08   | 1791. | 523.     |
| Daylight | 83/ 3/18         | 240.23  | 0.00 | 19.28 | 0.00 | 1.90    | 259.51 | 261.41   | 4540. | 1106.    |
| Daylight | 83/ 4/21         | 236.48  | 0.00 | 19.98 | 0.00 | 1.79    | 255.46 | 257.25   | 3961. | 586.     |
| Daylight | 83/ 3/22         | 236.37  | 0.00 | 18.97 | 0.00 | 1.79    | 255.34 | 257.13   | 3944. | 1184.    |
| Daylight | 83/ 3/ 5         | 236.35  | 0.00 | 18.97 | 0.00 | 1.79    | 255.33 | 257.12   | 3942. | 1421.    |
| Daylight | 83/ 3/ 6         | 235.72  | 0.00 | 18.92 | 0.00 | 1.77    | 254.64 | 256.41   | 3844. | 1470.    |
| Daylight | 83/ 3/ 9         | 235.34  | 0.00 | 18.89 | 0.00 | 1.76    | 254.24 | 256.00   | 3786. | 1521.    |
| Daylight | 83/ 3/ 4         | 234.23  | 0.00 | 18.80 | 0.00 | 1.74    | 253.03 | 254.77   | 3614. | 1537.    |
| Daylight | 83/ 3/24         | 231.18  | 0.00 | 18.56 | 0.00 | 1.65    | 249.73 | 251.39   | 3143. | 963.     |
| Daylight | 83/ 3/ 2         | 230.18  | 0.00 | 18.47 | 0.00 | 1.62    | 248.65 | 250.27   | 2988. | 1374.    |
| Daylight | 83/ 4/29         | 228.67  | 0.00 | 18.35 | 0.00 | 1.58    | 247.03 | 248.61   | 2756. | 1070.    |
| Daylight | 83/ 3/15         | 228.56  | 0.00 | 18.35 | 0.00 | 1.58    | 246.91 | 248.49   | 2739. | 1275.    |
| Daylight | 83/ 4/17         | 225.58  | 0.00 | 18.11 | 0.00 | 1.50    | 243.68 | 245.18   | 2278. | 1052.    |
| Daylight | 83/ 4/14         | 224.86  | 0.00 | 18.05 | 0.00 | 1.48    | 242.90 | 244.38   | 2167. | 961.     |
| Daylight | 83/ 4/ 1         | 224.23  | 0.00 | 18.00 | 0.00 | 1.46    | 242.22 | 243.69   | 2070. | 1012.    |
| Daylight | 83/ 4/18         | 219.85  | 0.00 | 17.65 | 0.00 | 0.99    | 237.49 | 238.49   | 1526. | 763.     |
| Daylight | 83/ 2/27         | 217.86  | 0.00 | 17.49 | 0.00 | 1.61    | 235.35 | 236.95   | 3578. | 1584.    |
| Daylight | 83/ 2/28         | 217.45  | 0.00 | 17.46 | 0.00 | 1.44    | 234.90 | 236.35   | 2223. | 1080.    |
| Daylight | 83/ 5/ 3         | 214.67  | 0.00 | 17.23 | 0.00 | 1.63    | 231.90 | 233.54   | 4023. | 840.     |
| Daylight | 83/ 2/25         | 206.90  | 0.00 | 16.61 | 0.00 | 1.63    | 223.51 | 225.14   | 4505. | 1766.    |
| Daylight | 83/ 5/ 4         | 198.97  | 0.00 | 15.97 | 0.00 | 1.35    | 214.95 | 216.30   | 2560. | 757.     |
| Daylight | 83/ 5/ 6         | 196.15  | 0.00 | 15.74 | 0.00 | 1.56    | 211.90 | 213.47   | 4724. | 810.     |
| Daylight | 83/ 5/ 5         | 191.06  | 0.00 | 15.34 | 0.00 | 1.28    | 206.40 | 207.68   | 2412. | 394.     |
| Daylight | 83/ 5/ 7         | 178.86  | 0.00 | 14.36 | 0.00 | 1.24    | 193.21 | 194.46   | 2797. | 1066.    |
| Daylight | 83/ 5/13         | 177.94  | 0.00 | 14.28 | 0.00 | 1.02    | 192.22 | 193.24   | 3526. | 1171.    |
| Daylight | 83/ 5/ 9         | 165.97  | 0.00 | 13.32 | 0.00 | 1.18    | 179.30 | 180.47   | 3103. | 789.     |
| Daylight | 83/ 5/ 2         | 166.13  | 0.00 | 13.33 | 0.00 | 0.75    | 179.47 | 180.21   | 1327. | 398.     |
| Daylight | 83/ 5/12         | 148.26  | 0.00 | 11.90 | 0.00 | 1.13    | 160.16 | 161.29   | 4074. | 1295.    |
| Daylight | 83/ 5/14         | 130.68  | 0.00 | 10.48 | 0.00 | 0.95    | 141.17 | 142.12   | 3319. | 1252.    |
| Daylight | 83/ 3/16         | 129.46  | 0.00 | 10.39 | 0.00 | 1.34    | 139.85 | 141.19   | 1891. | 729.     |
| Daylight | 83/ 5/ 1         | 128.77  | 0.00 | 10.34 | 0.00 | 0.83    | 139.10 | 139.94   | 1391. | 695.     |
| Daylight | 83/ 5/15         | 121.06  | 0.00 | 9.72  | 0.00 | 0.83    | 130.78 | 131.61   | 2634. | 812.     |
| Daylight | 83/ 5/16         | 115.99  | 0.00 | 9.31  | 0.00 | 0.84    | 125.30 | 126.14   | 3267. | 1222.    |
| Daylight | 83/ 5/17         | 109.77  | 0.00 | 8.81  | 0.00 | 0.81    | 118.58 | 119.39   | 3605. | 1396.    |
| Daylight | 83/ 4/23         | 103.77  | 0.00 | 8.33  | 0.00 | 1.08    | 112.10 | 113.18   | 1615. | 499.     |
| Daylight | 83/ 4/11         | 101.54  | 0.00 | 8.15  | 0.00 | 1.51    | 109.70 | 111.21   | 2381. | 612.     |
| Daylight | 83/ 2/21         | 101.12  | 0.00 | 8.11  | 0.00 | 1.05    | 109.23 | 110.28   | 2001. | 551.     |
| Daylight | 83/ 2/12         | 94.60   | 0.00 | 7.59  | 0.00 | 0.65    | 102.20 | 102.86   | 2750. | 1011.    |
| Daylight | 83/ 5/19         | 91.93   | 0.00 | 7.38  | 0.00 | 0.62    | 99.31  | 99.93    | 2389. | 548.     |
| Daylight | 83/ 2/23         | 90.27   | 0.00 | 7.25  | 0.00 | 0.94    | 97.52  | 98.46    | 1723. | 495.     |
| Daylight | 83/ 3/21         | 80.60   | 0.00 | 6.47  | 0.00 | 0.84    | 87.06  | 87.90    | 1366. | 262.     |
| Daylight | 83/ 5/24         | 72.89   | 0.00 | 5.85  | 0.00 | 0.41    | 78.74  | 79.15    | 3086. | 1332.    |
| Daylight | 83/ 3/25         | 72.22   | 0.00 | 5.79  | 0.00 | 0.75    | 78.02  | 78.77    | 1276. | 617.     |
| Daylight | 83/ 4/15         | 68.32   | 0.00 | 5.48  | 0.00 | 0.44    | 73.81  | 74.25    | 958.  | 437.     |

|          |          |       |      |      |      |      |       |       |       |       |
|----------|----------|-------|------|------|------|------|-------|-------|-------|-------|
| Daylight | 83/ 5/22 | 66.75 | 0.00 | 5.36 | 0.00 | 0.35 | 72.11 | 72.47 | 1680. | 825.  |
| Daylight | 83/ 4/30 | 60.77 | 0.00 | 4.88 | 0.00 | 0.63 | 65.65 | 66.28 | 1153. | 498.  |
| Daylight | 83/ 4/24 | 55.84 | 0.00 | 4.48 | 0.00 | 0.88 | 60.32 | 61.20 | 1412. | 497.  |
|          | 83/ 4/16 | 51.62 | 0.00 | 4.14 | 0.00 | 1.79 | 55.76 | 57.55 | 3905. | 628.  |
|          | 83/ 3/17 | 51.48 | 0.00 | 4.13 | 0.00 | 1.78 | 55.61 | 57.39 | 3877. | 1029. |
|          | 83/ 4/26 | 50.95 | 0.00 | 4.09 | 0.00 | 1.76 | 55.04 | 56.80 | 3772. | 621.  |
| Daylight | 83/ 5/25 | 51.80 | 0.00 | 4.16 | 0.00 | 0.40 | 55.96 | 56.35 | 4011. | 1732. |
|          | 83/ 3/10 | 50.08 | 0.00 | 4.02 | 0.00 | 1.73 | 54.10 | 55.83 | 3601. | 1444. |
|          | 83/ 3/19 | 49.71 | 0.00 | 3.99 | 0.00 | 1.72 | 53.70 | 55.42 | 3528. | 965.  |
|          | 83/ 3/ 8 | 48.68 | 0.00 | 3.91 | 0.00 | 1.68 | 52.59 | 54.27 | 3325. | 1473. |
|          | 83/ 3/ 7 | 48.42 | 0.00 | 3.89 | 0.00 | 1.67 | 52.30 | 53.98 | 3273. | 1290. |
|          | 83/ 3/11 | 47.96 | 0.00 | 3.85 | 0.00 | 1.66 | 51.91 | 53.47 | 3183. | 1271. |
|          | 83/ 3/ 5 | 47.43 | 0.00 | 3.81 | 0.00 | 1.64 | 51.23 | 52.87 | 3078. | 1386. |
|          | 83/ 4/ 3 | 47.29 | 0.00 | 3.79 | 0.00 | 1.63 | 51.09 | 52.72 | 3051. | 564.  |
| Daylight | 83/ 5/27 | 47.03 | 0.00 | 3.83 | 0.00 | 0.28 | 51.46 | 51.73 | 3807. | 1489. |
|          | 83/ 3/13 | 46.02 | 0.00 | 3.69 | 0.00 | 1.59 | 49.72 | 51.31 | 2801. | 1196. |
|          | 83/ 3/14 | 45.94 | 0.00 | 3.69 | 0.00 | 1.59 | 49.62 | 51.21 | 2784. | 1144. |
|          | 83/ 4/27 | 44.99 | 0.00 | 3.61 | 0.00 | 1.56 | 48.60 | 50.16 | 2598. | 814.  |
|          | 83/ 4/25 | 43.98 | 0.00 | 3.53 | 0.00 | 1.52 | 47.51 | 49.03 | 2398. | 894.  |
|          | 83/ 3/20 | 43.91 | 0.00 | 3.52 | 0.00 | 1.52 | 47.44 | 48.95 | 2385. | 653.  |
|          | 83/ 4/20 | 43.34 | 0.00 | 3.48 | 0.00 | 1.49 | 46.81 | 48.31 | 2271. | 665.  |
|          | 83/ 3/ 1 | 42.73 | 0.00 | 3.43 | 0.00 | 1.48 | 46.16 | 47.64 | 2152. | 1030. |
| Daylight | 83/ 5/26 | 43.64 | 0.00 | 3.50 | 0.00 | 0.32 | 47.14 | 47.46 | 3383. | 1009. |
|          | 83/ 2/24 | 41.56 | 0.00 | 3.33 | 0.00 | 1.43 | 44.89 | 46.33 | 3627. | 1539. |
|          | 83/ 4/ 2 | 40.31 | 0.00 | 3.23 | 0.00 | 1.39 | 43.54 | 44.94 | 1941. | 750.  |
|          | 83/ 2/22 | 38.46 | 0.00 | 3.09 | 0.00 | 1.33 | 41.55 | 42.88 | 3724. | 1338. |
|          | 83/ 3/23 | 32.34 | 0.00 | 2.60 | 0.00 | 1.12 | 34.93 | 36.05 | 1656. | 828.  |
| Daylight | 83/ 2/26 | 31.23 | 0.00 | 2.51 | 0.00 | 0.49 | 33.74 | 34.23 | 1069. | 378.  |
| Daylight | 83/ 3/12 | 30.31 | 0.00 | 2.44 | 0.00 | 0.48 | 32.74 | 33.22 | 995.  | 486.  |
| Daylight | 83/ 5/29 | 28.55 | 0.00 | 2.29 | 0.00 | 0.16 | 30.84 | 31.01 | 3790. | 1285. |
| Daylight | 83/ 5/20 | 25.79 | 0.00 | 2.07 | 0.00 | 0.42 | 27.86 | 28.28 | 1650. | 230.  |
|          | 83/ 2/20 | 25.25 | 0.00 | 2.03 | 0.00 | 0.87 | 27.28 | 28.15 | 1809. | 376.  |
| Daylight | 83/ 2/19 | 24.23 | 0.00 | 1.94 | 0.00 | 0.38 | 26.17 | 26.55 | 1104. | 541.  |
| Daylight | 83/ 5/ 8 | 23.46 | 0.00 | 1.88 | 0.00 | 0.11 | 25.35 | 25.45 | 646.  | 297.  |
| Daylight | 83/ 5/28 | 23.27 | 0.00 | 1.87 | 0.00 | 0.10 | 25.14 | 25.25 | 1369. | 342.  |
|          | 83/ 5/18 | 21.94 | 0.00 | 1.76 | 0.00 | 0.76 | 23.70 | 24.46 | 3613. | 489.  |
| Daylight | 83/ 5/30 | 20.21 | 0.00 | 1.62 | 0.00 | 0.12 | 21.83 | 21.96 | 4811. | 1336. |
| Daylight | 83/ 5/21 | 19.07 | 0.00 | 1.53 | 0.00 | 0.20 | 20.60 | 20.79 | 1096. | 244.  |
|          | 83/ 2/18 | 16.89 | 0.00 | 1.35 | 0.00 | 0.58 | 18.25 | 18.83 | 1473. | 679.  |
|          | 83/ 2/11 | 16.17 | 0.00 | 1.30 | 0.00 | 0.56 | 17.47 | 18.03 | 2133. | 611.  |
| Daylight | 83/ 2/ 4 | 13.73 | 0.00 | 1.10 | 0.00 | 0.14 | 14.83 | 14.97 | 6484. | 3179. |
|          | 83/ 5/10 | 12.92 | 0.00 | 1.04 | 0.00 | 0.45 | 13.96 | 14.41 | 1172. | 518.  |
|          | 83/ 5/23 | 10.83 | 0.00 | 0.87 | 0.00 | 0.37 | 11.70 | 12.08 | 1877. | 700.  |
|          | 83/ 2/15 | 9.14  | 0.00 | 0.73 | 0.00 | 0.32 | 9.88  | 10.19 | 1132. | 283.  |
| Daylight | 83/ 2/14 | 8.17  | 0.00 | 0.66 | 0.00 | 0.03 | 8.83  | 8.86  | 579.  | 289.  |
|          | 83/ 2/16 | 5.25  | 0.00 | 0.42 | 0.00 | 0.18 | 5.67  | 5.85  | 840.  | 420.  |
|          | 83/ 2/ 3 | 4.39  | 0.00 | 0.35 | 0.00 | 0.15 | 4.75  | 4.90  | 2101. | 799.  |
|          | 83/ 2/13 | 3.86  | 0.00 | 0.31 | 0.00 | 0.13 | 4.17  | 4.30  | 808.  | 404.  |
| Daylight | 83/ 2/10 | 2.34  | 0.00 | 0.19 | 0.00 | 0.02 | 2.53  | 2.56  | 573.  | 243.  |
|          | 83/ 3/27 | 2.21  | 0.00 | 0.18 | 0.00 | 0.08 | 2.39  | 2.46  | 579.  | 289.  |
|          | 83/ 5/11 | 1.96  | 0.00 | 0.16 | 0.00 | 0.07 | 2.12  | 2.19  | 607.  | 283.  |
|          | 83/ 2/ 2 | 1.28  | 0.00 | 0.10 | 0.00 | 0.04 | 1.39  | 1.43  | 1165. | 582.  |
| Daylight | 83/ 5/31 | 0.41  | 0.00 | 0.03 | 0.00 | 0.00 | 0.44  | 0.45  | 714.  | 346.  |
| Daylight | 83/ 3/29 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 322.  | 80.   |
|          | 83/ 4/ 4 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 464.  | 135.  |
| Daylight | 83/ 2/17 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 138.  | 57.   |
| Daylight | 83/ 3/30 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 322.  | 80.   |
| Daylight | 83/ 3/31 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 368.  | 184.  |
| Daylight | 83/ 4/19 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 287.  | 136.  |

| Comment | YR/MO/DY | Flow    |      |      |      |         |        | Total Salmon | Salmon + Steelhd | Ampl  | RampRate |
|---------|----------|---------|------|------|------|---------|--------|--------------|------------------|-------|----------|
|         |          | Chinook | Pink | Chum | Coho | Steelhd | Salmon |              |                  |       |          |
|         | 83/ 8/15 | 0.00    | 0.00 | 0.00 | 4.23 | 524.77  | 4.23   | 529.00       | 4272.            | 811.  |          |
|         | 83/ 9/ 2 | 0.00    | 0.00 | 0.00 | 4.12 | 511.32  | 4.12   | 515.45       | 4390.            | 1357. |          |
|         | 83/ 8/24 | 0.00    | 0.00 | 0.00 | 4.03 | 499.81  | 4.03   | 503.84       | 4137.            | 1150. |          |
|         | 83/ 9/ 8 | 0.00    | 0.00 | 0.00 | 3.30 | 409.92  | 3.30   | 413.23       | 4422.            | 1451. |          |
|         | 83/ 8/18 | 0.00    | 0.00 | 0.00 | 3.10 | 384.35  | 3.10   | 387.45       | 3511.            | 1280. |          |
|         | 83/ 7/29 | 0.00    | 0.00 | 0.00 | 3.08 | 381.73  | 3.08   | 384.81       | 3911.            | 821.  |          |
|         | 83/ 8/17 | 0.00    | 0.00 | 0.00 | 2.97 | 368.32  | 2.97   | 371.29       | 3424.            | 715.  |          |
|         | 83/ 9/10 | 0.00    | 0.00 | 0.00 | 2.97 | 367.89  | 2.97   | 370.86       | 4371.            | 1291. |          |
|         | 83/ 8/23 | 0.00    | 0.00 | 0.00 | 2.96 | 366.66  | 2.96   | 369.62       | 3415.            | 694.  |          |
|         | 83/ 8/30 | 0.00    | 0.00 | 0.00 | 2.86 | 354.13  | 2.86   | 356.99       | 3347.            | 1391. |          |
|         | 83/ 8/16 | 0.00    | 0.00 | 0.00 | 2.82 | 349.15  | 2.82   | 351.97       | 3320.            | 1415. |          |
|         | 83/ 9/ 1 | 0.00    | 0.00 | 0.00 | 2.81 | 347.88  | 2.81   | 350.69       | 3376.            | 1325. |          |
|         | 83/ 8/10 | 0.00    | 0.00 | 0.00 | 2.65 | 329.07  | 2.65   | 331.72       | 3211.            | 882.  |          |
|         | 83/ 7/27 | 0.00    | 0.00 | 0.00 | 2.64 | 327.64  | 2.64   | 330.28       | 3887.            | 1052. |          |
|         | 83/ 8/31 | 0.00    | 0.00 | 0.00 | 2.60 | 322.06  | 2.60   | 324.66       | 3173.            | 694.  |          |
|         | 83/ 7/28 | 0.00    | 0.00 | 0.00 | 2.59 | 320.87  | 2.59   | 323.46       | 3664.            | 1090. |          |
|         | 83/ 9/14 | 0.00    | 0.00 | 0.00 | 2.50 | 309.98  | 2.50   | 312.48       | 4491.            | 1652. |          |
|         | 83/ 9/ 3 | 0.00    | 0.00 | 0.00 | 2.42 | 299.89  | 2.42   | 302.30       | 3227.            | 1156. |          |
|         | 83/ 8/ 1 | 0.00    | 0.00 | 0.00 | 2.39 | 296.45  | 2.39   | 298.84       | 3034.            | 929.  |          |
|         | 83/ 8/25 | 0.00    | 0.00 | 0.00 | 2.37 | 294.23  | 2.37   | 296.61       | 3022.            | 960.  |          |
|         | 83/ 8/ 9 | 0.00    | 0.00 | 0.00 | 2.37 | 294.23  | 2.37   | 296.61       | 3022.            | 892.  |          |
|         | 83/ 9/15 | 0.00    | 0.00 | 0.00 | 2.35 | 290.89  | 2.35   | 293.23       | 4482.            | 1365. |          |
|         | 83/ 8/29 | 0.00    | 0.00 | 0.00 | 2.11 | 261.80  | 2.11   | 263.91       | 2846.            | 774.  |          |
|         | 83/ 9/ 9 | 0.00    | 0.00 | 0.00 | 2.11 | 261.39  | 2.11   | 263.50       | 3424.            | 1504. |          |
|         | 83/ 8/26 | 0.00    | 0.00 | 0.00 | 2.06 | 254.79  | 2.06   | 256.85       | 2808.            | 577.  |          |
|         | 83/ 9/ 5 | 0.00    | 0.00 | 0.00 | 2.03 | 252.19  | 2.03   | 254.22       | 3057.            | 895.  |          |
|         | 83/ 9/ 6 | 0.00    | 0.00 | 0.00 | 2.03 | 251.55  | 2.03   | 253.58       | 3118.            | 1158. |          |
|         | 83/ 8/14 | 0.00    | 0.00 | 0.00 | 2.00 | 248.16  | 2.00   | 250.16       | 2772.            | 981.  |          |
|         | 83/ 9/ 7 | 0.00    | 0.00 | 0.00 | 1.89 | 235.07  | 1.89   | 236.97       | 3073.            | 757.  |          |
|         | 83/ 8/ 8 | 0.00    | 0.00 | 0.00 | 1.74 | 216.28  | 1.74   | 218.02       | 2599.            | 770.  |          |
|         | 83/ 9/ 4 | 0.00    | 0.00 | 0.00 | 1.57 | 194.95  | 1.57   | 196.52       | 2640.            | 970.  |          |
|         | 83/ 9/16 | 0.00    | 0.00 | 0.00 | 1.56 | 193.29  | 1.56   | 194.85       | 3593.            | 820.  |          |
|         | 83/ 7/30 | 0.00    | 0.00 | 0.00 | 1.53 | 189.30  | 1.53   | 190.82       | 2581.            | 1217. |          |
|         | 83/ 9/13 | 0.00    | 0.00 | 0.00 | 1.50 | 185.93  | 1.50   | 187.43       | 3163.            | 1114. |          |
|         | 83/ 9/11 | 0.00    | 0.00 | 0.00 | 1.19 | 147.38  | 1.19   | 148.57       | 2665.            | 693.  |          |
|         | 83/ 8/20 | 0.00    | 0.00 | 0.00 | 0.97 | 120.99  | 0.97   | 121.97       | 2082.            | 951.  |          |
|         | 83/ 7/31 | 0.00    | 0.00 | 0.00 | 0.87 | 108.18  | 0.87   | 109.05       | 2047.            | 995.  |          |
|         | 83/ 8/ 5 | 0.00    | 0.00 | 0.00 | 0.86 | 106.98  | 0.86   | 107.85       | 2006.            | 468.  |          |
|         | 83/ 7/16 | 0.00    | 0.00 | 0.00 | 0.78 | 96.49   | 0.78   | 97.27        | 6130.            | 1163. |          |
|         | 83/ 9/18 | 0.00    | 0.00 | 0.00 | 0.72 | 89.23   | 0.72   | 89.95        | 2580.            | 1157. |          |
|         | 83/ 8/19 | 0.00    | 0.00 | 0.00 | 0.68 | 84.70   | 0.68   | 85.39        | 1700.            | 506.  |          |
|         | 83/ 8/12 | 0.00    | 0.00 | 0.00 | 0.60 | 74.75   | 0.60   | 75.35        | 1559.            | 176.  |          |
|         | 83/ 8/ 6 | 0.00    | 0.00 | 0.00 | 0.56 | 68.96   | 0.56   | 69.52        | 1477.            | 468.  |          |
|         | 83/ 8/22 | 0.00    | 0.00 | 0.00 | 0.48 | 59.73   | 0.48   | 60.41        | 1349.            | 614.  |          |

|          |      |      |      |      |       |      |       |       |      |
|----------|------|------|------|------|-------|------|-------|-------|------|
| 83/ 8/21 | 0.00 | 0.00 | 0.00 | 0.48 | 59.29 | 0.48 | 59.77 | 1340. | 280. |
| 83/ 8/27 | 0.00 | 0.00 | 0.00 | 0.38 | 47.22 | 0.38 | 47.60 | 1169. | 566. |
| 83/ 9/12 | 0.00 | 0.00 | 0.00 | 0.33 | 41.01 | 0.33 | 41.34 | 1448. | 554. |
| 83/ 9/20 | 0.00 | 0.00 | 0.00 | 0.33 | 40.71 | 0.33 | 41.04 | 2048. | 976. |
| 83/ 9/21 | 0.00 | 0.00 | 0.00 | 0.24 | 29.14 | 0.24 | 29.38 | 1780. | 732. |
| 83/ 7/18 | 0.00 | 0.00 | 0.00 | 0.18 | 23.00 | 0.18 | 23.18 | 1966. | 585. |
| 83/ 8/11 | 0.00 | 0.00 | 0.00 | 0.18 | 22.45 | 0.18 | 22.63 | 810.  | 162. |
| 83/ 9/22 | 0.00 | 0.00 | 0.00 | 0.17 | 20.33 | 0.17 | 20.49 | 1492. | 606. |
| 83/ 7/26 | 0.00 | 0.00 | 0.00 | 0.15 | 18.73 | 0.15 | 18.88 | 898.  | 189. |
| 83/ 9/19 | 0.00 | 0.00 | 0.00 | 0.15 | 18.25 | 0.15 | 18.40 | 1168. | 575. |
| 83/ 9/24 | 0.00 | 0.00 | 0.00 | 0.14 | 17.72 | 0.14 | 17.87 | 1612. | 666. |
| 83/ 7/20 | 0.00 | 0.00 | 0.00 | 0.14 | 17.58 | 0.14 | 17.72 | 1247. | 115. |
| 83/ 9/25 | 0.00 | 0.00 | 0.00 | 0.14 | 16.79 | 0.14 | 16.93 | 1729. | 463. |
| 83/ 9/26 | 0.00 | 0.00 | 0.00 | 0.13 | 16.60 | 0.13 | 16.73 | 1958. | 830. |
| 83/ 9/29 | 0.00 | 0.00 | 0.00 | 0.13 | 16.08 | 0.13 | 16.21 | 2778. | 772. |
| 83/ 9/27 | 0.00 | 0.00 | 0.00 | 0.12 | 15.02 | 0.12 | 15.14 | 2057. | 966. |
| 83/ 8/ 7 | 0.00 | 0.00 | 0.00 | 0.10 | 12.28 | 0.10 | 12.38 | 674.  | 216. |
| 83/ 9/28 | 0.00 | 0.00 | 0.00 | 0.08 | 10.11 | 0.08 | 10.19 | 1980. | 850. |
| 83/ 9/23 | 0.00 | 0.00 | 0.00 | 0.06 | 7.83  | 0.06 | 7.90  | 930.  | 405. |
| 83/ 7/23 | 0.00 | 0.00 | 0.00 | 0.02 | 2.36  | 0.02 | 2.38  | 567.  | 105. |
| 83/ 7/21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.11  | 0.00 | 0.11  | 504.  | 84.  |
| 83/ 7/25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 345.  | 138. |
| 83/ 9/17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 221.  | 110. |
| 83/ 8/ 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 333.  | 166. |
| 83/ 7/22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 336.  | 168. |

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Potholes Stranding and Trapping - Daily Detail with Stranding Ranking  
 ======  
 (Results of applying base year data to the indicate flow regime)

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Disconnects | Total Salmon + Steelhead |      |      |      |       |         | Begflow Endflow |         |
|------------------|--------------|--------------------------|------|------|------|-------|---------|-----------------|---------|
|                  |              | Chinook                  | Pink | Chum | Coho | Sthd  | Salmon  | Steelhd         | Begflow |
| 83/ 3/26         | 225          | 74.84                    | 0.54 | 0.00 | 0.23 | 0.92  | 75.61   | 76.52           | 6720.   |
|                  |              | 1043.09                  | 0.61 | 0.00 | 4.12 | 16.48 | 1356.83 | 1373.31         | 3466.   |
| 83/ 3/24         | 215          | 70.51                    | 0.50 | 0.00 | 0.22 | 0.87  | 71.23   | 72.09           | 6545.   |
|                  |              | 1195.44                  | 8.56 | 0.00 | 3.67 | 14.67 | 1207.66 | 1222.33         | 3562.   |
| 83/ 5/ 3         | 225          | 67.82                    | 0.49 | 0.00 | 0.21 | 0.83  | 68.52   | 69.35           | 7140.   |
|                  |              | 1217.18                  | 8.71 | 0.00 | 3.73 | 14.94 | 1229.62 | 1244.56         | 3394.   |
| 83/ 4/16         | 211          | 64.64                    | 0.46 | 0.00 | 0.20 | 0.79  | 65.30   | 66.09           | 7280.   |
|                  |              | 1117.12                  | 8.00 | 0.00 | 3.43 | 13.71 | 1128.54 | 1142.25         | 3635.   |
| 83/ 4/26         | 211          | 64.64                    | 0.46 | 0.00 | 0.20 | 0.79  | 65.30   | 66.09           | 7350.   |
|                  |              | 1117.12                  | 8.00 | 0.00 | 3.43 | 13.71 | 1128.54 | 1142.25         |         |
| 83/ 4/17         | 203          | 64.31                    | 0.46 | 0.00 | 0.20 | 0.79  | 64.97   | 65.76           | 5950.   |
|                  |              | 1032.28                  | 7.39 | 0.00 | 3.17 | 12.67 | 1042.83 | 1055.50         | 3760.   |
| 83/ 5/ 4         | 211          | 56.56                    | 0.41 | 0.00 | 0.17 | 0.69  | 57.14   | 57.83           | 5740.   |
|                  |              | 977.48                   | 7.00 | 0.00 | 3.00 | 11.99 | 987.47  | 999.47          |         |
| 83/ 3/18         | 199          | 55.02                    | 0.39 | 0.00 | 0.17 | 0.68  | 55.59   | 56.26           | 8270.   |
|                  |              | 1023.96                  | 7.33 | 0.00 | 3.14 | 12.56 | 1034.43 | 1047.00         | 3810.   |
| 83/ 4/29         | 199          | 55.02                    | 0.39 | 0.00 | 0.17 | 0.68  | 55.59   | 56.26           | 6265.   |
|                  |              | 1023.96                  | 7.33 | 0.00 | 3.14 | 12.56 | 1034.43 | 1047.00         |         |
| 83/ 5/ 9         | 226          | 53.79                    | 0.38 | 0.00 | 0.17 | 0.66  | 54.34   | 55.00           | 6195.   |
|                  |              | 965.35                   | 6.91 | 0.00 | 2.96 | 11.85 | 975.22  | 987.06          |         |
| 83/ 5/ 6         | 208          | 52.52                    | 0.38 | 0.00 | 0.16 | 0.64  | 53.06   | 53.70           | 8070.   |
|                  |              | 887.79                   | 6.35 | 0.00 | 2.72 | 10.89 | 896.87  | 907.76          | 3660.   |
| 83/ 4/30         | 117          | 51.13                    | 0.37 | 0.00 | 0.16 | 0.63  | 51.65   | 52.28           | 4970.   |
|                  |              | 584.64                   | 4.18 | 0.00 | 1.79 | 7.17  | 590.62  | 597.79          |         |
| 83/ 4/23         | 174          | 44.60                    | 0.32 | 0.00 | 0.14 | 0.55  | 45.06   | 45.60           | 5540.   |
|                  |              | 788.96                   | 5.65 | 0.00 | 2.42 | 9.68  | 797.03  | 806.71          |         |
| 83/ 3/22         | 174          | 43.09                    | 0.31 | 0.00 | 0.13 | 0.53  | 43.53   | 44.06           | 7990.   |
|                  |              | 762.67                   | 5.46 | 0.00 | 2.34 | 9.36  | 770.47  | 779.82          | 4204.   |
| 83/ 4/24         | 162          | 42.11                    | 0.30 | 0.00 | 0.13 | 0.52  | 42.54   | 43.06           | 5845.   |
|                  |              | 753.03                   | 5.39 | 0.00 | 2.31 | 9.24  | 760.73  | 769.97          |         |
| 83/ 5/ 1         | 124          | 41.26                    | 0.29 | 0.00 | 0.13 | 0.51  | 41.69   | 42.19           | 5390.   |
|                  |              | 703.58                   | 5.04 | 0.00 | 2.16 | 8.63  | 710.77  | 719.41          | 4148.   |
| 83/ 5/12         | 203          | 40.20                    | 0.29 | 0.00 | 0.12 | 0.49  | 40.61   | 41.10           | 7245.   |
|                  |              | 645.17                   | 4.62 | 0.00 | 1.98 | 7.92  | 651.77  | 659.69          |         |
| 83/ 5/ 7         | 194          | 39.17                    | 0.28 | 0.00 | 0.12 | 0.48  | 39.57   | 40.05           | 6685.   |
|                  |              | 788.17                   | 5.64 | 0.00 | 2.42 | 9.67  | 796.22  | 805.90          | 3990.   |
| 83/ 3/17         | 126          | 35.66                    | 0.25 | 0.00 | 0.11 | 0.44  | 36.03   | 36.47           | 8470.   |
|                  |              | 682.67                   | 4.89 | 0.00 | 2.09 | 8.38  | 689.66  | 698.03          |         |
| 83/ 3/ 5         | 123          | 35.66                    | 0.25 | 0.00 | 0.11 | 0.44  | 36.03   | 36.47           | 8550.   |
|                  |              | 672.41                   | 4.81 | 0.00 | 2.06 | 8.25  | 679.28  | 687.53          | 4670.   |
| 83/ 3/20         | 122          | 35.66                    | 0.25 | 0.00 | 0.11 | 0.44  | 36.03   | 36.47           | 6965.   |
|                  |              | 672.41                   | 4.81 | 0.00 | 2.06 | 8.25  | 679.28  | 687.53          |         |
| 83/ 4/21         | 123          | 35.66                    | 0.25 | 0.00 | 0.11 | 0.44  | 36.03   | 36.47           | 8670.   |
|                  |              | 672.41                   | 4.81 | 0.00 | 2.06 | 8.25  | 679.28  | 687.53          | 4700.   |
| 83/ 3/ 6         | 123          | 35.66                    | 0.25 | 0.00 | 0.11 | 0.44  | 36.03   | 36.47           | 8550.   |
|                  |              | 672.41                   | 4.81 | 0.00 | 2.06 | 8.25  | 679.28  | 687.53          | 4730.   |
| 83/ 4/27         | 121          | 34.52                    | 0.25 | 0.00 | 0.11 | 0.42  | 34.88   | 35.30           | 7000.   |
|                  |              | 672.24                   | 4.81 | 0.00 | 2.06 | 8.25  | 679.12  | 687.36          | 4790.   |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Discn | Chinook | Pink  | Chum | Coho  | Sthd  | Total<br>Salmon | Salmon +<br>Steelhd | Begflow | Endflow |
|------------------|--------|---------|-------|------|-------|-------|-----------------|---------------------|---------|---------|
| 83/ 4/ 8         | 118    | 32.92   | 0.24  | 0.00 | 0.10  | 0.40  | 33.25           | 33.66               | 8710.   | 4820.   |
|                  |        | 658.75  | 4.72  | 0.00 | 2.02  | 8.08  | 665.48          | 673.56              |         |         |
| 83/ 4/ 4         | 56     | 32.47   | 0.23  | 0.00 | 0.10  | 0.40  | 32.80           | 33.20               | 5030.   | 4550.   |
|                  |        | 270.47  | 1.94  | 0.00 | 0.83  | 3.32  | 273.24          | 276.55              |         |         |
| 83/ 4/ 3         | 116    | 32.43   | 0.23  | 0.00 | 0.10  | 0.40  | 32.76           | 33.16               | 7830.   | 4880.   |
|                  |        | 658.42  | 4.71  | 0.00 | 2.02  | 8.08  | 665.15          | 673.23              |         |         |
| 83/ 5/18         | 215    | 30.85   | 0.22  | 0.00 | 0.09  | 0.38  | 31.16           | 31.54               | 6755.   | 3562.   |
|                  |        | 523.01  | 3.74  | 0.00 | 1.60  | 6.42  | 528.35          | 534.77              |         |         |
| 83/ 5/14         | 186    | 25.15   | 0.18  | 0.00 | 0.08  | 0.31  | 25.40           | 25.71               | 7105.   | 4094.   |
|                  |        | 501.55  | 3.59  | 0.00 | 1.54  | 6.15  | 506.68          | 512.83              |         |         |
| 83/ 5/17         | 194    | 23.50   | 0.17  | 0.00 | 0.07  | 0.29  | 23.74           | 24.03               | 7000.   | 3938.   |
|                  |        | 472.90  | 3.38  | 0.00 | 1.45  | 5.80  | 477.73          | 483.54              |         |         |
| 83/ 5/16         | 190    | 22.74   | 0.16  | 0.00 | 0.07  | 0.28  | 22.98           | 23.26               | 7000.   | 4042.   |
|                  |        | 467.63  | 3.35  | 0.00 | 1.43  | 5.74  | 472.41          | 478.15              |         |         |
| 83/ 5/15         | 141    | 19.32   | 0.14  | 0.00 | 0.06  | 0.24  | 19.51           | 19.75               | 7070.   | 4490.   |
|                  |        | 367.55  | 2.63  | 0.00 | 1.13  | 4.51  | 371.30          | 375.81              |         |         |
| 83/ 5/19         | 186    | 18.16   | 0.13  | 0.00 | 0.06  | 0.22  | 18.35           | 18.57               | 5775.   | 4120.   |
|                  |        | 362.23  | 2.59  | 0.00 | 1.11  | 4.45  | 365.93          | 370.38              |         |         |
| 83/ 5/20         | 63     | 12.61   | 0.09  | 0.00 | 0.04  | 0.16  | 12.74           | 12.90               | 5420.   | 4790.   |
|                  |        | 197.23  | 1.41  | 0.00 | 0.61  | 2.42  | 199.25          | 201.67              |         |         |
| 83/ 5/10         | 94     | 6.34    | 0.05  | 0.00 | 0.02  | 0.08  | 6.41            | 6.48                | 5985.   | 4910.   |
|                  |        | 438.43  | 3.14  | 0.00 | 1.35  | 5.38  | 442.92          | 448.29              |         |         |
| 83/ 4/28         | 77     | 3.89    | 0.05  | 0.00 | 0.01  | 0.05  | 3.93            | 3.98                | 6825.   | 5030.   |
|                  |        | 421.38  | 3.02  | 0.00 | 1.29  | 5.17  | 425.69          | 430.86              |         |         |
| 83/ 3/ 4         | 77     | 3.89    | 0.03  | 0.00 | 0.01  | 0.05  | 3.93            | 3.98                | 8710.   | 5060.   |
|                  |        | 421.38  | 3.02  | 0.00 | 1.29  | 5.17  | 425.69          | 430.86              |         |         |
| 83/ 2/25         | 77     | 3.36    | 0.02  | 0.00 | 1.E-2 | 0.04  | 3.39            | 3.43                | 9710.   | 5060.   |
|                  |        | 363.26  | 2.60  | 0.00 | 1.11  | 4.46  | 366.97          | 371.43              |         |         |
| 83/ 5/ 5         | 77     | 3.28    | 0.02  | 0.00 | 1.E-2 | 0.04  | 3.32            | 3.36                | 7105.   | 5030.   |
|                  |        | 355.54  | 2.55  | 0.00 | 1.09  | 4.36  | 359.17          | 363.54              |         |         |
| 83/ 5/21         | 77     | 1.34    | 1.E-2 | 0.00 | 4.E-3 | 0.02  | 1.35            | 1.37                | 5880.   | 5030.   |
|                  |        | 144.85  | 1.04  | 0.00 | 0.44  | 1.78  | 146.33          | 148.11              |         |         |
| 83/ 5/22         | 76     | 1.22    | 9.E-3 | 0.00 | 4.E-3 | 0.01  | 1.23            | 1.24                | 6965.   | 5090.   |
|                  |        | 131.68  | 0.94  | 0.00 | 0.40  | 1.62  | 133.03          | 134.64              |         |         |
| 83/ 4/20         | 54     | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 7710.   | 5635.   |
|                  |        | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62           | 84.64               |         |         |
| 83/ 4/ 2         | 58     | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 7280.   | 5510.   |
|                  |        | 146.29  | 1.05  | 0.00 | 0.45  | 1.79  | 147.79          | 149.59              |         |         |
| 83/ 3/19         | 54     | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 7070.   | 5740.   |
|                  |        | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62           | 84.64               |         |         |
| 83/ 4/22         | 58     | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 8590.   | 5450.   |
|                  |        | 146.29  | 1.05  | 0.00 | 0.45  | 1.79  | 147.79          | 149.59              |         |         |
| 83/ 3/ 7         | 56     | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 8750.   | 5540.   |
|                  |        | 146.29  | 1.05  | 0.00 | 0.45  | 1.79  | 147.79          | 149.59              |         |         |
| 83/ 3/25         | 54     | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 6930.   | 5670.   |
|                  |        | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62           | 84.64               |         |         |
| 83/ 3/ 3         | 54     | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 8790.   | 5740.   |
|                  |        | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62           | 84.64               |         |         |
| 83/ 4/18         | 58     | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90            | 0.91                | 6650.   | 5330.   |
|                  |        | 146.29  | 1.05  | 0.00 | 0.45  | 1.79  | 147.79          | 149.59              |         |         |
| 83/ 5/ 2         | 56     | 0.83    | 6.E-3 | 0.00 | 3.E-3 | 1.E-2 | 0.84            | 0.85                | 6755.   | 5540.   |
|                  |        | 137.15  | 0.98  | 0.00 | 0.42  | 1.68  | 138.55          | 140.24              |         |         |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #  | Disconnect | Chinook | Pink | Chum  | Coho  | Stho   | Total<br>Salmon | Salmon +<br>Steelhd | Begflow | Endflow |
|------------------|----|------------|---------|------|-------|-------|--------|-----------------|---------------------|---------|---------|
| 83/ 2/27         | 58 | 0.03       | 6.E-3   | 0.00 | 3.E-3 | 1.E-2 | .83    | 0.85            | 8950.               | 5510.   |         |
|                  |    | 136.21     | 0.98    | 0.00 | 0.42  | 1.67  | 137.60 | 139.27          |                     |         |         |
| 83/ 5/ 8         | 54 | 0.67       | 5.E-3   | 0.00 | 2.E-3 | 8.E-3 | 0.67   | 0.68            | 6335.               | 5635.   |         |
|                  |    | 62.08      | 0.44    | 0.00 | 0.19  | 0.76  | 62.72  | 63.48           |                     |         |         |
| 83/ 3/16         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8590.               | 6825.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | .00    | 0.00            |                     |         |         |
| 83/ 3/28         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 14650.              | 9230.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 2/10         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8070.               | 7470.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 4/ 1         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 9150.               | 6895.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 3/30         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 7930.               | 9550.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 2/16         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8910.               | 8110.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 3/21         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 7910.               | 6720.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 4/11         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8550.               | 6055.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 3/23         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8070.               | 6475.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 4/13         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8190.               | 6405.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 4/14         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8270.               | 6020.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 4/15         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8350.               | 7280.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 3/27         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8550.               | 8550.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 2/ 3         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8390.               | 6300.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 2/ 4         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 7790.               | 6230.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 4/19         | 4  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 5600.               | 5360.   |         |
|                  |    | 63.52      | 0.46    | 0.00 | 0.19  | 0.78  | 64.17  | 64.95           |                     |         |         |
| 83/ 2/11         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8070.               | 7990.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 2/12         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 10200.              | 7140.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 2/13         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 9510.               | 8750.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 2/14         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 9350.               | 8670.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 2/ 2         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8350.               | 7070.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 4/25         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 8710.               | 6440.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 2/17         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 10470.              | 10160.  |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |
| 83/ 2/18         | 0  | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            | 9750.               | 8030.   |         |
|                  |    | 0.00       | 0.00    | 0.00 | 0.00  | 0.00  | 0.00   | 0.00            |                     |         |         |

First line shows STRANDED fish  
Second line shows TRAPPED fish

First line shows STRANDED fish  
Second line shows TRAPPED fish

Table 7 Gravel bar and pothole stranding and trapping estimates produced by SKAGMDL for 1982.

PARAMETERS FOR THIS RUN:

-----  
04/18/87  
16:16:03

Slope categories:  
0 to 5%  
> 5% to 10%  
> 10%

Substrate categories:  
Less than 3 inches  
Greater than 3 inches

Location codes:  
Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:  
YEAR SEASON BEGDATE ENDDATE

-----  
82 1 201 531  
82 2 715 930

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

-----  
Chronological order

Season totals only

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Season Totals

---

(Results of applying base year stranding data to the indicated flow regime)

| Flow<br>Year      | Seas | GBType | Chinook | Pink    | Chum   | Coho  | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|-------------------|------|--------|---------|---------|--------|-------|---------|-----------------|---------------------|
| 82                | 1    | 1      | 378.21  | 180.68  | 30.11  | 0.00  | 4.93    | 589.01          | 593.93              |
| 82                | 1    | 2      | 794.01  | 379.30  | 63.22  | 0.00  | 8.45    | 1236.53         | 1244.98             |
| 82                | 1    | 3      | 3767.92 | 1799.96 | 299.99 | 0.00  | 26.38   | 5867.87         | 5894.25             |
| 82                | 1    | 4      | 437.29  | 208.90  | 34.81  | 0.00  | 5.75    | 681.00          | 686.76              |
| 82                | 1    | 5      | 269.32  | 128.66  | 21.44  | 0.00  | 2.87    | 419.42          | 422.29              |
| 82                | 1    | 6      | 886.31  | 423.40  | 70.57  | 0.00  | 5.42    | 1380.28         | 1385.69             |
| 82                | 1    | 7      | 88.94   | 42.48   | 7.08   | 0.00  | 1.40    | 138.50          | 139.90              |
| 82                | 1    | 8      | 104.26  | 49.80   | 8.30   | 0.00  | 1.17    | 162.37          | 163.53              |
| 82                | 1    | 9      | 928.65  | 443.62  | 73.94  | 0.00  | 6.56    | 1446.21         | 1452.78             |
| 82                | 1    | 10     | 190.42  | 90.97   | 15.16  | 0.00  | 2.76    | 296.55          | 299.31              |
| 82                | 1    | 11     | 113.22  | 54.09   | 9.01   | 0.00  | 1.24    | 176.32          | 177.56              |
| 82                | 1    | 12     | 420.32  | 200.79  | 33.47  | 0.00  | 2.90    | 654.58          | 657.48              |
| 82                | 1    | 13     | 38.81   | 18.54   | 3.09   | 0.00  | 0.84    | 60.44           | 61.29               |
| 82                | 1    | 14     | 28.18   | 13.46   | 2.24   | 0.00  | 0.34    | 43.88           | 44.21               |
| 82                | 1    | 15     | 350.98  | 167.67  | 27.94  | 0.00  | 2.43    | 546.58          | 549.01              |
| 82                | 1    | 16     | 47.97   | 22.91   | 3.81   | 0.00  | 1.04    | 74.69           | 75.74               |
| 82                | 1    | 17     | 18.82   | 8.99    | 1.50   | 0.00  | 0.22    | 29.30           | 29.53               |
| 82                | 1    | 18     | 99.50   | 47.52   | 7.93   | 0.00  | 0.74    | 154.93          | 155.68              |
| <hr/>             |      |        | <hr/>   |         |        |       |         |                 |                     |
| Season subtotals: |      |        | 8963.1  | 4281.7  | 713.6  | 0.0   | 75.4    | 13958.5         | 14033.9             |
| <hr/>             |      |        |         |         |        |       |         |                 |                     |
| 82                | 2    | 1      | 0.00    | 0.00    | 0.00   | 3.55  | 440.31  | 3.55            | 443.87              |
| 82                | 2    | 2      | 0.00    | 0.00    | 0.00   | 6.09  | 754.83  | 6.09            | 760.92              |
| 82                | 2    | 3      | 0.00    | 0.00    | 0.00   | 26.11 | 3237.06 | 26.11           | 3263.17             |
| 82                | 2    | 4      | 0.00    | 0.00    | 0.00   | 23.22 | 2878.93 | 23.22           | 2902.14             |
| 82                | 2    | 5      | 0.00    | 0.00    | 0.00   | 11.61 | 1439.46 | 11.61           | 1451.07             |
| 82                | 2    | 6      | 0.00    | 0.00    | 0.00   | 1.16  | 143.41  | 1.16            | 144.57              |
| 82                | 2    | 7      | 0.00    | 0.00    | 0.00   | 6.79  | 842.05  | 6.79            | 848.84              |
| 82                | 2    | 8      | 0.00    | 0.00    | 0.00   | 5.66  | 701.70  | 5.66            | 707.37              |
| 82                | 2    | 9      | 0.00    | 0.00    | 0.00   | 3.41  | 422.97  | 3.41            | 426.38              |
| 82                | 2    | 10     | 0.00    | 0.00    | 0.00   | 0.65  | 80.23   | 0.65            | 80.87               |
| 82                | 2    | 11     | 0.00    | 0.00    | 0.00   | 0.29  | 36.11   | 0.29            | 36.41               |
| 82                | 2    | 12     | 0.00    | 0.00    | 0.00   | 1.31  | 162.00  | 1.31            | 163.30              |
| 82                | 2    | 13     | 0.00    | 0.00    | 0.00   | 2.13  | 264.08  | 2.13            | 266.21              |
| 82                | 2    | 14     | 0.00    | 0.00    | 0.00   | 0.85  | 105.63  | 0.85            | 106.48              |
| 82                | 2    | 15     | 0.00    | 0.00    | 0.00   | 0.00  | 0.00    | 0.00            | 0.00                |
| 82                | 2    | 16     | 0.00    | 0.00    | 0.00   | 3.83  | 475.54  | 3.83            | 479.38              |
| 82                | 2    | 17     | 0.00    | 0.00    | 0.00   | 0.83  | 102.82  | 0.83            | 103.64              |
| 82                | 2    | 18     | 0.00    | 0.00    | 0.00   | 0.16  | 19.80   | 0.16            | 19.96               |
| <hr/>             |      |        | <hr/>   |         |        |       |         |                 |                     |
| Season subtotals: |      |        | 0.0     | 0.0     | 0.0    | 97.7  | 12106.9 | 97.7            | 12204.6             |

Potholes Stranding and Trapping - Season Totals

=====

(Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
Second line shows TRAPPED fish

| Flow | Year | #Disconnects | Chinook | Pink  | Chum | Coho  | Steelhd | Total Salmon | Salmon + Steelhd |
|------|------|--------------|---------|-------|------|-------|---------|--------------|------------------|
|      | 82   | 10177        | 2925.6  | 20.9  | 0.0  | 9.0   | 35.9    | 2955.5       | 2991.4           |
|      |      |              | 51703.7 | 370.1 | 0.0  | 158.6 | 634.4   | 52232.3      | 52866.7          |

PARAMETERS FOR THIS RUN:

-----  
04/18/87  
16:33:38

Slope categories:

- 0 to 5%
- 5% to 10%
- > 10%

Substrate categories:

- Less than 3 inches
- Greater than 3 inches

Location codes:

- Upper reach
- Middle reach
- Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 82   | 1      | 201     | 531     |
| 82   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

-----  
Chronological order

Monthly totals only

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Monthly Detail with Subtotals

=====

(Results of applying base year stranding data to the indicated flow regime)

| Flow<br>YR/MO | GBTtype | Chinook | Pink   | Chum  | Coho | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|---------|---------|--------|-------|------|---------|-----------------|---------------------|
| 82/ 2         | 1       | 9.35    | 4.47   | 0.74  | 0.00 | 0.30    | 14.56           | 14.86               |
| 82/ 2         | 2       | 16.03   | 7.66   | 1.28  | 0.00 | 0.51    | 24.96           | 25.47               |
| 82/ 2         | 3       | 248.73  | 118.02 | 19.80 | 0.00 | 1.75    | 387.36          | 389.11              |
| 82/ 2         | 4       | 10.77   | 5.15   | 0.86  | 0.00 | 0.34    | 16.77           | 17.12               |
| 82/ 2         | 5       | 5.39    | 2.57   | 0.43  | 0.00 | 0.17    | 8.39            | 8.56                |
| 82/ 2         | 6       | 39.70   | 18.96  | 3.16  | 0.00 | 0.24    | 61.82           | 62.06               |
| 82/ 2         | 7       | 1.99    | 0.95   | 0.16  | 0.00 | 0.06    | 3.09            | 3.16                |
| 82/ 2         | 8       | 1.65    | 0.79   | 0.13  | 0.00 | 0.05    | 2.58            | 2.63                |
| 82/ 2         | 9       | 62.89   | 30.04  | 5.01  | 0.00 | 0.45    | 97.94           | 98.39               |
| 82/ 2         | 10      | 4.47    | 2.13   | 0.35  | 0.00 | 0.14    | 6.96            | 7.10                |
| 82/ 2         | 11      | 2.01    | 0.96   | 0.16  | 0.00 | 0.07    | 3.13            | 3.20                |
| 82/ 2         | 12      | 26.69   | 12.75  | 2.12  | 0.00 | 0.18    | 41.56           | 41.75               |
| 82/ 2         | 13      | 0.66    | 0.31   | 0.05  | 0.00 | 0.02    | 1.03            | 1.05                |
| 82/ 2         | 14      | 0.26    | 0.13   | 0.02  | 0.00 | 1.E-2   | 0.41            | 0.42                |
| 82/ 2         | 15      | 22.28   | 10.65  | 1.77  | 0.00 | 0.15    | 34.70           | 34.86               |
| 82/ 2         | 16      | 0.81    | 0.39   | 0.06  | 0.00 | 0.03    | 1.27            | 1.30                |
| 82/ 2         | 17      | 0.18    | 0.08   | 1.E-2 | 0.00 | 1.E-2   | 0.27            | 0.28                |
| 82/ 2         | 18      | 7.62    | 3.64   | 0.61  | 0.00 | 0.05    | 11.87           | 11.92               |
| <hr/>         |         |         |        |       |      |         |                 |                     |
| Month total:  |         | 461.5   | 220.5  | 36.7  | 0.0  | 4.5     | 718.7           | 723.2               |

| Flow<br>YR/MO | GBTtype | Chinook | Pink   | Chum  | Coho | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|---------|---------|--------|-------|------|---------|-----------------|---------------------|
| 82/ 3         | 1       | 192.42  | 91.92  | 15.32 | 0.00 | 1.79    | 299.66          | 301.45              |
| 82/ 3         | 2       | 372.75  | 178.07 | 29.68 | 0.00 | 3.07    | 580.50          | 583.56              |
| 82/ 3         | 3       | 952.49  | 455.01 | 75.83 | 0.00 | 10.12   | 1483.33         | 1493.45             |
| 82/ 3         | 4       | 221.35  | 105.74 | 17.62 | 0.00 | 2.07    | 344.71          | 346.79              |
| 82/ 3         | 5       | 125.74  | 60.07  | 10.01 | 0.00 | 1.03    | 195.82          | 196.85              |
| 82/ 3         | 6       | 193.59  | 92.48  | 15.41 | 0.00 | 1.66    | 301.49          | 303.15              |
| 82/ 3         | 7       | 39.41   | 18.82  | 3.14  | 0.00 | 0.44    | 61.37           | 61.81               |
| 82/ 3         | 8       | 42.93   | 20.51  | 3.42  | 0.00 | 0.37    | 66.86           | 67.22               |
| 82/ 3         | 9       | 237.32  | 113.37 | 18.90 | 0.00 | 2.56    | 369.59          | 372.15              |
| 82/ 3         | 10      | 90.27   | 43.13  | 7.19  | 0.00 | 0.92    | 140.59          | 141.51              |
| 82/ 3         | 11      | 49.48   | 23.64  | 3.94  | 0.00 | 0.41    | 77.05           | 77.47               |
| 82/ 3         | 12      | 104.54  | 49.94  | 8.32  | 0.00 | 1.09    | 162.80          | 163.89              |
| 82/ 3         | 13      | 11.48   | 5.48   | 0.92  | 0.00 | 0.21    | 17.88           | 18.09               |
| 82/ 3         | 14      | 9.14    | 4.37   | 0.73  | 0.00 | 0.08    | 14.24           | 14.32               |
| 82/ 3         | 15      | 87.29   | 41.70  | 6.95  | 0.00 | 0.91    | 135.94          | 136.85              |
| 82/ 3         | 16      | 14.19   | 6.78   | 1.13  | 0.00 | 0.26    | 22.10           | 22.36               |
| 82/ 3         | 17      | 6.11    | 2.92   | 0.49  | 0.00 | 0.06    | 9.51            | 9.57                |
| 82/ 3         | 18      | 26.84   | 12.82  | 2.14  | 0.00 | 0.31    | 41.80           | 42.10               |
| <hr/>         |         |         |        |       |      |         |                 |                     |
| Month total:  |         | 2777.3  | 1326.8 | 221.1 | 0.0  | 27.4    | 4325.2          | 4352.6              |

| Flow<br>YR/MO | GBTtype | Chinook | Pink   | Chum  | Coho | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|---------|---------|--------|-------|------|---------|-----------------|---------------------|
| 82/ 4         | 1       | 115.62  | 55.23  | 9.21  | 0.00 | 1.66    | 180.06          | 181.72              |
| 82/ 4         | 2       | 236.21  | 112.84 | 18.81 | 0.00 | 2.85    | 347.85          | 370.71              |

|              |    |         |        |        |      |      |         |         |
|--------------|----|---------|--------|--------|------|------|---------|---------|
| 82/ 4        | 1  | 1482.38 | 708.14 | 118.02 | 0.00 | 8.91 | 2008.54 | 2317.45 |
| 82/ 4        | 4  | 134.31  | 64.16  | 10.69  | 0.00 | 1.94 | 209.16  | 211.11  |
| 82/ 4        | 5  | 80.11   | 38.27  | 6.38   | 0.00 | 0.97 | 124.76  | 125.73  |
| 82/ 4        | 6  | 324.53  | 155.03 | 25.84  | 0.00 | 1.83 | 505.40  | 507.23  |
| 82/ 4        | 7  | 30.47   | 14.55  | 2.42   | 0.00 | 0.47 | 47.45   | 47.92   |
| 82/ 4        | 8  | 30.95   | 14.78  | 2.46   | 0.00 | 0.39 | 48.19   | 48.59   |
| 82/ 4        | 9  | 367.39  | 175.50 | 29.25  | 0.00 | 2.22 | 572.15  | 574.37  |
| 82/ 4        | 10 | 61.92   | 29.58  | 4.93   | 0.00 | 0.93 | 96.43   | 97.36   |
| 82/ 4        | 11 | 33.64   | 16.07  | 2.68   | 0.00 | 0.42 | 52.38   | 52.80   |
| 82/ 4        | 12 | 164.00  | 78.35  | 13.06  | 0.00 | 0.98 | 255.41  | 256.39  |
| 82/ 4        | 13 | 16.50   | 7.88   | 1.31   | 0.00 | 0.28 | 25.70   | 25.98   |
| 82/ 4        | 14 | 8.33    | 3.98   | 0.66   | 0.00 | 0.11 | 12.98   | 13.09   |
| 82/ 4        | 15 | 136.95  | 65.42  | 10.90  | 0.00 | 0.82 | 213.27  | 214.09  |
| 82/ 4        | 16 | 20.40   | 9.74   | 1.62   | 0.00 | 0.35 | 31.76   | 32.12   |
| 82/ 4        | 17 | 5.57    | 2.66   | 0.44   | 0.00 | 0.08 | 8.67    | 8.74    |
| 82/ 4        | 18 | 40.47   | 19.33  | 3.22   | 0.00 | 0.25 | 63.01   | 63.27   |
| <hr/>        |    |         |        |        |      |      |         |         |
| Month total: |    | 3289.8  | 1571.5 | 261.9  | 0.0  | 25.5 | 5123.2  | 5148.7  |

| Flow<br>YR/MO | GBType | Chinook | Pink   | Chum  | Coho | Total<br>Steelhd | Salmon +<br>Steelhd |         |
|---------------|--------|---------|--------|-------|------|------------------|---------------------|---------|
| 82/ 5         | 1      | 60.82   | 29.06  | 4.84  | 0.00 | 1.18             | 94.72               | 95.90   |
| 82/ 5         | 2      | 169.01  | 80.74  | 13.46 | 0.00 | 2.02             | 263.21              | 265.23  |
| 82/ 5         | 3      | 1084.32 | 517.99 | 86.33 | 0.00 | 5.59             | 1688.64             | 1694.23 |
| 82/ 5         | 4      | 70.86   | 33.85  | 5.64  | 0.00 | 1.39             | 110.35              | 111.74  |
| 82/ 5         | 5      | 58.09   | 27.75  | 4.62  | 0.00 | 0.70             | 90.45               | 91.15   |
| 82/ 5         | 6      | 329.50  | 156.92 | 26.15 | 0.00 | 1.69             | 511.57              | 513.26  |
| 82/ 5         | 7      | 17.08   | 8.16   | 1.36  | 0.00 | 0.43             | 26.59               | 27.02   |
| 82/ 5         | 8      | 28.73   | 13.72  | 2.29  | 0.00 | 0.35             | 44.74               | 45.09   |
| 82/ 5         | 9      | 261.04  | 124.70 | 20.78 | 0.00 | 1.35             | 406.52              | 407.87  |
| 82/ 5         | 10     | 33.76   | 16.13  | 2.69  | 0.00 | 0.76             | 52.57               | 53.33   |
| 82/ 5         | 11     | 28.09   | 13.42  | 2.24  | 0.00 | 0.34             | 43.75               | 44.09   |
| 82/ 5         | 12     | 125.09  | 59.76  | 9.96  | 0.00 | 0.64             | 194.82              | 195.46  |
| 82/ 5         | 13     | 10.17   | 4.85   | 0.81  | 0.00 | 0.33             | 15.83               | 16.16   |
| 82/ 5         | 14     | 10.43   | 4.99   | 0.83  | 0.00 | 0.13             | 16.25               | 16.38   |
| 82/ 5         | 15     | 104.45  | 49.90  | 8.32  | 0.00 | 0.54             | 162.67              | 163.21  |
| 82/ 5         | 16     | 12.56   | 6.00   | 1.00  | 0.00 | 0.40             | 19.56               | 19.96   |
| 82/ 5         | 17     | 6.97    | 3.33   | 0.55  | 0.00 | 0.09             | 10.85               | 10.94   |
| 82/ 5         | 18     | 24.57   | 11.74  | 1.96  | 0.00 | 0.13             | 38.25               | 38.38   |
| <hr/>         |        |         |        |       |      |                  |                     |         |
| Month total:  |        | 2434.5  | 1163.0 | 193.8 | 0.0  | 18.1             | 3791.3              | 3809.4  |

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum | Coho | Total<br>Steelhd | Salmon +<br>Steelhd |        |
|---------------|--------|---------|------|------|------|------------------|---------------------|--------|
| 82/ 7         | 1      | 0.00    | 0.00 | 0.00 | 0.19 | 24.15            | 0.19                | 24.34  |
| 82/ 7         | 2      | 0.00    | 0.00 | 0.00 | 0.33 | 41.40            | 0.33                | 41.73  |
| 82/ 7         | 3      | 0.00    | 0.00 | 0.00 | 0.84 | 104.45           | 0.84                | 105.29 |
| 82/ 7         | 4      | 0.00    | 0.00 | 0.00 | 0.48 | 59.24            | 0.48                | 59.72  |
| 82/ 7         | 5      | 0.00    | 0.00 | 0.00 | 0.24 | 29.62            | 0.24                | 29.86  |
| 82/ 7         | 6      | 0.00    | 0.00 | 0.00 | 0.06 | 7.23             | 0.06                | 7.29   |
| 82/ 7         | 7      | 0.00    | 0.00 | 0.00 | 0.27 | 33.02            | 0.27                | 33.29  |
| 82/ 7         | 8      | 0.00    | 0.00 | 0.00 | 0.22 | 27.51            | 0.22                | 27.74  |
| 82/ 7         | 9      | 0.00    | 0.00 | 0.00 | 0.11 | 13.38            | 0.11                | 13.47  |
| 82/ 7         | 10     | 0.00    | 0.00 | 0.00 | 0.05 | 6.21             | 0.05                | 6.26   |
| 82/ 7         | 11     | 0.00    | 0.00 | 0.00 | 0.02 | 2.80             | 0.02                | 2.82   |
| 82/ 7         | 12     | 0.00    | 0.00 | 0.00 | 0.08 | 10.61            | 0.08                | 10.69  |

|              |    |      |      |      |      |       |      |       |
|--------------|----|------|------|------|------|-------|------|-------|
| 82/ 7        | 13 | 0.00 | 0.00 | 0.00 | 0.04 | 4.93  | 0.04 | 4.97  |
| 82/ 7        | 14 | 0.00 | 0.00 | 0.00 | 0.02 | 1.97  | 0.02 | 1.99  |
| 82/ 7        | 15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  |
| 82/ 7        | 15 | 0.00 | 0.00 | 0.00 | 0.15 | 15.90 | 0.13 | 16.02 |
| 82/ 7        | 17 | 0.00 | 0.00 | 0.00 | 0.03 | 3.44  | 0.03 | 3.46  |
| 82/ 7        | 18 | 0.00 | 0.00 | 0.00 | 0.02 | 2.20  | 0.02 | 2.21  |
| <hr/>        |    |      |      |      |      |       |      |       |
| Month total: |    | 0.0  | 0.0  | 0.0  | 3.1  | 388.0 | 3.1  | 391.1 |

| YR/MO        | GBTypr | Flow    |      |      |       |         | Total | Salmon + |
|--------------|--------|---------|------|------|-------|---------|-------|----------|
|              |        | Chinook | Pink | Chum | Coho  | Steelhd |       |          |
| 82/ 8        | 1      | 0.00    | 0.00 | 0.00 | 1.95  | 242.62  | 1.95  | 244.58   |
| 82/ 8        | 2      | 0.00    | 0.00 | 0.00 | 3.35  | 415.93  | 3.35  | 419.28   |
| 82/ 8        | 3      | 0.00    | 0.00 | 0.00 | 11.81 | 1464.76 | 11.81 | 1476.57  |
| 82/ 8        | 4      | 0.00    | 0.00 | 0.00 | 9.32  | 1155.84 | 9.32  | 1165.16  |
| 82/ 8        | 5      | 0.00    | 0.00 | 0.00 | 4.66  | 577.92  | 4.66  | 582.58   |
| 82/ 8        | 6      | 0.00    | 0.00 | 0.00 | 0.81  | 76.25   | 0.81  | 76.86    |
| 82/ 8        | 7      | 0.00    | 0.00 | 0.00 | 3.38  | 406.54  | 3.38  | 409.82   |
| 82/ 8        | 8      | 0.00    | 0.00 | 0.00 | 2.73  | 338.78  | 2.73  | 341.52   |
| 82/ 8        | 9      | 0.00    | 0.00 | 0.00 | 1.53  | 190.14  | 1.53  | 191.67   |
| 82/ 8        | 10     | 0.00    | 0.00 | 0.00 | 0.42  | 52.13   | 0.42  | 52.55    |
| 82/ 8        | 11     | 0.00    | 0.00 | 0.00 | 0.19  | 23.46   | 0.19  | 23.65    |
| 82/ 8        | 12     | 0.00    | 0.00 | 0.00 | 0.78  | 96.79   | 0.78  | 97.57    |
| 82/ 8        | 13     | 0.00    | 0.00 | 0.00 | 0.84  | 103.84  | 0.84  | 104.68   |
| 82/ 8        | 14     | 0.00    | 0.00 | 0.00 | 0.33  | 41.54   | 0.33  | 41.87    |
| 82/ 8        | 15     | 0.00    | 0.00 | 0.00 | 0.00  | 0.00    | 0.00  | 0.00     |
| 82/ 8        | 16     | 0.00    | 0.00 | 0.00 | 1.76  | 217.59  | 1.76  | 219.35   |
| 82/ 8        | 17     | 0.00    | 0.00 | 0.00 | 0.38  | 47.05   | 0.38  | 47.42    |
| 82/ 8        | 18     | 0.00    | 0.00 | 0.00 | 0.12  | 15.53   | 0.12  | 15.66    |
| <hr/>        |        |         |      |      |       |         |       |          |
| Month total: |        | 0.0     | 0.0  | 0.0  | 44.1  | 5466.7  | 44.1  | 5510.8   |

| YR/MO | GBTypr | Flow    |      |      |       |         | Total | Salmon + |
|-------|--------|---------|------|------|-------|---------|-------|----------|
|       |        | Chinook | Pink | Chum | Coho  | Steelhd |       |          |
| 82/ 9 | 1      | 0.00    | 0.00 | 0.00 | 1.40  | 173.54  | 1.40  | 174.94   |
| 82/ 9 | 2      | 0.00    | 0.00 | 0.00 | 2.40  | 297.50  | 2.40  | 299.90   |
| 82/ 9 | 3      | 0.00    | 0.00 | 0.00 | 13.45 | 1667.85 | 13.45 | 1681.31  |
| 82/ 9 | 4      | 0.00    | 0.00 | 0.00 | 13.42 | 1663.85 | 13.42 | 1677.26  |
| 82/ 9 | 5      | 0.00    | 0.00 | 0.00 | 6.71  | 831.92  | 6.71  | 838.63   |
| 82/ 9 | 6      | 0.00    | 0.00 | 0.00 | 0.48  | 59.94   | 0.48  | 60.42    |
| 82/ 9 | 7      | 0.00    | 0.00 | 0.00 | 3.25  | 402.49  | 3.25  | 405.73   |
| 82/ 9 | 8      | 0.00    | 0.00 | 0.00 | 2.70  | 335.40  | 2.70  | 338.11   |
| 82/ 9 | 9      | 0.00    | 0.00 | 0.00 | 1.77  | 219.47  | 1.77  | 221.24   |
| 82/ 9 | 10     | 0.00    | 0.00 | 0.00 | 0.18  | 21.88   | 0.18  | 22.06    |
| 82/ 9 | 11     | 0.00    | 0.00 | 0.00 | 0.08  | 9.85    | 0.08  | 9.93     |
| 82/ 9 | 12     | 0.00    | 0.00 | 0.00 | 0.44  | 54.60   | 0.44  | 55.04    |
| 82/ 9 | 13     | 0.00    | 0.00 | 0.00 | 1.25  | 155.31  | 1.25  | 156.56   |
| 82/ 9 | 14     | 0.00    | 0.00 | 0.00 | 0.50  | 62.12   | 0.50  | 62.62    |
| 82/ 9 | 15     | 0.00    | 0.00 | 0.00 | 0.00  | 0.00    | 0.00  | 0.00     |
| 82/ 9 | 16     | 0.00    | 0.00 | 0.00 | 1.95  | 242.05  | 1.95  | 244.00   |
| 82/ 9 | 17     | 0.00    | 0.00 | 0.00 | 0.42  | 52.33   | 0.42  | 52.76    |
| 82/ 9 | 18     | 0.00    | 0.00 | 0.00 | 0.02  | 2.07    | 0.02  | 2.09     |

Potholes Stranding and Trapping - Monthly Detail with Subtotals  
 ======  
 (Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO | #Discard | Chinook  | Pink   | Chum | Coho  | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|----------|----------|--------|------|-------|---------|-----------------|---------------------|
| 82/ 2         | 566      | 125.47   | 0.90   | 0.00 | 0.38  | 1.54    | 126.75          | 128.29              |
|               |          | 2678.51  | 19.17  | 0.00 | 8.21  | 32.86   | 2705.90         | 2738.76             |
| 82/ 3         | 3316     | 1064.10  | 7.61   | 0.00 | 3.26  | 13.05   | 1074.98         | 1088.03             |
|               |          | 18045.54 | 129.16 | 0.00 | 55.36 | 221.42  | 18230.05        | 18451.47            |
| 82/ 4         | 4377     | 1381.79  | 9.89   | 0.00 | 4.24  | 16.95   | 1395.92         | 1412.87             |
|               |          | 24377.65 | 174.48 | 0.00 | 74.78 | 299.11  | 24626.91        | 24926.03            |
| 82/ 5         | 1918     | 354.21   | 2.54   | 0.00 | 1.08  | 4.35    | 357.84          | 362.18              |
|               |          | 6601.97  | 47.25  | 0.00 | 20.25 | 81.00   | 6669.47         | 6750.48             |
| Year totals:  |          | 2925.6   | 20.9   | 0.0  | 9.0   | 35.9    | 2955.5          | 2991.4              |
|               |          | 51703.7  | 370.1  | 0.0  | 158.6 | 634.4   | 52232.3         | 52866.7             |

PARAMETERS FOR THIS RUN:

-----  
04/18/87  
16:46:34

Slope categories:

0 to 5%  
> 5% to 10%  
> 10%

Substrate categories:

Less than 3 inches  
Greater than 3 inches

Location codes:

Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 82   | 1      | 201     | 531     |
| 82   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

-----  
Chronological order

Daily detail report

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Daily Detail with Subtotals  
 ======  
 (Results of applying base year stranding data to the indicated flow regime)

| Comment         | Flow<br>YR/MO/DY | Flow    |       |       |      |         |        | Total   | Salmon + |          |  |
|-----------------|------------------|---------|-------|-------|------|---------|--------|---------|----------|----------|--|
|                 |                  | Chinook | Pink  | Chum  | Coho | Steelhd | Salmon | Steelhd | Ampl     | RampRate |  |
| Flood           | 82/ 2/ 1         |         |       |       |      |         |        |         |          |          |  |
| Flood           | 82/ 2/ 2         |         |       |       |      |         |        |         |          |          |  |
| Flood           | 82/ 2/ 3         |         |       |       |      |         |        |         |          |          |  |
| No event        | 82/ 2/ 4         |         |       |       |      |         |        |         |          |          |  |
| Flood           | 82/ 2/ 5         |         |       |       |      |         |        |         |          |          |  |
| Flood           | 82/ 2/ 6         |         |       |       |      |         |        |         |          |          |  |
| No event        | 82/ 2/ 7         |         |       |       |      |         |        |         |          |          |  |
| Flood           | 82/ 2/ 8         |         |       |       |      |         |        |         |          |          |  |
| Flood           | 82/ 2/ 9         |         |       |       |      |         |        |         |          |          |  |
| No event        | 82/ 2/10         |         |       |       |      |         |        |         |          |          |  |
| No event        | 82/ 2/11         |         |       |       |      |         |        |         |          |          |  |
| Flood           | 82/ 2/12         |         |       |       |      |         |        |         |          |          |  |
| No event        | 82/ 2/13         |         |       |       |      |         |        |         |          |          |  |
| No event        | 82/ 2/14         |         |       |       |      |         |        |         |          |          |  |
| No event        | 82/ 2/15         |         |       |       |      |         |        |         |          |          |  |
| Flood           | 82/ 2/16         |         |       |       |      |         |        |         |          |          |  |
| No event        | 82/ 2/17         |         |       |       |      |         |        |         |          |          |  |
| No event        | 82/ 2/18         |         |       |       |      |         |        |         |          |          |  |
| Daylight        | 82/ 2/19         | 19.37   | 9.25  | 1.54  | 0.00 | 0.13    | 30.16  | 30.28   | 783.     | 391.     |  |
| Daylight        | 82/ 2/20         | 15.11   | 7.22  | 1.20  | 0.00 | 0.07    | 23.52  | 23.59   | 646.     | 266.     |  |
| Daylight        | 82/ 2/21         | 0.00    | 0.00  | 0.00  | 0.00 | 0.00    | 0.00   | 0.00    | 304.     | 133.     |  |
|                 | 82/ 2/22         | 0.00    | 0.00  | 0.00  | 0.00 | 0.00    | 0.00   | 0.00    | 378.     | 168.     |  |
| Daylight        | 82/ 2/23         | 125.68  | 60.04 | 10.01 | 0.00 | 0.85    | 195.73 | 196.58  | 2397.    | 798.     |  |
| Daylight        | 82/ 2/24         | 135.43  | 64.70 | 10.78 | 0.00 | 1.01    | 210.91 | 211.92  | 3538.    | 722.     |  |
|                 | 82/ 2/25         | 25.66   | 12.25 | 2.04  | 0.00 | 0.90    | 39.95  | 40.85   | 2108.    | 425.     |  |
|                 | 82/ 2/26         | 23.37   | 11.16 | 1.86  | 0.00 | 0.82    | 36.40  | 37.21   | 1831.    | 626.     |  |
| Daylight        | 82/ 2/27         | 116.88  | 55.83 | 9.30  | 0.00 | 0.77    | 182.03 | 182.79  | 1702.    | 389.     |  |
|                 | 82/ 2/28         | 0.00    | 0.00  | 0.00  | 0.00 | 0.00    | 0.00   | 0.00    | 381.     | 190.     |  |
| Month subtotal: |                  | 461.5   | 220.4 | 36.7  | 0.0  | 4.6     | 718.7  | 723.2   |          |          |  |

| Comment  | Flow<br>YR/MO/DY | Flow    |       |       |      |         |        | Total   | Salmon + |          |  |
|----------|------------------|---------|-------|-------|------|---------|--------|---------|----------|----------|--|
|          |                  | Chinook | Pink  | Chum  | Coho | Steelhd | Salmon | Steelhd | Ampl     | RampRate |  |
| Daylight | 82/ 3/ 1         | 163.03  | 77.88 | 12.98 | 0.00 | 1.20    | 253.89 | 255.10  | 3403.    | 763.     |  |
|          | 82/ 3/ 2         | 34.69   | 16.57 | 2.76  | 0.00 | 1.21    | 54.02  | 55.24   | 3496.    | 1350.    |  |
|          | 82/ 3/ 3         | 30.83   | 14.73 | 2.45  | 0.00 | 1.08    | 48.00  | 49.08   | 2408.    | 536.     |  |
| Daylight | 82/ 3/ 4         | 163.49  | 78.10 | 13.02 | 0.00 | 1.22    | 254.61 | 255.83  | 3505.    | 811.     |  |
|          | 82/ 3/ 5         | 30.01   | 14.33 | 2.39  | 0.00 | 1.05    | 46.73  | 47.78   | 2178.    | 468.     |  |
| Daylight | 82/ 3/ 6         | 23.91   | 11.42 | 1.90  | 0.00 | 0.25    | 37.24  | 37.49   | 867.     | 420.     |  |
| No event | 82/ 3/ 7         |         |       |       |      |         |        |         |          |          |  |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                        |               |               |              |            |             |               |               |       |       |
|------------------------|---------------|---------------|--------------|------------|-------------|---------------|---------------|-------|-------|
| Daylight 82/ 3/ 8      | 74.93         | 35.79         | 5.97         | 0.00       | 0.79        | 116.69        | 117.48        | 1650. | 468.  |
| Daylight 82/ 3/ 9      | 102.43        | 48.93         | 8.15         | 0.00       | 1.05        | 159.52        | 160.57        | 2 79. | 504.  |
| Daylight 82/ 3/10      | 161.97        | 77.37         | 12.90        | 0.00       | 1.17        | 252.25        | 253.42        | 3170. | 581.  |
| Daylight 82/ 3/11      | 61.44         | 29.35         | 4.89         | 0.00       | 0.65        | 95.69         | 96.33         | 1443. | 585.  |
| Daylight 82/ 3/12      | 162.94        | 77.84         | 12.97        | 0.00       | 1.20        | 253.76        | 254.46        | 3384. | 1204. |
| Daylight 82/ 3/13      | 65.92         | 31.49         | 5.25         | 0.00       | 1.04        | 102.66        | 103.70        | 2091. | 756.  |
| Daylight 82/ 3/14      | 25.05         | 11.96         | 1.99         | 0.00       | 0.88        | 39.01         | 39.88         | 1779. | 605.  |
| Daylight 82/ 3/15      | 83.93         | 40.09         | 6.68         | 0.00       | 1.25        | 130.70        | 131.95        | 1770. | 745.  |
| Daylight 82/ 3/16      | 178.82        | 85.42         | 14.24        | 0.00       | 0.82        | 278.48        | 279.30        | 1692. | 846.  |
| Daylight 82/ 3/17      | 133.50        | 63.77         | 10.63        | 0.00       | 1.20        | 207.90        | 209.10        | 3164. | 1054. |
| Daylight 82/ 3/18      | 103.00        | 49.21         | 8.20         | 0.00       | 1.05        | 160.41        | 161.47        | 2201. | 1100. |
| Daylight 82/ 3/19      | 72.76         | 34.76         | 5.79         | 0.00       | 0.33        | 113.31        | 113.64        | 985.  | 283.  |
| Daylight 82/ 3/20      | 61.18         | 29.23         | 4.87         | 0.00       | 1.00        | 95.28         | 96.28         | 961.  | 399.  |
| Daylight 82/ 3/21      | 14.04         | 6.71          | 1.12         | 0.00       | 0.49        | 21.87         | 22.36         | 1217. | 204.  |
| Daylight 82/ 3/22      | 105.05        | 50.18         | 8.36         | 0.00       | 1.07        | 163.60        | 164.66        | 2279. | 612.  |
| Daylight 82/ 3/23      | 57.78         | 27.60         | 4.60         | 0.00       | 0.93        | 89.98         | 90.91         | 1848. | 610.  |
| Daylight 82/ 3/24      | 68.94         | 32.93         | 5.49         | 0.00       | 0.72        | 107.36        | 108.08        | 1558. | 539.  |
| Daylight 82/ 3/25      | 103.82        | 49.60         | 8.27         | 0.00       | 0.68        | 161.68        | 162.36        | 1494. | 563.  |
| Daylight 82/ 3/26      | 49.58         | 23.69         | 3.95         | 0.00       | 0.52        | 77.22         | 77.74         | 1261. | 344.  |
| Daylight 82/ 3/27      | 41.11         | 19.64         | 3.27         | 0.00       | 0.66        | 64.02         | 64.67         | 1459. | 374.  |
| Daylight 82/ 3/28      | 26.91         | 12.86         | 2.14         | 0.00       | 0.28        | 41.91         | 42.19         | 913.  | 456.  |
| Daylight 82/ 3/29      | 204.48        | 97.68         | 16.28        | 0.00       | 1.17        | 318.44        | 319.61        | 3113. | 1119. |
| Daylight 82/ 3/30      | 161.57        | 77.18         | 12.86        | 0.00       | 1.16        | 251.61        | 252.78        | 3080. | 699.  |
| Daylight 82/ 3/31      | 210.24        | 100.43        | 16.74        | 0.00       | 1.22        | 327.41        | 328.63        | 3559. | 675.  |
| <b>Month subtotal:</b> | <b>2777.4</b> | <b>1326.7</b> | <b>221.1</b> | <b>0.0</b> | <b>27.3</b> | <b>4325.3</b> | <b>4352.6</b> |       |       |

| Comment           | YR/MO/DY | Flow    |       |      |      |         | Total  | Salmon + Steelhd |         | Ampl | RampRate |
|-------------------|----------|---------|-------|------|------|---------|--------|------------------|---------|------|----------|
|                   |          | Chinook | Pink  | Chum | Coho | Steelhd |        | Salmon           | Steelhd |      |          |
| Daylight 82/ 4/ 1 | 161.62   | 77.21   | 12.87 | 0.00 | 1.16 | 251.69  | 252.85 | 3091.            | 1173.   |      |          |
| 82/ 4/ 2          | 30.55    | 14.59   | 2.43  | 0.00 | 1.07 | 47.57   | 48.64  | 2330.            | 518.    |      |          |
| Daylight 82/ 4/ 3 | 91.70    | 43.81   | 7.30  | 0.00 | 0.60 | 142.81  | 143.41 | 1378.            | 593.    |      |          |
| Daylight 82/ 4/ 4 | 23.70    | 11.32   | 1.89  | 0.00 | 0.11 | 36.91   | 37.02  | 658.             | 320.    |      |          |
| Daylight 82/ 4/ 5 | 158.42   | 75.68   | 12.61 | 0.00 | 1.08 | 246.71  | 247.79 | 2387.            | 476.    |      |          |
| Daylight 82/ 4/ 6 | 161.48   | 77.14   | 12.86 | 0.00 | 1.16 | 251.47  | 252.64 | 3061.            | 1278.   |      |          |
| Daylight 82/ 4/ 7 | 209.58   | 100.12  | 16.69 | 0.00 | 1.22 | 326.38  | 327.60 | 3508.            | 1122.   |      |          |
| Daylight 82/ 4/ 8 | 158.03   | 75.49   | 12.58 | 0.00 | 1.07 | 246.10  | 247.16 | 2300.            | 351.    |      |          |
| Daylight 82/ 4/ 9 | 112.39   | 53.69   | 8.75  | 0.00 | 1.10 | 175.03  | 176.13 | 2559.            | 546.    |      |          |
| Daylight 82/ 4/10 | 0.00     | 0.00    | 0.00  | 0.00 | 0.00 | 0.00    | 0.00   | 464.             | 226.    |      |          |
| No event 82/ 4/11 |          |         |       |      |      |         |        |                  |         |      |          |
| Daylight 82/ 4/12 | 26.91    | 12.86   | 2.14  | 0.00 | 0.28 | 41.91   | 42.19  | 913.             | 320.    |      |          |
| Daylight 82/ 4/13 | 200.62   | 95.84   | 15.97 | 0.00 | 1.13 | 312.43  | 313.56 | 2814.            | 933.    |      |          |
| Daylight 82/ 4/14 | 163.40   | 78.05   | 13.01 | 0.00 | 1.21 | 254.46  | 255.68 | 3484.            | 670.    |      |          |
| Daylight 82/ 4/15 | 163.08   | 77.91   | 12.98 | 0.00 | 1.21 | 253.98  | 255.18 | 3415.            | 816.    |      |          |
| Daylight 82/ 4/16 | 97.25    | 46.46   | 7.74  | 0.00 | 1.26 | 151.45  | 152.71 | 3847.            | 908.    |      |          |
| Daylight 82/ 4/17 | 191.92   | 91.69   | 15.28 | 0.00 | 1.05 | 298.89  | 299.94 | 2141.            | 609.    |      |          |
| Daylight 82/ 4/18 | 2.87     | 1.37    | 0.23  | 0.00 | 0.05 | 4.47    | 4.52   | 567.             | 277.    |      |          |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                        |               |               |              |            |             |               |               |       |      |
|------------------------|---------------|---------------|--------------|------------|-------------|---------------|---------------|-------|------|
| Daylight 82/ 4/19      | 77.19         | 36.88         | 6.14         | 0.00       | 1.12        | 120.22        | 121.34        | 2723. | 483. |
| Daylight 82/ 4/20      | 8.71          | 4.17          | 0.69         | 0.00       | 0.09        | 13.60         | 13.69         | 634.  | 317. |
| 82/ 4/21               | 4.35          | 2.08          | 0.55         | 0.00       | 0.15        | 6.77          | 6.92          | 722.  | 293. |
| Daylight 82/ 4/22      | 90.14         | 43.06         | 7.18         | 0.00       | 0.59        | 140.37        | 140.96        | 1363. | 350. |
| Daylight 82/ 4/23      | 208.31        | 99.51         | 16.58        | 0.00       | 1.20        | 324.41        | 325.62        | 3410. | 931. |
| Daylight 82/ 4/24      | 27.09         | 12.94         | 2.15         | 0.00       | 0.43        | 42.19         | 42.62         | 1132. | 374. |
| Daylight 82/ 4/25      | 195.50        | 95.39         | 15.57        | 0.00       | 1.08        | 304.46        | 305.54        | 2418. | 530. |
| Daylight 82/ 4/26      | 163.92        | 78.31         | 13.05        | 0.00       | 1.23        | 255.28        | 256.51        | 3600. | 403. |
| Daylight 82/ 4/27      | 65.46         | 31.27         | 5.21         | 0.00       | 1.04        | 101.94        | 102.97        | 2065. | 747. |
| Daylight 82/ 4/28      | 164.01        | 78.34         | 13.06        | 0.00       | 1.23        | 255.41        | 256.64        | 3618. | 585. |
| Daylight 82/ 4/29      | 166.27        | 79.43         | 13.24        | 0.00       | 1.29        | 258.94        | 260.24        | 4118. | 945. |
| Daylight 82/ 4/30      | 165.23        | 78.93         | 13.15        | 0.00       | 1.26        | 257.32        | 258.58        | 3888. | 415. |
| <b>Month subtotal:</b> | <b>3289.7</b> | <b>1571.5</b> | <b>261.9</b> | <b>0.0</b> | <b>25.5</b> | <b>5123.2</b> | <b>5148.7</b> |       |      |

| Comment           | YR/MO/DY | Flow    |       |      |      |         | Total Salmon | Salmon + Steelhd | Ampl  | RampRate |
|-------------------|----------|---------|-------|------|------|---------|--------------|------------------|-------|----------|
|                   |          | Chinook | Pink  | Chum | Coho | Steelhd |              |                  |       |          |
| Daylight 82/ 5/ 1 | 160.15   | 76.50   | 12.75 | 0.00 | 1.23 | 249.40  | 250.63       | 3906.            | 732.  |          |
| Daylight 82/ 5/ 2 | 94.00    | 44.91   | 7.48  | 0.00 | 0.62 | 146.39  | 147.00       | 1460.            | 730.  |          |
| Daylight 82/ 5/ 3 | 143.91   | 68.74   | 11.46 | 0.00 | 0.98 | 224.11  | 225.09       | 2469.            | 1045. |          |
| Daylight 82/ 5/ 4 | 194.81   | 93.06   | 15.51 | 0.00 | 1.17 | 303.37  | 304.55       | 4519.            | 1479. |          |
| Daylight 82/ 5/ 5 | 139.97   | 66.87   | 11.14 | 0.00 | 1.08 | 217.98  | 219.07       | 4034.            | 1576. |          |
| Daylight 82/ 5/ 6 | 136.28   | 65.10   | 10.85 | 0.00 | 1.08 | 212.23  | 213.32       | 4439.            | 1676. |          |
| Daylight 82/ 5/ 7 | 131.27   | 62.71   | 10.45 | 0.00 | 1.05 | 204.42  | 205.47       | 4503.            | 1592. |          |
| Daylight 82/ 5/ 8 | 125.89   | 59.18   | 9.86  | 0.00 | 0.95 | 192.93  | 193.88       | 3878.            | 1324. |          |
| Daylight 82/ 5/ 9 | 39.80    | 19.01   | 3.17  | 0.00 | 0.64 | 61.99   | 62.63        | 1792.            | 896.  |          |
| Daylight 82/ 5/10 | 113.04   | 54.00   | 9.00  | 0.00 | 0.85 | 176.04  | 176.89       | 3709.            | 1626. |          |
| Daylight 82/ 5/11 | 106.83   | 51.03   | 8.51  | 0.00 | 0.78 | 166.38  | 167.16       | 3351.            | 1490. |          |
| Daylight 82/ 5/12 | 104.53   | 49.93   | 8.32  | 0.00 | 0.82 | 162.78  | 163.60       | 4331.            | 1735. |          |
| Daylight 82/ 5/13 | 99.79    | 47.67   | 7.94  | 0.00 | 0.80 | 155.40  | 156.20       | 4513.            | 1756. |          |
| Daylight 82/ 5/14 | 61.26    | 29.27   | 4.88  | 0.00 | 0.28 | 95.40   | 95.69        | 1226.            | 512.  |          |
| Daylight 82/ 5/15 | 87.74    | 41.92   | 6.98  | 0.00 | 0.67 | 136.65  | 137.32       | 3874.            | 765.  |          |
| Daylight 82/ 5/16 | 48.97    | 23.39   | 3.90  | 0.00 | 0.70 | 76.26   | 76.95        | 4944.            | 1178. |          |
| Daylight 82/ 5/17 | 78.97    | 37.72   | 6.29  | 0.00 | 0.36 | 122.98  | 123.34       | 1623.            | 378.  |          |
| Daylight 82/ 5/18 | 100.20   | 47.87   | 7.98  | 0.00 | 0.46 | 156.04  | 156.50       | 2147.            | 363.  |          |
| Daylight 82/ 5/19 | 97.51    | 46.58   | 7.76  | 0.00 | 0.45 | 151.85  | 152.27       | 2551.            | 446.  |          |
| Daylight 82/ 5/20 | 75.72    | 36.17   | 6.03  | 0.00 | 0.43 | 117.92  | 118.35       | 2915.            | 715.  |          |
| Daylight 82/ 5/21 | 79.06    | 37.77   | 6.29  | 0.00 | 0.49 | 123.13  | 123.62       | 5090.            | 1174. |          |
| 82/ 5/22          | 13.88    | 6.63    | 1.11  | 0.00 | 0.49 | 21.62   | 22.11        | 6230.            | 1635. |          |
| 82/ 5/23          | 8.46     | 4.04    | 0.67  | 0.00 | 0.29 | 13.17   | 13.47        | 2195.            | 868.  |          |
| Daylight 82/ 5/24 | 56.76    | 27.11   | 4.52  | 0.00 | 0.35 | 88.39   | 89.74        | 4860.            | 1332. |          |
| Daylight 82/ 5/25 | 41.78    | 19.96   | 3.33  | 0.00 | 0.23 | 65.07   | 65.30        | 2071.            | 898.  |          |
| Daylight 82/ 5/26 | 38.78    | 18.53   | 3.09  | 0.00 | 0.22 | 60.40   | 60.63        | 3297.            | 974.  |          |
| Daylight 82/ 5/27 | 27.90    | 13.33   | 2.22  | 0.00 | 0.25 | 43.45   | 43.71        | 6700.            | 1369. |          |
| 82/ 5/28          | 3.89     | 1.86    | 0.31  | 0.00 | 0.14 | 6.06    | 6.20         | 2496.            | 975.  |          |
| Daylight 82/ 5/29 | 15.07    | 7.20    | 1.20  | 0.00 | 0.11 | 23.47   | 23.57        | 2894.            | 595.  |          |
| Daylight 82/ 5/30 | 4.14     | 1.98    | 0.33  | 0.00 | 0.07 | 6.45    | 6.52         | 2294.            | 740.  |          |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |        |        |       |      |      |        |        |       |       |
|-----------------|----------|--------|--------|-------|------|------|--------|--------|-------|-------|
| Daylight        | 82/ 5/31 | 6.16   | 2.94   | 0.49  | 0.00 | 0.03 | 9.60   | 9.63   | 2547. | 1273. |
| Month subtotal: |          | 2434.5 | 1162.0 | 193.8 | 0.0  | 18.1 | 3791.3 | 3809.4 |       |       |

| Comment         | YR/MO/DY | Flow    |      |      |       |         | Total Salmon | Steelhd | Ampl  | RampRate |
|-----------------|----------|---------|------|------|-------|---------|--------------|---------|-------|----------|
|                 |          | Chinook | Pink | Chum | Coho  | Steelhd |              |         |       |          |
|                 | 82/ 7/15 | 0.00    | 0.00 | 0.00 | 0.33  | 40.56   | 0.33         | 40.89   | 5383. | 1381.    |
|                 | 82/ 7/16 | 0.00    | 0.00 | 0.00 | 0.03  | 4.15    | 0.03         | 4.18    | 1029. | 294.     |
|                 | 82/ 7/17 | 0.00    | 0.00 | 0.00 | 1.E-2 | 1.77    | 1.E-2        | 1.78    | 650.  | 314.     |
| No event        | 82/ 7/18 |         |      |      |       |         |              |         |       |          |
| No event        | 82/ 7/19 |         |      |      |       |         |              |         |       |          |
| No event        | 82/ 7/20 |         |      |      |       |         |              |         |       |          |
|                 | 82/ 7/21 | 0.00    | 0.00 | 0.00 | 0.21  | 25.72   | 0.21         | 25.93   | 1437. | 585.     |
|                 | 82/ 7/22 | 0.00    | 0.00 | 0.00 | 0.02  | 3.07    | 0.02         | 3.10    | 598.  | 299.     |
| No event        | 82/ 7/23 |         |      |      |       |         |              |         |       |          |
| No event        | 82/ 7/24 |         |      |      |       |         |              |         |       |          |
| No event        | 82/ 7/25 |         |      |      |       |         |              |         |       |          |
|                 | 82/ 7/26 | 0.00    | 0.00 | 0.00 | 0.18  | 22.26   | 0.18         | 22.44   | 973.  | 168.     |
|                 | 82/ 7/27 | 0.00    | 0.00 | 0.00 | 0.56  | 69.28   | 0.56         | 69.84   | 1859. | 782.     |
|                 | 82/ 7/28 | 0.00    | 0.00 | 0.00 | 0.00  | 0.00    | 0.00         | 0.00    | 230.  | 80.      |
| No event        | 82/ 7/29 |         |      |      |       |         |              |         |       |          |
|                 | 82/ 7/30 | 0.00    | 0.00 | 0.00 | 1.71  | 212.23  | 1.71         | 213.94  | 2721. | 540.     |
|                 | 82/ 7/31 | 0.00    | 0.00 | 0.00 | 0.07  | 9.00    | 0.07         | 9.07    | 635.  | 215.     |
| Month subtotal: |          | 0.0     | 0.0  | 0.0  | 3.1   | 388.0   | 3.1          | 391.2   |       |          |

| Comment  | YR/MO/DY | Flow    |      |      |      |         | Total Salmon | Steelhd | Ampl  | RampRate |
|----------|----------|---------|------|------|------|---------|--------------|---------|-------|----------|
|          |          | Chinook | Pink | Chum | Coho | Steelhd |              |         |       |          |
|          | 82/ 8/ 1 | 0.00    | 0.00 | 0.00 | 0.02 | 3.25    | 0.02         | 3.27    | 546.  | 94.      |
|          | 82/ 8/ 2 | 0.00    | 0.00 | 0.00 | 2.56 | 317.64  | 2.56         | 320.20  | 3149. | 703.     |
|          | 82/ 8/ 3 | 0.00    | 0.00 | 0.00 | 0.96 | 118.97  | 0.96         | 119.92  | 2071. | 519.     |
|          | 82/ 8/ 4 | 0.00    | 0.00 | 0.00 | 0.53 | 65.22   | 0.53         | 65.75   | 1424. | 396.     |
|          | 82/ 8/ 5 | 0.00    | 0.00 | 0.00 | 0.31 | 38.82   | 0.31         | 39.13   | 1050. | 523.     |
|          | 82/ 8/ 6 | 0.00    | 0.00 | 0.00 | 1.41 | 175.18  | 1.41         | 176.59  | 2376. | 611.     |
|          | 82/ 8/ 7 | 0.00    | 0.00 | 0.00 | 0.55 | 68.05   | 0.55         | 68.59   | 1464. | 451.     |
|          | 82/ 8/ 8 | 0.00    | 0.00 | 0.00 | 0.37 | 45.67   | 0.37         | 46.04   | 1147. | 567.     |
|          | 82/ 8/ 9 | 0.00    | 0.00 | 0.00 | 2.28 | 282.81  | 2.28         | 285.09  | 2960. | 978.     |
| No event | 82/ 8/10 |         |      |      |      |         |              |         |       |          |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |      |      |      |      |        |      |        |       |       |
|-----------------|----------|------|------|------|------|--------|------|--------|-------|-------|
|                 | 82/ 9/22 | 0.00 | 0.00 | 0.00 | 0.83 | 103.62 | 0.83 | 104.45 | 3362. | 745.  |
|                 | 82/ 9/23 | 0.00 | 0.00 | 0.00 | 1.01 | 125.88 | 1.01 | 126.89 | 4072. | 1264. |
|                 | 82/ 9/24 | 0.00 | 0.00 | 0.00 | 0.95 | 118.00 | 0.95 | 118.95 | 4260. | 1155. |
|                 | 82/ 9/25 | 0.00 | 0.00 | 0.00 | 0.38 | 46.60  | 0.38 | 46.98  | 2732. | 1175. |
| No event        | 82/ 9/26 |      |      |      |      |        |      |        |       |       |
|                 | 82/ 9/27 | 0.00 | 0.00 | 0.00 | 0.24 | 29.48  | 0.24 | 29.71  | 2665. | 1114. |
|                 | 82/ 9/28 | 0.00 | 0.00 | 0.00 | 0.16 | 19.64  | 0.16 | 19.82  | 2528. | 925.  |
|                 | 82/ 9/29 | 0.00 | 0.00 | 0.00 | 0.08 | 10.16  | 0.08 | 10.24  | 2280. | 701.  |
| <hr/>           |          |      |      |      |      |        |      |        |       |       |
| Month subtotal: |          | 0.0  | 0.0  | 0.0  | 50.4 | 6252.2 | 50.4 | 6302.6 |       |       |

=====
Year total:        8963.1    4281.7    713.6    97.6    12182.4    14056.1    26238.4

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |      |      |      |        |        |        |        |       |
|-----------------|----------|------|------|------|--------|--------|--------|--------|-------|
| 82/ 8/11        | 0.00     | 0.00 | 0.00 | 0.41 | 50.40  | 0.41   | 50.80  | 1214.  | 398.  |
| 82/ 8/12        | 0.00     | 0.00 | 0.00 | 0.44 | 54.00  | 0.44   | 54.43  | 1265.  | 530.  |
| 82/ 8/13        | 0.00     | 0.00 | 0.00 | 3.33 | 413.47 | 3.33   | 416.81 | 3669.  | 934.  |
| No event        | 82/ 8/14 |      |      |      |        |        |        |        |       |
| 82/ 8/15        | 0.00     | 0.00 | 0.00 | 0.00 | 0.00   | 0.00   | 0.00   | 126.   | 31.   |
| 82/ 8/16        | 0.00     | 0.00 | 0.00 | 0.12 | 14.82  | 0.12   | 14.94  | 710.   | 105.  |
| 82/ 8/17        | 0.00     | 0.00 | 0.00 | 4.05 | 502.03 | 4.05   | 506.08 | 4149.  | 679.  |
| 82/ 8/18        | 0.00     | 0.00 | 0.00 | 1.75 | 216.64 | 1.75   | 218.39 | 2601.  | 539.  |
| 82/ 8/19        | 0.00     | 0.00 | 0.00 | 1.88 | 232.86 | 1.88   | 234.74 | 2689.  | 504.  |
| 82/ 8/20        | 0.00     | 0.00 | 0.00 | 3.42 | 424.72 | 3.42   | 428.14 | 3730.  | 648.  |
| 82/ 8/21        | 0.00     | 0.00 | 0.00 | 1.02 | 126.71 | 1.02   | 127.73 | 2113.  | 640.  |
| 82/ 8/22        | 0.00     | 0.00 | 0.00 | 0.25 | 31.55  | 0.25   | 31.81  | 947.   | 363.  |
| 82/ 8/23        | 0.00     | 0.00 | 0.00 | 1.53 | 189.92 | 1.53   | 191.45 | 2456.  | 566.  |
| 82/ 8/24        | 0.00     | 0.00 | 0.00 | 4.09 | 507.02 | 4.09   | 511.11 | 4176.  | 1553. |
| 82/ 8/25        | 0.00     | 0.00 | 0.00 | 4.87 | 604.09 | 4.87   | 608.96 | 4701.  | 1386. |
| 82/ 8/26        | 0.00     | 0.00 | 0.00 | 1.97 | 244.29 | 1.97   | 246.26 | 2751.  | 1074. |
| 82/ 8/27        | 0.00     | 0.00 | 0.00 | 1.61 | 199.50 | 1.61   | 201.11 | 2508.  | 639.  |
| 82/ 8/28        | 0.00     | 0.00 | 0.00 | 0.00 | 0.28   | 0.00   | 0.28   | 504.   | 174.  |
| 82/ 8/29        | 0.00     | 0.00 | 0.00 | 0.64 | 78.77  | 0.64   | 79.41  | 1616.  | 703.  |
| 82/ 8/30        | 0.00     | 0.00 | 0.00 | 1.89 | 234.89 | 1.89   | 236.78 | 2700.  | 1328. |
| 82/ 8/31        | 0.00     | 0.00 | 0.00 | 1.81 | 225.12 | 1.81   | 226.94 | 2647.  | 929.  |
| Month subtotal: |          | 0.0  | 0.0  | 0.0  | 44.1   | 5466.7 | 44.1   | 5510.7 |       |

| Comment  | Flow     |         |      |      |        |         | Total Salmon | Salmon + Steelhd | Ampl  | RampRate |
|----------|----------|---------|------|------|--------|---------|--------------|------------------|-------|----------|
|          | YR/MO/DY | Chinook | Pink | Chum | Coho   | Steelhd |              |                  |       |          |
| 82/ 9/ 1 | 0.00     | 0.00    | 0.00 | 4.14 | 513.75 | 4.14    | 517.89       | 4305.            | 1886. |          |
| 82/ 9/ 2 | 0.00     | 0.00    | 0.00 | 4.09 | 507.00 | 4.09    | 511.09       | 4365.            | 2057. |          |
| 82/ 9/ 3 | 0.00     | 0.00    | 0.00 | 3.47 | 429.73 | 3.47    | 433.20       | 4007.            | 1129. |          |
| 82/ 9/ 4 | 0.00     | 0.00    | 0.00 | 1.72 | 212.77 | 1.72    | 214.48       | 2751.            | 1272. |          |
| 82/ 9/ 5 | 0.00     | 0.00    | 0.00 | 2.36 | 292.53 | 2.36    | 294.89       | 3318.            | 1416. |          |
| 82/ 9/ 6 | 0.00     | 0.00    | 0.00 | 2.79 | 345.49 | 2.79    | 348.28       | 3750.            | 1188. |          |
| 82/ 9/ 7 | 0.00     | 0.00    | 0.00 | 3.24 | 401.84 | 3.24    | 405.08       | 4241.            | 1661. |          |
| 82/ 9/ 8 | 0.00     | 0.00    | 0.00 | 3.11 | 385.09 | 3.11    | 388.20       | 4241.            | 1458. |          |
| 82/ 9/ 9 | 0.00     | 0.00    | 0.00 | 3.08 | 381.47 | 3.08    | 384.55       | 4341.            | 1925. |          |
| 82/ 9/10 | 0.00     | 0.00    | 0.00 | 2.90 | 359.00 | 2.90    | 361.89       | 4300.            | 1798. |          |
| 82/ 9/11 | 0.00     | 0.00    | 0.00 | 2.80 | 346.79 | 2.80    | 349.59       | 4341.            | 1810. |          |
| 82/ 9/12 | 0.00     | 0.00    | 0.00 | 0.00 | 0.00   | 0.00    | 0.00         | 446.             | 218.  |          |
| 82/ 9/13 | 0.00     | 0.00    | 0.00 | 2.47 | 306.64 | 2.47    | 309.11       | 4290.            | 1251. |          |
| 82/ 9/14 | 0.00     | 0.00    | 0.00 | 2.06 | 255.14 | 2.06    | 257.20       | 3950.            | 864.  |          |
| 82/ 9/15 | 0.00     | 0.00    | 0.00 | 2.16 | 268.18 | 2.16    | 270.34       | 4244.            | 1000. |          |
| 82/ 9/16 | 0.00     | 0.00    | 0.00 | 2.06 | 255.71 | 2.06    | 257.77       | 4292.            | 1749. |          |
| 82/ 9/17 | 0.00     | 0.00    | 0.00 | 1.96 | 243.51 | 1.96    | 245.47       | 4350.            | 1219. |          |
| 82/ 9/18 | 0.00     | 0.00    | 0.00 | 0.20 | 24.33  | 0.20    | 24.53        | 1322.            | 661.  |          |
| No event | 82/ 9/19 |         |      |      |        |         |              |                  |       |          |
| 82/ 9/20 | 0.00     | 0.00    | 0.00 | 0.98 | 121.47 | 0.98    | 122.46       | 3283.            | 1554. |          |
| 82/ 9/21 | 0.00     | 0.00    | 0.00 | 1.19 | 148.36 | 1.19    | 149.56       | 3921.            | 643.  |          |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

SUMMARY OF DAY/NIGHT EVENTS FOR SPRING SALMON ONLY  
FOR THE FOLLOWING FLOW REGIME YEARS:

YEAR

-----

82

Daylight events

-----

Number of events

86

Total chinook stranded

8718.31

Total pinks stranded

4164.8

Total chums stranded

694.08

Total cohos stranded

0.

Total salmon stranded (all species)

13577.28

Nighttime events

-----

Number of events

14

Total chinook stranded

244.78

Total pinks stranded

116.91

Total chums stranded

19.48

Total cohos stranded

0.

Total salmon stranded (all species)

381.17

Potholes Stranding and Trapping - Daily Detail with Subtotals  
 ======  
 (Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| flow<br>YR/MO/DY | #Discn | Chinook | Pink | Chum | Coho | Sthd | Total  | Salmon +<br>Steelhd | Begflow | Endflow |
|------------------|--------|---------|------|------|------|------|--------|---------------------|---------|---------|
| 82/ 2/ 1         |        |         |      |      |      |      |        |                     |         |         |
| Flood            |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/ 2         |        |         |      |      |      |      |        |                     |         |         |
| Flood            |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/ 3         |        |         |      |      |      |      |        |                     |         |         |
| Flood            |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/ 4         |        |         |      |      |      |      |        |                     |         |         |
| No event         |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/ 5         |        |         |      |      |      |      |        |                     |         |         |
| Flood            |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/ 6         |        |         |      |      |      |      |        |                     |         |         |
| Flood            |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/ 7         |        |         |      |      |      |      |        |                     |         |         |
| No event         |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/ 8         |        |         |      |      |      |      |        |                     |         |         |
| Flood            |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/ 9         |        |         |      |      |      |      |        |                     |         |         |
| Flood            |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/10         |        |         |      |      |      |      |        |                     |         |         |
| No event         |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/11         |        |         |      |      |      |      |        |                     |         |         |
| No event         |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/12         |        |         |      |      |      |      |        |                     |         |         |
| Flood            |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/13         |        |         |      |      |      |      |        |                     |         |         |
| No event         |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/14         |        |         |      |      |      |      |        |                     |         |         |
| No event         |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/15         |        |         |      |      |      |      |        |                     |         |         |
| No event         |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/16         |        |         |      |      |      |      |        |                     |         |         |
| Flood            |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/17         |        |         |      |      |      |      |        |                     |         |         |
| No event         |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/18         |        |         |      |      |      |      |        |                     |         |         |
| No event         |        |         |      |      |      |      |        |                     |         |         |
| 82/ 2/19         | 0      | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 10430.              | 9630.   |         |
|                  |        | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   |                     |         |         |
| 82/ 2/20         | 0      | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 9750.               | 9750.   |         |
|                  |        | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   |                     |         |         |
| 82/ 2/21         | 0      | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 10790.              | 10160.  |         |
|                  |        | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   |                     |         |         |
| 82/ 2/22         | 0      | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 9430.               | 8910.   |         |
|                  |        | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   |                     |         |         |
| 82/ 2/23         | 0      | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 8910.               | 6265.   |         |
|                  |        | 0.00    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   |                     |         |         |
| 82/ 2/24         | 133    | 30.09   | 0.22 | 0.00 | 0.09 | 0.37 | 30.40  | 30.77               | 8310.   | 4550.   |
|                  |        | 572.57  | 4.10 | 0.00 | 1.76 | 7.03 | 578.42 | 585.44              |         |         |

First line shows STRANDED fish  
Second line shows TRAPPED fish

|                         |     |         |       |      |       |       |         |         |       |       |
|-------------------------|-----|---------|-------|------|-------|-------|---------|---------|-------|-------|
| 82/ 2/25                | 77  | 3.36    | 0.02  | 0.00 | 1.E-2 | 0.04  | 3.39    | 3.43    | 7105. | 5030. |
|                         |     | 363.26  | 2.60  | 0.00 | 1.11  | 4.46  | 366.97  | 371.43  |       |       |
| 82/ 2/26                | 174 | 38.63   | 0.28  | 0.00 | 0.12  | 0.47  | 39.03   | 39.50   | 6090. | 4232. |
|                         |     | 683.77  | 4.89  | 0.00 | 2.10  | 8.39  | 690.76  | 699.15  |       |       |
| 82/ 2/27                | 132 | 40.80   | 0.29  | 0.00 | 0.13  | 0.50  | 41.21   | 41.71   | 5705. | 4094. |
|                         |     | 753.08  | 5.39  | 0.00 | 2.31  | 9.24  | 760.78  | 770.02  |       |       |
| 82/ 2/28                | 50  | 12.59   | 0.09  | 0.00 | 0.04  | 0.5   | 12.72   | 12.87   | 4460. | 4016. |
|                         |     | 305.84  | 2.19  | 0.00 | 0.94  | 3.75  | 308.96  | 312.72  |       |       |
| <b>Month subtotals:</b> |     | 125.47  | 0.90  | 0.00 | 0.39  | 1.54  | 126.75  | 128.29  |       |       |
|                         |     | 2678.51 | 19.17 | 0.00 | 8.22  | 32.87 | 2705.90 | 2738.76 |       |       |

First line shows STRANDED fish  
Second line shows TRAPPED fish

|                  |     |          |        |      |       |        |          |          |       |       |
|------------------|-----|----------|--------|------|-------|--------|----------|----------|-------|-------|
| 82/ 3/20         | 20  | 3.00     | 0.02   | 0.00 | 9.E-3 | 0.04   | 3.04     | 3.07     | 5420. | 5000. |
|                  |     | 277.92   | 1.99   | 0.00 | 0.85  | 3.41   | 280.76   | 284.17   |       |       |
| 82/ 3/21         | 140 | 66.62    | 0.48   | 0.00 | 0.20  | 0.82   | 67.30    | 68.11    | 4970. | 3538. |
|                  |     | 784.75   | 5.62   | 0.00 | 2.41  | 9.63   | 792.78   | 802.41   |       |       |
| 82/ 3/22         | 161 | 69.62    | 0.50   | 0.00 | 0.21  | 0.85   | 70.33    | 71.19    | 5600. | 3562. |
|                  |     | 1112.67  | 7.96   | 0.00 | 3.41  | 13.65  | 1124.04  | 1137.69  |       |       |
| 82/ 3/23         | 154 | 69.06    | 0.49   | 0.00 | 0.21  | 0.85   | 69.77    | 70.61    | 5300. | 3538. |
|                  |     | 1053.94  | 7.54   | 0.00 | 3.23  | 12.93  | 1064.72  | 1077.65  |       |       |
| 82/ 3/24         | 147 | 63.19    | 0.45   | 0.00 | 0.19  | 0.77   | 63.84    | 64.61    | 5270. | 3586. |
|                  |     | 962.09   | 5.89   | 0.00 | 2.95  | 11.81  | 971.93   | 983.73   |       |       |
| 82/ 3/25         | 133 | 60.75    | 0.44   | 0.00 | 0.19  | 0.75   | 61.37    | 62.12    | 5000. | 3610. |
|                  |     | 692.90   | 4.96   | 0.00 | 2.13  | 8.50   | 699.99   | 708.49   |       |       |
| 82/ 3/26         | 123 | 60.42    | 0.43   | 0.00 | 0.19  | 0.74   | 61.04    | 61.78    | 4910. | 3760. |
|                  |     | 561.22   | 4.02   | 0.00 | 1.72  | 6.89   | 566.95   | 573.84   |       |       |
| 82/ 3/27         | 138 | 62.87    | 0.45   | 0.00 | 0.19  | 0.77   | 63.51    | 64.28    | 5150. | 3785. |
|                  |     | 877.25   | 6.28   | 0.00 | 2.69  | 10.76  | 886.22   | 896.98   |       |       |
| 82/ 3/28         | 88  | 35.57    | 0.25   | 0.00 | 0.11  | 0.44   | 35.93    | 36.37    | 5240. | 4430. |
|                  |     | 536.82   | 3.84   | 0.00 | 1.65  | 6.59   | 542.31   | 548.90   |       |       |
| 82/ 3/29         | 211 | 64.64    | 0.46   | 0.00 | 0.20  | 0.79   | 65.30    | 66.09    | 6615. | 3586. |
|                  |     | 1117.12  | 8.00   | 0.00 | 3.43  | 13.71  | 1128.54  | 1142.25  |       |       |
| 82/ 3/30         | 215 | 70.51    | 0.50   | 0.00 | 0.22  | 0.87   | 71.23    | 72.09    | 6475. | 3562. |
|                  |     | 1195.44  | 8.56   | 0.00 | 3.67  | 14.67  | 1207.66  | 1222.33  |       |       |
| 82/ 3/31         | 215 | 70.51    | 0.50   | 0.00 | 0.22  | 0.87   | 71.23    | 72.09    | 7105. | 3542. |
|                  |     | 1195.44  | 8.56   | 0.00 | 3.67  | 14.67  | 1207.66  | 1222.33  |       |       |
| <hr/>            |     |          |        |      |       |        |          |          |       |       |
| Month subtotals: |     | 1064.10  | 7.61   | 0.00 | 3.26  | 13.06  | 1074.98  | 1088.03  |       |       |
|                  |     | 18045.54 | 129.16 | 0.00 | 55.36 | 221.42 | 18230.05 | 18451.47 |       |       |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

|                  |     |          |        |      |       |        |          |          |       |       |
|------------------|-----|----------|--------|------|-------|--------|----------|----------|-------|-------|
| 82/ 4/12         | 0   | 0.00     | 0.00   | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     | 7000. | 6160. |
|                  |     | 0.00     | 0.00   | 0.00 | 0.00  | 0.00   | 0.00     | 0.00     |       |       |
| 82/ 4/13         | 152 | 37.01    | 0.26   | 0.00 | 0.11  | 0.45   | 37.39    | 37.85    | 7670. | 4430. |
|                  |     | 691.85   | 4.95   | 0.00 | 2.12  | 8.49   | 698.92   | 707.41   |       |       |
| 82/ 4/14         | 194 | 50.13    | 0.36   | 0.00 | 0.15  | 0.62   | 50.65    | 51.26    | 7510. | 3964. |
|                  |     | 1008.85  | 7.22   | 0.00 | 3.10  | 12.38  | 1019.17  | 1031.55  |       |       |
| 82/ 4/15         | 194 | 50.13    | 0.36   | 0.00 | 0.15  | 0.62   | 50.65    | 51.26    | 7430. | 3964. |
|                  |     | 1008.85  | 7.22   | 0.00 | 3.10  | 12.38  | 1019.17  | 1031.55  |       |       |
| 82/ 4/16         | 225 | 74.84    | 0.54   | 0.00 | 0.23  | 0.92   | 75.61    | 76.52    | 7140. | 3442. |
|                  |     | 1343.09  | 1.61   | 0.00 | 4.12  | 16.48  | 1356.83  | 1373.31  |       |       |
| 82/ 4/17         | 171 | 73.95    | 0.53   | 0.00 | 0.23  | 0.91   | 74.71    | 75.61    | 5570. | 3466. |
|                  |     | 1260.32  | 9.02   | 0.00 | 3.87  | 15.46  | 1273.21  | 1288.67  |       |       |
| 82/ 4/18         | 76  | 34.59    | 0.25   | 0.00 | 0.11  | 0.42   | 34.94    | 35.37    | 4910. | 4372. |
|                  |     | 257.96   | 1.85   | 0.00 | 0.79  | 3.16   | 260.60   | 263.76   |       |       |
| 82/ 4/19         | 226 | 74.84    | 0.54   | 0.00 | 0.23  | 0.92   | 75.61    | 76.52    | 5880. | 3278. |
|                  |     | 1343.09  | 9.61   | 0.00 | 4.12  | 16.48  | 1356.83  | 1373.31  |       |       |
| 82/ 4/20         | 30  | 21.55    | 0.15   | 0.00 | 0.07  | 0.26   | 21.77    | 22.03    | 4232. | 3710. |
|                  |     | 269.61   | 1.93   | 0.00 | 0.83  | 3.31   | 272.37   | 275.67   |       |       |
| 82/ 4/21         | 39  | 30.13    | 0.22   | 0.00 | 0.09  | 0.37   | 30.44    | 30.81    | 4094. | 3418. |
|                  |     | 451.45   | 3.23   | 0.00 | 1.38  | 5.54   | 456.07   | 461.61   |       |       |
| 82/ 4/22         | 118 | 42.04    | 0.30   | 0.00 | 0.13  | 0.52   | 42.47    | 42.98    | 5210. | 4148. |
|                  |     | 717.54   | 5.14   | 0.00 | 2.20  | 8.80   | 724.88   | 733.68   |       |       |
| 82/ 4/23         | 174 | 43.09    | 0.31   | 0.00 | 0.13  | 0.53   | 43.53    | 44.06    | 7630. | 4204. |
|                  |     | 762.67   | 5.46   | 0.00 | 2.34  | 9.36   | 770.47   | 779.82   |       |       |
| 82/ 4/24         | 68  | 2.13     | 0.01   | 0.00 | 7.E-3 | 0.03   | 2.15     | 2.18     | 6265. | 5150. |
|                  |     | 312.82   | 2.24   | 0.00 | 0.96  | 3.84   | 316.02   | 319.86   |       |       |
| 82/ 4/25         | 199 | 55.02    | 0.39   | 0.00 | 0.17  | 0.68   | 55.59    | 56.26    | 6230. | 3910. |
|                  |     | 1023.96  | 7.33   | 0.00 | 3.14  | 12.56  | 1034.43  | 1047.00  |       |       |
| 82/ 4/26         | 195 | 55.02    | 0.39   | 0.00 | 0.17  | 0.68   | 55.59    | 56.26    | 7210. | 3860. |
|                  |     | 1008.85  | 7.22   | 0.00 | 3.10  | 12.38  | 1019.17  | 1031.55  |       |       |
| 82/ 4/27         | 54  | 0.89     | 6.E-3  | 0.00 | 3.E-3 | 0.01   | 0.90     | 0.91     | 7350. | 5600. |
|                  |     | 82.77    | 0.59   | 0.00 | 0.25  | 1.02   | 83.62    | 84.64    |       |       |
| 82/ 4/28         | 162 | 42.11    | 0.30   | 0.00 | 0.13  | 0.52   | 42.54    | 43.06    | 8110. | 4316. |
|                  |     | 753.03   | 5.39   | 0.00 | 2.31  | 9.24   | 760.73   | 769.97   |       |       |
| 82/ 4/29         | 194 | 50.13    | 0.36   | 0.00 | 0.15  | 0.62   | 50.65    | 51.26    | 8190. | 3964. |
|                  |     | 1008.85  | 7.22   | 0.00 | 3.10  | 12.38  | 1019.17  | 1031.55  |       |       |
| 82/ 4/30         | 215 | 70.51    | 0.50   | 0.00 | 0.22  | 0.87   | 71.23    | 72.09    | 7390. | 3562. |
|                  |     | 1195.44  | 8.56   | 0.00 | 3.67  | 14.67  | 1207.66  | 1222.33  |       |       |
| <hr/>            |     |          |        |      |       |        |          |          |       |       |
| Month subtotals: |     | 1381.79  | 9.89   | 0.00 | 4.24  | 16.95  | 1395.92  | 1412.87  |       |       |
|                  |     | 24377.65 | 174.48 | 0.00 | 74.78 | 299.11 | 24626.91 | 24926.03 |       |       |

| Flow     | YR/MO/DY | #Disconnect | Chinook | Pink  | Chum | Coho  | Sthd  | Total Salmon | Salmon + Steelhd | Begflow | Endflow |
|----------|----------|-------------|---------|-------|------|-------|-------|--------------|------------------|---------|---------|
| 82/ 5/ 1 |          | 203         | 62.30   | 0.45  | 0.00 | 0.19  | 0.76  | 62.94        | 63.71            | 7175.   | 3760.   |
|          |          |             | 1000.02 | 7.16  | 0.00 | 3.07  | 12.27 | 1010.24      | 1022.51          |         |         |
| 82/ 5/ 2 |          | 0           | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00         | 0.00             | 7950.   | 6475.   |
|          |          |             | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00         | 0.00             |         |         |
| 82/ 5/ 3 |          | 54          | 0.80    | 6.E-3 | 0.00 | 2.E-3 | 1.E-2 | 0.81         | 0.82             | 8270.   | 5740.   |
|          |          |             | 75.01   | 0.54  | 0.00 | 0.23  | 0.92  | 75.78        | 76.70            |         |         |
| 82/ 5/ 4 |          | 133         | 31.82   | 0.23  | 0.00 | 0.10  | 0.39  | 32.14        | 32.53            | 9150.   | 4520.   |
|          |          |             | 605.37  | 4.33  | 0.00 | 1.86  | 7.43  | 611.56       | 618.98           |         |         |

First line shows STRANDED fish  
Second line shows TRAPPED fish

First line shows STRANDED fish  
Second line shows TRAPPED fish

-----  
Month subtotals:    354.21    2.54    0.00    1.08    4.35    357.84    362.19  
                    6601.97    47.25    0.00    20.25    81.01    6669.47    6750.48

=====  
Year totals:       2925.6    20.9    0.0    9.0    35.9    2955.5    2991.4  
                    51703.7    370.1    0.0    158.6    634.4    52232.3    52866.7

Gravel Bar Stranding - Daily Detail with Stranding Ranking  
 ======  
 (Results from applying base year stranding data to the indicated flow regime)

| Comment  | YR/MO/DY | Flow   | Total Salmon + Steelhd |       |      |      |         |        | Salmon + Steelhd | Ampl  | RampRate |
|----------|----------|--------|------------------------|-------|------|------|---------|--------|------------------|-------|----------|
|          |          |        | Chinook                | Pink  | Chum | Coho | Steelhd | Salmon |                  |       |          |
| Daylight | 82/ 3/31 | 210.24 | 100.43                 | 16.74 | 0.00 | 1.22 | 327.41  | 328.63 | 3559.            | 675.  |          |
| Daylight | 82/ 4/ 7 | 209.58 | 100.12                 | 16.69 | 0.00 | 1.22 | 326.38  | 327.60 | 3508.            | 1122. |          |
| Daylight | 82/ 4/23 | 208.31 | 99.51                  | 16.58 | 0.00 | 1.20 | 324.41  | 325.62 | 3410.            | 931.  |          |
| Daylight | 82/ 3/29 | 204.48 | 97.68                  | 16.28 | 0.00 | 1.17 | 318.44  | 319.61 | 3113.            | 1119. |          |
| Daylight | 82/ 4/13 | 200.62 | 95.84                  | 15.97 | 0.00 | 1.13 | 312.43  | 313.56 | 2814.            | 933.  |          |
| Daylight | 82/ 4/25 | 195.50 | 93.39                  | 15.57 | 0.00 | 1.08 | 304.46  | 305.54 | 2418.            | 530.  |          |
| Daylight | 82/ 5/ 4 | 194.81 | 93.06                  | 15.51 | 0.00 | 1.17 | 303.37  | 304.55 | 4519.            | 1479. |          |
| Daylight | 82/ 4/17 | 191.92 | 91.69                  | 15.28 | 0.00 | 1.05 | 298.89  | 299.94 | 2141.            | 607.  |          |
| Daylight | 82/ 3/16 | 178.82 | 85.42                  | 14.24 | 0.00 | 0.82 | 278.48  | 279.30 | 1692.            | 846.  |          |
| Daylight | 82/ 4/29 | 166.27 | 79.43                  | 13.24 | 0.00 | 1.29 | 258.94  | 260.24 | 4118.            | 945.  |          |
| Daylight | 82/ 4/30 | 163.23 | 78.93                  | 13.15 | 0.00 | 1.26 | 257.32  | 258.58 | 3888.            | 415.  |          |
| Daylight | 82/ 4/28 | 164.01 | 78.34                  | 13.06 | 0.00 | 1.23 | 255.41  | 256.64 | 3618.            | 585.  |          |
| Daylight | 82/ 4/26 | 163.92 | 78.31                  | 13.05 | 0.00 | 1.23 | 253.28  | 256.51 | 3600.            | 403.  |          |
| Daylight | 82/ 3/ 4 | 163.49 | 78.10                  | 13.02 | 0.00 | 1.22 | 254.61  | 255.83 | 3505.            | 811.  |          |
| Daylight | 82/ 4/14 | 163.40 | 78.05                  | 13.01 | 0.00 | 1.21 | 254.46  | 255.68 | 3484.            | 670.  |          |
| Daylight | 82/ 4/15 | 163.08 | 77.91                  | 12.98 | 0.00 | 1.21 | 253.98  | 255.18 | 3415.            | 816.  |          |
| Daylight | 82/ 3/ 1 | 163.03 | 77.88                  | 12.98 | 0.00 | 1.20 | 253.89  | 255.10 | 3403.            | 763.  |          |
| Daylight | 82/ 3/12 | 162.94 | 77.84                  | 12.97 | 0.00 | 1.20 | 253.76  | 254.96 | 3384.            | 1204. |          |
| Daylight | 82/ 3/10 | 161.97 | 77.37                  | 12.90 | 0.00 | 1.17 | 252.25  | 253.42 | 3170.            | 581.  |          |
| Daylight | 82/ 4/ 1 | 161.62 | 77.21                  | 12.87 | 0.00 | 1.16 | 251.69  | 252.85 | 3091.            | 1173. |          |
| Daylight | 82/ 3/30 | 161.57 | 77.18                  | 12.86 | 0.00 | 1.16 | 251.61  | 252.78 | 3080.            | 699.  |          |
| Daylight | 82/ 4/ 6 | 161.48 | 77.14                  | 12.86 | 0.00 | 1.16 | 251.47  | 252.64 | 3061.            | 1278. |          |
| Daylight | 82/ 5/ 1 | 160.15 | 76.50                  | 12.75 | 0.00 | 1.23 | 249.40  | 250.63 | 3906.            | 732.  |          |
| Daylight | 82/ 4/ 5 | 158.42 | 75.68                  | 12.61 | 0.00 | 1.08 | 246.71  | 247.79 | 2387.            | 476.  |          |
| Daylight | 82/ 4/ 8 | 158.03 | 75.49                  | 12.58 | 0.00 | 1.07 | 246.10  | 247.16 | 2300.            | 351.  |          |
| Daylight | 82/ 5/ 3 | 143.91 | 68.74                  | 11.46 | 0.00 | 0.98 | 224.11  | 225.09 | 2469.            | 1045. |          |
| Daylight | 82/ 5/ 5 | 139.97 | 66.87                  | 11.14 | 0.00 | 1.08 | 217.98  | 219.07 | 4034.            | 1576. |          |
| Daylight | 82/ 5/ 6 | 136.28 | 65.10                  | 10.85 | 0.00 | 1.08 | 212.23  | 213.32 | 4439.            | 1676. |          |
| Daylight | 82/ 2/24 | 135.43 | 64.70                  | 10.78 | 0.00 | 1.01 | 210.91  | 211.92 | 3538.            | 722.  |          |
| Daylight | 82/ 3/17 | 133.50 | 63.77                  | 10.63 | 0.00 | 1.20 | 207.90  | 209.10 | 3364.            | 1054. |          |
| Daylight | 82/ 5/ 7 | 131.27 | 62.71                  | 10.45 | 0.00 | 1.05 | 204.42  | 205.47 | 4503.            | 1592. |          |
| Daylight | 82/ 2/23 | 125.68 | 60.04                  | 10.01 | 0.00 | 0.85 | 195.73  | 196.58 | 2397.            | 798.  |          |
| Daylight | 82/ 5/ 8 | 123.89 | 59.18                  | 9.86  | 0.00 | 0.95 | 192.93  | 193.88 | 3878.            | 1324. |          |
| Daylight | 82/ 2/27 | 116.88 | 55.83                  | 9.30  | 0.00 | 0.77 | 182.03  | 182.79 | 1702.            | 389.  |          |
| Daylight | 82/ 5/10 | 113.04 | 54.00                  | 9.00  | 0.00 | 0.85 | 176.04  | 176.89 | 3709.            | 1626. |          |
| Daylight | 82/ 4/ 9 | 112.39 | 53.69                  | 8.95  | 0.00 | 1.10 | 175.03  | 176.13 | 2559.            | 546.  |          |
| Daylight | 82/ 5/11 | 106.83 | 51.03                  | 8.51  | 0.00 | 0.78 | 166.38  | 167.16 | 3351.            | 1490. |          |
| Daylight | 82/ 3/22 | 105.05 | 50.18                  | 8.36  | 0.00 | 1.07 | 163.60  | 164.66 | 2279.            | 612.  |          |
| Daylight | 82/ 5/12 | 104.53 | 49.93                  | 8.32  | 0.00 | 0.82 | 162.78  | 163.60 | 4331.            | 1735. |          |
| Daylight | 82/ 3/25 | 103.82 | 49.60                  | 8.27  | 0.00 | 0.68 | 161.68  | 162.36 | 1494.            | 563.  |          |
| Daylight | 82/ 3/18 | 103.00 | 49.21                  | 8.20  | 0.00 | 1.05 | 160.41  | 161.47 | 2201.            | 1100. |          |
| Daylight | 82/ 3/ 9 | 102.43 | 48.93                  | 8.15  | 0.00 | 1.05 | 159.52  | 160.57 | 2179.            | 504.  |          |
| Daylight | 82/ 5/18 | 100.20 | 47.87                  | 7.98  | 0.00 | 0.46 | 156.04  | 156.50 | 2147.            | 363.  |          |
| Daylight | 82/ 5/13 | 99.79  | 47.67                  | 7.94  | 0.00 | 0.80 | 155.40  | 156.20 | 4513.            | 1756. |          |
| Daylight | 82/ 4/16 | 97.25  | 46.46                  | 7.74  | 0.00 | 1.26 | 151.45  | 152.71 | 3847.            | 908.  |          |
| Daylight | 82/ 5/19 | 97.51  | 46.58                  | 7.76  | 0.00 | 0.45 | 151.85  | 152.29 | 2551.            | 446.  |          |
| Daylight | 82/ 5/ 2 | 94.00  | 44.91                  | 7.48  | 0.00 | 0.62 | 146.39  | 147.00 | 1460.            | 730.  |          |
| Daylight | 82/ 4/ 3 | 91.70  | 43.81                  | 7.30  | 0.00 | 0.60 | 142.81  | 143.41 | 1378.            | 593.  |          |
| Daylight | 82/ 4/22 | 90.14  | 43.06                  | 7.18  | 0.00 | 0.59 | 140.37  | 140.96 | 1363.            | 350.  |          |
| Daylight | 82/ 5/15 | 87.74  | 41.92                  | 6.98  | 0.00 | 0.67 | 136.65  | 137.32 | 3874.            | 765.  |          |
| Daylight | 82/ 3/15 | 83.93  | 40.09                  | 6.68  | 0.00 | 1.25 | 130.70  | 131.95 | 3770.            | 745.  |          |

**PARAMETERS FOR THIS RUN:**

-----  
04/18/87  
17:04:04

**Slope categories:**

0 to 5%  
> 5% to 10%  
> 10%

**Substrate categories:**

Less than 3 inches  
Greater than 3 inches

**Location codes:**

Upper reach  
Middle reach  
Lower reach

**Flow data was extracted for the following time periods:**

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 82   | 1      | 201     | 331     |
| 82   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

**TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:**

-----  
Rank by stranding using the database column --  
TOTSTR

Daily detail report

Tables will be written for gravel bars and/or potholes as selected.

|          |          |       |       |      |      |      |        |        |       |       |
|----------|----------|-------|-------|------|------|------|--------|--------|-------|-------|
| Daylight | 82/ 5/21 | 79.06 | 37.77 | 6.29 | 0.00 | 0.49 | 123.13 | 123.62 | 5090. | 1174. |
| Daylight | 82/ 5/ 7 | 78.97 | 37.72 | 6.29 | 0.00 | 0.36 | 122.98 | 123.34 | 1623. | 378.  |
| Daylight | 82/ 4/19 | 77.19 | 36.88 | 6.14 | 0.00 | 1.12 | 120.22 | 121.34 | 2723. | 483.  |
| Daylight | 82/ 5/20 | 75.72 | 36.17 | 6.03 | 0.00 | 0.43 | 117.92 | 118.35 | 2915. | 715.  |
| Daylight | 82/ 3/ 8 | 74.93 | 35.79 | 5.97 | 0.00 | 0.79 | 116.69 | 117.48 | 1650. | 468.  |
| Daylight | 82/ 3/19 | 72.76 | 34.76 | 5.79 | 0.00 | 0.33 | 113.31 | 113.64 | 985.  | 283.  |
| Daylight | 82/ 3/24 | 68.94 | 32.93 | 5.49 | 0.00 | 0.72 | 107.36 | 108.08 | 1558. | 539.  |
| Daylight | 82/ 3/13 | 65.92 | 31.49 | 5.25 | 0.00 | 1.04 | 102.66 | 103.79 | 2091. | 756.  |
| Daylight | 82/ 4/27 | 65.46 | 31.27 | 5.21 | 0.00 | 1.04 | 101.94 | 102.97 | 2065. | 747.  |
| Daylight | 82/ 3/11 | 61.44 | 29.35 | 4.89 | 0.00 | 0.65 | 95.69  | 96.33  | 1443. | 585.  |
| Daylight | 82/ 3/20 | 61.18 | 29.23 | 4.87 | 0.00 | 1.00 | 95.28  | 96.28  | 1961. | 399.  |
| Daylight | 82/ 5/ 4 | 61.26 | 29.27 | 4.88 | 0.00 | 0.28 | 95.40  | 95.89  | 1226  | 512.  |
| Daylight | 82/ 3/23 | 57.78 | 27.60 | 4.60 | 0.00 | 0.93 | 89.98  | 90.91  | 1848. | 610.  |
| Daylight | 82/ 5/24 | 56.76 | 27.11 | 4.52 | 0.00 | 0.35 | 88.39  | 88.74  | 4860. | 1332. |
| Daylight | 82/ 3/26 | 49.58 | 23.69 | 3.95 | 0.00 | 0.52 | 77.22  | 77.74  | 1261. | 344.  |
| Daylight | 82/ 5/16 | 48.97 | 23.39 | 3.90 | 0.00 | 0.70 | 76.26  | 76.95  | 4044. | 1178. |
| Daylight | 82/ 5/25 | 41.78 | 19.96 | 3.33 | 0.00 | 0.23 | 65.07  | 65.30  | 2071. | 898.  |
| Daylight | 82/ 3/27 | 41.11 | 19.64 | 3.27 | 0.00 | 0.66 | 64.02  | 64.67  | 1459. | 374.  |
| Daylight | 82/ 5/ 9 | 39.80 | 19.01 | 3.17 | 0.00 | 0.64 | 61.99  | 62.63  | 1792. | 896.  |
| Daylight | 82/ 5/26 | 38.78 | 18.53 | 3.09 | 0.00 | 0.22 | 60.40  | 60.63  | 3297. | 974.  |
|          | 82/ 3/ 2 | 34.69 | 16.57 | 2.76 | 0.00 | 1.21 | 54.02  | 55.24  | 3496. | 1350. |
|          | 82/ 3/ 3 | 30.83 | 14.73 | 2.45 | 0.00 | 1.08 | 48.00  | 49.08  | 2408. | 536.  |
|          | 82/ 4/ 2 | 30.55 | 14.59 | 2.43 | 0.00 | 1.07 | 47.57  | 48.64  | 2330. | 518.  |
|          | 82/ 3/ 5 | 30.01 | 14.33 | 2.39 | 0.00 | 1.05 | 46.73  | 47.78  | 2178. | 468.  |
| Daylight | 82/ 5/27 | 27.90 | 13.33 | 2.22 | 0.00 | 0.25 | 43.45  | 43.71  | 6700. | 1369. |
| Daylight | 82/ 4/24 | 27.09 | 12.94 | 2.15 | 0.00 | 0.43 | 42.19  | 42.62  | 1132. | 374.  |
| Daylight | 82/ 4/12 | 26.91 | 12.86 | 2.14 | 0.00 | 0.28 | 41.91  | 42.19  | 913.  | 320.  |
| Daylight | 82/ 3/28 | 26.91 | 12.86 | 2.14 | 0.00 | 0.28 | 41.91  | 42.19  | 913.  | 456.  |
|          | 82/ 2/25 | 25.66 | 12.25 | 2.04 | 0.00 | 0.40 | 39.95  | 40.85  | 2108. | 425.  |
|          | 82/ 3/14 | 25.05 | 11.96 | 1.99 | 0.00 | 0.88 | 39.01  | 39.08  | 1779. | 605.  |
| Daylight | 82/ 3/ 6 | 23.91 | 11.42 | 1.90 | 0.00 | 0.25 | 37.24  | 37.49  | 867.  | 420.  |
|          | 82/ 2/26 | 23.37 | 11.16 | 1.86 | 0.00 | 0.82 | 36.40  | 37.21  | 1831. | 626.  |
| Daylight | 82/ 4/ 4 | 23.70 | 11.32 | 1.89 | 0.00 | 0.11 | 36.91  | 37.02  | 658.  | 320.  |
| Daylight | 82/ 2/19 | 19.37 | 9.25  | 1.54 | 0.00 | 0.13 | 30.16  | 30.28  | 783.  | 391.  |
| Daylight | 82/ 2/20 | 15.11 | 7.22  | 1.20 | 0.00 | 0.07 | 23.52  | 23.59  | 646.  | 266.  |
| Daylight | 82/ 5/29 | 15.07 | 7.20  | 1.20 | 0.00 | 0.11 | 23.47  | 23.57  | 2894. | 595.  |
|          | 82/ 3/21 | 14.04 | 6.71  | 1.12 | 0.00 | 0.49 | 21.87  | 22.36  | 1217. | 204.  |
|          | 82/ 5/22 | 13.88 | 6.63  | 1.11 | 0.00 | 0.49 | 21.62  | 22.11  | 6230. | 1635. |
| Daylight | 82/ 4/20 | 8.73  | 4.17  | 0.69 | 0.00 | 0.09 | 13.60  | 13.69  | 634.  | 317.  |
|          | 82/ 5/23 | 8.46  | 4.04  | 0.67 | 0.00 | 0.29 | 13.17  | 13.47  | 2195. | 868.  |
| Daylight | 82/ 5/31 | 6.16  | 2.94  | 0.49 | 0.00 | 0.03 | 9.60   | 9.63   | 2547. | 1273. |
|          | 82/ 4/21 | 4.35  | 2.08  | 0.35 | 0.00 | 0.15 | 6.77   | 6.92   | 722.  | 293.  |
| Daylight | 82/ 5/30 | 4.14  | 1.98  | 0.33 | 0.00 | 0.07 | 6.45   | 6.52   | 2294. | 740.  |
|          | 82/ 5/28 | 3.89  | 1.86  | 0.31 | 0.00 | 0.14 | 6.06   | 6.20   | 2496. | 975.  |
| Daylight | 82/ 4/18 | 2.87  | 1.37  | 0.23 | 0.00 | 0.05 | 4.47   | 4.52   | 567.  | 277.  |
|          | 82/ 2/28 | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00   | 381.  | 190.  |
| Daylight | 82/ 4/10 | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00   | 464.  | 226.  |
| Daylight | 82/ 2/21 | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00   | 304.  | 133.  |
|          | 82/ 2/22 | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00   | 378.  | 168.  |

| Comment | Flow<br>YR/MO/DY | Total   |       |      |      |         |        | Salmon + |       |          |
|---------|------------------|---------|-------|------|------|---------|--------|----------|-------|----------|
|         |                  | Chinook | Pink  | Chum | Coho | Steelhd | Salmon | Steelhd  | Ampl  | RampRate |
|         | 82/ 8/25         | 0.00    | 0.00  | 0.00 | 4.87 | 604.09  | 4.87   | 608.96   | 4701. | 1386.    |
|         | 82/ 9/ 1         | 0.00    | 0.00  | 0.00 | 4.14 | 513.75  | 4.14   | 517.89   | 4305. | 1886.    |
|         | 82/ 8/24         | 0.00    | 0.00  | 0.00 | 4.09 | 507.02  | 4.09   | 511.11   | 4176. | 1553.    |
|         | 82/ 9/ 2         | 0.00    | 0.00  | 0.00 | 4.09 | 507.00  | 4.09   | 511.09   | 4365. | 2057.    |
|         | 82/ 8/17         | 0.00    | 0.00  | 0.00 | 4.05 | 502.03  | 4.05   | 506.08   | 4149. | 679.     |
|         | 82/ 9/ 3         | 0.00    | 1.00. | 0.00 | 3.47 | 429.73  | 3.47   | 433.20   | 4007. | 1129.    |
|         | 82/ 8/20         | 0.00    | 0.00  | 0.00 | 3.42 | 424.72  | 3.42   | 428.14   | 3730. | 648.     |
|         | 82/ 8/13         | 0.00    | 0.00  | 0.00 | 3.33 | 413.47  | 3.33   | 416.81   | 3664. | 934.     |
|         | 82/ 9/ 7         | 0.00    | 0.00  | 0.00 | 3.24 | 401.84  | 3.24   | 405.08   | 4241. | 1661.    |
|         | 82/ 9/ 8         | 0.00    | 0.00  | 0.00 | 3.11 | 385.09  | 3.11   | 388.20   | 4241. | 1458.    |
|         | 82/ 9/ 9         | 0.00    | 0.00  | 0.00 | 3.08 | 381.47  | 3.08   | 384.55   | 4341. | 1925.    |
|         | 82/ 9/10         | 0.00    | 0.00  | 0.00 | 2.90 | 359.00  | 2.90   | 361.89   | 4300. | 1798.    |
|         | 82/ 9/11         | 0.00    | 0.00  | 0.00 | 2.80 | 346.79  | 2.80   | 349.59   | 4341. | 1810.    |
|         | 82/ 9/ 6         | 0.00    | 0.00  | 0.00 | 2.79 | 345.49  | 2.79   | 348.28   | 3750. | 1188.    |
|         | 82/ 8/ 2         | 0.00    | 0.00  | 0.00 | 2.56 | 317.64  | 2.56   | 320.20   | 3149. | 703.     |
|         | 82/ 9/13         | 0.00    | 0.00  | 0.00 | 2.47 | 306.64  | 2.47   | 309.11   | 4290. | 1251.    |
|         | 82/ 9/ 5         | 0.00    | 0.00  | 0.00 | 2.36 | 292.53  | 2.36   | 294.89   | 3318. | 1416.    |
|         | 82/ 8/ 9         | 0.00    | 0.00  | 0.00 | 2.28 | 282.81  | 2.28   | 285.09   | 2960. | 978.     |
|         | 82/ 9/15         | 0.00    | 0.00  | 0.00 | 2.16 | 268.18  | 2.16   | 270.34   | 4244. | 1000.    |
|         | 82/ 9/16         | 0.00    | 0.00  | 0.00 | 2.06 | 255.71  | 2.06   | 257.77   | 4292. | 1749.    |
|         | 82/ 9/14         | 0.00    | 0.00  | 0.00 | 2.06 | 255.14  | 2.06   | 257.20   | 3950. | 864.     |
|         | 82/ 8/26         | 0.00    | 0.00  | 0.00 | 1.97 | 244.29  | 1.97   | 246.26   | 2751. | 1074.    |
|         | 82/ 9/17         | 0.00    | 0.00  | 0.00 | 1.96 | 243.51  | 1.96   | 245.47   | 4350. | 1219.    |
|         | 82/ 8/30         | 0.00    | 0.00  | 0.00 | 1.89 | 234.89  | 1.89   | 236.78   | 2700. | 1328.    |
|         | 82/ 8/19         | 0.00    | 0.00  | 0.00 | 1.88 | 232.86  | 1.88   | 234.74   | 2689. | 504.     |
|         | 82/ 8/31         | 0.00    | 0.00  | 0.00 | 1.81 | 225.12  | 1.81   | 226.94   | 2647. | 929.     |
|         | 82/ 8/18         | 0.00    | 0.00  | 0.00 | 1.75 | 216.64  | 1.75   | 218.39   | 2601. | 539.     |
|         | 82/ 9/ 4         | 0.00    | 0.00  | 0.00 | 1.72 | 212.77  | 1.72   | 214.48   | 2751. | 1272.    |
|         | 82/ 7/30         | 0.00    | 0.00  | 0.00 | 1.71 | 212.23  | 1.71   | 213.94   | 2721. | 540.     |
|         | 82/ 8/27         | 0.00    | 0.00  | 0.00 | 1.61 | 199.50  | 1.61   | 201.11   | 2508. | 639.     |
|         | 82/ 8/23         | 0.00    | 0.00  | 0.00 | 1.53 | 189.92  | 1.53   | 191.45   | 2456. | 566.     |
|         | 82/ 8/ 6         | 0.00    | 0.00  | 0.00 | 1.41 | 175.18  | 1.41   | 176.59   | 2376. | 611.     |
|         | 82/ 9/21         | 0.00    | 0.00  | 0.00 | 1.19 | 148.36  | 1.19   | 149.56   | 3921. | 643.     |
|         | 82/ 8/21         | 0.00    | 0.00  | 0.00 | 1.02 | 126.71  | 1.02   | 127.73   | 2113. | 640.     |
|         | 82/ 9/23         | 0.00    | 0.00  | 0.00 | 1.01 | 125.88  | 1.01   | 126.89   | 4072. | 1264.    |
|         | 82/ 9/20         | 0.00    | 0.00  | 0.00 | 0.98 | 121.47  | 0.98   | 122.46   | 3283. | 1554.    |
|         | 82/ 8/ 3         | 0.00    | 0.00  | 0.00 | 0.96 | 118.97  | 0.96   | 119.92   | 2071. | 519.     |
|         | 82/ 9/24         | 0.00    | 0.00  | 0.00 | 0.95 | 118.00  | 0.95   | 118.95   | 4260. | 1155.    |
|         | 82/ 9/22         | 0.00    | 0.00  | 0.00 | 0.83 | 103.62  | 0.83   | 104.45   | 3362. | 745.     |
|         | 82/ 8/29         | 0.00    | 0.00  | 0.00 | 0.64 | 78.77   | 0.64   | 79.41    | 1616. | 703.     |
|         | 82/ 7/27         | 0.00    | 0.00  | 0.00 | 0.56 | 69.28   | 0.56   | 69.84    | 1859. | 782.     |
|         | 82/ 8/ 7         | 0.00    | 0.00  | 0.00 | 0.55 | 68.05   | 0.55   | 68.59    | 1464. | 451.     |
|         | 82/ 8/ 4         | 0.00    | 0.00  | 0.00 | 0.53 | 65.22   | 0.53   | 65.75    | 1424. | 396.     |
|         | 82/ 8/12         | 0.00    | 0.00  | 0.00 | 0.44 | 54.00   | 0.44   | 54.43    | 1265. | 530.     |

|          |      |      |      |       |       |       |       |       |       |
|----------|------|------|------|-------|-------|-------|-------|-------|-------|
| 82/ 8/11 | 0.00 | 0.00 | 0.00 | 0.41  | 50.40 | 0.41  | 50.80 | 1214. | 398.  |
| 82/ 9/25 | 0.00 | 0.00 | 0.00 | 0.38  | 46.60 | 0.38  | 46.98 | 2732. | 1175. |
| 82/ 8/ 8 | 0.00 | 0.00 | 0.00 | 0.37  | 45.67 | 0.37  | 46.04 | 1147. | 567.  |
| 82/ 7/15 | 0.00 | 0.00 | 0.00 | 0.33  | 40.56 | 0.33  | 40.89 | 5383. | 1381. |
| 82/ 8/ 5 | 0.00 | 0.00 | 0.00 | 0.31  | 38.82 | 0.31  | 39.13 | 1050. | 525.  |
| 82/ 8/22 | 0.00 | 0.00 | 0.00 | 0.25  | 31.55 | 0.25  | 31.81 | 947.  | 363.  |
| 82/ 9/27 | 0.00 | 0.00 | 0.00 | 0.24  | 29.48 | 0.24  | 29.71 | 2665. | 1114. |
| 82/ 7/21 | 0.00 | 0.00 | 0.00 | 0.21  | 25.72 | 0.21  | 25.93 | 1437. | 583.  |
| 82/ 9/18 | 0.00 | 0.00 | 0.00 | 0.20  | 24.33 | 0.20  | 24.53 | 1322. | 661.  |
| 82/ 7/26 | 0.00 | 0.00 | 0.00 | 0.18  | 22.26 | 0.18  | 22.44 | 973.  | 168.  |
| 82/ 7/28 | 0.00 | 0.00 | 0.00 | 0.16  | 19.66 | 0.16  | 19.82 | 2528. | 925.  |
| 82/ 8/16 | 0.00 | 0.00 | 0.00 | 0.12  | 14.82 | 0.12  | 14.94 | 710.  | 105.  |
| 82/ 9/29 | 0.00 | 0.00 | 0.00 | 0.08  | 10.16 | 0.08  | 10.24 | 2280. | 701.  |
| 82/ 7/31 | 0.00 | 0.00 | 0.00 | 0.07  | 9.00  | 0.07  | 9.07  | 635.  | 215.  |
| 82/ 7/16 | 0.00 | 0.00 | 0.00 | 0.03  | 4.15  | 0.03  | 4.18  | 1029. | 294.  |
| 82/ 8/ 1 | 0.00 | 0.00 | 0.00 | 0.02  | 3.25  | 0.02  | 3.27  | 546.  | 94.   |
| 82/ 7/22 | 0.00 | 0.00 | 0.00 | 0.02  | 3.07  | 0.02  | 3.10  | 598.  | 299.  |
| 82/ 7/17 | 0.00 | 0.00 | 0.00 | 1.E-2 | 1.77  | 1.E-2 | 1.78  | 450.  | 314.  |
| 82/ 8/28 | 0.00 | 0.00 | 0.00 | 0.00  | 0.28  | 0.00  | 0.28  | 504.  | 174.  |
| 82/ 9/12 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 0.00  | 446.  | 218.  |
| 82/ 8/15 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 0.00  | 126.  | 31.   |
| 82/ 7/28 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 0.00  | 230.  | 80.   |

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Potholes Stranding and Trapping - Daily Detail with Stranding Ranking  
 ======  
 (Results of applying base year data to the indicate flow regime)

First line shows STRANDED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Disconnect | Total   |      |      |      |       |         | Salmon + Steelhead |       |       | Beginflow | Endflow |
|------------------|-------------|---------|------|------|------|-------|---------|--------------------|-------|-------|-----------|---------|
|                  |             | Chinook | Pink | Chum | Coho | Sthhd | Salmon  | Steelhd            |       |       |           |         |
| 8/ / 5           | 225         | 74.84   | 0.54 | 0.00 | 0.23 | 0.92  | 75.61   | 76.52              | 5950. | 3442. |           |         |
|                  |             | 1343.09 | 9.61 | 0.00 | 4.12 | 16.48 | 1356.83 | 1373.31            |       |       |           |         |
| 82/ 4/19         | 226         | 74.84   | 0.54 | 0.00 | 0.23 | 0.92  | 75.61   | 76.52              | 5880. | 3278. |           |         |
|                  |             | 1343.09 | 9.61 | 0.00 | 4.12 | 16.48 | 1356.83 | 1373.31            |       |       |           |         |
| 82/ 4/16         | 225         | 74.84   | 0.54 | 0.00 | 0.23 | 0.92  | 75.61   | 76.52              | 7140. | 3442. |           |         |
|                  |             | 1343.09 | 9.61 | 0.00 | 4.12 | 16.48 | 1356.83 | 1373.31            |       |       |           |         |
| 82/ 4/ 6         | 225         | 74.84   | 0.54 | 0.00 | 0.23 | 0.92  | 75.61   | 76.52              | 6405. | 3418. |           |         |
|                  |             | 1343.09 | 9.61 | 0.00 | 4.12 | 16.48 | 1356.83 | 1373.31            |       |       |           |         |
| 82/ 4/ 7         | 225         | 74.84   | 0.54 | 0.00 | 0.23 | 0.92  | 75.61   | 76.52              | 6755. | 3418. |           |         |
|                  |             | 1343.09 | 9.61 | 0.00 | 4.12 | 16.48 | 1356.83 | 1373.31            |       |       |           |         |
| 82/ 4/17         | 171         | 75.95   | 0.53 | 0.00 | 0.23 | 0.91  | 74.71   | 75.61              | 5570. | 3466. |           |         |
|                  |             | 1260.32 | 9.02 | 0.00 | 3.87 | 15.46 | 1273.21 | 1288.67            |       |       |           |         |
| 82/ 4/ 1         | 219         | 70.51   | 0.50 | 0.00 | 0.22 | 0.87  | 71.23   | 72.09              | 6475. | 3514. |           |         |
|                  |             | 1208.97 | 8.65 | 0.00 | 3.71 | 14.93 | 1221.33 | 1236.16            |       |       |           |         |
| 82/ 3/31         | 215         | 70.51   | 0.50 | 0.00 | 0.22 | 0.87  | 71.23   | 72.09              | 7105. | 3562. |           |         |
|                  |             | 1195.44 | 8.56 | 0.00 | 3.67 | 14.67 | 1207.66 | 1222.33            |       |       |           |         |
| 82/ 4/30         | 215         | 70.51   | 0.50 | 0.00 | 0.22 | 0.87  | 71.23   | 72.09              | 7390. | 3562. |           |         |
|                  |             | 1195.44 | 8.56 | 0.00 | 3.67 | 14.67 | 1207.66 | 1222.33            |       |       |           |         |
| 82/ 4/ 2         | 223         | 70.51   | 0.50 | 0.00 | 0.22 | 0.87  | 71.23   | 72.09              | 5740. | 3490. |           |         |
|                  |             | 1208.97 | 8.65 | 0.00 | 3.71 | 14.83 | 1221.33 | 1236.16            |       |       |           |         |
| 82/ 3/30         | 215         | 70.51   | 0.50 | 0.00 | 0.22 | 0.87  | 71.23   | 72.09              | 6475. | 3562. |           |         |
|                  |             | 1195.44 | 8.56 | 0.00 | 3.67 | 14.67 | 1207.66 | 1222.33            |       |       |           |         |
| 82/ 3/22         | 161         | 69.62   | 0.50 | 0.00 | 0.21 | 0.85  | 70.33   | 71.19              | 5600. | 3562. |           |         |
|                  |             | 1112.67 | 7.96 | 0.00 | 3.41 | 13.65 | 1124.04 | 1137.69            |       |       |           |         |
| 82/ 3/23         | 154         | 69.06   | 0.49 | 0.00 | 0.21 | 0.85  | 69.77   | 70.61              | 5300. | 3538. |           |         |
|                  |             | 1053.94 | 7.54 | 0.00 | 3.23 | 12.93 | 1064.72 | 1077.65            |       |       |           |         |
| 82/ 3/21         | 140         | 66.62   | 0.48 | 0.00 | 0.20 | 0.82  | 67.30   | 68.11              | 4970. | 3538. |           |         |
|                  |             | 784.75  | 5.62 | 0.00 | 2.41 | 9.63  | 792.78  | 802.41             |       |       |           |         |
| 82/ 4/ 9         | 204         | 64.64   | 0.46 | 0.00 | 0.20 | 0.79  | 65.30   | 66.09              | 6125. | 3710. |           |         |
|                  |             | 1032.28 | 7.39 | 0.00 | 3.17 | 12.67 | 1042.83 | 1055.50            |       |       |           |         |
| 82/ 3/29         | 211         | 64.64   | 0.46 | 0.00 | 0.20 | 0.79  | 65.30   | 66.09              | 6615. | 3586. |           |         |
|                  |             | 1117.12 | 8.00 | 0.00 | 3.43 | 13.71 | 1128.54 | 1142.25            |       |       |           |         |
| 82/ 3/24         | 147         | 63.19   | 0.45 | 0.00 | 0.19 | 0.77  | 63.84   | 64.61              | 5270. | 3586. |           |         |
|                  |             | 962.09  | 6.89 | 0.00 | 2.95 | 11.81 | 971.93  | 983.73             |       |       |           |         |
| 82/ 3/27         | 138         | 52.87   | 0.45 | 0.00 | 0.19 | 0.77  | 63.51   | 64.28              | 5150. | 3785. |           |         |
|                  |             | 877.25  | 6.28 | 0.00 | 2.69 | 10.76 | 886.22  | 896.98             |       |       |           |         |
| 82/ 5/ 1         | 203         | 62.30   | 0.45 | 0.00 | 0.19 | 0.76  | 62.94   | 63.71              | 7175. | 3760. |           |         |
|                  |             | 1000.02 | 7.16 | 0.00 | 3.07 | 12.27 | 1010.24 | 1022.51            |       |       |           |         |
| 82/ 3/25         | 133         | 60.75   | 0.44 | 0.00 | 0.19 | 0.75  | 61.37   | 62.12              | 5000. | 3610. |           |         |
|                  |             | 692.90  | 4.96 | 0.00 | 2.13 | 8.50  | 699.99  | 708.49             |       |       |           |         |
| 82/ 3/26         | 123         | 60.42   | 0.43 | 0.00 | 0.19 | 0.74  | 61.04   | 61.78              | 4910. | 3760. |           |         |
|                  |             | 561.22  | 4.02 | 0.00 | 1.72 | 6.89  | 566.95  | 573.84             |       |       |           |         |
| 82/ 4/26         | 195         | 55.02   | 0.39 | 0.00 | 0.17 | 0.68  | 55.59   | 56.26              | 7210. | 3860. |           |         |
|                  |             | 1008.85 | 7.22 | 0.00 | 3.10 | 12.38 | 1019.17 | 1031.55            |       |       |           |         |
| 82/ 4/25         | 199         | 55.02   | 0.39 | 0.00 | 0.17 | 0.68  | 55.59   | 56.26              | 6230. | 3810. |           |         |
|                  |             | 1023.96 | 7.33 | 0.00 | 3.14 | 12.56 | 1034.43 | 1047.00            |       |       |           |         |
| 82/ 5/ 5         | 211         | 54.54   | 0.39 | 0.00 | 0.17 | 0.67  | 55.10   | 55.77              | 7590. | 3610. |           |         |
|                  |             | 942.57  | 6.75 | 0.00 | 2.89 | 11.56 | 952.21  | 963.77             |       |       |           |         |

First line shows STRANDED fish  
 Second Line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Disconnects | Total   |      |      |      |       |         | Salmon + Steelhead |         |         |
|------------------|--------------|---------|------|------|------|-------|---------|--------------------|---------|---------|
|                  |              | Chinook | Pink | Chum | Coho | Sthd  | Salmon  | Steelhd            | Begflow | Endflow |
| 82/ 3/14         | - 141        | 54.14   | 0.39 | 0.00 | 0.17 | 0.66  | 54.69   | 55.35              | 5670.   | 3886.   |
|                  |              | 926.08  | 6.63 | 0.00 | 2.84 | 11.36 | 935.55  | 946.91             |         |         |
| 82/ 4/ 3         | 132          | 53.38   | 0.38 | 0.00 | 0.16 | 0.66  | 54.13   | 54.78              | 5150.   | 3835.   |
|                  |              | 853.83  | 6.11 | 0.00 | 2.62 | 10.48 | 862.56  | 873.03             |         |         |
| 82/ 5/ 6         | 203          | 50.26   | 0.37 | 0.00 | 0.16 | 0.64  | 52.79   | 53.43              | 7910.   | 3760.   |
|                  |              | 838.72  | 6.00 | 0.00 | 2.57 | 10.29 | 847.30  | 857.59             |         |         |
| 82/ 5/ 7         | 203          | 50.25   | 0.36 | 0.00 | 0.15 | 0.62  | 50.76   | 51.38              | 8190.   | 3760.   |
|                  |              | 806.47  | 5.77 | 0.00 | 2.47 | 9.90  | 814.71  | 824.61             |         |         |
| 82/ 4/14         | 194          | 50.13   | 0.36 | 0.00 | 0.15 | 0.62  | 50.65   | 51.26              | 7510.   | 3964.   |
|                  |              | 1008.85 | 7.22 | 0.00 | 3.10 | 12.38 | 1019.17 | 1031.55            |         |         |
| 82/ 4/29         | 194          | 50.13   | 0.36 | 0.00 | 0.15 | 0.62  | 50.65   | 51.26              | 8190.   | 3964.   |
|                  |              | 1008.85 | 7.22 | 0.00 | 3.10 | 12.38 | 1019.17 | 1031.55            |         |         |
| 82/ 4/15         | 194          | 50.13   | 0.36 | 0.00 | 0.15 | 0.62  | 50.65   | 51.26              | 7430.   | 3964.   |
|                  |              | 1008.85 | 7.22 | 0.00 | 3.10 | 12.38 | 1019.17 | 1031.55            |         |         |
| 82/ 5/ 8         | 211          | 48.48   | 0.35 | 0.00 | 0.15 | 0.60  | 48.98   | 49.57              | 7430.   | 3635.   |
|                  |              | 837.84  | 6.00 | 0.00 | 2.57 | 10.28 | 846.41  | 856.68             |         |         |
| 82/ 3/12         | 186          | 44.71   | 0.22 | 0.00 | 0.14 | 0.55  | 45.16   | 45.71              | 7390.   | 4068.   |
|                  |              | 891.64  | 6.38 | 0.00 | 2.75 | 10.94 | 900.76  | 911.70             |         |         |
| 82/ 3/ 4         | 174          | 43.09   | 0.31 | 0.00 | 0.13 | 0.53  | 43.53   | 44.06              | 7790.   | 4260.   |
|                  |              | 762.67  | 5.46 | 0.00 | 2.34 | 9.36  | 770.47  | 779.82             |         |         |
| 82/ 4/23         | 174          | 43.09   | 0.31 | 0.00 | 0.13 | 0.53  | 43.53   | 44.06              | 7630.   | 4294.   |
|                  |              | 762.67  | 5.46 | 0.00 | 2.24 | 9.36  | 770.47  | 779.82             |         |         |
| 82/ 3/10         | 162          | 42.11   | 0.30 | 0.00 | 0.13 | 0.52  | 42.54   | 43.06              | 7035.   | 4316.   |
|                  |              | 753.03  | 5.39 | 0.00 | 2.31 | 9.24  | 760.73  | 769.97             |         |         |
| 82/ 4/28         | 162          | 42.11   | 0.30 | 0.00 | 0.13 | 0.52  | 42.54   | 43.06              | 8110.   | 4316.   |
|                  |              | 753.03  | 5.39 | 0.00 | 2.31 | 9.24  | 760.73  | 769.97             |         |         |
| 82/ 3/ 2         | 162          | 42.11   | 0.30 | 0.00 | 0.13 | 0.52  | 42.54   | 43.06              | 7870.   | 4316.   |
|                  |              | 753.03  | 5.39 | 0.00 | 2.31 | 9.24  | 760.73  | 769.97             |         |         |
| 82/ 4/22         | 118          | 42.04   | 0.30 | 0.00 | 0.13 | 0.52  | 42.47   | 42.98              | 5210.   | 4148.   |
|                  |              | 717.54  | 5.14 | 0.00 | 2.20 | 8.80  | 724.88  | 733.68             |         |         |
| 82/ 2/27         | 132          | 40.80   | 0.29 | 0.00 | 0.13 | 0.50  | 41.21   | 41.71              | 5705.   | 4094.   |
|                  |              | 753.08  | 5.39 | 0.00 | 2.31 | 9.24  | 760.78  | 770.02             |         |         |
| 82/ 2/26         | 174          | 38.63   | 0.28 | 0.00 | 0.12 | 0.47  | 39.03   | 39.50              | 6090.   | 4232.   |
|                  |              | 683.77  | 4.89 | 0.00 | 2.10 | 8.39  | 690.76  | 699.15             |         |         |
| 82/ 4/13         | 152          | 37.01   | 0.26 | 0.00 | 0.11 | 0.45  | 37.39   | 37.85              | 7670.   | 4430.   |
|                  |              | 891.85  | 4.95 | 0.00 | 2.12 | 8.49  | 698.92  | 707.41             |         |         |
| 82/ 4/ 8         | 152          | 37.01   | 0.26 | 0.00 | 0.11 | 0.45  | 37.39   | 37.85              | 6580.   | 4400.   |
|                  |              | 691.85  | 4.95 | 0.00 | 2.12 | 8.49  | 698.92  | 707.41             |         |         |
| 82/ 3/ 1         | 142          | 36.36   | 0.25 | 0.00 | 0.11 | 0.45  | 36.73   | 37.18              | 7790.   | 4460.   |
|                  |              | 691.85  | 4.95 | 0.00 | 2.12 | 8.49  | 698.92  | 707.41             |         |         |
| 82/ 3/28         | 88           | 35.57   | 0.25 | 0.00 | 0.11 | 0.44  | 35.93   | 36.37              | 5240.   | 4470.   |
|                  |              | 536.82  | 5.84 | 0.00 | 1.65 | 6.59  | 542.31  | 548.90             |         |         |
| 82/ 4/19         | 76           | 34.59   | 0.25 | 0.00 | 0.11 | 0.42  | 34.94   | 35.37              | 4910.   | 4372.   |
|                  |              | 257.96  | 1.85 | 0.00 | 0.79 | 3.16  | 260.60  | 263.76             |         |         |
| 82/ 4/ 4         | 57           | 33.08   | 0.24 | 0.00 | 0.10 | 0.41  | 33.41   | 33.82              | 5210.   | 4790.   |
|                  |              | 517.22  | 3.70 | 0.00 | 1.59 | 6.35  | 522.50  | 528.85             |         |         |
| 82/ 3/17         | 118          | 32.92   | 0.24 | 0.00 | 0.10 | 0.40  | 32.25   | 33.66              | 6930.   | 4820.   |
|                  |              | 658.75  | 4.72 | 0.00 | 2.02 | 8.08  | 665.48  | 673.56             |         |         |
| 82/ 3/18         | 116          | 32.43   | 0.23 | 0.00 | 0.10 | 0.40  | 32.76   | 33.16              | 6580.   | 4880.   |
|                  |              | 658.42  | 4.71 | 0.00 | 2.02 | 8.08  | 665.15  | 673.23             |         |         |
| 82/ 3/ 6         | 64           | 32.03   | 0.23 | 0.00 | 0.10 | 0.39  | 32.36   | 32.75              | 5570.   | 4820.   |
|                  |              | 575.97  | 4.12 | 0.00 | 1.77 | 7.07  | 581.86  | 588.93             |         |         |

First line shows STRANDED fish

Second line shows TRAPPED fish

First line shows STRANDED fish  
Second line shows TRAPPED fish

Table 8 Gravel bar and pothole stranding and trapping estimates produced by SKAGMDL for 1981.

PARAMETERS FOR THIS RUN:

-----  
04/16/87  
7:28:17

Slope categories:

0 to 5%  
> 5% to 10%  
> 10%

Substrate categories:

Less than 3 inches  
Greater than 3 inches

Location codes:

Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 81   | 1      | 201     | 531     |
| 81   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

-----  
Chronological order

Monthly totals only

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Monthly Detail with Subtotal:

(Results of applying base year stranding data to the indicated flow regime)

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum  | Coho | Steelhd | Total  | Salmon +<br>Steelhd |
|---------------|--------|---------|------|-------|------|---------|--------|---------------------|
| 81/ 2         | 1      | 37.54   | 0.00 | 3.01  | 0.00 | 0.57    | 40.56  | 41.13               |
| 81/ 2         | 2      | 51.86   | 0.00 | 4.15  | 0.00 | 0.97    | 56.02  | 57.00               |
| 81/ 2         | 3      | 293.59  | 0.00 | 23.57 | 0.00 | 3.43    | 317.15 | 320.58              |
| 81/ 2         | 4      | 43.33   | 0.00 | 3.48  | 0.00 | 0.65    | 44.81  | 47.46               |
| 81/ 2         | 5      | 17.34   | 0.00 | 1.39  | 0.00 | 0.33    | 18.73  | 19.06               |
| 81/ 2         | 6      | 29.49   | 0.00 | 2.37  | 0.00 | 0.41    | 31.85  | 32.27               |
| 81/ 2         | 7      | 8.41    | 0.00 | 0.67  | 0.00 | 0.11    | 9.08   | 9.20                |
| 81/ 2         | 8      | 4.64    | 0.00 | 0.37  | 0.00 | 0.09    | 5.01   | 5.11                |
| 81/ 2         | 9      | 75.70   | 0.00 | 6.08  | 0.00 | 0.88    | 81.78  | 82.66               |
| 81/ 2         | 10     | 18.43   | 0.00 | 1.48  | 0.00 | 0.26    | 19.91  | 20.17               |
| 81/ 2         | 11     | 6.07    | 0.00 | 0.49  | 0.00 | 0.12    | 6.56   | 6.68                |
| 81/ 2         | 12     | 30.52   | 0.00 | 2.45  | 0.00 | 0.36    | 32.97  | 33.33               |
| 81/ 2         | 13     | 3.26    | 0.00 | 0.26  | 0.00 | 0.03    | 3.52   | 3.55                |
| 81/ 2         | 14     | 0.37    | 0.00 | 0.03  | 0.00 | 1.E-2   | 0.40   | 0.41                |
| 81/ 2         | 15     | 25.48   | 0.00 | 2.04  | 0.00 | 0.30    | 27.53  | 27.83               |
| 81/ 2         | 16     | 4.03    | 0.00 | 0.32  | 0.00 | 0.03    | 4.35   | 4.38                |
| 81/ 2         | 17     | 0.25    | 0.00 | 0.02  | 0.00 | 1.E-2   | 0.26   | 0.27                |
| 81/ 2         | 18     | 9.98    | 0.00 | 0.80  | 0.00 | 0.11    | 10.77  | 10.89               |
| <hr/>         |        |         |      |       |      |         |        |                     |
| Month total:  |        | 660.3   | 0.0  | 53.0  | 0.0  | 8.7     | 713.3  | 722.0               |

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum  | Coho | Steelhd | Total   | Salmon +<br>Steelhd |
|---------------|--------|---------|------|-------|------|---------|---------|---------------------|
| 81/ 3         | 1      | 68.26   | 0.00 | 5.48  | 0.00 | 1.10    | 73.74   | 74.84               |
| 81/ 3         | 2      | 197.39  | 0.00 | 15.84 | 0.00 | 1.98    | 213.24  | 215.12              |
| 81/ 3         | 3      | 1003.81 | 0.00 | 80.57 | 0.00 | 6.47    | 1084.39 | 1090.86             |
| 81/ 3         | 4      | 78.29   | 0.00 | 6.29  | 0.00 | 1.27    | 84.58   | 85.85               |
| 81/ 3         | 5      | 66.82   | 0.00 | 5.36  | 0.00 | 0.64    | 72.19   | 72.82               |
| 81/ 3         | 6      | 152.43  | 0.00 | 12.23 | 0.00 | 0.88    | 164.66  | 165.54              |
| 81/ 3         | 7      | 12.80   | 0.00 | 1.03  | 0.00 | 0.24    | 13.83   | 14.07               |
| 81/ 3         | 8      | 24.77   | 0.00 | 1.99  | 0.00 | 0.20    | 26.76   | 26.96               |
| 81/ 3         | 9      | 254.47  | 0.00 | 20.43 | 0.00 | 1.65    | 274.90  | 276.55              |
| 81/ 3         | 10     | 30.69   | 0.00 | 2.46  | 0.00 | 0.53    | 33.16   | 33.69               |
| 81/ 3         | 11     | 27.44   | 0.00 | 2.20  | 0.00 | 0.24    | 29.65   | 29.89               |
| 81/ 3         | 12     | 107.26  | 0.00 | 8.61  | 0.00 | 0.69    | 115.87  | 116.56              |
| 81/ 3         | 13     | 2.41    | 0.00 | 0.19  | 0.00 | 0.08    | 2.61    | 2.69                |
| 81/ 3         | 14     | 6.23    | 0.00 | 0.50  | 0.00 | 0.03    | 6.72    | 6.76                |
| 81/ 3         | 15     | 89.57   | 0.00 | 7.19  | 0.00 | 0.57    | 96.76   | 97.32               |
| 81/ 3         | 16     | 2.98    | 0.00 | 0.24  | 0.00 | 0.10    | 3.22    | 3.32                |
| 81/ 3         | 17     | 4.16    | 0.00 | 0.33  | 0.00 | 0.02    | 4.49    | 4.51                |
| 81/ 3         | 18     | 31.19   | 0.00 | 2.50  | 0.00 | 0.21    | 33.70   | 33.90               |
| <hr/>         |        |         |      |       |      |         |         |                     |
| Month total:  |        | 2161.0  | 0.0  | 173.4 | 0.0  | 16.8    | 2334.5  | 2351.2              |

| Flow         |        |         |      |        |      |         |                        |
|--------------|--------|---------|------|--------|------|---------|------------------------|
| YR/MO        | GBType | Chinook | Pink | Chum   | Coho | Steelhd | Total Salmon + Steelhd |
| 81/ 4        | 1      | 112.99  | 0.00 | 9.07   | 0.00 | 1.48    | 122.05 123.54          |
| 81/ 4        | 2      | 430.05  | 0.00 | 34.52  | 0.00 | 2.55    | 464.57 467.11          |
| 81/ 4        | 3      | 1415.15 | 0.00 | 113.59 | 0.00 | 8.89    | 1528.74 1537.63        |
| 81/ 4        | 4      | 130.11  | 0.00 | 10.44  | 0.00 | 1.71    | 140.54 142.26          |
| 81/ 4        | 5      | 144.31  | 0.00 | 11.58  | 0.00 | 0.86    | 155.89 156.74          |
| 81/ 4        | 6      | 182.45  | 0.00 | 14.64  | 0.00 | 1.12    | 197.10 198.22          |
| 81/ 4        | 7      | 23.79   | 0.00 | 1.91   | 0.00 | 0.31    | 25.69 26.00            |
| 81/ 4        | 8      | 42.97   | 0.00 | 3.45   | 0.00 | 0.25    | 46.42 46.67            |
| 81/ 4        | 9      | 361.49  | 0.00 | 29.02  | 0.00 | 2.27    | 390.51 392.78          |
| 81/ 4        | 10     | 53.74   | 0.00 | 4.31   | 0.00 | 0.69    | 58.05 58.75            |
| 81/ 4        | 11     | 53.07   | 0.00 | 4.26   | 0.00 | 0.31    | 57.33 57.65            |
| 81/ 4        | 12     | 149.34  | 0.00 | 11.99  | 0.00 | 0.94    | 161.38 162.32          |
| 81/ 4        | 13     | 7.66    | 0.00 | 0.61   | 0.00 | 0.09    | 8.27 8.36              |
| 81/ 4        | 14     | 6.09    | 0.00 | 0.49   | 0.00 | 0.03    | 6.58 6.62              |
| 81/ 4        | 15     | 124.74  | 0.00 | 10.01  | 0.00 | 0.78    | 134.75 135.53          |
| 81/ 4        | 16     | 9.46    | 0.00 | 0.76   | 0.00 | 0.11    | 10.22 10.33            |
| 81/ 4        | 17     | 4.97    | 0.00 | 0.33   | 0.00 | 0.02    | 4.40 4.42              |
| 81/ 4        | 18     | 45.80   | 0.00 | 3.68   | 0.00 | 0.29    | 49.48 49.76            |
| <hr/>        |        |         |      |        |      |         |                        |
| Month total: |        | 3297.3  | 0.0  | 264.7  | 0.0  | 22.7    | 3562.0 3584.7          |

| Flow         |        |         |      |       |      |         |                        |
|--------------|--------|---------|------|-------|------|---------|------------------------|
| YR/MO        | GBType | Chinook | Pink | Chum  | Coho | Steelhd | Total Salmon + Steelhd |
| 81/ 5        | 1      | 55.64   | 0.00 | 4.46  | 0.00 | 0.62    | 60.10 60.72            |
| 81/ 5        | 2      | 120.97  | 0.00 | 9.71  | 0.00 | 1.06    | 130.68 131.74          |
| 81/ 5        | 3      | 577.80  | 0.00 | 46.38 | 0.00 | 3.70    | 624.17 627.88          |
| 81/ 5        | 4      | 64.48   | 0.00 | 5.17  | 0.00 | 0.71    | 69.65 70.36            |
| 81/ 5        | 5      | 40.77   | 0.00 | 3.27  | 0.00 | 0.35    | 44.04 44.40            |
| 81/ 5        | 6      | 78.94   | 0.00 | 6.74  | 0.00 | 0.45    | 85.28 85.74            |
| 81/ 5        | 7      | 13.96   | 0.00 | 1.11  | 0.00 | 0.12    | 14.97 15.09            |
| 81/ 5        | 8      | 13.60   | 0.00 | 1.09  | 0.00 | 0.10    | 14.69 14.79            |
| 81/ 5        | 9      | 147.22  | 0.00 | 11.82 | 0.00 | 0.95    | 159.03 159.99          |
| 81/ 5        | 10     | 28.89   | 0.00 | 2.31  | 0.00 | 0.28    | 31.20 31.49            |
| 81/ 5        | 11     | 15.85   | 0.00 | 1.27  | 0.00 | 0.13    | 17.13 17.25            |
| 81/ 5        | 12     | 61.24   | 0.00 | 4.92  | 0.00 | 0.39    | 66.16 66.55            |
| 81/ 5        | 13     | 6.80    | 0.00 | 0.55  | 0.00 | 0.05    | 7.35 7.38              |
| 81/ 5        | 14     | 2.74    | 0.00 | 0.22  | 0.00 | 1.E-2   | 2.96 2.97              |
| 81/ 5        | 15     | 51.14   | 0.00 | 4.11  | 0.00 | 0.32    | 55.24 55.57            |
| 81/ 5        | 16     | 8.40    | 0.00 | 0.67  | 0.00 | 0.04    | 9.08 9.12              |
| 81/ 5        | 17     | 1.87    | 0.00 | 0.15  | 0.00 | 1.E-2   | 1.98 1.98              |
| 81/ 5        | 18     | 18.45   | 0.00 | 1.48  | 0.00 | 0.12    | 19.93 20.05            |
| <hr/>        |        |         |      |       |      |         |                        |
| Month total: |        | 1308.6  | 0.0  | 105.0 | 0.0  | 9.4     | 1413.6 1423.1          |

| Flow  |        |         |      |      |      |         |                        |
|-------|--------|---------|------|------|------|---------|------------------------|
| YR/MO | GBType | Chinook | Pink | Chum | Coho | Steelhd | Total Salmon + Steelhd |
| 81/ 7 | 1      | 0.00    | 0.00 | 0.00 | 0.55 | 68.36   | 0.55 68.91             |

|              |    |      |      |      |      |        |      |        |
|--------------|----|------|------|------|------|--------|------|--------|
| 81/ 7        | 1  | 0.00 | 0.00 | 0.00 | 0.94 | 117.18 | 0.94 | 118.13 |
| 81/ 7        | 2  | 0.00 | 0.00 | 0.10 | 3.48 | 431.81 | 3.48 | 435.09 |
| 81/ 7        | 3  | 0.00 | 0.00 | 0.00 | 2.83 | 351.19 | 2.83 | 354.02 |
| 81/ 7        | 4  | 0.00 | 0.00 | 0.00 | 1.41 | 175.59 | 1.41 | 177.01 |
| 81/ 7        | 5  | 0.00 | 0.00 | 0.00 | 0.17 | 21.65  | 0.17 | 21.82  |
| 81/ 7        | 6  | 0.00 | 0.00 | 0.00 | 0.95 | 117.95 | 0.95 | 118.90 |
| 81/ 7        | 7  | 0.00 | 0.00 | 0.00 | 0.79 | 98.29  | 0.79 | 99.08  |
| 81/ 7        | 8  | 0.00 | 0.00 | 0.00 | 0.45 | 56.12  | 0.45 | 56.57  |
| 81/ 7        | 9  | 0.00 | 0.00 | 0.00 | 0.11 | 14.22  | 0.11 | 14.33  |
| 81/ 7        | 10 | 0.00 | 0.00 | 0.00 | 0.05 | 6.40   | 0.05 | 6.45   |
| 81/ 7        | 11 | 0.00 | 0.00 | 0.00 | 0.22 | 26.82  | 0.22 | 27.04  |
| 81/ 7        | 12 | 0.00 | 0.00 | 0.00 | 0.26 | 31.73  | 0.26 | 31.98  |
| 81/ 7        | 13 | 0.00 | 0.00 | 0.00 | 0.10 | 12.59  | 0.10 | 12.79  |
| 81/ 7        | 14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00   |
| 81/ 7        | 15 | 0.00 | 0.00 | 0.00 | 0.52 | 63.94  | 0.52 | 64.46  |
| 81/ 7        | 16 | 0.00 | 0.00 | 0.00 | 0.11 | 13.82  | 0.11 | 13.94  |
| 81/ 7        | 17 | 0.00 | 0.00 | 0.00 | 0.03 | 4.08   | 0.03 | 4.12   |
| <hr/>        |    |      |      |      |      |        |      |        |
| Month total: |    | 0.0  | 0.0  | 0.0  | 13.0 | 1611.6 | 13.0 | 1624.6 |

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum | Coho  | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|--------|---------|------|------|-------|---------|-----------------|---------------------|
| 81/ 8         | 1      | 0.00    | 0.00 | 0.00 | 1.63  | 202.09  | 1.63            | 203.72              |
| 81/ 8         | 2      | 0.00    | 0.00 | 0.00 | 2.79  | 346.45  | 2.79            | 349.24              |
| 81/ 8         | 3      | 0.00    | 0.00 | 0.00 | 10.28 | 1275.11 | 10.28           | 1285.39             |
| 81/ 8         | 4      | 0.00    | 0.00 | 0.00 | 8.36  | 1037.05 | 8.36            | 1045.41             |
| 81/ 8         | 5      | 0.00    | 0.00 | 0.00 | 4.18  | 518.52  | 4.18            | 522.71              |
| 81/ 8         | 6      | 0.00    | 0.00 | 0.00 | 0.31  | 63.99   | 0.31            | 64.50               |
| 81/ 8         | 7      | 0.00    | 0.00 | 0.00 | 2.81  | 348.55  | 2.81            | 351.35              |
| 81/ 8         | 8      | 0.00    | 0.00 | 0.00 | 2.34  | 290.45  | 2.34            | 292.80              |
| 81/ 8         | 9      | 0.00    | 0.00 | 0.00 | 1.34  | 165.79  | 1.34            | 167.12              |
| 81/ 8         | 10     | 0.00    | 0.00 | 0.00 | 0.34  | 42.05   | 0.34            | 42.39               |
| 81/ 8         | 11     | 0.00    | 0.00 | 0.00 | 0.15  | 18.93   | 0.15            | 19.08               |
| 81/ 8         | 12     | 0.00    | 0.00 | 0.00 | 0.64  | 79.32   | 0.64            | 79.96               |
| 81/ 8         | 13     | 0.00    | 0.00 | 0.00 | 0.75  | 93.69   | 0.75            | 94.44               |
| 81/ 8         | 14     | 0.00    | 0.00 | 0.00 | 0.30  | 37.47   | 0.30            | 37.78               |
| 81/ 8         | 15     | 0.00    | 0.00 | 0.00 | 0.00  | 0.00    | 0.00            | 0.00                |
| 81/ 8         | 16     | 0.00    | 0.00 | 0.00 | 1.52  | 188.92  | 1.52            | 190.44              |
| 81/ 8         | 17     | 0.00    | 0.00 | 0.00 | 0.33  | 40.85   | 0.33            | 41.17               |
| 81/ 8         | 18     | 0.00    | 0.00 | 0.00 | 0.11  | 13.52   | 0.11            | 13.63               |
| <hr/>         |        |         |      |      |       |         |                 |                     |
| Month total:  |        | 0.0     | 0.0  | 0.0  | 38.4  | 4762.8  | 38.4            | 4801.1              |

| Flow<br>YR/MO | GBType | Chinook | Pink | Chum | Coho | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd |
|---------------|--------|---------|------|------|------|---------|-----------------|---------------------|
| 81/ 9         | 1      | 0.00    | 0.00 | 0.00 | 0.35 | 43.41   | 0.35            | 43.76               |
| 81/ 9         | 2      | 0.00    | 0.00 | 0.00 | 0.60 | 74.41   | 0.60            | 75.01               |
| 81/ 9         | 3      | 0.00    | 0.00 | 0.00 | 1.01 | 124.96  | 1.01            | 125.97              |
| 81/ 9         | 4      | 0.00    | 0.00 | 0.00 | 0.17 | 21.73   | 0.17            | 21.91               |
| 81/ 9         | 5      | 0.00    | 0.00 | 0.00 | 0.09 | 10.87   | 0.09            | 10.95               |
| 81/ 9         | 6      | 0.00    | 0.00 | 0.00 | 0.10 | 12.45   | 0.10            | 12.55               |

|              |    |      |      |      |      |       |      |       |
|--------------|----|------|------|------|------|-------|------|-------|
| 81/ 9        | 7  | 0.00 | 0.00 | 0.00 | 0.59 | 48.04 | 0.79 | 48.43 |
| 81/ 9        | 8  | 0.00 | 0.00 | 0.00 | 0.72 | 40.03 | 0.32 | 40.35 |
| 81/ 9        | 9  | 0.00 | 0.00 | 0.00 | 0.12 | 15.56 | 0.12 | 15.69 |
| 81/ 9        | 10 | 0.00 | 0.00 | 0.00 | 0.10 | 12.73 | 0.10 | 12.83 |
| 81/ 9        | 11 | 0.00 | 0.00 | 0.00 | 0.05 | 5.73  | 0.05 | 5.78  |
| 81/ 9        | 12 | 0.00 | 0.00 | 0.00 | 0.17 | 20.55 | 0.17 | 20.72 |
| 81/ 9        | 13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.66  | 0.00 | 0.67  |
| 81/ 9        | 14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.26  | 0.00 | 0.27  |
| 81/ 9        | 15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  |
| 81/ 9        | 16 | 0.00 | 0.00 | 0.00 | 0.16 | 19.83 | 0.16 | 19.99 |
| 81/ 9        | 17 | 0.00 | 0.00 | 0.00 | 0.03 | 4.29  | 0.03 | 4.32  |
| 81/ 9        | 18 | 0.00 | 0.00 | 0.00 | 0.04 | 4.88  | 0.04 | 4.92  |
| <hr/>        |    |      |      |      |      |       |      |       |
| Month total: |    | 0.0  | 0.0  | 0.0  | 3.7  | 460.4 | 3.7  | 464.1 |

Potholes Stranding and Trapping - Monthly Detail with Subtotals  
===== ===== ===== ===== ===== ===== =====  
(Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
Second line shows TRAPPED fish

| Flow<br>YR/MO       | #Discard | Total          |              |            |             |              | Salmon +<br>Steelhd |                |
|---------------------|----------|----------------|--------------|------------|-------------|--------------|---------------------|----------------|
|                     |          | Chinook        | Pink         | Chum       | Coho        | Steelhd      | Salmon              | Steelhd        |
| 81/ 2               | 296      | 159.06         | 1.14         | 0.00       | 0.49        | 1.95         | 160.68              | 162.64         |
|                     |          | 2434.82        | 17.43        | 0.00       | 7.47        | 29.88        | 2459.71             | 2489.59        |
| 81/ 3               | 2362     | 969.01         | 6.93         | 0.00       | 2.97        | 11.89        | 978.92              | 990.80         |
|                     |          | 15035.89       | 107.62       | 0.00       | 46.12       | 184.49       | 15189.63            | 15374.12       |
| 81/ 4               | 829      | 154.89         | 1.11         | 0.00       | 0.47        | 1.90         | 156.48              | 158.38         |
|                     |          | 3637.69        | 26.04        | 0.00       | 11.16       | 44.63        | 3674.88             | 3719.52        |
| 81/ 5               | 269      | 347.50         | 2.50         | 0.00       | 1.07        | 4.29         | 353.08              | 357.37         |
|                     |          | 6311.50        | 45.17        | 0.00       | 19.36       | 77.44        | 6376.04             | 6453.48        |
| <b>Year totals:</b> |          | <b>1632.5</b>  | <b>11.7</b>  | <b>0.0</b> | <b>5.0</b>  | <b>20.0</b>  | <b>1649.2</b>       | <b>1669.2</b>  |
|                     |          | <b>27419.9</b> | <b>196.3</b> | <b>0.0</b> | <b>94.1</b> | <b>336.4</b> | <b>27700.3</b>      | <b>28036.7</b> |

PARAMETERS FOR THIS RUN:

-----  
04/16/87  
7:51:28

Slope categories:

0 to 5%  
5% to 10%  
> 10%

Substrate categories:

Less than 3 inches  
Greater than 3 inches

Location codes:

Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 81   | 1      | 201     | 531     |
| 81   | 2      | 715     | 959     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

-----  
Chronological order

Season totals only

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Season Totals

=====

(Results of applying base year stranding data to the indicated flow regime)

| Flow | Year                     | Seas | GBType | Chinook | Pink   | Chum   | Coho  | Steelhd | Total   | Salmon  | Salmon + Steelhd |
|------|--------------------------|------|--------|---------|--------|--------|-------|---------|---------|---------|------------------|
|      | 81                       | 1    | 1      | 274.43  | 0.00   | 22.02  | 0.00  | 3.77    | 296.46  | 300.22  |                  |
|      | 81                       | 1    | 2      | 800.27  | 0.00   | 64.24  | 0.00  | 6.47    | 864.51  | 870.97  |                  |
|      | 81                       | 1    | 3      | 3290.34 | 0.00   | 264.10 | 0.00  | 22.49   | 3554.46 | 3576.95 |                  |
|      | 81                       | 1    | 4      | 316.20  | 0.00   | 25.38  | 0.00  | 4.34    | 341.58  | 345.92  |                  |
|      | 81                       | 1    | 5      | 269.24  | 0.00   | 21.61  | 0.00  | 2.17    | 290.85  | 293.02  |                  |
|      | 81                       | 1    | 6      | 443.31  | 0.00   | 35.58  | 0.00  | 2.87    | 478.89  | 481.77  |                  |
|      | 81                       | 1    | 7      | 58.05   | 0.00   | 4.72   | 0.00  | 0.78    | 63.58   | 64.36   |                  |
|      | 81                       | 1    | 8      | 85.98   | 0.00   | 6.89   | 0.00  | 0.65    | 92.88   | 93.53   |                  |
|      | 81                       | 1    | 9      | 838.89  | 0.00   | 67.34  | 0.00  | 5.74    | 906.22  | 911.97  |                  |
|      | 81                       | 1    | 10     | 131.75  | 0.00   | 10.57  | 0.00  | 1.77    | 142.32  | 144.10  |                  |
|      | 81                       | 1    | 11     | 102.44  | 0.00   | 8.22   | 0.00  | 0.80    | 110.67  | 111.47  |                  |
|      | 81                       | 1    | 12     | 348.42  | 0.00   | 27.97  | 0.00  | 2.37    | 376.39  | 378.76  |                  |
|      | 81                       | 1    | 13     | 20.13   | 0.00   | 1.62   | 0.00  | 0.23    | 21.75   | 21.97   |                  |
|      | 81                       | 1    | 14     | 15.43   | 0.00   | 1.24   | 0.00  | 0.09    | 16.67   | 16.76   |                  |
|      | 81                       | 1    | 15     | 290.94  | 0.00   | 23.05  | 0.00  | 1.98    | 314.29  | 316.26  |                  |
|      | 81                       | 1    | 16     | 24.87   | 0.00   | 2.00   | 0.00  | 0.29    | 26.87   | 27.16   |                  |
|      | 81                       | 1    | 17     | 10.71   | 0.00   | 0.83   | 0.00  | 0.06    | 11.13   | 11.20   |                  |
|      | 81                       | 1    | 18     | 105.42  | 0.00   | 9.46   | 0.00  | 0.73    | 115.88  | 114.60  |                  |
|      | <b>Season subtotals:</b> |      |        |         | 7427.2 | 0.0    | 596.1 | 0.0     | 57.6    | 8023.4  | 8081.0           |
|      |                          | 81   | 2      | 1       | 0.00   | 0.00   | 0.00  | 2.53    | 313.86  | 2.53    | 316.39           |
|      |                          | 81   | 2      | 2       | 0.00   | 0.00   | 0.00  | 4.34    | 538.05  | 4.34    | 542.38           |
|      |                          | 81   | 2      | 3       | 0.00   | 0.00   | 0.00  | 14.77   | 1831.68 | 14.77   | 1846.45          |
|      |                          | 81   | 2      | 4       | 0.00   | 0.00   | 0.00  | 11.37   | 1409.97 | 11.37   | 1421.34          |
|      |                          | 81   | 2      | 5       | 0.00   | 0.00   | 0.00  | 5.68    | 704.98  | 5.68    | 710.67           |
|      |                          | 81   | 2      | 6       | 0.00   | 0.00   | 0.00  | 0.79    | 98.08   | 0.79    | 98.87            |
|      |                          | 81   | 2      | 7       | 0.00   | 0.00   | 0.00  | 4.15    | 514.54  | 4.15    | 518.68           |
|      |                          | 81   | 2      | 8       | 0.00   | 0.00   | 0.00  | 3.46    | 428.78  | 3.46    | 432.24           |
|      |                          | 81   | 2      | 9       | 0.00   | 0.00   | 0.00  | 1.91    | 237.47  | 1.91    | 239.38           |
|      |                          | 81   | 2      | 10      | 0.00   | 0.00   | 0.00  | 0.56    | 69.00   | 0.56    | 69.55            |
|      |                          | 81   | 2      | 11      | 0.00   | 0.00   | 0.00  | 0.25    | 31.06   | 0.25    | 31.31            |
|      |                          | 81   | 2      | 12      | 0.00   | 0.00   | 0.00  | 1.02    | 126.69  | 1.02    | 127.72           |
|      |                          | 81   | 2      | 13      | 0.00   | 0.00   | 0.00  | 1.02    | 126.08  | 1.02    | 127.09           |
|      |                          | 81   | 2      | 14      | 0.00   | 0.00   | 0.00  | 0.40    | 50.43   | 0.40    | 50.84            |
|      |                          | 81   | 2      | 15      | 0.00   | 0.00   | 0.00  | 0.00    | 0.00    | 0.00    | 0.00             |
|      |                          | 81   | 2      | 16      | 0.00   | 0.00   | 0.00  | 2.20    | 272.69  | 2.20    | 274.88           |
|      |                          | 81   | 2      | 17      | 0.00   | 0.00   | 0.00  | 0.48    | 58.96   | 0.48    | 59.43            |
|      |                          | 81   | 2      | 18      | 0.00   | 0.00   | 0.00  | 0.18    | 22.48   | 0.18    | 22.66            |
|      | <b>Season subtotals:</b> |      |        |         | 0.0    | 0.0    | 0.0   | 55.1    | 6834.8  | 55.1    | 6889.9           |

Potholes Stranding and Trapping - Season Totals

=====

(Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
Second line shows TRAPPED fish

| Flow<br>Year # | Disconnect |         |       |      |      |         |         | Total   | Salmon +<br>Steelhd |
|----------------|------------|---------|-------|------|------|---------|---------|---------|---------------------|
|                |            | Chinook | Pink  | Chum | Coho | Steelhd | Salmon  |         |                     |
| 81             | 6656       | 1632.5  | 11.7  | 0.0  | 5.0  | 20.0    | 1649.2  | 1669.2  |                     |
|                |            | 27419.9 | 196.3 | 0.0  | 84.1 | 334.4   | 27700.3 | 28034.7 |                     |

PARAMETERS FOR THIS RUN:

-----  
04/18/87  
13:54:19

Slope categories:

0 to 5%  
> 5% to 10%  
> 10%

Substrate categories:

Less than 3 inches  
Greater than 3 inches

Location codes:

Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 81   | 1      | 201     | 521     |
| 81   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

-----  
Chronological order

Daily detail report

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Daily Detail with Subtotals  
 ======  
 (Results of applying base year stranding data to the indicated flow regime)

| Comment         | YR/MO/DY | Flow    |      |       |      |         | Total Salmon | Salmon + Steelhd | Ampl  | RampRate |
|-----------------|----------|---------|------|-------|------|---------|--------------|------------------|-------|----------|
|                 |          | Chinook | Pink | Chum  | Coho | Steelhd |              |                  |       |          |
| No event        | 81/ 2/ 1 |         |      |       |      |         |              |                  |       |          |
| Daylight        | 81/ 2/ 2 | 3.42    | 0.00 | 0.27  | 0.00 | 0.03    | 3.69         | 3.72             | 1032. | 444.     |
| Daylight        | 81/ 2/ 3 | 7.17    | 0.00 | 0.58  | 0.00 | 0.11    | 7.74         | 7.86             | 1632. | 456.     |
| Daylight        | 81/ 2/ 4 | 9.44    | 0.00 | 0.76  | 0.00 | 0.15    | 10.20        | 10.35            | 1618. | 500.     |
| Daylight        | 81/ 2/ 5 | 13.50   | 0.00 | 1.08  | 0.00 | 0.21    | 14.58        | 14.80            | 1779. | 596.     |
| Daylight        | 81/ 2/ 6 | 0.00    | 0.00 | 0.00  | 0.00 | 0.01    | 0.00         | 0.00             | 413.  | 195.     |
| No event        | 81/ 2/ 7 |         |      |       |      |         |              |                  |       |          |
| No event        | 81/ 2/ 8 |         |      |       |      |         |              |                  |       |          |
|                 | 81/ 2/ 9 | 1.38    | 0.00 | 0.11  | 0.00 | 0.05    | 1.49         | 1.54             | 659.  | 299.     |
| Daylight        | 81/ 2/10 | 47.61   | 0.00 | 3.82  | 0.00 | 0.51    | 51.43        | 52.04            | 3814. | 802.     |
| Daylight        | 81/ 2/11 | 53.96   | 0.00 | 4.33  | 0.00 | 0.55    | 58.29        | 58.85            | 2071. | 564.     |
| No event        | 81/ 2/12 |         |      |       |      |         |              |                  |       |          |
| No event        | 81/ 2/13 |         |      |       |      |         |              |                  |       |          |
| No event        | 81/ 2/14 |         |      |       |      |         |              |                  |       |          |
| No event        | 81/ 2/15 |         |      |       |      |         |              |                  |       |          |
| Daylight        | 81/ 2/16 | 94.58   | 0.00 | 7.59  | 0.00 | 0.50    | 102.18       | 102.68           | 1447. | 381.     |
|                 | 81/ 2/17 | 27.84   | 0.00 | 2.23  | 0.00 | 0.96    | 30.07        | 31.04            | 3091. | 1150.    |
|                 | 81/ 2/18 | 18.94   | 0.00 | 1.52  | 0.00 | 0.65    | 20.46        | 21.12            | 1591. | 638.     |
| No event        | 81/ 2/19 |         |      |       |      |         |              |                  |       |          |
| No event        | 81/ 2/20 |         |      |       |      |         |              |                  |       |          |
|                 | 81/ 2/21 | 31.27   | 0.00 | 2.51  | 0.00 | 1.08    | 33.78        | 34.86            | 2241. | 601.     |
| No event        | 81/ 2/22 |         |      |       |      |         |              |                  |       |          |
|                 | 81/ 2/23 | 28.75   | 0.00 | 2.31  | 0.00 | 0.99    | 31.06        | 32.05            | 1796. | 852.     |
| No event        | 81/ 2/24 |         |      |       |      |         |              |                  |       |          |
| Daylight        | 81/ 2/25 | 183.13  | 0.00 | 14.70 | 0.00 | 1.19    | 197.83       | 199.02           | 1924. | 941.     |
| Daylight        | 81/ 2/26 | 115.42  | 0.00 | 9.27  | 0.00 | 0.75    | 124.69       | 125.44           | 1363. | 280.     |
|                 | 81/ 2/27 | 15.13   | 0.00 | 1.21  | 0.00 | 0.52    | 16.35        | 16.87            | 1081. | 240.     |
|                 | 81/ 2/28 | 8.72    | 0.00 | 0.70  | 0.00 | 0.30    | 9.42         | 9.73             | 823.  | 315.     |
| Month subtotal: |          | 660.3   | 0.0  | 53.0  | 0.0  | 8.7     | 713.3        | 722.0            |       |          |

| Comment  | YR/MO/DY | Flow    |      |       |      |         | Total Salmon | Salmon + Steelhd | Ampl  | RampRate |
|----------|----------|---------|------|-------|------|---------|--------------|------------------|-------|----------|
|          |          | Chinook | Pink | Chum  | Coho | Steelhd |              |                  |       |          |
| Daylight | 81/ 3/ 1 | 0.00    | 0.00 | 0.00  | 0.00 | 0.00    | 0.00         | 0.00             | 366.  | 183.     |
| Daylight | 81/ 3/ 2 | 164.55  | 0.00 | 13.21 | 0.00 | 1.07    | 177.76       | 178.82           | 1603. | 407.     |
| No event | 81/ 3/ 3 |         |      |       |      |         |              |                  |       |          |
| Daylight | 81/ 3/ 4 | 0.00    | 0.00 | 0.00  | 0.00 | 0.00    | 0.00         | 0.00             | 450.  | 120.     |
| Daylight | 81/ 3/ 5 | 29.14   | 0.00 | 2.34  | 0.00 | 0.46    | 31.48        | 31.94            | 976.  | 280.     |
| Daylight | 81/ 3/ 6 | 52.10   | 0.00 | 4.18  | 0.00 | 0.82    | 56.28        | 57.11            | 1351. | 371.     |
| No event | 81/ 3/ 7 |         |      |       |      |         |              |                  |       |          |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |        |      |       |      |      |        |        |       |       |
|-----------------|----------|--------|------|-------|------|------|--------|--------|-------|-------|
| Daylight        | 81/ 3/ 8 | 1.28   | 0.00 | 0.10  | 0.00 | 0.02 | 1.39   | 1.41   | 521.  | 213.  |
| Daylight        | 81/ 3/ 9 | 9.12   | 0.00 | 0.73  | 0.00 | 0.99 | 9.85   | 9.93   | 598.  | 293.  |
| Daylight        | 81/ 3/10 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00   | 0.00   | 138.  | 63.   |
| No event        | 81/ 3/11 |        |      |       |      |      |        |        |       |       |
| Daylight        | 81/ 3/12 | 61.10  | 0.00 | 4.91  | 0.00 | 0.96 | 66.01  | 66.97  | 1498. | 411.  |
|                 | 81/ 3/13 | 43.63  | 0.00 | 3.50  | 0.00 | 1.51 | 47.14  | 48.64  | 2330. | 408.  |
| Daylight        | 81/ 3/14 | 50.72  | 0.00 | 4.07  | 0.00 | 0.53 | 54.79  | 55.37  | 1045. | 314.  |
| Daylight        | 81/ 3/15 | 65.04  | 0.00 | 5.22  | 0.00 | 0.42 | 70.26  | 70.69  | 936.  | 408.  |
|                 | 81/ 3/16 | 14.32  | 0.00 | 1.15  | 0.00 | 0.50 | 15.47  | 15.97  | 1012. | 451.  |
| Daylight        | 81/ 3/17 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00   | 0.00   | 195.  | 97.   |
| Daylight        | 81/ 3/18 | 192.25 | 0.00 | 15.43 | 0.00 | 1.03 | 207.68 | 208.71 | 1562. | 276.  |
|                 | 81/ 3/19 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00   | 0.00   | 264.  | 126.  |
| No event        | 81/ 3/20 |        |      |       |      |      |        |        |       |       |
|                 | 81/ 3/21 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00   | 0.00   | 345.  | 165.  |
| Daylight        | 81/ 3/22 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00   | 0.00   | 342.  | 149.  |
| Daylight        | 81/ 3/23 | 277.18 | 0.00 | 22.25 | 0.00 | 1.50 | 299.43 | 300.93 | 2306. | 1012. |
| Daylight        | 81/ 3/24 | 225.36 | 0.00 | 18.09 | 0.00 | 1.49 | 243.44 | 244.93 | 2244. | 818.  |
| Daylight        | 81/ 3/25 | 279.17 | 0.00 | 22.41 | 0.00 | 1.52 | 301.58 | 303.10 | 2414. | 1037. |
| Daylight        | 81/ 3/26 | 225.09 | 0.00 | 18.07 | 0.00 | 1.47 | 243.16 | 244.65 | 2204. | 464.  |
| Daylight        | 81/ 3/27 | 130.24 | 0.00 | 10.45 | 0.00 | 0.84 | 140.69 | 141.53 | 1373. | 686.  |
|                 | 81/ 3/28 | 17.46  | 0.00 | 1.40  | 0.00 | 0.60 | 18.85  | 19.44  | 1124. | 562.  |
| No event        | 81/ 3/29 |        |      |       |      |      |        |        |       |       |
| Daylight        | 81/ 3/30 | 323.24 | 0.00 | 25.94 | 0.00 | 1.94 | 349.18 | 351.12 | 4803. | 1191. |
| No event        | 81/ 3/31 |        |      |       |      |      |        |        |       |       |
| Month subtotal: |          | 2161.0 | 0.0  | 173.4 | 0.0  | 16.8 | 2334.4 | 2351.3 |       |       |

| Comment  | Flow<br>YR/MO/DY | Flow    |      |       |      |         |        | Total  | Salmon + |       |          |
|----------|------------------|---------|------|-------|------|---------|--------|--------|----------|-------|----------|
|          |                  | Chinook | Pink | Chum  | Coho | Steelhd | Salmon |        | Steelhd  | Ampl  | RampRate |
|          | 81/ 4/ 1         | 47.45   | 0.00 | 7.81  | 0.00 | 1.64    | 51.26  | 52.90  | 3083.    | 775.  |          |
| No event | 81/ 4/ 2         |         |      |       |      |         |        |        |          |       |          |
| Daylight | 81/ 4/ 3         | 116.03  | 0.00 | 9.31  | 0.00 | 0.82    | 125.35 | 125.97 | 1141.    | 453.  |          |
| No event | 81/ 4/ 4         |         |      |       |      |         |        |        |          |       |          |
| Daylight | 81/ 4/ 5         | 116.42  | 0.00 | 9.34  | 0.00 | 1.21    | 125.77 | 126.98 | 1751.    | 479.  |          |
|          | 81/ 4/ 6         | 18.13   | 0.00 | 1.45  | 0.00 | 0.63    | 19.58  | 20.21  | 1148.    | 545.  |          |
| Daylight | 81/ 4/ 7         | 149.16  | 0.00 | 11.97 | 0.00 | 0.79    | 161.14 | 161.93 | 1324.    | 394.  |          |
|          | 81/ 4/ 8         | 42.40   | 0.00 | 3.40  | 0.00 | 1.47    | 45.80  | 47.27  | 2087.    | 967.  |          |
| Daylight | 81/ 4/ 9         | 149.16  | 0.00 | 11.97 | 0.00 | 0.79    | 161.14 | 161.93 | 1324.    | 394.  |          |
| Daylight | 81/ 4/10         | 149.16  | 0.00 | 11.97 | 0.00 | 0.79    | 161.14 | 161.93 | 1324.    | 394.  |          |
| Daylight | 81/ 4/11         | 149.16  | 0.00 | 11.97 | 0.00 | 0.79    | 161.14 | 161.93 | 1324.    | 394.  |          |
| Daylight | 81/ 4/12         | 97.75   | 0.00 | 7.84  | 0.00 | 0.52    | 105.60 | 106.12 | 1040.    | 520.  |          |
| Daylight | 81/ 4/13         | 97.75   | 0.00 | 7.84  | 0.00 | 0.52    | 105.60 | 106.12 | 1040.    | 520.  |          |
| Daylight | 81/ 4/14         | 97.75   | 0.00 | 7.84  | 0.00 | 0.52    | 105.60 | 106.12 | 1040.    | 520.  |          |
| No event | 81/ 4/15         |         |      |       |      |         |        |        |          |       |          |
| Daylight | 81/ 4/16         | 97.75   | 0.00 | 7.84  | 0.00 | 0.52    | 105.60 | 106.12 | 1040.    | 520.  |          |
| Daylight | 81/ 4/17         | 356.77  | 0.00 | 28.64 | 0.00 | 1.61    | 385.41 | 387.02 | 2910.    | 1087. |          |
| Daylight | 81/ 4/18         | 76.92   | 0.00 | 6.17  | 0.00 | 0.35    | 83.10  | 83.45  | 859.     | 429.  |          |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                        |               |            |              |            |             |               |               |       |      |
|------------------------|---------------|------------|--------------|------------|-------------|---------------|---------------|-------|------|
| Daylight 81/ 4/19      | 175.95        | 0.00       | 14.12        | 0.00       | 1.94        | 190.08        | 191.02        | 1472. | 544. |
| No event 81/ 4/20      |               |            |              |            |             |               |               |       |      |
| Daylight 81/ 4/21      | 192.25        | 0.00       | 15.43        | 0.00       | 1.03        | 207.68        | 208.71        | 1562. | 488. |
| Daylight 81/ 4/22      | 339.09        | 0.00       | 27.22        | 0.00       | 1.53        | 366.31        | 367.84        | 2455. | 972. |
| Daylight 81/ 4/23      | 128.60        | 0.00       | 10.32        | 0.00       | 0.83        | 138.91        | 139.73        | 1362. | 671. |
| Daylight 81/ 4/24      | 288.76        | 0.00       | 23.18        | 0.00       | 1.61        | 311.94        | 313.55        | 2934. | 929. |
| Daylight 81/ 4/25      | 11.57         | 0.00       | 0.93         | 0.00       | 0.19        | 12.50         | 12.68         | 689.  | 325. |
| 81/ 4/26               | 23.67         | 0.00       | 1.90         | 0.00       | 0.82        | 25.57         | 26.38         | 1346. | 375. |
| 81/ 4/27               | 19.10         | 0.00       | 1.53         | 0.00       | 0.66        | 20.64         | 21.30         | 1183. | 388. |
| Daylight 81/ 4/28      | 291.75        | 0.00       | 23.42        | 0.00       | 1.64        | 315.17        | 316.81        | 3096. | 853. |
| Daylight 81/ 4/29      | 64.77         | 0.00       | 5.20         | 0.00       | 0.67        | 69.97         | 70.65         | 1196. | 304. |
| No event 81/ 4/30      |               |            |              |            |             |               |               |       |      |
| <b>Month subtotal:</b> | <b>3297.3</b> | <b>0.0</b> | <b>264.6</b> | <b>0.0</b> | <b>22.7</b> | <b>3562.0</b> | <b>3584.7</b> |       |      |

| Comment  | Flow<br>YR/MO/DY | Chinook | Pink | Chum  | Coho | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd | Ampl  | RampRate |
|----------|------------------|---------|------|-------|------|---------|-----------------|---------------------|-------|----------|
|          | 81/ 5/ 1         | 25.47   | 0.00 | 2.04  | 0.00 | 0.89    | 27.52           | 28.40               | 1440. | 460.     |
| Daylight | 81/ 5/ 2         | 28.93   | 0.00 | 2.32  | 0.00 | 0.46    | 31.25           | 31.71               | 1004. | 405.     |
|          | 81/ 5/ 3         | 0.00    | 0.00 | 0.00  | 0.00 | 0.00    | 0.00            | 0.00                | 285.  | 120.     |
| Daylight | 81/ 5/ 4         | 341.86  | 0.00 | 27.44 | 0.00 | 1.54    | 369.29          | 370.84              | 3783. | 1891.    |
| Daylight | 81/ 5/ 5         | 189.88  | 0.00 | 15.24 | 0.00 | 1.25    | 205.12          | 206.37              | 2195. | 750.     |
| Daylight | 81/ 5/ 6         | 21.79   | 0.00 | 1.75  | 0.00 | 0.34    | 23.54           | 23.88               | 938.  | 269.     |
| Daylight | 81/ 5/ 7         | 152.31  | 0.00 | 12.23 | 0.00 | 0.81    | 164.54          | 165.35              | 1577. | 427.     |
| Daylight | 81/ 5/ 8         | 30.70   | 0.00 | 2.46  | 0.00 | 0.14    | 35.16           | 33.30               | 691.  | 260.     |
| No event | 81/ 5/ 9         |         |      |       |      |         |                 |                     |       |          |
| Daylight | 81/ 5/10         | 23.29   | 0.00 | 1.87  | 0.00 | 0.24    | 25.16           | 25.40               | 864.  | 362.     |
| Daylight | 81/ 5/11         | 1.69    | 0.00 | 0.13  | 0.00 | 1.E-2   | 1.82            | 1.83                | 512.  | 250.     |
| Daylight | 81/ 5/12         | 3.54    | 0.00 | 0.28  | 0.00 | 0.02    | 3.83            | 3.85                | 538.  | 269.     |
| No event | 81/ 5/13         |         |      |       |      |         |                 |                     |       |          |
| Daylight | 81/ 5/14         | 17.12   | 0.00 | 1.37  | 0.00 | 0.11    | 18.49           | 18.60               | 704.  | 211.     |
|          | 81/ 5/15         | 22.31   | 0.00 | 1.79  | 0.00 | 0.77    | 24.10           | 24.87               | 2005. | 508.     |
| Daylight | 81/ 5/16         | 78.25   | 0.00 | 6.28  | 0.00 | 0.51    | 84.53           | 85.03               | 1549. | 434.     |
| Daylight | 81/ 5/17         | 24.75   | 0.00 | 1.99  | 0.00 | 0.16    | 26.74           | 26.90               | 854.  | 298.     |
| Daylight | 81/ 5/18         | 32.15   | 0.00 | 2.58  | 0.00 | 0.17    | 34.73           | 34.91               | 906.  | 238.     |
| Daylight | 81/ 5/19         | 91.49   | 0.00 | 7.34  | 0.00 | 0.49    | 98.83           | 99.32               | 1744. | 368.     |
| Daylight | 81/ 5/20         | 102.07  | 0.00 | 8.19  | 0.00 | 0.54    | 110.26          | 110.81              | 2035. | 436.     |
| Daylight | 81/ 5/21         | 0.00    | 0.00 | 0.00  | 0.00 | 0.00    | 0.00            | 0.00                | 313.  | 150.     |
| Daylight | 81/ 5/22         | 56.88   | 0.00 | 4.56  | 0.00 | 0.37    | 61.44           | 61.81               | 1720. | 429.     |
| Daylight | 81/ 5/23         | 0.00    | 0.00 | 0.00  | 0.00 | 0.00    | 0.00            | 0.00                | 435.  | 217.     |
| Daylight | 81/ 5/24         | 23.25   | 0.00 | 1.87  | 0.00 | 0.10    | 25.12           | 25.22               | 934.  | 249.     |
| Daylight | 81/ 5/25         | 7.62    | 0.00 | 0.61  | 0.00 | 0.08    | 8.22            | 8.30                | 874.  | 241.     |
|          | 81/ 5/26         | 7.20    | 0.00 | 0.58  | 0.00 | 0.25    | 7.77            | 8.02                | 1072. | 397.     |
| Daylight | 81/ 5/27         | 10.92   | 0.00 | 0.88  | 0.00 | 0.05    | 11.79           | 11.84               | 826.  | 297.     |
| Daylight | 81/ 5/28         | 7.42    | 0.00 | 0.60  | 0.00 | 0.05    | 8.02            | 8.07                | 898.  | 266.     |
| Daylight | 81/ 5/29         | 5.51    | 0.00 | 0.44  | 0.00 | 0.03    | 5.95            | 5.99                | 894.  | 307.     |
| Daylight | 81/ 5/30         | 2.26    | 0.00 | 0.18  | 0.00 | 0.03    | 2.44            | 2.47                | 1090. | 272.     |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |        |      |       |      |      |        |        |      |      |     |
|-----------------|----------|--------|------|-------|------|------|--------|--------|------|------|-----|
| Daylight        | 81/ 5/31 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00   | 0.00   | 0.00 | 215. | 81. |
| Month subtotal: |          | 1308.7 | 0.0  | 105.0 | 0.0  | 9.4  | 1413.7 | 1423.1 |      |      |     |

| Comment         | YR/MO/DY | Flow    |      |      |       |         | Total | Salmon + Steelhd | Ampl  | RampRate |
|-----------------|----------|---------|------|------|-------|---------|-------|------------------|-------|----------|
|                 |          | Chinook | Pink | Chum | Coho  | Steelhd |       |                  |       |          |
|                 | 81/ 7/15 | 0.00    | 0.00 | 0.00 | 1.E-2 | 0.79    | 1.E-2 | 0.80             | 703.  | 124.     |
|                 | 81/ 7/16 | 0.00    | 0.00 | 0.00 | 0.09  | 11.51   | 0.09  | 11.60            | 1968. | 628.     |
|                 | 81/ 7/17 | 0.00    | 0.00 | 0.00 | 0.00  | 0.00    | 0.00  | 0.00             | 418.  | 57.      |
|                 | 81/ 7/18 | 0.00    | 0.00 | 0.00 | 0.68  | 84.59   | 0.68  | 85.27            | 3491. | 836.     |
|                 | 81/ 7/19 | 0.00    | 0.00 | 0.00 | 0.07  | 8.25    | 0.07  | 8.32             | 921.  | 237.     |
|                 | 81/ 7/20 | 0.00    | 0.00 | 0.00 | 0.18  | 22.59   | 0.18  | 22.77            | 1460. | 366.     |
|                 | 81/ 7/21 | 0.00    | 0.00 | 0.00 | 1.34  | 167.32  | 1.34  | 168.67           | 3760. | 1707.    |
|                 | 81/ 7/22 | 0.00    | 0.00 | 0.00 | 2.17  | 268.32  | 2.17  | 270.48           | 4699. | 849.     |
|                 | 81/ 7/23 | 0.00    | 0.00 | 0.00 | 0.32  | 39.95   | 0.32  | 40.27            | 1632. | 797.     |
|                 | 81/ 7/24 | 0.00    | 0.00 | 0.00 | 1.28  | 158.55  | 1.28  | 159.83           | 2974. | 655.     |
| No event        | 81/ 7/25 |         |      |      |       |         |       |                  |       |          |
|                 | 81/ 7/26 | 0.00    | 0.00 | 0.00 | 1.67  | 207.34  | 1.67  | 209.01           | 3113. | 964.     |
|                 | 81/ 7/27 | 0.00    | 0.00 | 0.00 | 0.32  | 40.32   | 0.32  | 40.65            | 1291. | 626.     |
|                 | 81/ 7/28 | 0.00    | 0.00 | 0.00 | 0.34  | 42.38   | 0.34  | 42.72            | 1272. | 430.     |
|                 | 81/ 7/29 | 0.00    | 0.00 | 0.00 | 0.50  | 62.19   | 0.50  | 62.68            | 1557. | 656.     |
|                 | 81/ 7/30 | 0.00    | 0.00 | 0.00 | 0.48  | 59.86   | 0.48  | 60.34            | 1454. | 409.     |
|                 | 81/ 7/31 | 0.00    | 0.00 | 0.00 | 3.53  | 437.67  | 3.53  | 441.20           | 3940. | 909.     |
| Month subtotal: |          | 0.0     | 0.0  | 0.0  | 13.0  | 1611.6  | 13.0  | 1624.6           |       |          |

| Comment  | YR/MO/DY | Flow    |      |      |      |         | Total | Salmon + Steelhd | Ampl  | RampRate |
|----------|----------|---------|------|------|------|---------|-------|------------------|-------|----------|
|          |          | Chinook | Pink | Chum | Coho | Steelhd |       |                  |       |          |
|          | 81/ 8/ 1 | 0.00    | 0.00 | 0.00 | 0.17 | 20.26   | 0.17  | 20.42            | 787.  | 249.     |
|          | 81/ 8/ 2 | 0.00    | 0.00 | 0.00 | 0.09 | 10.94   | 0.09  | 11.03            | 655.  | 224.     |
|          | 81/ 8/ 3 | 0.00    | 0.00 | 0.00 | 3.59 | 445.73  | 3.59  | 449.32           | 3844. | 432.     |
|          | 81/ 8/ 4 | 0.00    | 0.00 | 0.00 | 4.55 | 564.71  | 4.55  | 569.26           | 4488. | 755.     |
|          | 81/ 8/ 5 | 0.00    | 0.00 | 0.00 | 5.36 | 665.10  | 5.36  | 670.47           | 5031. | 772.     |
|          | 81/ 8/ 6 | 0.00    | 0.00 | 0.00 | 5.48 | 679.52  | 5.48  | 685.01           | 5109. | 817.     |
|          | 81/ 8/ 7 | 0.00    | 0.00 | 0.00 | 4.86 | 602.98  | 4.86  | 607.84           | 4695. | 2347.    |
|          | 81/ 8/ 8 | 0.00    | 0.00 | 0.00 | 0.05 | 5.72    | 0.05  | 5.76             | 581.  | 114.     |
|          | 81/ 8/ 9 | 0.00    | 0.00 | 0.00 | 0.07 | 9.11    | 0.07  | 9.18             | 629.  | 178.     |
| No event | 81/ 8/10 |         |      |      |      |         |       |                  |       |          |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

|                 |          |      |      |      |        |        |        |        |      |
|-----------------|----------|------|------|------|--------|--------|--------|--------|------|
| 81/ 8/11        | 0.00     | 0.00 | 0.00 | 0.65 | 80.75  | 0.65   | 81.40  | 1644.  | 210. |
| 81/ 8/12        | 0.00     | 0.00 | 0.00 | 0.81 | 100.23 | 0.81   | 101.04 | 1920.  | 440. |
| 81/ 8/13        | 0.00     | 0.00 | 0.00 | 0.09 | 10.87  | 0.09   | 10.96  | 654.   | 164. |
| 81/ 8/14        | 0.00     | 0.00 | 0.00 | 0.37 | 45.88  | 0.37   | 46.25  | 1150.  | 229. |
| 81/ 8/15        | 0.00     | 0.00 | 0.00 | 0.00 | 0.00   | 0.00   | 0.00   | 247.   | 66.  |
| 81/ 8/16        | 0.00     | 0.00 | 0.00 | 0.14 | 17.50  | 0.14   | 17.65  | 748.   | 136. |
| 81/ 8/17        | 0.00     | 0.00 | 0.00 | 0.31 | 38.26  | 0.31   | 38.57  | 1042.  | 512. |
| 81/ 8/18        | 0.00     | 0.00 | 0.00 | 0.47 | 58.94  | 0.47   | 59.41  | 1335.  | 418. |
| 81/ 8/19        | 0.00     | 0.00 | 0.00 | 2.17 | 268.80 | 2.17   | 270.97 | 2884.  | 612. |
| 81/ 8/20        | 0.00     | 0.00 | 0.00 | 0.76 | 93.81  | 0.76   | 94.57  | 1829.  | 439. |
| 81/ 8/21        | 0.00     | 0.00 | 0.00 | 1.35 | 167.44 | 1.35   | 168.79 | 2334.  | 670. |
| 81/ 8/22        | 0.00     | 0.00 | 0.00 | 1.42 | 176.10 | 1.42   | 177.52 | 2381.  | 604. |
| 81/ 8/23        | 0.00     | 0.00 | 0.00 | 0.56 | 69.03  | 0.56   | 69.59  | 1478.  | 467. |
| 81/ 8/24        | 0.00     | 0.00 | 0.00 | 0.74 | 91.34  | 0.74   | 92.08  | 1794.  | 871. |
| 81/ 8/25        | 0.00     | 0.00 | 0.00 | 1.71 | 211.40 | 1.71   | 213.19 | 2573.  | 816. |
| 81/ 8/26        | 0.00     | 0.00 | 0.00 | 0.15 | 19.06  | 0.15   | 19.21  | 770.   | 133. |
| 81/ 8/27        | 0.00     | 0.00 | 0.00 | 0.20 | 24.78  | 0.20   | 24.98  | 851.   | 425. |
| 81/ 8/28        | 0.00     | 0.00 | 0.00 | 0.84 | 104.61 | 0.84   | 105.45 | 1982.  | 395. |
| 81/ 8/29        | 0.00     | 0.00 | 0.00 | 1.45 | 179.79 | 1.45   | 181.23 | 2401.  | 555. |
| 81/ 8/30        | 0.00     | 0.00 | 0.00 | 0.00 | 0.00   | 0.00   | 0.00   | 481.   | 235. |
| No event        | 81/ 8/31 |      |      |      |        |        |        |        |      |
| Month subtotal: |          | 0.0  | 0.0  | 0.0  | 38.4   | 4762.7 | 38.4   | 4801.1 |      |

| Comment  | Flow<br>YR/MO/DY | Chinook | Pink | Chum | Coho | Steelhd | Total<br>Salmon | Salmon +<br>Steelhd | Ampl  | RampRate |
|----------|------------------|---------|------|------|------|---------|-----------------|---------------------|-------|----------|
|          | 81/ 9/ 1         | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00            | 0.00                | 221.  | 42.      |
|          | 81/ 9/ 2         | 0.00    | 0.00 | 0.00 | 0.39 | 48.80   | 0.39            | 49.19               | 1237. | 266.     |
|          | 81/ 9/ 3         | 0.00    | 0.00 | 0.00 | 0.62 | 76.13   | 0.62            | 76.74               | 1694. | 425.     |
|          | 81/ 9/ 4         | 0.00    | 0.00 | 0.00 | 0.23 | 27.91   | 0.23            | 28.14               | 954.  | 225.     |
|          | 81/ 9/ 5         | 0.00    | 0.00 | 0.00 | 0.54 | 66.60   | 0.54            | 67.14               | 1625. | 333.     |
|          | 81/ 9/ 6         | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00            | 0.00                | 456.  | 170.     |
| No event | 81/ 9/ 7         |         |      |      |      |         |                 |                     |       |          |
| No event | 81/ 9/ 8         |         |      |      |      |         |                 |                     |       |          |
|          | 81/ 9/ 9         | 0.00    | 0.00 | 0.00 | 0.77 | 95.60   | 0.77            | 96.45               | 2157. | 449.     |
|          | 81/ 9/10         | 0.00    | 0.00 | 0.00 | 0.30 | 36.87   | 0.30            | 37.16               | 1271. | 294.     |
|          | 81/ 9/11         | 0.00    | 0.00 | 0.00 | 0.02 | 2.32    | 0.02            | 2.34                | 551.  | 190.     |
| No event | 81/ 9/12         |         |      |      |      |         |                 |                     |       |          |
| No event | 81/ 9/13         |         |      |      |      |         |                 |                     |       |          |
|          | 81/ 9/14         | 0.00    | 0.00 | 0.00 | 0.09 | 11.57   | 0.09            | 11.67               | 799.  | 212.     |
|          | 81/ 9/15         | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00            | 0.00                | 437.  | 141.     |
| No event | 81/ 9/16         |         |      |      |      |         |                 |                     |       |          |
| No event | 81/ 9/17         |         |      |      |      |         |                 |                     |       |          |
|          | 81/ 9/18         | 0.00    | 0.00 | 0.00 | 0.13 | 15.78   | 0.13            | 15.90               | 1033. | 404.     |
|          | 81/ 9/19         | 0.00    | 0.00 | 0.00 | 0.00 | 0.03    | 0.00            | 0.03                | 501.  | 198.     |
| No event | 81/ 9/20         |         |      |      |      |         |                 |                     |       |          |
|          | 81/ 9/21         | 0.00    | 0.00 | 0.00 | 0.12 | 15.01   | 0.12            | 15.13               | 1159. | 477.     |

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunset; no comment indicates regular night-time event.

|          |      |      |      |      |       |      |       |       |      |
|----------|------|------|------|------|-------|------|-------|-------|------|
| 81/ 9/22 | 0.00 | 0.00 | 0.00 | 0.23 | 27.81 | 0.23 | 28.04 | 1857. | 324. |
| 81/ 9/23 | 0.00 | 0.00 | 0.00 | 0.10 | 12.84 | 0.10 | 12.95 | 1205. | 286. |
| 81/ 9/24 | 0.00 | 0.00 | 0.00 | 0.05 | 6.28  | 0.05 | 6.33  | 894.  | 346. |
| 81/ 9/25 | 0.00 | 0.00 | 0.00 | 0.07 | 9.13  | 0.07 | 9.20  | 1168. | 473. |
| 81/ 9/26 | 0.00 | 0.00 | 0.00 | 0.06 | 7.66  | 0.06 | 7.72  | 1173. | 484. |
| 81/ 9/27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 180.  | 90.  |

-----  
Month subtotal:      0.0      0.0      0.0      3.7      460.4      3.7      464.1

\*\*\*\*\*  
Year total:      7427.2      0.0      596.1      55.1      6892.3      8078.5      14970.9

"No event" = insufficient amplitude to be considered an event, "Flood" = period of flooding,  
 "Daylight" = event endtime was after sunrise; no comment indicates regular night-time event.

SUMMARY OF DAY/NIGHT EVENTS FOR SPRING SALMON ONLY  
FOR THE FOLLOWING FLOW REGIME YEARS:

YEAR

-----  
81

Daylight events

Number of events

75

Total chinook stranded

7014.01

Total pinks stranded

0.

Total chums stranded

562.93

Total cohos stranded

0.

Total salmon stranded (all species)

7577.03

Nighttime events

Number of events

21

Total chinook stranded

413.17

Total pinks stranded

0.

Total chums stranded

33.14

Total cohos stranded

0.

Total salmon stranded (all species)

446.33

Potholes Stranding and Trapping - Daily Detail with Subtotals  
 ======  
 (Results of applying base year data to the indicated flow regime)

First line shows STRANDED fish  
Second line shows TRAPPED fish

First line shows STRANDED fish  
Second line shows TRAPPED fish

|                         |     |         |       |      |       |       |         |         |       |       |
|-------------------------|-----|---------|-------|------|-------|-------|---------|---------|-------|-------|
| 81/ 2/25                | 0   | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    | 9310. | 7245. |
|                         |     | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00    | 0.00    |       |       |
| 81/ 2/26                | 54  | 0.80    | 6.E-3 | 0.00 | 2.E-3 | 1.E-2 | 0.80    | 0.81    | 7140. | 5740. |
|                         |     | 74.21   | 0.53  | 0.00 | 0.23  | 0.91  | 74.97   | 75.88   |       |       |
| 81/ 2/27                | 133 | 33.85   | 0.24  | 0.00 | 0.10  | 0.41  | 34.20   | 34.62   | 5740. | 4550. |
|                         |     | 644.14  | 4.61  | 0.00 | 1.98  | 7.90  | 650.72  | 658.63  |       |       |
| 81/ 2/28                | 108 | 39.41   | 0.28  | 0.00 | 0.12  | 0.48  | 39.81   | 40.29   | 5000. | 4120. |
|                         |     | 451.31  | 3.23  | 0.00 | 1.38  | 5.54  | 455.92  | 461.46  |       |       |
| <b>Month subtotals:</b> |     | 159.06  | 1.14  | 0.00 | 0.49  | 1.95  | 160.68  | 162.64  |       |       |
|                         |     | 2434.82 | 17.43 | 0.00 | 7.47  | 29.88 | 2459.71 | 2489.59 |       |       |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

81/ 3/20

No event

|          |     |         |      |      |      |       |         |         |       |       |
|----------|-----|---------|------|------|------|-------|---------|---------|-------|-------|
| 81/ 3/21 | 48  | 31.77   | 0.23 | 0.00 | 0.10 | 0.39  | 32.10   | 32.49   | 4970. | 4610. |
|          |     | 258.46  | 1.85 | 0.00 | 0.79 | 3.17  | 261.10  | 264.27  |       |       |
| 81/ 3/22 | 39  | 6.45    | 0.05 | 0.00 | 0.02 | 0.08  | 6.52    | 6.59    | 4670. | 4316. |
|          |     | 80.52   | 0.58 | 0.00 | 0.25 | 0.99  | 81.44   | 82.43   |       |       |
| 81/ 3/23 | 171 | 73.95   | 0.53 | 0.00 | 0.23 | 0.91  | 74.71   | 75.61   | 5705. | 3394. |
|          |     | 1260.32 | 9.02 | 0.00 | 3.87 | 15.46 | 1273.21 | 1288.67 |       |       |
| 81/ 3/24 | 169 | 69.62   | 0.50 | 0.00 | 0.21 | 0.85  | 70.33   | 71.19   | 5600. | 3490. |
|          |     | 1126.19 | 8.06 | 0.00 | 3.45 | 13.82 | 1137.71 | 1151.53 |       |       |
| 81/ 3/25 | 225 | 74.84   | 0.54 | 0.00 | 0.23 | 0.92  | 75.61   | 76.52   | 5740. | 3418. |
|          |     | 1343.09 | 9.61 | 0.00 | 4.12 | 16.48 | 1356.83 | 1373.31 |       |       |
| 81/ 3/26 | 171 | 73.95   | 0.53 | 0.00 | 0.23 | 0.91  | 74.71   | 75.61   | 5570. | 3418. |
|          |     | 1260.32 | 9.02 | 0.00 | 3.87 | 15.46 | 1273.21 | 1288.67 |       |       |
| 81/ 3/27 | 0   | 0.00    | 0.00 | 0.00 | 0.00 | 0.00  | 0.00    | 0.00    | 7510. | 6055. |
|          |     | 0.00    | 0.00 | 0.00 | 0.00 | 0.00  | 0.00    | 0.00    |       |       |
| 81/ 3/28 | 0   | 0.00    | 0.00 | 0.00 | 0.00 | 0.00  | 0.00    | 0.00    | 7390. | 6335. |
|          |     | 0.00    | 0.00 | 0.00 | 0.00 | 0.00  | 0.00    | 0.00    |       |       |

81/ 3/29

No event

|          |     |         |      |      |      |       |         |         |       |       |
|----------|-----|---------|------|------|------|-------|---------|---------|-------|-------|
| 81/ 3/30 | 195 | 55.02   | 0.39 | 0.00 | 0.17 | 0.68  | 55.59   | 56.26   | 8270. | 3886. |
|          |     | 1008.85 | 7.22 | 0.00 | 3.10 | 12.38 | 1019.17 | 1031.55 |       |       |

81/ 3/31

No event

| Month subtotals: | 969.01   | 6.94   | 0.00 | 2.97  | 11.89  | 978.92   | 990.80   |  |  |  |
|------------------|----------|--------|------|-------|--------|----------|----------|--|--|--|
|                  | 15035.89 | 107.62 | 0.00 | 46.12 | 184.49 | 15189.63 | 15374.12 |  |  |  |

| Flow<br>YR/MO/DY | #Disconnects | Chinook | Pink  | Chum | Coho  | Sthhd | Total Salmon | Salmon + Steelhd | Begflow | Endflow |
|------------------|--------------|---------|-------|------|-------|-------|--------------|------------------|---------|---------|
| 81/ 4/ 1         | 194          | 50.13   | 0.36  | 0.00 | 0.15  | 0.62  | 50.65        | 51.26            | 6755.   | 3938.   |
|                  |              | 1008.85 | 7.22  | 0.00 | 3.10  | 12.38 | 1019.17      | 1031.55          |         |         |
| 81/ 4/ 2         | No event     |         |       |      |       |       |              |                  |         |         |
| 81/ 4/ 3         | 129          | 48.69   | 0.35  | 0.00 | 0.15  | 0.60  | 49.19        | 49.78            | 5150.   | 3990.   |
|                  |              | 853.93  | 6.11  | 0.00 | 2.62  | 10.48 | 862.56       | 873.03           |         |         |
| 81/ 4/ 4         | No event     |         |       |      |       |       |              |                  |         |         |
| 81/ 4/ 5         | 138          | 48.51   | 0.35  | 0.00 | 0.15  | 0.60  | 49.01        | 49.60            | 5670.   | 4016.   |
|                  |              | 925.84  | 6.63  | 0.00 | 2.84  | 11.36 | 935.30       | 946.66           |         |         |
| 81/ 4/ 6         | 54           | 0.89    | 6.E-3 | 0.00 | 3.E-3 | 0.01  | 0.90         | 0.91             | 6755.   | 5635.   |
|                  |              | 82.77   | 0.59  | 0.00 | 0.25  | 1.02  | 83.62        | 84.64            |         |         |
| 81/ 4/ 7         | 64           | 1.45    | 1.E-2 | 0.00 | 4.E-3 | 0.02  | 1.46         | 1.48             | 6545.   | 5300.   |
|                  |              | 155.03  | 1.11  | 0.00 | 0.48  | 1.90  | 156.61       | 158.51           |         |         |
| 81/ 4/ 8         | 0            | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00         | 0.00             | 8190.   | 6090.   |
|                  |              | 0.00    | 0.00  | 0.00 | 0.00  | 0.00  | 0.00         | 0.00             |         |         |
| 81/ 4/ 9         | 64           | 1.45    | 1.E-2 | 0.00 | 4.E-3 | 0.02  | 1.46         | 1.48             | 6545.   | 5300.   |
|                  |              | 155.03  | 1.11  | 0.00 | 0.48  | 1.90  | 156.61       | 158.51           |         |         |
| 81/ 4/10         | 64           | 1.45    | 1.E-2 | 0.00 | 4.E-3 | 0.02  | 1.46         | 1.48             | 6545.   | 5300.   |
|                  |              | 155.03  | 1.11  | 0.00 | 0.48  | 1.90  | 156.61       | 158.51           |         |         |
| 81/ 4/11         | 64           | 1.45    | 1.E-2 | 0.00 | 4.E-3 | 0.02  | 1.46         | 1.48             | 6545.   | 5300.   |
|                  |              | 155.03  | 1.11  | 0.00 | 0.48  | 1.90  | 156.61       | 158.51           |         |         |

First line shows STRANDED fish  
 Second line shows TRAPPED fish

|                  |       |         |       |       |       |       |         |         |        |        |
|------------------|-------|---------|-------|-------|-------|-------|---------|---------|--------|--------|
| 81/ 4/12         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 8470.  | 7630.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/13         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 8470.  | 7630.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/14         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 8470.  | 7630.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/15         |       |         |       |       |       |       |         |         |        |        |
| No event         |       |         |       |       |       |       |         |         |        |        |
| 81/ 4/16         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 8470.  | 7630.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/17         | 58    | 0.89    | 6.E-3 | 0.00  | 3.E-3 | 0.01  | 0.90    | 0.91    | 8190.  | 5450.  |
|                  |       | 146.29  | 1.05  | 0.00  | 0.45  | 1.79  | 147.79  | 149.59  |        |        |
| 81/ 4/18         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 8270.  | 7550.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/19         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 8350.  | 6755.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/20         |       |         |       |       |       |       |         |         |        |        |
| No event         |       |         |       |       |       |       |         |         |        |        |
| 81/ 4/21         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 9070.  | 8070.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/22         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 9840.  | 7790.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/23         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 13650. | 12050. |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/24         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 12600. | 6965.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/25         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 8870.  | 7990.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/26         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 7630.  | 6160.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/27         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 7430.  | 6580.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/28         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 11150. | 6895.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/29         | 0     | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    | 7750.  | 6370.  |
|                  |       | 0.00    | 0.00  | 0.00  | 0.00  | 0.00  | 0.00    | 0.00    |        |        |
| 81/ 4/30         |       |         |       |       |       |       |         |         |        |        |
| No event         |       |         |       |       |       |       |         |         |        |        |
| <hr/>            | <hr/> | <hr/>   | <hr/> | <hr/> | <hr/> | <hr/> | <hr/>   | <hr/>   | <hr/>  | <hr/>  |
| Month subtotals: |       | 154.89  | 1.11  | 0.00  | 0.47  | 1.90  | 156.48  | 158.38  |        |        |
|                  |       | 3637.69 | 26.04 | 0.00  | 11.16 | 44.63 | 3674.88 | 3719.52 |        |        |

| Flow     | YR/MO/DY | #Disconnect | Chinook | Pink  | Chum  | Coho  | Sthd   | Total Salmon | Salmon + Steelhd | Begflow | Endflow |
|----------|----------|-------------|---------|-------|-------|-------|--------|--------------|------------------|---------|---------|
| <hr/>    | <hr/>    | <hr/>       | <hr/>   | <hr/> | <hr/> | <hr/> | <hr/>  | <hr/>        | <hr/>            | <hr/>   | <hr/>   |
| 81/ 5/ 1 | 0        | 0.00        | 0.00    | 0.00  | 0.00  | 0.00  | 0.00   | 0.00         | 0.00             | 7470.   | 5775.   |
|          |          | 0.00        | 0.00    | 0.00  | 0.00  | 0.00  | 0.00   | 0.00         | 0.00             |         |         |
| 81/ 5/ 2 | 77       | 5.65        | 0.03    | 0.00  | 0.01  | 0.05  | 3.69   | 3.73         | 6195.            | 5030.   |         |
|          |          | 375.04      | 2.83    | 0.00  | 1.21  | 4.85  | 399.08 | 403.93       |                  |         |         |
| 81/ 5/ 3 | 0        | 0.00        | 0.00    | 0.00  | 0.00  | 0.00  | 0.00   | 0.00         | 0.00             | 6160.   | 5810.   |
|          |          | 0.00        | 0.00    | 0.00  | 0.00  | 0.00  | 0.00   | 0.00         | 0.00             |         |         |
| 81/ 5/ 4 | 65       | 1.27        | 9.E-3   | 0.00  | 4.E-3 | 0.02  | 1.28   | 1.29         | 7590.            | 5180.   |         |
|          |          | 135.65      | 0.97    | 0.00  | 0.42  | 1.66  | 137.04 | 138.70       |                  |         |         |

First line shows STRANDED fish  
Second line shows TRAPPED fish

First line shows STRANDED fish  
Second line shows TRAPPED fish

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|                  |         |       |      |       |       |         |         |
|------------------|---------|-------|------|-------|-------|---------|---------|
| Month subtotals: | 349.50  | 2.50  | 0.00 | 1.07  | 4.29  | 353.08  | 357.37  |
|                  | 6311.50 | 45.17 | 0.00 | 19.36 | 77.44 | 6376.04 | 6453.48 |

---

|              |         |       |     |      |       |         |         |
|--------------|---------|-------|-----|------|-------|---------|---------|
| Year totals: | 1632.5  | 11.7  | 0.0 | 5.0  | 20.0  | 1649.2  | 1669.2  |
|              | 27419.9 | 196.3 | 0.0 | 84.1 | 336.4 | 27700.3 | 28036.7 |

PARAMETERS FOR THIS RUN:

-----  
04/18/87  
13:49:19

Slope categories:

0 to 5%  
> 5% to 10%  
> 10%

Substrate categories:

Less than 3 inches  
Greater than 3 inches

Location codes:

Upper reach  
Middle reach  
Lower reach

Flow data was extracted for the following time periods:

| YEAR | SEASON | BEGDATE | ENDDATE |
|------|--------|---------|---------|
| 81   | 1      | 201     | 531     |
| 81   | 2      | 715     | 930     |

Both gravel bars and potholes were run.  
(using maximum ramp rate for gravel bar simulation)

TABLES WERE CONSTRUCTED USING THE FOLLOWING SPECIFICATIONS:

-----  
Rank by stranding using the database column --  
TOTSTR

Daily detail report

Tables will be written for gravel bars and/or potholes as selected.

Gravel Bar Stranding - Daily Detail with Stranding Ranking  
 ======  
 (Results from applying base year stranding data to the indicated flow regime)

| Comment  | YR/MO/DY | Flow    |      |       |      |         |        | Total Salmon | Salmon + Steelhd | Ampl  | RampRate |
|----------|----------|---------|------|-------|------|---------|--------|--------------|------------------|-------|----------|
|          |          | Chinook | Pink | Chum  | Coho | Steelhd |        |              |                  |       |          |
| Daylight | 81/ 4/17 | 356.77  | 0.00 | 28.64 | 0.00 | 1.61    | 385.41 | 387.02       | 2910.            | 1087. |          |
| Daylight | 81/ 5/ 4 | 341.86  | 0.00 | 27.44 | 0.00 | 1.54    | 369.29 | 370.84       | 3783.            | 1891. |          |
| Daylight | 81/ 4/22 | 339.09  | 0.00 | 27.22 | 0.00 | 1.53    | 366.31 | 367.84       | 2455.            | 972.  |          |
| Daylight | 81/ 3/30 | 323.24  | 0.00 | 25.94 | 0.00 | 1.94    | 349.18 | 351.12       | 4803.            | 1191. |          |
| Daylight | 81/ 4/28 | 291.75  | 0.00 | 23.42 | 0.00 | 1.64    | 315.17 | 316.81       | 3096.            | 853.  |          |
| Daylight | 81/ 4/24 | 288.76  | 0.00 | 23.18 | 0.00 | 1.61    | 311.94 | 313.55       | 2934.            | 929.  |          |
| Daylight | 81/ 3/23 | 277.17  | 0.00 | 22.41 | 0.00 | 1.52    | 301.58 | 303.10       | 2414.            | 1037. |          |
| Daylight | 81/ 3/23 | 277.18  | 0.00 | 22.25 | 0.00 | 1.50    | 299.43 | 300.93       | 2306.            | 1012. |          |
| Daylight | 81/ 3/24 | 225.36  | 0.00 | 18.09 | 0.00 | 1.49    | 243.44 | 244.93       | 2244.            | 818.  |          |
| Daylight | 81/ 3/26 | 225.09  | 0.00 | 18.07 | 0.00 | 1.49    | 243.16 | 244.65       | 2204.            | 464.  |          |
| Daylight | 81/ 4/21 | 192.25  | 0.00 | 15.43 | 0.00 | 1.03    | 207.68 | 208.71       | 1562.            | 488.  |          |
| Daylight | 81/ 3/18 | 192.25  | 0.00 | 15.43 | 0.00 | 1.03    | 207.68 | 208.71       | 1562.            | 276.  |          |
| Daylight | 81/ 5/ 5 | 189.88  | 0.00 | 15.24 | 0.00 | 1.25    | 205.12 | 206.37       | 2195.            | 350.  |          |
| Daylight | 81/ 2/25 | 183.13  | 0.00 | 14.70 | 0.00 | 1.19    | 197.83 | 199.02       | 1924.            | 941.  |          |
| Daylight | 81/ 4/19 | 175.95  | 0.00 | 14.12 | 0.00 | 0.94    | 190.08 | 191.02       | 1472.            | 544.  |          |
| Daylight | 81/ 3/ 2 | 164.55  | 0.00 | 13.21 | 0.00 | 1.07    | 177.76 | 178.82       | 1603.            | 407.  |          |
| Daylight | 81/ 5/ 7 | 152.31  | 0.00 | 12.23 | 0.00 | 0.81    | 164.54 | 165.35       | 1577.            | 427.  |          |
| Daylight | 81/ 4/ 9 | 149.16  | 0.00 | 11.97 | 0.00 | 0.79    | 161.14 | 161.93       | 1324.            | 394.  |          |
| Daylight | 81/ 4/11 | 149.16  | 0.00 | 11.97 | 0.00 | 0.79    | 161.14 | 161.93       | 1324.            | 394.  |          |
| Daylight | 81/ 4/ 7 | 149.16  | 0.00 | 11.97 | 0.00 | 0.79    | 161.14 | 161.93       | 1324.            | 394.  |          |
| Daylight | 81/ 4/10 | 149.16  | 0.00 | 11.97 | 0.00 | 0.79    | 161.14 | 161.93       | 1324.            | 394.  |          |
| Daylight | 81/ 3/27 | 130.24  | 0.00 | 10.45 | 0.00 | 0.84    | 140.69 | 141.53       | 1373.            | 686.  |          |
| Daylight | 81/ 4/23 | 129.60  | 0.00 | 10.32 | 0.00 | 0.83    | 138.91 | 139.75       | 1362.            | 671.  |          |
| Daylight | 81/ 4/ 5 | 116.42  | 0.00 | 9.34  | 0.00 | 1.21    | 125.77 | 126.98       | 1751.            | 470.  |          |
| Daylight | 81/ 4/ 3 | 116.03  | 0.00 | 9.31  | 0.00 | 0.62    | 125.35 | 125.97       | 1141.            | 453.  |          |
| Daylight | 81/ 2/26 | 115.42  | 0.00 | 9.27  | 0.00 | 0.75    | 124.89 | 125.44       | 1363.            | 280.  |          |
| Daylight | 81/ 5/20 | 102.07  | 0.00 | 8.19  | 0.00 | 0.54    | 110.26 | 110.81       | 2035.            | 436.  |          |
| Daylight | 81/ 4/15 | 97.75   | 0.00 | 7.84  | 0.00 | 0.52    | 105.60 | 106.12       | 1040.            | 520.  |          |
| Daylight | 81/ 4/16 | 97.75   | 0.00 | 7.84  | 0.00 | 0.52    | 105.60 | 106.12       | 1040.            | 520.  |          |
| Daylight | 81/ 4/12 | 97.75   | 0.00 | 7.84  | 0.00 | 0.52    | 105.60 | 106.12       | 1040.            | 520.  |          |
| Daylight | 81/ 4/14 | 97.75   | 0.00 | 7.84  | 0.00 | 0.52    | 105.60 | 106.12       | 1040.            | 520.  |          |
| Daylight | 81/ 2/16 | 94.58   | 0.00 | 7.59  | 0.00 | 0.50    | 102.18 | 102.68       | 1447.            | 381.  |          |
| Daylight | 81/ 5/19 | 91.49   | 0.00 | 7.34  | 0.00 | 0.49    | 98.83  | 99.32        | 1744.            | 368.  |          |
| Daylight | 81/ 5/16 | 78.25   | 0.00 | 6.28  | 0.00 | 0.51    | 84.53  | 85.03        | 1549.            | 454.  |          |
| Daylight | 81/ 4/18 | 76.92   | 0.00 | 6.17  | 0.00 | 0.35    | 83.10  | 83.45        | 859.             | 429.  |          |
| Daylight | 81/ 3/15 | 65.04   | 0.00 | 5.22  | 0.00 | 0.42    | 70.26  | 70.69        | 936.             | 408.  |          |
| Daylight | 81/ 4/29 | 64.77   | 0.00 | 5.20  | 0.00 | 0.67    | 69.97  | 70.65        | 1196.            | 304.  |          |
| Daylight | 81/ 3/12 | 61.10   | 0.00 | 4.91  | 0.00 | 0.96    | 66.01  | 66.97        | 1498.            | 411.  |          |
| Daylight | 81/ 5/22 | 56.88   | 0.00 | 4.56  | 0.00 | 0.37    | 61.44  | 61.81        | 1720.            | 429.  |          |
| Daylight | 81/ 2/11 | 53.96   | 0.00 | 4.33  | 0.00 | 0.55    | 58.29  | 58.85        | 2071.            | 564.  |          |
| Daylight | 81/ 3/ 6 | 52.10   | 0.00 | 4.18  | 0.00 | 0.82    | 56.28  | 57.11        | 1351.            | 371.  |          |
| Daylight | 81/ 3/14 | 50.72   | 0.00 | 4.07  | 0.00 | 0.53    | 54.79  | 55.32        | 1045.            | 314.  |          |
| 81/ 4/ 1 | 47.45    | 0.00    | 3.81 | 0.00  | 1.64 | 51.26   | 52.90  | 3083.        | 775.             |       |          |
| Daylight | 81/ 2/10 | 47.61   | 0.00 | 3.82  | 0.00 | 0.61    | 51.43  | 52.04        | 3814.            | 802.  |          |
| 81/ 3/13 | 43.65    | 0.00    | 3.50 | 0.00  | 1.51 | 47.14   | 48.64  | 2330.        | 408.             |       |          |
| 81/ 4/ 8 | 42.40    | 0.00    | 3.40 | 0.00  | 1.47 | 45.80   | 47.27  | 2087.        | 967.             |       |          |
| Daylight | 81/ 5/18 | 32.15   | 0.00 | 2.58  | 0.00 | 0.17    | 34.73  | 34.91        | 906.             | 238.  |          |
| 81/ 2/21 | 31.27    | 0.00    | 2.51 | 0.00  | 1.08 | 33.78   | 34.86  | 2241.        | 601.             |       |          |
| Daylight | 81/ 5/ 8 | 30.70   | 0.00 | 2.46  | 0.00 | 0.14    | 33.16  | 33.30        | 691.             | 260.  |          |
| 81/ 2/23 | 28.75    | 0.00    | 2.31 | 0.00  | 0.99 | 31.06   | 32.05  | 1796.        | 852.             |       |          |
| Daylight | 81/ 3/ 5 | 29.14   | 0.00 | 2.34  | 0.00 | 0.46    | 31.48  | 31.94        | 976.             | 280.  |          |

|          |          |       |      |      |      |       |       |       |       |       |
|----------|----------|-------|------|------|------|-------|-------|-------|-------|-------|
| Daylight | 81/ 5/ 2 | 28.93 | 0.00 | 2.32 | 0.00 | 0.46  | 31.25 | 31.71 | 1004. | 405.  |
|          | 81/ 2/17 | 27.84 | 0.00 | 2.23 | 0.00 | 0.96  | 30.07 | 31.04 | 3091. | 1150. |
|          | 81/ 5/ 1 | 25.47 | 0.00 | 2.04 | 0.00 | 0.88  | 27.52 | 28.40 | 1440. | 460.  |
| Daylight | 81/ 5/17 | 24.75 | 0.00 | 1.99 | 0.00 | 0.16  | 26.74 | 26.90 | 854.  | 298.  |
|          | 81/ 4/26 | 23.67 | 0.00 | 1.90 | 0.00 | 0.82  | 25.57 | 26.38 | 1346. | 375.  |
| Daylight | 81/ 5/10 | 23.29 | 0.00 | 1.87 | 0.00 | 0.24  | 25.16 | 25.40 | 864.  | 362.  |
| Daylight | 81/ 5/24 | 23.25 | 0.00 | 1.87 | 0.00 | 0.10  | 25.12 | 25.22 | 934.  | 249.  |
|          | 81/ 5/15 | 22.31 | 0.00 | 1.79 | 0.00 | 0.77  | 24.10 | 24.87 | 2005. | 508.  |
| Daylight | 81/ 5/ 6 | 21.79 | 0.00 | 1.75 | 0.00 | 0.34  | 23.54 | 23.88 | 938.  | 269.  |
|          | 81/ 4/27 | 19.10 | 0.00 | 1.53 | 0.00 | 0.66  | 20.64 | 21.30 | 1183. | 388.  |
|          | 81/ 2/18 | 18.94 | 0.00 | 1.52 | 0.00 | 0.65  | 20.46 | 21.12 | 1591. | 638.  |
|          | 81/ 4/ 6 | 18.13 | 0.00 | 1.45 | 0.00 | 0.63  | 19.58 | 20.21 | 1148. | 545.  |
|          | 81/ 3/28 | 17.46 | 0.00 | 1.40 | 0.00 | 0.60  | 18.85 | 19.46 | 1124. | 562.  |
| Daylight | 81/ 5/14 | 17.12 | 0.00 | 1.37 | 0.00 | 0.11  | 18.49 | 18.60 | 704.  | 211.  |
|          | 81/ 2/27 | 15.13 | 0.00 | 1.21 | 0.00 | 0.52  | 16.35 | 16.87 | 1081. | 240.  |
|          | 81/ 3/16 | 14.32 | 0.00 | 1.15 | 0.00 | 0.50  | 15.47 | 15.97 | 1012. | 451.  |
| Daylight | 81/ 2/ 5 | 13.50 | 0.00 | 1.08 | 0.00 | 0.21  | 14.58 | 14.80 | 1779. | 596.  |
| Daylight | 81/ 4/25 | 11.57 | 0.00 | 0.93 | 0.00 | 0.19  | 12.50 | 12.68 | 689.  | 325.  |
| Daylight | 81/ 5/27 | 10.92 | 0.00 | 0.88 | 0.00 | 0.05  | 11.79 | 11.84 | 826.  | 297.  |
| Daylight | 81/ 2/ 4 | 9.44  | 0.00 | 0.76 | 0.00 | 0.15  | 10.20 | 10.75 | 1618. | 500.  |
| Daylight | 81/ 3/ 9 | 9.12  | 0.00 | 0.73 | 0.00 | 0.09  | 9.85  | 9.95  | 598.  | 293.  |
|          | 81/ 2/28 | 8.72  | 0.00 | 0.70 | 0.00 | 0.30  | 9.42  | 9.73  | 823.  | 315.  |
| Daylight | 81/ 5/25 | 7.62  | 0.00 | 0.61 | 0.00 | 0.08  | 8.22  | 8.30  | 874.  | 241.  |
| Daylight | 81/ 5/28 | 7.42  | 0.00 | 0.60 | 0.00 | 0.05  | 8.02  | 8.07  | 898.  | 266.  |
|          | 81/ 5/26 | 7.20  | 0.00 | 0.58 | 0.00 | 0.25  | 7.77  | 8.02  | 1872. | 397.  |
| Daylight | 81/ 2/ 3 | 7.17  | 0.00 | 0.58 | 0.00 | 0.11  | 7.74  | 7.86  | 1632. | 456.  |
| Daylight | 81/ 5/29 | 5.51  | 0.00 | 0.44 | 0.00 | 0.03  | 5.95  | 5.99  | 894.  | 307.  |
| Daylight | 81/ 5/12 | 3.54  | 0.00 | 0.28 | 0.00 | 0.02  | 3.83  | 3.85  | 538.  | 259.  |
| Daylight | 81/ 2/ 2 | 3.42  | 0.00 | 0.27 | 0.00 | 0.03  | 3.69  | 3.72  | 1032. | 444.  |
| Daylight | 81/ 5/30 | 2.26  | 0.00 | 0.18 | 0.00 | 0.03  | 2.44  | 2.47  | 1090. | 272.  |
| Daylight | 81/ 5/11 | 1.69  | 0.00 | 0.13 | 0.00 | 1.E-2 | 1.82  | 1.83  | 512.  | 250.  |
|          | 81/ 2/ 9 | 1.38  | 0.00 | 0.11 | 0.00 | 0.05  | 1.49  | 1.54  | 659.  | 299.  |
| Daylight | 81/ 3/ 8 | 1.28  | 0.00 | 0.10 | 0.00 | 0.02  | 1.39  | 1.41  | 521.  | 213.  |
|          | 81/ 3/21 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 345.  | 165.  |
|          | 81/ 5/ 3 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 285.  | 120.  |
|          | 81/ 3/19 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 264.  | 126.  |
| Daylight | 81/ 5/23 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 435.  | 217.  |
| Daylight | 81/ 3/10 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 138.  | 65.   |
| Daylight | 81/ 3/ 1 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 366.  | 183.  |
| Daylight | 81/ 3/22 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 342.  | 149.  |
| Daylight | 81/ 3/ 4 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 450.  | 120.  |
| Daylight | 81/ 2/ 6 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 413.  | 195.  |
| Daylight | 81/ 5/21 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 313.  | 150.  |
| Daylight | 81/ 3/17 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 195.  | 97.   |
| Daylight | 81/ 5/31 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00  | 213.  | 81.   |

| Comment  | Flow<br>YR/MO/DY | Total Salmon + |      |      |        |         |        | Amp1  | RampRate |
|----------|------------------|----------------|------|------|--------|---------|--------|-------|----------|
|          |                  | Chinook        | Pink | Chum | Coho   | Steelhd | Salmon |       |          |
|          |                  |                |      |      |        |         |        |       |          |
| 81/ 8/ 6 | 0.00             | 0.00           | 0.00 | 5.48 | 679.52 | 5.48    | 695.01 | 5109. | 817.     |
| 81/ 8/ 5 | 0.00             | 0.00           | 0.00 | 5.36 | 665.10 | 5.36    | 670.47 | 5031. | 772.     |
| 81/ 8/ 7 | 0.00             | 0.00           | 0.00 | 4.87 | 602.98 | 4.86    | 607.84 | 4695. | 2347.    |
| 81/ 8/ 4 | 0.00             | 0.00           | 0.00 | 4.55 | 564.71 | 4.55    | 567.26 | 4488. | 755.     |
| 81/ 8/ 3 | 0.00             | 0.00           | 0.00 | 3.59 | 445.73 | 3.59    | 449.32 | 3844. | 432.     |
| 81/ 7/31 | 0.00             | 0.00           | 0.00 | 3.53 | 437.67 | 3.53    | 441.20 | 3940. | 809.     |
| 81/ 8/19 | 0.00             | 0.00           | 0.00 | 2.17 | 268.80 | 2.17    | 270.97 | 2884. | 612.     |
| 81/ 7/22 | 0.00             | 0.00           | 0.00 | 2.17 | 268.32 | 2.17    | 270.48 | 4699. | 849.     |
| 81/ 8/25 | 0.00             | 0.00           | 0.00 | 1.71 | 211.48 | 1.71    | 213.19 | 2573. | 816.     |
| 81/ 7/26 | 0.00             | 0.00           | 0.00 | 1.67 | 207.34 | 1.67    | 209.01 | 3113. | 964.     |
| 81/ 8/29 | 0.00             | 0.00           | 0.00 | 1.45 | 179.79 | 1.45    | 181.23 | 2401. | 555.     |
| 81/ 8/22 | 0.00             | 0.00           | 0.00 | 1.42 | 176.10 | 1.42    | 177.52 | 2381. | 604.     |
| 81/ 8/21 | 0.00             | 0.00           | 0.00 | 1.35 | 167.44 | 1.35    | 168.79 | 2334. | 670.     |
| 81/ 7/21 | 0.00             | 0.00           | 0.00 | 1.34 | 167.32 | 1.34    | 168.67 | 3760. | 1707.    |
| 81/ 7/24 | 0.00             | 0.00           | 0.00 | 1.28 | 158.55 | 1.28    | 159.83 | 2974. | 655.     |
| 81/ 8/28 | 0.00             | 0.00           | 0.00 | 0.84 | 104.61 | 0.84    | 105.45 | 1982. | 395.     |
| 81/ 8/12 | 0.00             | 0.00           | 0.00 | 0.87 | 100.23 | 0.81    | 101.04 | 1920. | 440.     |
| 81/ 9/ 9 | 0.00             | 0.00           | 0.00 | 0.77 | 95.68  | 0.77    | 96.45  | 2157. | 449.     |
| 81/ 8/20 | 0.00             | 0.00           | 0.00 | 0.76 | 93.81  | 0.76    | 94.57  | 1829. | 439.     |
| 81/ 8/24 | 0.00             | 0.00           | 0.00 | 0.74 | 91.34  | 0.74    | 92.08  | 1794. | 871.     |
| 81/ 7/18 | 0.00             | 0.00           | 0.00 | 0.68 | 84.59  | 0.68    | 85.27  | 3491. | 876.     |
| 81/ 8/11 | 0.00             | 0.00           | 0.00 | 0.65 | 80.75  | 0.65    | 81.40  | 1644. | 210.     |
| 81/ 9/ 3 | 0.00             | 0.00           | 0.00 | 0.62 | 76.13  | 0.62    | 76.74  | 1694. | 425.     |
| 81/ 8/23 | 0.00             | 0.00           | 0.00 | 0.56 | 69.03  | 0.56    | 69.59  | 1478. | 467.     |
| 81/ 9/ 5 | 0.00             | 0.00           | 0.00 | 0.54 | 56.50  | 0.54    | 57.14  | 1625. | 333.     |
| 81/ 7/29 | 0.00             | 0.00           | 0.00 | 0.50 | 62.18  | 0.50    | 62.68  | 1557. | 656.     |
| 81/ 7/30 | 0.00             | 0.00           | 0.00 | 0.48 | 59.86  | 0.48    | 60.34  | 1454. | 409.     |
| 81/ 8/18 | 0.00             | 0.00           | 0.00 | 0.47 | 58.94  | 0.47    | 59.41  | 1335. | 418.     |
| 81/ 9/ 2 | 0.00             | 0.00           | 0.00 | 0.39 | 48.90  | 0.39    | 49.19  | 1239. | 266.     |
| 81/ 8/14 | 0.00             | 0.00           | 0.00 | 0.37 | 45.88  | 0.37    | 46.25  | 1150. | 288.     |
| 81/ 7/28 | 0.00             | 0.00           | 0.00 | 0.34 | 42.58  | 0.34    | 42.72  | 1272. | 470.     |
| 81/ 7/27 | 0.00             | 0.00           | 0.00 | 0.32 | 40.32  | 0.32    | 40.65  | 1291. | 626.     |
| 81/ 7/23 | 0.00             | 0.00           | 0.00 | 0.32 | 39.95  | 0.32    | 40.27  | 1632. | 797.     |
| 81/ 8/17 | 0.00             | 0.00           | 0.00 | 0.31 | 38.26  | 0.31    | 38.57  | 1042. | 512.     |
| 81/ 9/10 | 0.00             | 0.00           | 0.00 | 0.30 | 36.97  | 0.30    | 37.16  | 1271. | 294.     |
| 81/ 9/ 4 | 0.00             | 0.00           | 0.00 | 0.23 | 27.91  | 0.23    | 28.14  | 954.  | 225.     |
| 81/ 9/22 | 0.00             | 0.00           | 0.00 | 0.23 | 27.81  | 0.23    | 28.04  | 1857. | 324.     |
| 81/ 8/27 | 0.00             | 0.00           | 0.00 | 0.20 | 24.78  | 0.20    | 24.98  | 851.  | 425.     |
| 81/ 7/20 | 0.00             | 0.00           | 0.00 | 0.18 | 22.59  | 0.18    | 22.77  | 1460. | 366.     |
| 81/ 8/ 1 | 0.00             | 0.00           | 0.00 | 0.17 | 20.26  | 0.17    | 20.42  | 787.  | 249.     |
| 81/ 8/26 | 0.00             | 0.00           | 0.00 | 0.15 | 19.06  | 0.15    | 19.21  | 770.  | 133.     |
| 81/ 8/16 | 0.00             | 0.00           | 0.00 | 0.14 | 17.50  | 0.14    | 17.65  | 748.  | 136.     |
| 81/ 9/18 | 0.00             | 0.00           | 0.00 | 0.13 | 15.78  | 0.13    | 15.90  | 1033. | 404.     |
| 81/ 9/21 | 0.00             | 0.00           | 0.00 | 0.12 | 15.01  | 0.12    | 15.13  | 1159. | 477.     |
| 81/ 9/23 | 0.00             | 0.00           | 0.00 | 0.10 | 12.84  | 0.10    | 12.95  | 1205. | 286.     |
| 81/ 9/14 | 0.00             | 0.00           | 0.00 | 0.09 | 11.57  | 0.09    | 11.67  | 799.  | 212.     |
| 81/ 7/16 | 0.00             | 0.00           | 0.00 | 0.09 | 11.51  | 0.09    | 11.60  | 1968. | 628.     |
| 81/ 8/ 2 | 0.00             | 0.00           | 0.00 | 0.09 | 10.94  | 0.09    | 11.03  | 655.  | 224.     |
| 81/ 8/13 | 0.00             | 0.00           | 0.00 | 0.09 | 10.87  | 0.09    | 10.96  | 654.  | 164.     |
| 81/ 9/25 | 0.00             | 0.00           | 0.00 | 0.07 | 9.13   | 0.07    | 9.20   | 1168. | 473.     |
| 81/ 8/ 9 | 0.00             | 0.00           | 0.00 | 0.07 | 9.11   | 0.07    | 9.18   | 629.  | 178.     |
| 81/ 7/19 | 0.00             | 0.00           | 0.00 | 0.07 | 8.25   | 0.07    | 8.32   | 921.  | 237.     |
| 81/ 9/26 | 0.00             | 0.00           | 0.00 | 0.06 | 7.66   | 0.06    | 7.72   | 1173. | 484.     |
| 81/ 9/24 | 0.00             | 0.00           | 0.00 | 0.05 | 6.28   | 0.05    | 6.35   | 894.  | 346.     |
| 81/ 8/ 8 | 0.00             | 0.00           | 0.00 | 0.05 | 5.72   | 0.05    | 5.76   | 581.  | 114.     |

|           |      |      |      |       |      |       |      |      |      |
|-----------|------|------|------|-------|------|-------|------|------|------|
| 8/1/ 9/11 | 0.00 | 0.00 | 0.00 | 0.02  | 2.32 | 0.02  | 2.34 | 551. | 190. |
| 8/1/ 7/15 | 0.00 | 0.00 | 0.00 | 1.E-2 | 0.79 | 1.E-2 | 0.80 | 703. | 124. |
| 8/1/ 9/19 | 0.00 | 0.00 | 0.00 | 0.00  | 0.03 | 0.00  | 0.03 | 501. | 198. |
| 8/1/ 7/17 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 418. | 57.  |
| 8/1/ 9/ 1 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 221. | 42.  |
| 8/1/ 8/30 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 481. | 235. |
| 8/1/ 8/15 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 247. | 66.  |
| 8/1/ 9/ 6 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 456. | 170. |
| 8/1/ 9/15 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 437. | 141. |
| 8/1/ 9/27 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  | 0.00 | 180. | 90.  |

Potholes Stranding and Trapping - Daily Detail with Stranding Ranking  
 ======  
 (Results of applying base year data to the indicate flow regime)

First line shows STRANDED fish  
 Second line shows TRAPPED Fish

| Flow     |             | Total   | Salmon + | Begflow | Endflow |       |         |         |
|----------|-------------|---------|----------|---------|---------|-------|---------|---------|
| YR/MO/DY | #Disconnect | Chinook | Pink     | Chum    | Coho    | Sthd  | Salmon  | Steelhd |
| 81/ 3/25 | 225         | 74.84   | 0.54     | 0.00    | 0.23    | 0.92  | 75.61   | 78.52   |
|          |             | 1343.09 | 9.61     | 0.00    | 4.12    | 16.48 | 1356.83 | 1373.31 |
| 81/ 3/13 | 167         | 73.95   | 0.53     | 0.00    | 0.23    | 0.91  | 74.71   | 75.61   |
|          |             | 1196.80 | 8.57     | 0.00    | 3.67    | 14.69 | 1209.04 | 1223.72 |
| 81/ 3/26 | 171         | 73.95   | 0.53     | 0.00    | 0.23    | 0.91  | 74.71   | 75.61   |
|          |             | 1260.32 | 9.02     | 0.00    | 3.87    | 15.46 | 1273.21 | 1288.67 |
| 81/ 3/23 | 171         | 73.95   | 0.53     | 0.00    | 0.23    | 0.91  | 74.71   | 75.61   |
|          |             | 1260.32 | 9.02     | 0.00    | 3.87    | 15.46 | 1273.21 | 1288.67 |
| 81/ 3/12 | 147         | 70.95   | 0.51     | 0.00    | 0.22    | 0.87  | 71.67   | 72.54   |
|          |             | 918.88  | 6.58     | 0.00    | 2.82    | 11.27 | 928.28  | 939.55  |
| 81/ 3/18 | 148         | 70.95   | 0.51     | 0.00    | 0.22    | 0.87  | 71.67   | 72.54   |
|          |             | 921.72  | 6.50     | 0.00    | 2.83    | 11.31 | 931.14  | 942.45  |
| 81/ 3/24 | 169         | 69.62   | 0.50     | 0.00    | 0.21    | 0.85  | 70.33   | 71.19   |
|          |             | 1126.19 | 8.06     | 0.00    | 3.45    | 13.82 | 1137.71 | 1151.53 |
| 81/ 3/ 2 | 145         | 63.43   | 0.45     | 0.00    | 0.19    | 0.78  | 64.07   | 64.85   |
|          |             | 885.98  | 6.34     | 0.00    | 2.72    | 10.87 | 895.04  | 905.91  |
| 81/ 5/ 5 | 215         | 59.49   | 0.43     | 0.00    | 0.18    | 0.73  | 60.10   | 60.83   |
|          |             | 1008.65 | 7.22     | 0.00    | 3.09    | 12.38 | 1018.97 | 1031.34 |
| 81/ 3/30 | 195         | 55.02   | 0.39     | 0.00    | 0.17    | 0.68  | 55.59   | 56.26   |
|          |             | 1008.85 | 7.22     | 0.00    | 3.10    | 12.38 | 1019.17 | 1031.55 |
| 81/ 4/ 1 | 194         | 50.13   | 0.36     | 0.00    | 0.15    | 0.62  | 50.65   | 51.26   |
|          |             | 1008.85 | 7.22     | 0.00    | 3.10    | 12.38 | 1019.17 | 1031.55 |
| 81/ 3/ 6 | 130         | 48.69   | 0.35     | 0.00    | 0.15    | 0.60  | 49.19   | 49.78   |
|          |             | 853.83  | 5.11     | 0.00    | 2.62    | 10.48 | 862.56  | 873.03  |
| 81/ 4/ 3 | 129         | 48.69   | 0.35     | 0.00    | 0.15    | 0.60  | 49.19   | 49.78   |
|          |             | 853.83  | 5.11     | 0.00    | 2.62    | 10.48 | 862.56  | 873.03  |
| 81/ 4/ 5 | 138         | 48.51   | 0.35     | 0.00    | 0.15    | 0.60  | 49.01   | 49.60   |
|          |             | 925.84  | 6.83     | 0.00    | 2.84    | 11.36 | 935.30  | 946.66  |
| 81/ 3/16 | 117         | 45.24   | 0.33     | 0.00    | 0.14    | 0.57  | 46.72   | 47.28   |
|          |             | 587.47  | 4.20     | 0.00    | 1.80    | 7.21  | 593.48  | 600.69  |
| 81/ 3/14 | 117         | 45.24   | 0.33     | 0.00    | 0.14    | 0.57  | 46.72   | 47.28   |
|          |             | 587.47  | 4.20     | 0.00    | 1.80    | 7.21  | 593.48  | 600.69  |
| 81/ 3/ 5 | 113         | 42.20   | 0.30     | 0.00    | 0.13    | 0.52  | 42.64   | 43.15   |
|          |             | 612.60  | 4.39     | 0.00    | 1.88    | 7.52  | 618.96  | 626.38  |
| 81/ 2/28 | 108         | 39.41   | 0.28     | 0.00    | 0.12    | 0.48  | 39.81   | 40.29   |
|          |             | 451.31  | 3.23     | 0.00    | 1.38    | 5.54  | 455.92  | 461.46  |
| 81/ 5/ 7 | 140         | 38.47   | 0.28     | 0.00    | 0.12    | 0.47  | 38.87   | 39.34   |
|          |             | 723.50  | 5.18     | 0.00    | 2.22    | 8.88  | 730.90  | 739.78  |
| 81/ 2/27 | 133         | 33.85   | 0.24     | 0.00    | 0.10    | 0.41  | 34.20   | 34.62   |
|          |             | 644.14  | 4.61     | 0.00    | 1.98    | 7.90  | 650.72  | 658.63  |
| 81/ 3/ 4 | 57          | 33.08   | 0.24     | 0.00    | 0.10    | 0.41  | 33.41   | 33.82   |
|          |             | 517.22  | 3.70     | 0.00    | 1.59    | 6.35  | 522.50  | 528.85  |
| 81/ 3/21 | 48          | 31.77   | 0.23     | 0.00    | 0.10    | 0.39  | 32.10   | 32.49   |
|          |             | 258.46  | 1.85     | 0.00    | 0.79    | 3.17  | 261.10  | 264.27  |
| 81/ 3/16 | 140         | 31.60   | 0.23     | 0.00    | 0.10    | 0.39  | 31.92   | 32.31   |
|          |             | 438.63  | 3.14     | 0.00    | 1.35    | 5.38  | 443.11  | 448.49  |
| 81/ 5/ 6 | 83          | 31.26   | 0.22     | 0.00    | 0.10    | 0.38  | 31.58   | 31.97   |
|          |             | 529.14  | 3.79     | 0.00    | 1.62    | 6.49  | 534.55  | 541.04  |

First line shows SPANNED fish  
 Second line shows TRAPPED fish

| Flow<br>YR/MO/DY | #Disconnect | Total   |      |      |       |      |        | Salmon + |         |         |
|------------------|-------------|---------|------|------|-------|------|--------|----------|---------|---------|
|                  |             | Chinook | Pink | Chum | Coho  | Sthd | Salmon | Steelhd  | Begflow | Endflow |
| 81/ 3/17         | 44          | 30.63   | 0.22 | 0.00 | 0.09  | 0.38 | 30.94  | 31.32    | 5030.   | 4790.   |
|                  |             | 250.87  | 1.80 | 0.00 | 0.77  | 3.08 | 253.43 | 256.51   |         |         |
| 81/ 5/15         | 199         | 29.23   | 0.21 | 0.00 | 0.09  | 0.36 | 29.53  | 29.89    | 5740.   | 3810.   |
|                  |             | 543.98  | 3.89 | 0.00 | 1.67  | 6.68 | 549.54 | 556.22   |         |         |
| 81/ 3/ 9         | 33          | 25.44   | 0.18 | 0.00 | 0.08  | 0.31 | 25.70  | 26.01    | 4016.   | 3418.   |
|                  |             | 334.48  | 2.39 | 0.00 | 1.03  | 4.10 | 337.91 | 342.01   |         |         |
| 81/ 3/ 8         | 31          | 24.71   | 0.18 | 0.00 | 0.08  | 0.30 | 24.96  | 25.26    | 3990.   | 3418.   |
|                  |             | 334.24  | 2.37 | 0.00 | 1.02  | 4.10 | 337.66 | 341.76   |         |         |
| 81/ 2/11         | 149         | 24.06   | 0.17 | 0.00 | 0.07  | 0.29 | 24.50  | 24.60    | 5705.   | 3760.   |
|                  |             | 360.16  | 2.58 | 0.00 | 1.11  | 4.42 | 363.84 | 368.26   |         |         |
| 81/ 2/10         | 204         | 22.29   | 0.16 | 0.00 | 0.07  | 0.27 | 22.52  | 22.79    | 7390.   | 3685.   |
|                  |             | 355.96  | 2.55 | 0.00 | 1.09  | 4.37 | 350.60 | 363.96   |         |         |
| 81/ 5/14         | 93          | 22.05   | 0.16 | 0.00 | 0.07  | 0.27 | 22.28  | 22.55    | 4940.   | 4288.   |
|                  |             | 189.25  | 1.75 | 0.00 | 0.58  | 2.31 | 190.18 | 192.49   |         |         |
| 81/ 5/10         | 78          | 19.92   | 0.14 | 0.00 | 0.06  | 0.24 | 20.13  | 20.37    | 4640.   | 3685.   |
|                  |             | 240.35  | 1.72 | 0.00 | 0.74  | 2.95 | 242.81 | 245.76   |         |         |
| 81/ 5/ 8         | 55          | 19.62   | 0.14 | 0.00 | 0.06  | 0.24 | 19.82  | 20.06    | 4372.   | 3635.   |
|                  |             | 291.07  | 2.08 | 0.00 | 0.89  | 3.57 | 294.05 | 297.62   |         |         |
| 81/ 5/18         | 102         | 17.32   | 0.12 | 0.00 | 0.05  | 0.21 | 17.50  | 17.71    | 4910.   | 4148.   |
|                  |             | 175.56  | 1.26 | 0.00 | 0.54  | 2.15 | 177.46 | 179.61   |         |         |
| 81/ 5/19         | 152         | 15.04   | 0.11 | 0.00 | 0.05  | 0.19 | 15.19  | 15.38    | 6160.   | 4400.   |
|                  |             | 281.06  | 2.01 | 0.00 | 0.86  | 3.45 | 283.94 | 287.39   |         |         |
| 81/ 5/22         | 186         | 13.97   | 0.10 | 0.00 | 0.04  | 0.17 | 14.11  | 14.28    | 5775.   | 4120.   |
|                  |             | 278.64  | 1.99 | 0.00 | 0.86  | 3.42 | 281.49 | 284.90   |         |         |
| 81/ 5/17         | 66          | 13.26   | 0.09 | 0.00 | 0.04  | 0.16 | 13.39  | 13.55    | 4460.   | 3660.   |
|                  |             | 187.88  | 1.35 | 0.00 | 0.58  | 2.31 | 189.80 | 192.11   |         |         |
| 81/ 2/ 5         | 148         | 12.23   | 0.09 | 0.00 | 0.04  | 0.15 | 12.36  | 12.51    | 4970.   | 3255.   |
|                  |             | 158.43  | 1.13 | 0.00 | 0.49  | 1.94 | 160.05 | 161.99   |         |         |
| 81/ 5/12         | 39          | 10.34   | 0.07 | 0.00 | 0.03  | 0.13 | 10.44  | 10.57    | 4372.   | 3860.   |
|                  |             | 174.90  | 1.25 | 0.00 | 0.54  | 2.15 | 176.68 | 178.83   |         |         |
| 81/ 2/ 4         | 148         | 9.79    | 0.07 | 0.00 | 0.03  | 0.12 | 9.89   | 10.01    | 4940.   | 3347.   |
|                  |             | 126.74  | 0.91 | 0.00 | 0.39  | 1.55 | 128.04 | 129.59   |         |         |
| 81/ 5/11         | 59          | 9.04    | 0.06 | 0.00 | 0.03  | 0.11 | 9.13   | 9.24     | 4490.   | 3938.   |
|                  |             | 208.03  | 1.49 | 0.00 | 0.64  | 2.55 | 210.16 | 212.71   |         |         |
| 81/ 2/ 3         | 145         | 7.34    | 0.05 | 0.00 | 0.02  | 0.09 | 7.41   | 7.51     | 4910.   | 3394.   |
|                  |             | 90.21   | 0.65 | 0.00 | 0.28  | 1.11 | 91.13  | 92.24    |         |         |
| 81/ 3/22         | 39          | 6.45    | 0.05 | 0.00 | 0.02  | 0.08 | 6.52   | 6.59     | 4670.   | 4316.   |
|                  |             | 80.62   | 0.58 | 0.00 | 0.25  | 0.99 | 81.44  | 82.43    |         |         |
| 81/ 5/27         | 65          | 5.47    | 0.04 | 0.00 | 0.02  | 0.07 | 5.49   | 5.56     | 5450.   | 4700.   |
|                  |             | 82.21   | 0.59 | 0.00 | 0.25  | 1.01 | 83.04  | 84.05    |         |         |
| 81/ 5/28         | 65          | 4.35    | 0.03 | 0.00 | 0.01  | 0.05 | 4.39   | 4.45     | 5510.   | 4700.   |
|                  |             | 65.76   | 0.47 | 0.00 | 0.20  | 0.81 | 66.44  | 67.24    |         |         |
| 81/ 3/15         | 77          | 3.89    | 0.03 | 0.00 | 0.01  | 0.05 | 3.93   | 3.98     | 5125.   | 5030.   |
|                  |             | 421.38  | 3.02 | 0.00 | 1.29  | 5.17 | 425.69 | 430.86   |         |         |
| 81/ 2/ 9         | 68          | 3.66    | 0.03 | 0.00 | 0.01  | 0.05 | 3.70   | 3.74     | 4790.   | 4120.   |
|                  |             | 72.28   | 0.52 | 0.00 | 0.22  | 0.89 | 73.02  | 73.90    |         |         |
| 81/ 5/ 2         | 77          | 3.65    | 0.03 | 0.00 | 0.01  | 0.05 | 3.69   | 3.73     | 6195.   | 5030.   |
|                  |             | 395.04  | 2.83 | 0.00 | 1.21  | 4.85 | 399.08 | 403.93   |         |         |
| 81/ 2/ 2         | 117         | 3.53    | 0.03 | 0.00 | 0.01  | 0.04 | 3.56   | 3.61     | 4910.   | 3835.   |
|                  |             | 37.00   | 0.24 | 0.00 | 0.11  | 0.46 | 37.47  | 37.92    |         |         |
| 81/ 3/ 1         | 18          | 3.00    | 0.02 | 0.00 | 9.E-3 | 0.04 | 3.04   | 3.07     | 5450.   | 5090.   |
|                  |             | 275.08  | 1.97 | 0.00 | 0.84  | 3.38 | 277.90 | 281.27   |         |         |

First line shows STRANDED fish  
Second line shows TRAPPED fish

First line shows STRANDED fish  
Second line shows TRAPPED fish

SECOND TIME SHOWS ATTRIBUTES FROM

**APPENDIX A**

**FLOW EVENT MODEL USERS GUIDE**

## SECTION 1 INTRODUCTION

### 1.1 PURPOSE

The FLOWEVNT model is designed to process hourly flow data obtained from USGS gaging stations on the Skagit River at Newhalem and Marblemount to identify and report "downramp" events. Downramps are sudden reductions in flow in the river caused by changes in flow through the hydroelectric turbines at the Diablo powerhouse. The FLOWEVNT model produces output files describing the downramp events.

Two types of output are produced by the FLOWEVNT model. "Event" files are generated to be used as input to the SKAGMDL model, and "plotter" files are produced to be used for graphing the downramp events. The "event" files contain a list of downramp events to be used by the SKAGMDL model for its analysis, and the "plotter" files contain X-Y data (time and flow) for graphing.

Two different types of downramp event need to be reported: "gravel bar stranding" events and "pothole" events. Program EVENTG identifies and reports on "gravel bar" events and program EVENTP identifies and reports on "pothole" events.

The following results are obtained after a run of the FLOWEVNT model:

1. An event file is generated to describe gravel bar stranding events.
2. An event file is generated to describe pothole events.
3. Seven plotter files are generated for each month analyzed.

### 1.2 VERSION

The FLOWEVNT model is written in FORTRAN 77 and runs on the IBM-PC, compatibles or any PC-DOS based machine.

### 1.3 RESPONSIBILITY

The FLOWEVNT model was designed, coded and tested by Christopher G. Chantrill, of R. W. Beck and Associates. Call (206) 441-7500 if you have any questions.

## SECTION 2 PROGRAM DESCRIPTION

### 2.1 GENERAL

The FLOWEVNT model processes hourly flow data from Newhalem and Marblemount gaging stations to produce event files describing downramp events and plotter files to be used to generate graphs of the downramp events. Two programs are used to produce the output data. Program EVENTG is used to produce event files of gravel bar stranding events, and program EVENTP is used to produce event files of pothole events. Both programs also produce plotter files for use in graphing of results. Program EVENTG is run for the months February thru May and July thru September; program EVENTP is run for the months February thru May only.

### 2.2 FUNCTIONAL DESCRIPTION

#### 2.2.1 Description of EVENTG

Program EVENTG analyzes hourly flow data at Newhalem to produce an event file describing gravel bar stranding downramp events. EVENTG also produces a number of files for use in graphing events.

EVENTG reads 24 hours of data at a time from the Newhalem flow data file. It keeps 48 hours of data in arrays in RAM: the current day's data and the next day's data.

EVENTG scans through each day's data looking for the start of a downramp. This is defined as any hour in which a flow reduction of 100 cfs or more is recorded. If the start of a downramp is found, EVENTG starts looking for the end of the downramp. The end of a downramp is found when an hour is found in which the reduction in flow from the previous hour is less than 300 cfs. EVENTP searches up to six hours into the next day for the end of the downramp.

Having found the end of the downramp, EVENTG now checks to see if the downramp was steep and deep enough to qualify for inclusion in the event file. It qualifies if the total amplitude of the downramp is more than 300 cfs and the maximum ramp rate, or slope of the downramp, exceeded 300 cfs in one or more hours during the downramp. Data describing the qualified downramps is written to the event file.

After the end of the downramp, EVENTG starts searching for the start of another downramp.

Appendix A contains a pseudo-code listing for EVENTG; Appendix B contains a program listing of EVENTG.

#### 2.2.2 Description of EVENTP

Program EVENTP analyzes hourly flow data at Newhalem and Marblemount to produce an event file describing pothole downramp events. EVENTP also produces a number of files for use in graphing events.

EVENTP reads 24 hours of data at a time from the Newhalem and Marblemount flow data files. It keeps 48 hours of data in arrays in RAM: the current day's data and the next day's data.

EVENTP scans through each day's data looking for the start of a downramp. This is defined as any hour in which a flow reduction of 100 cfs or more is recorded. If the start of a downramp is found, EVENTP starts looking for the end of the downramp. The end of a downramp is found when an hour is found in which the flow has increased, or when four hours of no change in flow has occurred. EVENTP searches up to six hours into the next day for the end of the downramp.

Having found the end of the downramp, EVENTP now checks to see if the downramp was steep and deep enough to qualify for inclusion in the event file. It qualifies if the total amplitude of the downramp 500 cfs or more. Data describing the qualified downramps is written to the event file.

After the end of the downramp, EVENTP starts searching for the start of another downramp.

Appendix A contains a pseudo-code listing for EVENTP; Appendix B contains a program listing of EVENTP.

### 1.3 RESTRICTIONS AND LIMITS

The programs are specific to the data for the Skagit River: the magnitude of the flows and the characteristic response to changes in generation at the Diablo powerhouse.

## SECTION 3 INPUT REQUIREMENTS

### 3.1 GENERAL

The FLOWEVNT programs read data from two files: the Newhalem hourly flow data file and the Marblemount hourly flow data file. The following data is available:

| <u>Year</u> | <u>Filename</u> | <u>Months Included</u>         |
|-------------|-----------------|--------------------------------|
| 1981        | NEWHAL81.HRF    | Feb. thru May, July thru Sept. |
|             | MARBLE81.HRF    |                                |
| 1982        | NEWHAL82.HRF    | Feb. thru May, July thru Sept. |
|             | MARBLE82.HRF    |                                |
| 1983        | NEWHAL83.HRF    | Feb. thru May, July thru Sept. |
|             | MARBLE83.HRF    |                                |
| 1984        | NEWHAL84.HRF    | Feb. thru May, July thru Sept. |
|             | MARBLE84.HRF    |                                |
| 1985        | NEWHAL85.HRF    | Feb. thru May, July thru Sept. |
|             | MARBLE85.HRF    |                                |
| 1986        | NEWHAL86.HRF    | Feb. thru May, July thru Sept. |
|             | MARBLE86.HRF    |                                |
| 1987        | NEWHAL87.HRF    | Feb. thru May, July thru Aug.  |
|             | MARBLE87.HRF    |                                |

"NEWHALnn.HRF" files are Newhalem data; "MARBLEnn.HRF" files are Marblemount data.

### 3.2 INPUT FILE DESCRIPTIONS

Data in the Newhalem and Marblemount hourly flow data files are formatted as follows:

*Columns Format Specifications*  
1-4 A4 Date (e.g., "2/27")  
5-76 12F6.0 Twelve hourly flow values for 1 a.m. through 12 noon or  
1 p.m. through 12 midnight. Flows are in CFS.

The following is an example of three days of flow data for Newhalem gage in the year 1981.

|      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 2-01 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 |
| 2-01 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 |
| 2-02 | 2304 | 2304 | 2304 | 2304 | 2304 | 2304 | 2337 | 3019 | 3865 | 3895 | 3655 | 3006 |      |
| 2-02 | 2863 | 2863 | 2863 | 2863 | 2863 | 2863 | 2863 | 2863 | 2863 | 2863 | 2863 | 2863 | 2863 |
| 2-03 | 2863 | 2863 | 2863 | 2863 | 2863 | 2863 | 2863 | 3214 | 3925 | 3880 | 3201 |      |      |
| 2-03 | 2967 | 2730 | 2293 | 2370 | 2348 | 2406 | 2718 | 2718 | 2718 | 2718 | 2359 | 2337 |      |

## SECTION 4 OUTPUT

### 4.1 GENERAL

The FLOWEVNT programs write data to several output files. The content of the data written to these files is as follows:

#### 4.1.1 EVENTG Program

##### Files for Data Output

Unit 3 Gravel bar downramp event data

##### Files for Plotting

Unit 12 Newhalem Flow for month

Unit 22 Newhalem Flow data during gravel bar downramps for month

Unit 42 Newhalem Flow at end of gravel bar downramps for month

Unit 62 Marblemount flow for month

#### 4.1.2 EVENTP Program

##### Files for Data Output

Unit 4 Pothole downramp event data

##### Files for Plotting

Unit 12 Newhalem Flow for month

Unit 32 Newhalem Flow during pothole downramps for month

Unit 52 Newhalem flow at end of pothole downramps for month

Unit 62 Marblemount flow for month

Unit 72 Marblemount flow at ends of pothole downramps for month

## 4.2 OUTPUT FILE DESCRIPTIONS

#### 4.2.1 EVENTG Program

The EVENTG program produces an event file for export to the SKAGMDL and several files of output designed to be input into the R. W. Beck and Associates CHARTER program for graphing.

4.2.1.1 EVENTG Event File Output: The event file for the EVENTG program contains data for use by the SKAGMDL model. Each record contains information describing a downramp event. The event file is formatted as follows:

| Columns | Format | Specifications                                                   |
|---------|--------|------------------------------------------------------------------|
| 1-8     | A8     | Date of Event                                                    |
| 9-10    | I2     | Season.<br>1 = Feb. 1 thru May. 31.<br>2 = Jul. 1 thru Sept. 30. |
| 11-12   | I2     | Sequence of event for this day (1 = first event, etc.)           |
| 13-18   | I6     | Time of start of downramp (hr)                                   |
| 19-24   | I6     | Time of end of downramp (hr)                                     |
| 25-30   | I6     | Amplitude of downramp (CFS)                                      |
| 31-36   | I6     | Average ramp rate for downramp (CFS/hr)                          |

37-42      I6      Maximum ramp rate during downramp (CFS/hr)  
43-48      I6      Flow at Newhalem at start of downramp (CFS)  
49-54      I6      Flow at Marblemount at end of downramp (CFS)

4.2.1.2 EVENTG Plotter File Output: EVENTG generates four files of plotter output per month of analysis. For February, these files would be FEB.1, FEB.2, FEB.3 and FEB.4. Each file contains X and Y values for graphing using the R. W. Beck and Associates CHARTER program.

*Feb 6*  
**Columns Format Specifications**

1-4      I4      Hour of the month (i.e. 1, 2 ... thru 744)  
5-10      I6      Flow value for the hour (CFS)

4.2.2 EVENTP Program

The EVENTP program produces an event file for export to the SKAGMDL and several files of output designed to be input into the R. W. Beck and Associates CHARTER program for graphing.

4.2.2.1 EVENTP Event File Output: The event file for the EVENTP program contains data for use by the SKAGMDL model. Each record contains information describing a downramp event. The event file is formatted as follows:

*Feb 6*  
**Columns Format Specifications**

1-8      A8      Date of Event  
9-10      I2      Season.  
              1 = Feb. 1 thru May. 31.  
11-12      I2      Sequence of event for this day (1 = first event, etc.)  
13-18      I6      Time of start of downramp (hr)  
19-24      I6      Time of end of downramp (hr)  
25-30      I6      Amplitude of downramp (CFS)  
31-36      I6      Average ramp rate for downramp (CFS/hr)  
37-42      I6      Flow at Newhalem at start of downramp (CFS)  
43-48      I6      Flow at Newhalem at end of downramp (CFS)  
49-54      I6      Max flow at Marblemount just after start of downramp (CFS)  
55-60      I6      Min flow at Marblemount just after end of downramp (CFS)

4.2.2.2 EVENTP Plotter File Output: EVENTP generates four files of plotter output per month of analysis. For February, these files would be FEB.1, FEB.2, FEB.3 and FEB.4. Each file contains X and Y values for graphing using the R. W. Beck and Associates CHARTER program.

*Feb 6 Feb 7*  
**Columns Format Specifications**

1-4      I4      Hour of the month (i.e. 1, 2 ... thru 744)  
5-10      I6      Flow value for the hour (CFS)

## SECTION 5 OPERATING INSTRUCTIONS

The FLOWEVNT model is run as a batch program at the user's PC. The user enters:

FLOWEVNT nn <ENTER>

where "nn" is the year to be analyzed (e.g., "85"), and "<ENTER>" represents the "enter" key on the PC keyboard. The PC automatically runs both the EVENTG and EVENTP programs to generate two event files and a set of plotter output files.

The FLOWEVNT programs assume that certain standard conventions are observed for the data input files as follows:

| <i>Input File</i> | <i>Standard Name</i> |
|-------------------|----------------------|
| Newhalem          | NEWHALnn.HRF         |
| Marblemount       | MARBLEnn.HRF         |

where "nn" is the year of the analysis (e.g., "85"). At present, there are files for Newhalem and Marblemount for the years 1981 through 1987.

Two event files are generated, one from the EVENTG program and one from the EVENTP program. They are named as follows:

| <i>Event File</i> | <i>File Name</i> |
|-------------------|------------------|
| EVENTG Events     | EVENTnn.G        |
| EVENTP Events     | EVENTnn.P        |

where "nn" is the year of the analysis as entered with the FLOWEVNT command.

A whole set of plotter output files are generated as follows:

| <i>Month</i> | <i>File names</i> |
|--------------|-------------------|
| February     | FEB.1 thru FEB.7  |
| March        | MAR.1 thru MAR.7  |
| April        | APR.1 thru APR.7  |
| May          | MAY.1 thru MAY.7  |
| July         | JUL.1 thru JUL.7  |
| August       | AUG.1 thru AUG.7  |
| September    | SEP.1 thru SEP.7  |

## **APPENDIX B**

**FLOW EVENT MODEL POTHOLE AND GRAVEL BAR EVENT OUTPUT FILES**

| Date        | BEG | ENDGB | Ampl. | AvRat | MxRat | BegFG | EndFG |
|-------------|-----|-------|-------|-------|-------|-------|-------|
| 2-02/81 1 1 | 10  | 12    | 889   | 444   | 649   | 3895  | 3006  |
| 2-03/81 1 1 | 11  | 12    | 679   | 679   | 679   | 3880  | 3201  |
| 2-03/81 1 2 | 13  | 15    | 674   | 337   | 437   | 2967  | 2293  |
| 2-04/81 1 1 | 10  | 12    | 1001  | 500   | 555   | 3955  | 2954  |
| 2-05/81 1 1 | 9   | 12    | 1354  | 451   | 631   | 4072  | 2718  |
| 2-09/81 1 1 | 14  | 15    | 861   | 861   | 861   | 3880  | 3019  |
| 2-09/81 1 2 | 23  | 24    | 480   | 480   | 480   | 3865  | 3385  |
| 2-10/81 1 1 | 10  | 16    | 3698  | 616   | 806   | 6652  | 2954  |
| 2-11/81 1 1 | 9   | 12    | 1863  | 621   | 777   | 4934  | 3071  |
| 2-11/81 1 2 | 22  | 27    | 2288  | 457   | 638   | 4718  | 2430  |
| 2-16/81 1 1 | 24  | 26    | 763   | 381   | 439   | 3445  | 2682  |
| 2-17/81 1 1 | 20  | 23    | 3001  | 1000  | 1362  | 6866  | 3865  |
| 2-18/81 1 1 | 19  | 21    | 1201  | 600   | 991   | 6610  | 5409  |
| 2-21/81 1 1 | 17  | 19    | 1203  | 601   | 804   | 7372  | 6169  |
| 2-21/81 1 2 | 21  | 23    | 698   | 349   | 399   | 5917  | 5219  |
| 2-22/81 1 1 | 12  | 13    | 672   | 672   | 672   | 6736  | 6064  |
| 2-22/81 1 2 | 15  | 16    | 588   | 588   | 588   | 5959  | 5371  |
| 2-23/81 1 1 | 22  | 24    | 1704  | 852   | 1400  | 6866  | 5162  |
| 2-25/81 1 1 | 24  | 26    | 1882  | 941   | 1191  | 7234  | 5352  |
| 2-28/81 1 1 | 15  | 17    | 631   | 315   | 395   | 3385  | 2754  |
| 3-02/81 1 1 | 23  | 25    | 707   | 353   | 564   | 3305  | 2598  |
| 3-04/81 1 1 | 10  | 12    | 676   | 338   | 346   | 3955  | 3279  |
| 3-05/81 1 1 | 9   | 11    | 546   | 273   | 390   | 4021  | 3475  |
| 3-05/81 1 2 | 21  | 23    | 679   | 339   | 424   | 3880  | 3201  |
| 3-06/81 1 1 | 10  | 12    | 742   | 371   | 376   | 4021  | 3279  |
| 3-06/81 1 2 | 13  | 16    | 596   | 198   | 323   | 3266  | 2670  |
| 3-06/81 1 3 | 20  | 23    | 999   | 333   | 353   | 3292  | 2293  |
| 3-08/81 1 1 | 8   | 9     | 576   | 576   | 576   | 2814  | 2238  |
| 3-09/81 1 1 | 11  | 13    | 587   | 293   | 439   | 2902  | 2315  |
| 3-12/81 1 1 | 10  | 12    | 764   | 382   | 614   | 3835  | 3071  |
| 3-13/81 1 1 | 9   | 11    | 817   | 408   | 460   | 4667  | 3850  |
| 3-13/81 1 2 | 13  | 16    | 730   | 243   | 364   | 3580  | 2850  |
| 3-14/81 1 1 | 12  | 13    | 405   | 405   | 405   | 3895  | 3490  |
| 3-15/81 1 1 | 22  | 24    | 782   | 391   | 663   | 4786  | 4004  |
| 3-16/81 1 1 | 19  | 21    | 903   | 451   | 539   | 3805  | 2902  |
| 3-17/81 1 1 | 11  | 13    | 848   | 424   | 443   | 3880  | 3032  |
| 3-18/81 1 1 | 17  | 19    | 480   | 240   | 375   | 3910  | 3430  |
| 3-24/81 1 1 | 1   | 3     | 2025  | 1012  | 1246  | 4599  | 2574  |
| 3-24/81 1 2 | 24  | 27    | 2148  | 716   | 844   | 4463  | 2315  |
| 3-26/81 1 1 | 1   | 4     | 2245  | 748   | 1224  | 4582  | 2337  |
| 3-26/81 1 2 | 21  | 26    | 1995  | 399   | 478   | 4497  | 2502  |
| 3-27/81 1 1 | 23  | 25    | 1373  | 686   | 822   | 6421  | 5048  |
| 3-28/81 1 1 | 22  | 23    | 953   | 953   | 953   | 6400  | 5447  |
| 3-30/81 1 1 | 23  | 28    | 4363  | 872   | 1259  | 6889  | 2526  |
| 4-01/81 1 1 | 11  | 15    | 2495  | 623   | 915   | 5371  | 2876  |
| 4-03/81 1 1 | 21  | 23    | 906   | 453   | 531   | 3925  | 3019  |
| 4-05/81 1 1 | 10  | 14    | 1661  | 415   | 520   | 4055  | 2394  |
| 4-06/81 1 1 | 22  | 23    | 938   | 938   | 938   | 5333  | 4395  |
| 4-07/81 1 1 | 18  | 20    | 788   | 394   | 541   | 5200  | 4412  |
| 4-08/81 1 1 | 21  | 23    | 1934  | 967   | 1199  | 6652  | 4718  |
| 4-09/81 1 1 | 22  | 23    | 730   | 730   | 730   | 5295  | 4565  |
| 4-10/81 1 1 | 11  | 12    | 418   | 418   | 418   | 5333  | 4915  |
| 4-10/81 1 2 | 13  | 14    | 612   | 612   | 612   | 4684  | 4072  |
| 4-10/81 1 3 | 22  | 23    | 437   | 437   | 437   | 5276  | 4839  |
| 4-11/81 1 1 | 21  | 23    | 1380  | 690   | 817   | 5656  | 4276  |
| 4-12/81 1 1 | 16  | 18    | 753   | 376   | 476   | 5029  | 4276  |
| 4-13/81 1 1 | 17  | 18    | 770   | 770   | 770   | 5029  | 4259  |
| 4-15/81 1 1 | 8   | 9     | 456   | 456   | 456   | 5314  | 4858  |
| 4-17/81 1 1 | 3   | 4     | 1040  | 1040  | 1040  | 6715  | 5675  |

|             |    |    |      |      |      |       |      |
|-------------|----|----|------|------|------|-------|------|
| 4-17/81 1 2 | 9  | 10 | 609  | 609  | 609  | 6463  | 5854 |
| 4-17/81 1 3 | 11 | 13 | 2175 | 1087 | 1301 | 5770  | 3595 |
| 4-17/81 1 4 | 18 | 20 | 620  | 310  | 342  | 5896  | 5276 |
| 4-18/81 1 1 | 11 | 12 | 859  | 859  | 859  | 6610  | 5751 |
| 4-18/81 1 2 | 16 | 17 | 773  | 773  | 773  | 6106  | 5333 |
| 4-18/81 1 3 | 18 | 20 | 663  | 331  | 348  | 6148  | 5485 |
| 4-19/81 1 1 | 22 | 25 | 1256 | 418  | 632  | 6190  | 4934 |
| 4-21/81 1 1 | 24 | 27 | 1183 | 394  | 640  | 7142  | 5959 |
| 4-22/81 1 1 | 11 | 14 | 2455 | 818  | 976  | 6442  | 3987 |
| 4-23/81 1 1 | 17 | 18 | 1056 | 1056 | 1056 | 6484  | 5428 |
| 4-23/81 1 2 | 24 | 26 | 1343 | 671  | 718  | 6866  | 5523 |
| 4-24/81 1 1 | 9  | 13 | 2562 | 640  | 935  | 6736  | 4174 |
| 4-26/81 1 1 | 15 | 17 | 751  | 375  | 380  | 5333  | 4582 |
| 4-27/81 1 1 | 21 | 22 | 544  | 544  | 544  | 4701  | 4157 |
| 4-28/81 1 1 | 23 | 27 | 3012 | 753  | 975  | 5466  | 2454 |
| 4-29/81 1 1 | 10 | 12 | 569  | 284  | 390  | 3445  | 2876 |
| 4-30/81 1 1 | 9  | 11 | 934  | 467  | 490  | 3580  | 2646 |
| 5-01/81 1 1 | 17 | 20 | 1167 | 369  | 521  | 3460  | 2293 |
| 5-02/81 1 1 | 13 | 15 | 811  | 405  | 473  | 3253  | 2442 |
| 5-04/81 1 1 | 9  | 11 | 3783 | 1891 | 3327 | 5523  | 1740 |
| 5-04/81 1 2 | 12 | 13 | 591  | 591  | 591  | 3610  | 3019 |
| 5-05/81 1 1 | 12 | 13 | 422  | 422  | 422  | 3415  | 2993 |
| 5-05/81 1 2 | 14 | 15 | 437  | 437  | 437  | 2730  | 2293 |
| 5-07/81 1 1 | 23 | 27 | 1577 | 394  | 435  | 3925  | 2348 |
| 5-10/81 1 1 | 13 | 16 | 844  | 281  | 363  | 2754  | 1910 |
| 5-11/81 1 1 | 5  | 7  | 500  | 250  | 380  | 2694  | 2194 |
| 5-11/81 1 2 | 16 | 18 | 503  | 251  | 371  | 2598  | 2095 |
| 5-12/81 1 1 | 18 | 20 | 538  | 269  | 370  | 2622  | 2084 |
| 5-14/81 1 1 | 10 | 12 | 427  | 213  | 319  | 2478  | 2051 |
| 5-15/81 1 1 | 15 | 19 | 1481 | 370  | 560  | 3730  | 2249 |
| 5-16/81 1 1 | 21 | 23 | 868  | 434  | 592  | 3490  | 2622 |
| 5-17/81 1 1 | 21 | 24 | 728  | 242  | 374  | 2658  | 1930 |
| 5-19/81 1 1 | 23 | 25 | 737  | 368  | 386  | 2876  | 2139 |
| 5-20/81 1 1 | 24 | 27 | 1144 | 381  | 441  | 3550  | 2406 |
| 5-21/81 1 1 | 22 | 24 | 538  | 269  | 317  | 3136  | 2598 |
| 5-22/81 1 1 | 21 | 25 | 1425 | 356  | 431  | 3520  | 2095 |
| 5-23/81 1 1 | 24 | 26 | 435  | 217  | 300  | 2889  | 2454 |
| 5-24/81 1 1 | 8  | 11 | 642  | 214  | 329  | 2562  | 1920 |
| 5-25/81 1 1 | 22 | 26 | 1640 | 410  | 481  | 4106  | 2466 |
| 5-26/81 1 1 | 19 | 20 | 496  | 496  | 496  | 2902  | 2406 |
| 5-27/81 1 1 | 23 | 25 | 724  | 362  | 372  | 2634  | 1910 |
| 5-28/81 1 1 | 19 | 21 | 420  | 210  | 312  | 2658  | 2238 |
| 5-30/81 1 1 | 22 | 24 | 501  | 250  | 357  | 2706  | 2205 |
| 7-01/81 2 1 | 1  | 2  | 1954 | 1954 | 1954 | 8270  | 6316 |
| 7-01/81 2 2 | 20 | 23 | 3266 | 1088 | 2355 | 10960 | 7694 |
| 7-04/81 2 1 | 19 | 20 | 964  | 964  | 964  | 7763  | 6799 |
| 7-05/81 2 1 | 17 | 19 | 1350 | 675  | 1080 | 10120 | 8770 |
| 7-06/81 2 1 | 17 | 21 | 3765 | 941  | 2160 | 12910 | 9145 |
| 7-07/81 2 1 | 1  | 3  | 1829 | 914  | 1160 | 9730  | 7901 |
| 7-07/81 2 2 | 14 | 16 | 2206 | 1103 | 1921 | 6958  | 4752 |
| 7-07/81 2 3 | 21 | 24 | 869  | 289  | 361  | 5917  | 5048 |
| 7-08/81 2 1 | 19 | 21 | 572  | 286  | 399  | 5791  | 5219 |
| 7-09/81 2 1 | 19 | 21 | 456  | 228  | 304  | 5390  | 4934 |
| 7-13/81 2 1 | 1  | 7  | 3034 | 505  | 684  | 7395  | 4361 |
| 7-13/81 2 2 | 23 | 26 | 2118 | 706  | 1111 | 7280  | 5162 |
| 7-14/81 2 1 | 3  | 5  | 469  | 234  | 323  | 4915  | 4446 |
| 7-17/81 2 1 | 2  | 5  | 1694 | 564  | 630  | 7464  | 5770 |
| 7-17/81 2 2 | 6  | 8  | 1079 | 539  | 737  | 5542  | 4463 |
| 7-18/81 2 1 | 23 | 29 | 3213 | 535  | 837  | 7234  | 4021 |
| 7-21/81 2 1 | 1  | 2  | 452  | 452  | 452  | 7188  | 6736 |
| 7-21/81 2 2 | 3  | 6  | 964  | 321  | 439  | 6715  | 5751 |

|         |   |   |    |    |      |      |      |       |      |
|---------|---|---|----|----|------|------|------|-------|------|
| 7-21/81 | 2 | 3 | 18 | 21 | 3760 | 1253 | 2115 | 11270 | 7510 |
| 7-21/81 | 2 | 4 | 23 | 28 | 4690 | 938  | 1675 | 8420  | 3730 |
| 7-22/81 | 2 | 1 | 19 | 21 | 1699 | 849  | 1122 | 7165  | 5466 |
| 7-22/81 | 2 | 2 | 23 | 28 | 2842 | 568  | 733  | 5428  | 2586 |
| 7-23/81 | 2 | 1 | 19 | 21 | 1594 | 797  | 901  | 6547  | 4953 |
| 7-23/81 | 2 | 2 | 23 | 27 | 2565 | 641  | 917  | 5295  | 2730 |
| 7-24/81 | 2 | 1 | 15 | 17 | 1310 | 655  | 827  | 6757  | 5447 |
| 7-24/81 | 2 | 2 | 22 | 24 | 673  | 336  | 374  | 4915  | 4242 |
| 7-26/81 | 2 | 1 | 18 | 20 | 1928 | 964  | 1191 | 6843  | 4915 |
| 7-26/81 | 2 | 2 | 24 | 26 | 544  | 272  | 306  | 4735  | 4191 |
| 7-27/81 | 2 | 1 | 23 | 25 | 1253 | 626  | 896  | 6757  | 5504 |
| 7-28/81 | 2 | 1 | 18 | 19 | 714  | 714  | 714  | 6757  | 6043 |
| 7-29/81 | 2 | 1 | 1  | 3  | 690  | 345  | 418  | 5833  | 5143 |
| 7-29/81 | 2 | 2 | 18 | 20 | 1312 | 656  | 903  | 6778  | 5466 |
| 7-30/81 | 2 | 1 | 13 | 14 | 525  | 525  | 525  | 6442  | 5917 |
| 7-30/81 | 2 | 2 | 18 | 20 | 819  | 409  | 588  | 6673  | 5834 |
| 7-31/81 | 2 | 1 | 1  | 2  | 557  | 557  | 557  | 5833  | 5276 |
| 7-31/81 | 2 | 2 | 14 | 16 | 861  | 430  | 735  | 6757  | 5896 |
| 7-31/81 | 2 | 3 | 23 | 26 | 2183 | 727  | 822  | 5124  | 2941 |
| 8-03/81 | 2 | 1 | 10 | 12 | 864  | 432  | 541  | 5276  | 4412 |
| 8-03/81 | 2 | 2 | 18 | 20 | 864  | 432  | 472  | 3987  | 3123 |
| 8-03/81 | 2 | 3 | 21 | 25 | 1346 | 336  | 457  | 3006  | 1660 |
| 8-04/81 | 2 | 1 | 15 | 21 | 3487 | 581  | 842  | 5791  | 2304 |
| 8-05/81 | 2 | 1 | 15 | 18 | 1933 | 644  | 811  | 6379  | 446  |
| 8-05/81 | 2 | 2 | 19 | 23 | 2575 | 643  | 933  | 4225  | 1650 |
| 8-06/81 | 2 | 1 | 16 | 22 | 3536 | 589  | 920  | 6568  | 3032 |
| 8-06/81 | 2 | 2 | 23 | 26 | 1190 | 396  | 476  | 2802  | 1612 |
| 8-07/81 | 2 | 1 | 16 | 18 | 4695 | 2347 | 4037 | 6253  | 1558 |
| 8-07/81 | 2 | 2 | 22 | 25 | 1448 | 482  | 584  | 4106  | 2658 |
| 8-12/81 | 2 | 1 | 17 | 21 | 1521 | 380  | 525  | 6778  | 5257 |
| 8-14/81 | 2 | 1 | 19 | 22 | 710  | 236  | 340  | 5105  | 4395 |
| 8-18/81 | 2 | 1 | 2  | 4  | 1025 | 512  | 639  | 4174  | 3149 |
| 8-18/81 | 2 | 2 | 23 | 26 | 1188 | 396  | 454  | 4038  | 2850 |
| 8-19/81 | 2 | 1 | 20 | 23 | 828  | 276  | 332  | 5257  | 4429 |
| 8-19/81 | 2 | 2 | 24 | 28 | 1982 | 495  | 701  | 4412  | 2430 |
| 8-20/81 | 2 | 1 | 14 | 15 | 1080 | 1080 | 1080 | 4021  | 2941 |
| 8-20/81 | 2 | 2 | 23 | 27 | 1489 | 372  | 532  | 5833  | 4344 |
| 8-21/81 | 2 | 1 | 23 | 27 | 2127 | 531  | 817  | 3987  | 1860 |
| 8-22/81 | 2 | 1 | 23 | 28 | 2215 | 443  | 615  | 3865  | 1650 |
| 8-23/81 | 2 | 1 | 13 | 16 | 1178 | 392  | 544  | 4004  | 2826 |
| 8-24/81 | 2 | 1 | 22 | 23 | 1743 | 1743 | 1743 | 3970  | 2227 |
| 8-25/81 | 2 | 1 | 7  | 8  | 1306 | 1306 | 1306 | 3820  | 2514 |
| 8-25/81 | 2 | 2 | 22 | 26 | 2313 | 578  | 821  | 5618  | 3305 |
| 8-27/81 | 2 | 1 | 2  | 4  | 851  | 425  | 630  | 4701  | 3850 |
| 8-28/81 | 2 | 1 | 2  | 3  | 428  | 428  | 428  | 4038  | 3610 |
| 8-28/81 | 2 | 2 | 22 | 25 | 1111 | 370  | 466  | 3625  | 2514 |
| 8-29/81 | 2 | 1 | 22 | 27 | 2307 | 461  | 643  | 3987  | 1680 |
| 9-03/81 | 2 | 1 | 23 | 26 | 1040 | 346  | 432  | 5656  | 4616 |
| 9-05/81 | 2 | 1 | 3  | 4  | 406  | 406  | 406  | 3490  | 3084 |
| 9-05/81 | 2 | 2 | 10 | 12 | 662  | 331  | 512  | 3655  | 2993 |
| 9-09/81 | 2 | 1 | 12 | 15 | 1003 | 334  | 493  | 3970  | 2967 |
| 9-10/81 | 2 | 1 | 2  | 3  | 493  | 493  | 493  | 2610  | 2117 |
| 9-10/81 | 2 | 2 | 9  | 11 | 489  | 244  | 369  | 2694  | 2205 |
| 9-14/81 | 2 | 1 | 19 | 21 | 424  | 212  | 314  | 1910  | 1486 |
| 9-18/81 | 2 | 1 | 19 | 22 | 958  | 319  | 406  | 3640  | 2682 |
| 9-21/81 | 2 | 1 | 21 | 23 | 955  | 477  | 627  | 3685  | 2730 |
| 9-22/81 | 2 | 1 | 21 | 24 | 852  | 284  | 375  | 2682  | 1830 |
| 9-23/81 | 2 | 1 | 15 | 17 | 573  | 286  | 429  | 2646  | 2073 |
| 9-24/81 | 2 | 1 | 21 | 24 | 813  | 271  | 385  | 2326  | 1513 |
| 9-25/81 | 2 | 1 | 20 | 23 | 1051 | 350  | 474  | 3505  | 2454 |
| 9-26/81 | 2 | 1 | 21 | 23 | 968  | 484  | 531  | 3987  | 3019 |

| Date        | BEGIN | ENDIM | Ampl. | AvRat | BegFN | EndFN | BegFM | EndFM |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2-02-81 1 1 | 10    | 18    | 1032  | 129   | 3895  | 2863  | 4910  | 3835  |
| 2-03-81 1 1 | 11    | 15    | 1587  | 396   | 3880  | 2293  | 4910  | 3394  |
| 2-04-81 1 1 | 10    | 17    | 1618  | 231   | 3955  | 2337  | 4940  | 3347  |
| 2-04-81 1 2 | 19    | 28    | 415   | 46    | 2730  | 2315  | 3785  | 3278  |
| 2-05-81 1 1 | 9     | 24    | 1779  | 118   | 4072  | 2293  | 4970  | 3232  |
| 2-06-81 1 1 | 14    | 23    | 413   | 45    | 2706  | 2293  | 3710  | 3186  |
| 2-09-81 1 1 | 14    | 17    | 1004  | 334   | 3880  | 2876  | 4820  | 3735  |
| 2-09-81 1 2 | 23    | 27    | 599   | 149   | 3865  | 3266  | 4790  | 4120  |
| 2-10-81 1 1 | 10    | 25    | 3814  | 254   | 6652  | 2838  | 7390  | 3635  |
| 2-11-81 1 1 | 9     | 13    | 2071  | 517   | 4934  | 2863  | 5705  | 3760  |
| 2-11-81 1 2 | 22    | 30    | 2425  | 303   | 4718  | 2293  | 5670  | 3324  |
| 2-12-81 1 1 | 10    | 16    | 449   | 74    | 2742  | 2293  | 3835  | 3490  |
| 2-16-81 1 1 | 21    | 30    | 1387  | 154   | 3865  | 2478  | 12050 | 11280 |
| 2-17-81 1 1 | 20    | 24    | 3091  | 772   | 6866  | 3775  | 12900 | 9390  |
| 2-18-81 1 1 | 14    | 25    | 1591  | 144   | 6715  | 5124  | 11640 | 9885  |
| 2-21-81 1 1 | 17    | 28    | 2172  | 197   | 7372  | 5200  | 10740 | 8070  |
| 2-22-81 1 1 | 12    | 21    | 1384  | 153   | 6736  | 5352  | 9550  | 7950  |
| 2-23-81 1 1 | 22    | 28    | 1704  | 284   | 6866  | 5162  | 9310  | 7470  |
| 2-25-81 1 1 | 24    | 30    | 1901  | 316   | 7234  | 5333  | 9310  | 7210  |
| 2-26-81 1 1 | 14    | 30    | 1344  | 84    | 5314  | 3970  | 7140  | 5740  |
| 2-27-81 1 1 | 10    | 19    | 648   | 72    | 3940  | 3292  | 5740  | 4760  |
| 2-28-81 1 1 | 15    | 19    | 823   | 205   | 3385  | 2562  | 5000  | 4120  |
| 3-02-81 1 1 | 12    | 21    | 635   | 70    | 3940  | 3305  | 5330  | 4730  |
| 3-02-81 1 2 | 23    | 30    | 968   | 138   | 3305  | 2337  | 4730  | 3760  |
| 3-04-81 1 1 | 10    | 17    | 676   | 96    | 3955  | 3279  | 5360  | 4610  |
| 3-05-81 1 1 | 9     | 18    | 976   | 108   | 4021  | 3045  | 5360  | 4288  |
| 3-05-81 1 2 | 21    | 29    | 991   | 123   | 3880  | 2889  | 5090  | 4094  |
| 3-06-81 1 1 | 10    | 16    | 1351  | 225   | 4021  | 2670  | 5270  | 3990  |
| 3-06-81 1 2 | 20    | 23    | 999   | 333   | 3292  | 2293  | 4550  | 3538  |
| 3-08-81 1 1 | 8     | 9     | 576   | 576   | 2814  | 2238  | 3938  | 3301  |
| 3-09-81 1 1 | 11    | 19    | 598   | 74    | 2902  | 2304  | 4016  | 3418  |
| 3-12-81 1 1 | 10    | 21    | 1498  | 136   | 3835  | 2337  | 5000  | 3442  |
| 3-13-81 1 1 | 9     | 26    | 2330  | 137   | 4667  | 2337  | 5450  | 3466  |
| 3-14-81 1 1 | 12    | 21    | 1045  | 116   | 3895  | 2850  | 5030  | 3938  |
| 3-15-81 1 1 | 22    | 30    | 936   | 117   | 4786  | 3850  | 6125  | 5030  |
| 3-16-81 1 1 | 19    | 27    | 967   | 120   | 3805  | 2838  | 5030  | 3938  |
| 3-17-81 1 1 | 11    | 14    | 939   | 313   | 3880  | 2941  | 5000  | 4042  |
| 3-18-81 1 1 | 17    | 30    | 1562  | 120   | 3910  | 2348  | 5030  | 3394  |
| 3-19-81 1 1 | 10    | 12    | 413   | 206   | 2706  | 2293  | 3785  | 3324  |
| 3-24-81 1 1 | 1     | 6     | 2306  | 461   | 4599  | 2293  | 5670  | 3394  |
| 3-24-81 1 2 | 24    | 30    | 2159  | 359   | 4463  | 2304  | 5570  | 3490  |
| 3-26-81 1 1 | 1     | 6     | 2278  | 455   | 4582  | 2304  | 5705  | 3418  |
| 3-26-81 1 2 | 21    | 30    | 2204  | 244   | 4497  | 2293  | 5570  | 3418  |
| 3-27-81 1 1 | 23    | 25    | 1373  | 686   | 6421  | 5048  | 7510  | 6055  |
| 3-28-81 1 1 | 22    | 27    | 1124  | 224   | 6400  | 5276  | 7390  | 6335  |
| 3-30-81 1 1 | 23    | 29    | 4596  | 766   | 6889  | 2293  | 8230  | 3886  |
| 4-01-81 1 1 | 11    | 29    | 3045  | 169   | 5371  | 2326  | 6755  | 3586  |
| 4-03-81 1 1 | 21    | 30    | 1111  | 123   | 3925  | 2814  | 5150  | 3964  |
| 4-05-81 1 1 | 10    | 24    | 1751  | 125   | 4055  | 2304  | 5670  | 3886  |
| 4-06-81 1 1 | 22    | 27    | 1091  | 218   | 5333  | 4242  | 6755  | 5635  |
| 4-07-81 1 1 | 18    | 26    | 958   | 119   | 5200  | 4242  | 6545  | 5330  |
| 4-08-81 1 1 | 21    | 25    | 2087  | 521   | 6652  | 4565  | 8190  | 6090  |
| 4-09-81 1 1 | 10    | 17    | 475   | 67    | 5352  | 4877  | 6790  | 5950  |
| 4-09-81 1 2 | 22    | 24    | 730   | 365   | 5295  | 4565  | 6230  | 0     |
| 4-10-81 1 1 | 11    | 16    | 1278  | 255   | 5333  | 4055  | 0     | 0     |
| 4-10-81 1 2 | 22    | 24    | 456   | 228   | 5276  | 4820  | 0     | 0     |
| 4-11-81 1 1 | 21    | 24    | 1380  | 460   | 5656  | 4276  | 0     | 0     |
| 4-12-81 1 1 | 16    | 19    | 753   | 251   | 5029  | 4276  | 0     | 0     |
| 4-13-81 1 1 | 17    | 24    | 1042  | 148   | 5029  | 3987  | 0     | 5270  |

|         |   |   |    |    |      |      |      |      |       |       |
|---------|---|---|----|----|------|------|------|------|-------|-------|
| 4-15-81 | 1 | 1 | 8  | 14 | 456  | 76   | 5314 | 4858 | 6685  | 6195  |
| 4-17-81 | 1 | 1 | 3  | 4  | 1040 | 1040 | 6715 | 5675 | 8430  | 7630  |
| 4-17-81 | 1 | 2 | 9  | 13 | 2868 | 717  | 6463 | 3595 | 8190  | 5450  |
| 4-17-81 | 1 | 3 | 18 | 23 | 620  | 124  | 5896 | 5276 | 7430  | 6930  |
| 4-18-81 | 1 | 1 | 11 | 12 | 859  | 859  | 6610 | 5751 | 8230  | 7550  |
| 4-18-81 | 1 | 2 | 16 | 17 | 773  | 773  | 6106 | 5333 | 7790  | 6965  |
| 4-18-81 | 1 | 3 | 18 | 26 | 701  | 87   | 6148 | 5447 | 7750  | 7140  |
| 4-19-81 | 1 | 1 | 22 | 30 | 1472 | 184  | 6190 | 4718 | 8350  | 6755  |
| 4-21-81 | 1 | 1 | 24 | 30 | 1562 | 260  | 7142 | 5580 | 9070  | 8070  |
| 4-22-81 | 1 | 1 | 11 | 14 | 2455 | 818  | 6442 | 3987 | 9840  | 7790  |
| 4-23-81 | 1 | 1 | 17 | 19 | 1132 | 566  | 6484 | 5352 | 10830 | 10110 |
| 4-23-81 | 1 | 2 | 24 | 27 | 1362 | 454  | 6866 | 5504 | 13650 | 12050 |
| 4-24-81 | 1 | 1 | 9  | 24 | 2613 | 174  | 6736 | 4123 | 12250 | 7245  |
| 4-25-81 | 1 | 1 | 15 | 29 | 689  | 49   | 6022 | 5333 | 8830  | 7670  |
| 4-26-81 | 1 | 1 | 15 | 17 | 751  | 375  | 5333 | 4582 | 7630  | 6335  |
| 4-26-81 | 1 | 2 | 19 | 26 | 612  | 87   | 4599 | 3987 | 6860  | 6090  |
| 4-27-81 | 1 | 1 | 19 | 27 | 1183 | 147  | 5238 | 4055 | 7430  | 6860  |
| 4-28-81 | 1 | 1 | 23 | 30 | 3096 | 442  | 5466 | 2370 | 10940 | 6895  |
| 4-29-81 | 1 | 1 | 10 | 19 | 1196 | 132  | 3445 | 2249 | 7750  | 6475  |
| 4-30-81 | 1 | 1 | 9  | 14 | 982  | 196  | 3580 | 2598 | 7830  | 7280  |
| 5-01-81 | 1 | 1 | 11 | 13 | 499  | 249  | 3505 | 3006 | 8070  | 7315  |
| 5-01-81 | 1 | 2 | 17 | 21 | 1365 | 341  | 3460 | 2095 | 7315  | 5775  |
| 5-02-81 | 1 | 1 | 2  | 5  | 791  | 263  | 3084 | 2293 | 6510  | 5600  |
| 5-02-81 | 1 | 2 | 13 | 27 | 1004 | 71   | 3253 | 2249 | 6125  | 4820  |
| 5-04-81 | 1 | 1 | 9  | 11 | 3783 | 1891 | 5523 | 1740 | 7590  | 5180  |
| 5-04-81 | 1 | 2 | 12 | 14 | 695  | 347  | 3610 | 2915 | 6195  | 5180  |
| 5-04-81 | 1 | 3 | 18 | 20 | 604  | 302  | 3214 | 2610 | 5360  | 4730  |
| 5-04-81 | 1 | 4 | 24 | 30 | 990  | 165  | 2730 | 1740 | 4850  | 3760  |
| 5-05-81 | 1 | 1 | 10 | 29 | 2195 | 115  | 3925 | 1730 | 5740  | 3490  |
| 5-06-81 | 1 | 1 | 10 | 25 | 892  | 59   | 2622 | 1730 | 4430  | 3418  |
| 5-07-81 | 1 | 1 | 23 | 30 | 1577 | 225  | 3925 | 2348 | 5570  | 3938  |
| 5-08-81 | 1 | 1 | 12 | 18 | 631  | 105  | 2682 | 2051 | 4372  | 3635  |
| 5-08-81 | 1 | 2 | 20 | 26 | 740  | 123  | 2490 | 1750 | 4094  | 3466  |
| 5-10-81 | 1 | 1 | 13 | 17 | 864  | 216  | 2754 | 1890 | 4640  | 3685  |
| 5-11-81 | 1 | 1 | 5  | 7  | 500  | 250  | 2694 | 2194 | 4490  | 3938  |
| 5-11-81 | 1 | 2 | 16 | 18 | 503  | 251  | 2598 | 2095 | 4260  | 3735  |
| 5-12-81 | 1 | 1 | 18 | 21 | 538  | 179  | 2622 | 2084 | 4372  | 3860  |
| 5-12-81 | 1 | 2 | 22 | 30 | 640  | 80   | 2490 | 1850 | 4316  | 3710  |
| 5-14-81 | 1 | 1 | 10 | 16 | 638  | 106  | 2478 | 1840 | 4490  | 4120  |
| 5-14-81 | 1 | 2 | 22 | 27 | 668  | 133  | 2538 | 1870 | 4940  | 4288  |
| 5-15-81 | 1 | 1 | 15 | 26 | 1960 | 178  | 3730 | 1770 | 5740  | 3810  |
| 5-16-81 | 1 | 1 | 21 | 30 | 1549 | 172  | 3490 | 1941 | 5240  | 3685  |
| 5-17-81 | 1 | 1 | 21 | 30 | 818  | 90   | 2658 | 1840 | 4430  | 3685  |
| 5-18-81 | 1 | 1 | 21 | 30 | 822  | 91   | 2682 | 1860 | 4910  | 4148  |
| 5-19-81 | 1 | 1 | 19 | 30 | 1744 | 158  | 3685 | 1941 | 6160  | 4430  |
| 5-20-81 | 1 | 1 | 19 | 28 | 2035 | 226  | 4429 | 2394 | 6720  | 4970  |
| 5-21-81 | 1 | 1 | 17 | 25 | 1168 | 146  | 3550 | 2382 | 5915  | 4760  |
| 5-22-81 | 1 | 1 | 21 | 28 | 1720 | 245  | 3520 | 1800 | 5775  | 4120  |
| 5-23-81 | 1 | 1 | 24 | 26 | 435  | 217  | 2889 | 2454 | 5705  | 5330  |
| 5-24-81 | 1 | 1 | 8  | 16 | 802  | 100  | 2562 | 1760 | 5510  | 4970  |
| 5-25-81 | 1 | 1 | 11 | 16 | 874  | 174  | 4769 | 3895 | 9510  | 8430  |
| 5-25-81 | 1 | 2 | 22 | 28 | 2121 | 353  | 4106 | 1985 | 8310  | 5740  |
| 5-26-81 | 1 | 1 | 12 | 23 | 1872 | 170  | 4055 | 2183 | 7245  | 5270  |
| 5-27-81 | 1 | 1 | 11 | 17 | 826  | 137  | 2954 | 2128 | 5450  | 4730  |
| 5-27-81 | 1 | 2 | 23 | 30 | 864  | 123  | 2634 | 1770 | 5360  | 4316  |
| 5-28-81 | 1 | 1 | 12 | 16 | 515  | 128  | 2610 | 2095 | 5030  | 4610  |
| 5-28-81 | 1 | 2 | 19 | 30 | 898  | 81   | 2658 | 1760 | 5510  | 4610  |
| 5-29-81 | 1 | 1 | 20 | 30 | 822  | 82   | 2622 | 1800 | 6370  | 5570  |
| 5-30-81 | 1 | 1 | 15 | 20 | 1064 | 212  | 3214 | 2150 | 6930  | 5915  |
| 5-30-81 | 1 | 2 | 22 | 30 | 946  | 118  | 2706 | 1760 | 6335  | 4760  |

| Date        | BEG | ENDGB | Ampl. | AvRat | MxRat | BegFG | EndFG |
|-------------|-----|-------|-------|-------|-------|-------|-------|
| 2-01/82 1 1 | 19  | 20    | 423   | 423   | 423   | 7096  | 6673  |
| 2-01/82 1 2 | 22  | 24    | 1892  | 946   | 1220  | 6610  | 4718  |
| 2-02/82 1 1 | 1   | 2     | 740   | 740   | 740   | 5067  | 4327  |
| 2-03/82 1 1 | 14  | 15    | 639   | 639   | 639   | 4915  | 4276  |
| 2-04/82 1 1 | 1   | 3     | 703   | 351   | 588   | 6935  | 6232  |
| 2-05/82 1 1 | 23  | 24    | 649   | 649   | 649   | 7280  | 6631  |
| 2-06/82 1 1 | 11  | 12    | 1212  | 1212  | 1212  | 7234  | 6022  |
| 2-06/82 1 2 | 14  | 16    | 1673  | 836   | 918   | 7234  | 5561  |
| 2-07/82 1 1 | 7   | 8     | 1248  | 1248  | 1248  | 6866  | 5618  |
| 2-07/82 1 2 | 11  | 13    | 1164  | 582   | 934   | 7165  | 6001  |
| 2-08/82 1 1 | 21  | 24    | 691   | 230   | 415   | 7280  | 6589  |
| 2-12/82 1 1 | 19  | 20    | 4400  | 4400  | 4400  | 16680 | 12280 |
| 2-12/82 1 2 | 22  | 26    | 3680  | 920   | 2010  | 12250 | 8570  |
| 2-16/82 1 1 | 6   | 7     | 1179  | 1179  | 1179  | 7579  | 6400  |
| 2-16/82 1 2 | 24  | 26    | 709   | 354   | 520   | 6232  | 5523  |
| 2-19/82 1 1 | 24  | 26    | 783   | 391   | 468   | 6211  | 5423  |
| 2-23/82 1 1 | 22  | 23    | 1554  | 1554  | 1554  | 6085  | 4531  |
| 2-23/82 1 2 | 24  | 25    | 724   | 724   | 724   | 4514  | 3790  |
| 2-24/82 1 1 | 14  | 15    | 504   | 504   | 504   | 5875  | 5371  |
| 2-24/82 1 2 | 20  | 23    | 1824  | 608   | 1007  | 4934  | 3110  |
| 2-24/82 1 3 | 24  | 25    | 656   | 656   | 656   | 3110  | 2454  |
| 2-25/82 1 1 | 10  | 11    | 496   | 496   | 496   | 5010  | 4514  |
| 2-25/82 1 2 | 13  | 14    | 671   | 671   | 671   | 4446  | 3775  |
| 2-25/82 1 3 | 16  | 18    | 663   | 331   | 455   | 3565  | 2902  |
| 2-25/82 1 4 | 21  | 23    | 751   | 375   | 569   | 3253  | 2502  |
| 2-26/82 1 1 | 20  | 23    | 1619  | 539   | 745   | 4157  | 2538  |
| 2-27/82 1 1 | 12  | 15    | 1414  | 471   | 567   | 4072  | 2658  |
| 2-27/82 1 2 | 19  | 21    | 673   | 336   | 519   | 4004  | 3331  |
| 2-27/82 1 3 | 22  | 23    | 425   | 425   | 425   | 3071  | 2646  |
| 3-01/82 1 1 | 13  | 15    | 942   | 471   | 714   | 5371  | 4429  |
| 3-01/82 1 2 | 20  | 24    | 2030  | 507   | 769   | 4412  | 2382  |
| 3-02/82 1 1 | 19  | 23    | 3427  | 856   | 1707  | 5833  | 2406  |
| 3-03/82 1 1 | 22  | 23    | 941   | 941   | 941   | 5875  | 4934  |
| 3-03/82 1 2 | 24  | 25    | 748   | 748   | 748   | 4803  | 4055  |
| 3-04/82 1 1 | 2   | 4     | 884   | 442   | 610   | 4839  | 3955  |
| 3-04/82 1 2 | 14  | 15    | 544   | 544   | 544   | 5896  | 5352  |
| 3-04/82 1 3 | 21  | 25    | 2886  | 721   | 953   | 5352  | 2466  |
| 3-05/82 1 1 | 11  | 15    | 1642  | 410   | 519   | 5833  | 4191  |
| 3-05/82 1 2 | 17  | 18    | 502   | 502   | 502   | 4157  | 3655  |
| 3-05/82 1 3 | 20  | 22    | 1300  | 650   | 716   | 3850  | 2550  |
| 3-06/82 1 1 | 12  | 13    | 790   | 790   | 790   | 4004  | 3214  |
| 3-06/82 1 2 | 20  | 22    | 934   | 467   | 589   | 3940  | 3006  |
| 3-08/82 1 1 | 10  | 13    | 1498  | 499   | 608   | 5485  | 3987  |
| 3-08/82 1 2 | 21  | 24    | 2020  | 673   | 961   | 4786  | 2766  |
| 3-09/82 1 1 | 9   | 10    | 646   | 646   | 646   | 5523  | 4877  |
| 3-09/82 1 2 | 11  | 12    | 731   | 731   | 731   | 4769  | 4038  |
| 3-09/82 1 3 | 21  | 27    | 2160  | 360   | 489   | 4497  | 2337  |
| 3-10/82 1 1 | 12  | 13    | 682   | 682   | 682   | 5485  | 4803  |
| 3-10/82 1 2 | 21  | 25    | 2142  | 535   | 704   | 4548  | 2406  |
| 3-11/82 1 1 | 11  | 13    | 1171  | 585   | 703   | 5770  | 4599  |
| 3-11/82 1 2 | 21  | 25    | 2022  | 505   | 895   | 4548  | 2526  |
| 3-12/82 1 1 | 22  | 26    | 3319  | 829   | 1352  | 5713  | 2394  |
| 3-13/82 1 1 | 14  | 17    | 2046  | 682   | 990   | 5791  | 3745  |
| 3-13/82 1 2 | 19  | 21    | 1074  | 537   | 732   | 4327  | 3253  |
| 3-13/82 1 3 | 23  | 24    | 551   | 551   | 551   | 2993  | 2442  |
| 3-14/82 1 1 | 14  | 17    | 1462  | 487   | 762   | 4072  | 2610  |
| 3-15/82 1 1 | 13  | 14    | 1010  | 1010  | 1010  | 6001  | 4991  |
| 3-15/82 1 2 | 21  | 25    | 2253  | 563   | 913   | 4839  | 2586  |
| 3-16/82 1 1 | 10  | 12    | 1692  | 846   | 1318  | 5713  | 4021  |

|         |   |    |    |    |      |      |      |      |      |
|---------|---|----|----|----|------|------|------|------|------|
| 3-16/82 | 1 | 2  | 22 | 26 | 2279 | 569  | 1036 | 4769 | 2490 |
| 3-17/82 | 1 | 1  | 9  | 13 | 3364 | 841  | 1802 | 5770 | 2406 |
| 3-17/82 | 1 | 2  | 15 | 18 | 1141 | 380  | 597  | 4004 | 2863 |
| 3-17/82 | 1 | 3  | 22 | 26 | 2206 | 551  | 851  | 4565 | 2359 |
| 3-18/82 | 1 | 1  | 9  | 11 | 2201 | 1100 | 1878 | 5428 | 3227 |
| 3-18/82 | 1 | 2  | 13 | 15 | 1253 | 626  | 634  | 4259 | 3006 |
| 3-18/82 | 1 | 3  | 24 | 26 | 2195 | 1097 | 1260 | 4565 | 2370 |
| 3-19/82 | 1 | 1  | 9  | 10 | 985  | 985  | 985  | 5938 | 4953 |
| 3-19/82 | 1 | 2  | 11 | 13 | 1180 | 590  | 1066 | 5371 | 4191 |
| 3-19/82 | 1 | 3  | 20 | 23 | 1273 | 424  | 530  | 3775 | 2502 |
| 3-20/82 | 1 | 1  | 16 | 18 | 791  | 395  | 551  | 3745 | 2954 |
| 3-21/82 | 1 | 1  | 7  | 8  | 1492 | 1492 | 1492 | 2315 | 823  |
| 3-22/82 | 1 | 1  | 11 | 15 | 2279 | 569  | 730  | 4616 | 2337 |
| 3-23/82 | 1 | 1  | 10 | 13 | 1540 | 513  | 626  | 4174 | 2634 |
| 3-23/82 | 1 | 2  | 20 | 23 | 1344 | 448  | 547  | 3670 | 2326 |
| 3-24/82 | 1 | 1  | 12 | 14 | 1078 | 539  | 559  | 3460 | 2382 |
| 3-25/82 | 1 | 1  | 11 | 14 | 1243 | 414  | 508  | 3625 | 2382 |
| 3-25/82 | 1 | 2  | 20 | 22 | 1126 | 563  | 580  | 3820 | 2694 |
| 3-26/82 | 1 | 1  | 13 | 14 | 532  | 532  | 532  | 3058 | 2526 |
| 3-26/82 | 1 | 2  | 19 | 21 | 964  | 482  | 808  | 3370 | 2406 |
| 3-27/82 | 1 | 1  | 9  | 10 | 450  | 450  | 450  | 3865 | 3415 |
| 3-27/82 | 1 | 2  | 13 | 15 | 749  | 374  | 515  | 3227 | 2478 |
| 3-28/82 | 1 | 1  | 13 | 15 | 913  | 456  | 549  | 3880 | 2967 |
| 3-29/82 | 1 | 10 | 12 | 27 | 727  | 363  | 480  | 5428 | 4701 |
| 3-29/82 | 1 | 2  | 24 | 26 | 2239 | 1119 | 1533 | 4565 | 2326 |
| 3-30/82 | 1 | 1  | 20 | 25 | 2825 | 565  | 796  | 5219 | 2394 |
| 3-31/82 | 1 | 1  | 22 | 28 | 3472 | 578  | 694  | 5854 | 2382 |
| 4-01/82 | 1 | 1  | 14 | 15 | 494  | 494  | 494  | 5314 | 4820 |
| 4-01/82 | 1 | 2  | 22 | 24 | 2347 | 1173 | 1457 | 4684 | 2337 |
| 4-02/82 | 1 | 1  | 15 | 17 | 546  | 273  | 360  | 4021 | 3475 |
| 4-02/82 | 1 | 2  | 19 | 21 | 1037 | 518  | 671  | 3385 | 2348 |
| 4-03/82 | 1 | 1  | 21 | 24 | 1378 | 459  | 731  | 4072 | 2694 |
| 4-04/82 | 1 | 1  | 11 | 12 | 658  | 658  | 658  | 4208 | 3550 |
| 4-04/82 | 1 | 2  | 22 | 23 | 625  | 625  | 625  | 3865 | 3240 |
| 4-05/82 | 1 | 1  | 14 | 15 | 578  | 578  | 578  | 4701 | 4123 |
| 4-05/82 | 1 | 2  | 21 | 25 | 1707 | 426  | 627  | 4089 | 2382 |
| 4-06/82 | 1 | 1  | 22 | 24 | 2556 | 1278 | 1545 | 4915 | 2359 |
| 4-07/82 | 1 | 1  | 10 | 13 | 1264 | 421  | 498  | 5812 | 4548 |
| 4-08/82 | 1 | 1  | 2  | 4  | 2244 | 1122 | 1373 | 4548 | 2304 |
| 4-08/82 | 1 | 2  | 9  | 10 | 532  | 532  | 532  | 5618 | 5086 |
| 4-08/82 | 1 | 3  | 21 | 22 | 544  | 544  | 544  | 4548 | 4004 |
| 4-08/82 | 1 | 4  | 24 | 26 | 609  | 304  | 324  | 3940 | 3331 |
| 4-09/82 | 1 | 1  | 9  | 11 | 1007 | 503  | 798  | 5181 | 4174 |
| 4-09/82 | 1 | 2  | 12 | 14 | 952  | 476  | 523  | 3880 | 2928 |
| 4-12/82 | 1 | 1  | 10 | 11 | 709  | 709  | 709  | 5257 | 4548 |
| 4-12/82 | 1 | 2  | 21 | 24 | 1822 | 607  | 780  | 4480 | 2658 |
| 4-13/82 | 1 | 1  | 20 | 23 | 2492 | 830  | 1126 | 5732 | 3240 |
| 4-14/82 | 1 | 1  | 13 | 15 | 1340 | 670  | 692  | 5854 | 4514 |
| 4-14/82 | 1 | 2  | 21 | 24 | 1526 | 508  | 766  | 4208 | 2682 |
| 4-15/82 | 1 | 1  | 13 | 15 | 1633 | 816  | 1106 | 5875 | 4242 |
| 4-15/82 | 1 | 2  | 20 | 23 | 1622 | 540  | 615  | 4208 | 2586 |
| 4-16/82 | 1 | 1  | 8  | 11 | 2364 | 788  | 953  | 5854 | 3490 |
| 4-16/82 | 1 | 2  | 12 | 14 | 634  | 317  | 491  | 3292 | 2658 |
| 4-17/82 | 1 | 1  | 22 | 25 | 1519 | 506  | 769  | 4225 | 2706 |
| 4-18/82 | 1 | 1  | 2  | 3  | 419  | 419  | 419  | 2514 | 2095 |
| 4-18/82 | 1 | 2  | 16 | 17 | 489  | 489  | 489  | 3625 | 3136 |
| 4-18/82 | 1 | 3  | 23 | 24 | 681  | 681  | 681  | 2941 | 2260 |
| 4-19/82 | 1 | 1  | 9  | 11 | 947  | 473  | 573  | 4752 | 3805 |
| 4-19/82 | 1 | 2  | 12 | 15 | 1309 | 436  | 538  | 3895 | 2586 |
| 4-20/82 | 1 | 1  | 12 | 13 | 634  | 634  | 634  | 3136 | 2502 |
| 4-21/82 | 1 | 1  | 8  | 9  | 400  | 400  | 400  | 2682 | 2282 |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 4-21/82 | 1 | 2 | 19 | 21 | 586  | 293  | 334  | 2670 | 2084 |
| 4-22/82 | 1 | 1 | 12 | 14 | 685  | 342  | 477  | 3331 | 2646 |
| 4-22/82 | 1 | 2 | 18 | 20 | 700  | 350  | 427  | 3370 | 2670 |
| 4-23/82 | 1 | 1 | 22 | 25 | 2475 | 825  | 1208 | 5637 | 3162 |
| 4-24/82 | 1 | 1 | 2  | 3  | 644  | 644  | 644  | 2915 | 2271 |
| 4-24/82 | 1 | 2 | 14 | 15 | 508  | 508  | 508  | 4463 | 3955 |
| 4-24/82 | 1 | 3 | 21 | 24 | 1060 | 353  | 521  | 3610 | 2550 |
| 4-25/82 | 1 | 1 | 23 | 24 | 865  | 865  | 865  | 4157 | 3292 |
| 4-26/82 | 1 | 1 | 1  | 3  | 1013 | 506  | 703  | 3097 | 2084 |
| 4-26/82 | 1 | 2 | 8  | 10 | 703  | 351  | 589  | 5618 | 4915 |
| 4-26/82 | 1 | 3 | 15 | 17 | 807  | 403  | 416  | 4896 | 4089 |
| 4-26/82 | 1 | 4 | 19 | 22 | 1092 | 364  | 417  | 4072 | 2980 |
| 4-26/82 | 1 | 5 | 23 | 24 | 469  | 469  | 469  | 2718 | 2249 |
| 4-27/82 | 1 | 1 | 15 | 18 | 1913 | 637  | 761  | 5523 | 3610 |
| 4-27/82 | 1 | 2 | 23 | 26 | 1538 | 512  | 597  | 3820 | 2282 |
| 4-28/82 | 1 | 1 | 15 | 18 | 995  | 331  | 444  | 5713 | 4718 |
| 4-28/82 | 1 | 2 | 19 | 20 | 561  | 561  | 561  | 4667 | 4106 |
| 4-28/82 | 1 | 3 | 23 | 26 | 1651 | 550  | 741  | 3955 | 2304 |
| 4-29/82 | 1 | 1 | 15 | 16 | 701  | 701  | 701  | 6148 | 5447 |
| 4-29/82 | 1 | 2 | 21 | 25 | 2983 | 745  | 1153 | 5276 | 2293 |
| 4-30/82 | 1 | 1 | 12 | 14 | 830  | 415  | 437  | 5599 | 4769 |
| 4-30/82 | 1 | 2 | 15 | 16 | 476  | 476  | 476  | 4497 | 4021 |
| 4-30/82 | 1 | 3 | 19 | 22 | 961  | 320  | 391  | 3715 | 2754 |
| 4-30/82 | 1 | 4 | 23 | 25 | 755  | 377  | 414  | 2718 | 1963 |
| 5-01/82 | 1 | 1 | 11 | 16 | 2890 | 578  | 817  | 5656 | 2766 |
| 5-01/82 | 1 | 2 | 23 | 25 | 676  | 338  | 377  | 2526 | 1850 |
| 5-02/82 | 1 | 1 | 24 | 25 | 1222 | 1222 | 1222 | 5770 | 4548 |
| 5-03/82 | 1 | 1 | 23 | 25 | 2091 | 1045 | 1633 | 5791 | 3700 |
| 5-04/82 | 1 | 1 | 15 | 17 | 681  | 340  | 566  | 7165 | 6484 |
| 5-04/82 | 1 | 2 | 22 | 24 | 2958 | 1479 | 1517 | 5938 | 2980 |
| 5-05/82 | 1 | 1 | 21 | 24 | 3825 | 1275 | 1796 | 5854 | 2029 |
| 5-06/82 | 1 | 1 | 16 | 17 | 456  | 456  | 456  | 6169 | 5713 |
| 5-06/82 | 1 | 2 | 21 | 24 | 4040 | 1346 | 1960 | 5770 | 1730 |
| 5-07/82 | 1 | 1 | 21 | 24 | 4041 | 1347 | 2084 | 5791 | 1750 |
| 5-08/82 | 1 | 1 | 14 | 17 | 1051 | 350  | 494  | 5599 | 4548 |
| 5-08/82 | 1 | 2 | 21 | 23 | 2648 | 1324 | 1830 | 4548 | 1900 |
| 5-09/82 | 1 | 1 | 17 | 19 | 1792 | 896  | 1417 | 5162 | 3370 |
| 5-09/82 | 1 | 2 | 22 | 24 | 2434 | 1217 | 1504 | 4174 | 1740 |
| 5-10/82 | 1 | 1 | 21 | 24 | 3667 | 1222 | 2093 | 5938 | 2271 |
| 5-11/82 | 1 | 1 | 21 | 24 | 3317 | 1105 | 2121 | 6232 | 2915 |
| 5-12/82 | 1 | 1 | 21 | 24 | 3996 | 1332 | 2261 | 5896 | 1900 |
| 5-13/82 | 1 | 1 | 21 | 24 | 4182 | 1394 | 1836 | 6211 | 2029 |
| 5-14/82 | 1 | 1 | 12 | 13 | 1226 | 1226 | 1226 | 6958 | 5732 |
| 5-14/82 | 1 | 2 | 19 | 24 | 4428 | 885  | 1774 | 6148 | 1720 |
| 5-15/82 | 1 | 1 | 13 | 16 | 1859 | 619  | 806  | 5694 | 3835 |
| 5-15/82 | 1 | 2 | 21 | 23 | 1530 | 765  | 1002 | 3430 | 1900 |
| 5-16/82 | 1 | 1 | 13 | 15 | 2333 | 1166 | 1390 | 6694 | 4361 |
| 5-16/82 | 1 | 2 | 21 | 24 | 2560 | 853  | 1758 | 4310 | 1750 |
| 5-17/82 | 1 | 1 | 24 | 26 | 735  | 367  | 462  | 6610 | 5875 |
| 5-18/82 | 1 | 1 | 24 | 26 | 649  | 324  | 460  | 6400 | 5751 |
| 5-19/82 | 1 | 1 | 23 | 28 | 1592 | 318  | 570  | 6106 | 4514 |
| 5-20/82 | 1 | 1 | 21 | 23 | 1431 | 715  | 1284 | 6064 | 4633 |
| 5-20/82 | 1 | 2 | 24 | 26 | 884  | 442  | 493  | 4599 | 3715 |
| 5-21/82 | 1 | 1 | 22 | 24 | 2348 | 1174 | 1613 | 8370 | 6022 |
| 5-22/82 | 1 | 1 | 1  | 4  | 2388 | 796  | 1393 | 6043 | 3655 |
| 5-22/82 | 1 | 2 | 15 | 18 | 3831 | 1277 | 2445 | 9145 | 5314 |
| 5-22/82 | 1 | 3 | 21 | 23 | 2182 | 1091 | 2068 | 5162 | 2980 |
| 5-23/82 | 1 | 1 | 22 | 23 | 1702 | 1702 | 1702 | 4276 | 2574 |
| 5-24/82 | 1 | 1 | 1  | 3  | 617  | 308  | 377  | 3805 | 3188 |
| 5-24/82 | 1 | 2 | 11 | 12 | 1152 | 1152 | 1152 | 6295 | 5143 |
| 5-24/82 | 1 | 3 | 22 | 23 | 1542 | 1542 | 1542 | 8320 | 6778 |

|         |   |   |    |    |      |      |      |       |       |
|---------|---|---|----|----|------|------|------|-------|-------|
| 5-24/82 | 1 | 4 | 24 | 27 | 2958 | 986  | 1685 | 6568  | 3610  |
| 5-25/82 | 1 | 1 | 22 | 24 | 1796 | 898  | 1355 | 8070  | 6274  |
| 5-26/82 | 1 | 1 | 1  | 4  | 2526 | 842  | 1468 | 6421  | 3895  |
| 5-26/82 | 1 | 2 | 6  | 7  | 463  | 463  | 463  | 6043  | 5580  |
| 5-26/82 | 1 | 3 | 23 | 25 | 1948 | 974  | 1480 | 9550  | 7602  |
| 5-27/82 | 1 | 1 | 2  | 4  | 1169 | 584  | 644  | 7464  | 6295  |
| 5-27/82 | 1 | 2 | 16 | 21 | 4227 | 845  | 1614 | 9370  | 5143  |
| 5-27/82 | 1 | 3 | 22 | 24 | 2160 | 1080 | 1120 | 5010  | 2850  |
| 5-28/82 | 1 | 1 | 22 | 24 | 1951 | 975  | 1353 | 5561  | 3610  |
| 5-29/82 | 1 | 1 | 1  | 3  | 826  | 413  | 564  | 4157  | 3331  |
| 5-29/82 | 1 | 2 | 18 | 24 | 2493 | 415  | 712  | 4293  | 1800  |
| 5-30/82 | 1 | 1 | 14 | 15 | 605  | 605  | 605  | 3910  | 3305  |
| 5-30/82 | 1 | 2 | 21 | 23 | 1481 | 740  | 854  | 3201  | 1720  |
| 5-31/82 | 1 | 1 | 22 | 24 | 2547 | 1273 | 1308 | 4327  | 1780  |
| 7-01/82 | 2 | 1 | 5  | 8  | 1209 | 403  | 709  | 8995  | 7786  |
| 7-01/82 | 2 | 2 | 15 | 17 | 3200 | 1600 | 2740 | 12320 | 9120  |
| 7-01/82 | 2 | 3 | 18 | 20 | 975  | 487  | 825  | 8945  | 7970  |
| 7-01/82 | 2 | 4 | 23 | 25 | 2501 | 1250 | 1255 | 7625  | 5124  |
| 7-02/82 | 2 | 1 | 14 | 15 | 945  | 945  | 945  | 6820  | 5875  |
| 7-02/82 | 2 | 2 | 16 | 17 | 570  | 570  | 570  | 5599  | 5029  |
| 7-02/82 | 2 | 3 | 18 | 20 | 955  | 477  | 496  | 4820  | 3865  |
| 7-03/82 | 2 | 1 | 9  | 10 | 1103 | 1103 | 1103 | 6778  | 5675  |
| 7-03/82 | 2 | 2 | 19 | 20 | 1209 | 1209 | 1209 | 7441  | 6232  |
| 7-03/82 | 2 | 3 | 22 | 24 | 2615 | 1307 | 2339 | 7418  | 4803  |
| 7-04/82 | 2 | 1 | 8  | 9  | 414  | 414  | 414  | 5200  | 4786  |
| 7-04/82 | 2 | 2 | 10 | 12 | 842  | 421  | 502  | 4752  | 3910  |
| 7-04/82 | 2 | 3 | 22 | 24 | 1237 | 618  | 937  | 3475  | 2238  |
| 7-05/82 | 2 | 1 | 8  | 9  | 1230 | 1230 | 1230 | 4735  | 3505  |
| 7-05/82 | 2 | 2 | 19 | 21 | 655  | 327  | 340  | 4055  | 3400  |
| 7-05/82 | 2 | 3 | 23 | 25 | 1783 | 891  | 989  | 4021  | 2238  |
| 7-06/82 | 2 | 1 | 13 | 15 | 1172 | 586  | 773  | 6106  | 4934  |
| 7-06/82 | 2 | 2 | 17 | 18 | 401  | 401  | 401  | 4915  | 4514  |
| 7-07/82 | 2 | 1 | 13 | 14 | 491  | 491  | 491  | 5938  | 5447  |
| 7-08/82 | 2 | 1 | 9  | 10 | 813  | 813  | 813  | 7234  | 6421  |
| 7-09/82 | 2 | 1 | 8  | 9  | 685  | 685  | 685  | 7211  | 6526  |
| 7-09/82 | 2 | 2 | 11 | 12 | 483  | 483  | 483  | 6295  | 5812  |
| 7-10/82 | 2 | 1 | 6  | 9  | 2290 | 763  | 1050 | 11060 | 8770  |
| 7-10/82 | 2 | 2 | 10 | 11 | 400  | 400  | 400  | 8920  | 8520  |
| 7-10/82 | 2 | 3 | 21 | 24 | 1440 | 480  | 970  | 11830 | 10390 |
| 7-11/82 | 2 | 1 | 9  | 12 | 1570 | 523  | 970  | 9940  | 8370  |
| 7-11/82 | 2 | 2 | 23 | 26 | 1290 | 430  | 510  | 10750 | 9460  |
| 7-12/82 | 2 | 1 | 9  | 10 | 1230 | 1230 | 1230 | 9400  | 8170  |
| 7-13/82 | 2 | 1 | 20 | 21 | 1290 | 1290 | 1290 | 10720 | 9430  |
| 7-14/82 | 2 | 1 | 9  | 13 | 1080 | 270  | 360  | 10420 | 9340  |
| 7-15/82 | 2 | 1 | 11 | 13 | 1340 | 670  | 750  | 11790 | 10450 |
| 7-15/82 | 2 | 2 | 14 | 18 | 3303 | 825  | 1445 | 10330 | 7027  |
| 7-16/82 | 2 | 1 | 19 | 21 | 588  | 294  | 336  | 6757  | 6169  |
| 7-17/82 | 2 | 1 | 18 | 19 | 650  | 650  | 650  | 5812  | 5162  |
| 7-21/82 | 2 | 1 | 22 | 23 | 936  | 936  | 936  | 8745  | 7809  |
| 7-22/82 | 2 | 1 | 7  | 8  | 575  | 575  | 575  | 7510  | 6935  |
| 7-27/82 | 2 | 1 | 7  | 10 | 1711 | 570  | 1025 | 6106  | 4395  |
| 7-27/82 | 2 | 2 | 22 | 23 | 1170 | 1170 | 1170 | 4514  | 3344  |
| 7-30/82 | 2 | 1 | 18 | 19 | 988  | 988  | 988  | 8820  | 7832  |
| 7-31/82 | 2 | 1 | 7  | 8  | 441  | 441  | 441  | 6757  | 6316  |
| 8-02/82 | 2 | 1 | 15 | 17 | 1407 | 703  | 894  | 5751  | 4344  |
| 8-02/82 | 2 | 2 | 18 | 21 | 1293 | 431  | 495  | 4208  | 2915  |
| 8-02/82 | 2 | 3 | 22 | 23 | 1292 | 1292 | 1292 | 3162  | 1870  |
| 8-03/82 | 2 | 1 | 5  | 7  | 925  | 462  | 551  | 4191  | 3266  |
| 8-03/82 | 2 | 2 | 16 | 18 | 812  | 406  | 456  | 5428  | 4616  |
| 8-03/82 | 2 | 3 | 22 | 23 | 860  | 860  | 860  | 4395  | 3535  |
| 8-04/82 | 2 | 1 | 19 | 21 | 793  | 396  | 454  | 3475  | 2682  |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 8-05/82 | 2 | 1 | 22 | 23 | 975  | 975  | 975  | 4735 | 3760 |
| 8-06/82 | 2 | 1 | 12 | 13 | 1188 | 1188 | 1188 | 5447 | 4259 |
| 8-07/82 | 2 | 1 | 13 | 14 | 595  | 595  | 595  | 4769 | 4174 |
| 8-07/82 | 2 | 2 | 15 | 16 | 688  | 688  | 688  | 4208 | 3520 |
| 8-07/82 | 2 | 3 | 22 | 24 | 1087 | 543  | 653  | 3685 | 2598 |
| 8-08/82 | 2 | 1 | 22 | 23 | 1003 | 1003 | 1003 | 3745 | 2742 |
| 8-09/82 | 2 | 1 | 21 | 24 | 2531 | 843  | 1292 | 5732 | 3201 |
| 8-11/82 | 2 | 1 | 20 | 23 | 1195 | 398  | 416  | 6148 | 4953 |
| 8-12/82 | 2 | 1 | 10 | 11 | 1265 | 1265 | 1265 | 5694 | 4429 |
| 8-12/82 | 2 | 2 | 12 | 14 | 1128 | 564  | 907  | 4633 | 3505 |
| 8-12/82 | 2 | 3 | 19 | 21 | 746  | 373  | 434  | 3188 | 2442 |
| 8-12/82 | 2 | 4 | 22 | 23 | 726  | 726  | 726  | 2406 | 1680 |
| 8-13/82 | 2 | 1 | 17 | 22 | 2766 | 553  | 1524 | 9460 | 6694 |
| 8-17/82 | 2 | 1 | 7  | 9  | 1358 | 679  | 1092 | 5770 | 4412 |
| 8-17/82 | 2 | 2 | 12 | 14 | 785  | 392  | 683  | 4395 | 3610 |
| 8-17/82 | 2 | 3 | 20 | 23 | 1519 | 506  | 908  | 3149 | 1630 |
| 8-18/82 | 2 | 1 | 18 | 23 | 2353 | 470  | 588  | 4123 | 1770 |
| 8-19/82 | 2 | 1 | 17 | 21 | 1864 | 466  | 521  | 4157 | 2293 |
| 8-20/82 | 2 | 1 | 13 | 14 | 684  | 684  | 684  | 5580 | 4896 |
| 8-20/82 | 2 | 2 | 15 | 17 | 1296 | 648  | 701  | 4786 | 3490 |
| 8-20/82 | 2 | 3 | 21 | 23 | 993  | 496  | 500  | 3110 | 2117 |
| 8-21/82 | 2 | 1 | 14 | 17 | 1417 | 472  | 734  | 4735 | 3318 |
| 8-21/82 | 2 | 2 | 18 | 20 | 449  | 224  | 306  | 3071 | 2622 |
| 8-21/82 | 2 | 3 | 21 | 23 | 992  | 496  | 515  | 2742 | 1750 |
| 8-22/82 | 2 | 1 | 21 | 24 | 938  | 312  | 422  | 2406 | 1468 |
| 8-23/82 | 2 | 1 | 20 | 24 | 2076 | 519  | 601  | 3625 | 1549 |
| 8-24/82 | 2 | 1 | 21 | 24 | 4158 | 1386 | 1878 | 5599 | 1441 |
| 8-25/82 | 2 | 1 | 9  | 13 | 2227 | 556  | 817  | 4157 | 1930 |
| 8-25/82 | 2 | 2 | 14 | 15 | 617  | 617  | 617  | 2337 | 1720 |
| 8-25/82 | 2 | 3 | 19 | 20 | 1330 | 1330 | 1330 | 6169 | 4839 |
| 8-25/82 | 2 | 4 | 21 | 24 | 3317 | 1105 | 2186 | 4803 | 1486 |
| 8-26/82 | 2 | 1 | 22 | 24 | 2148 | 1074 | 1441 | 3580 | 1432 |
| 8-27/82 | 2 | 1 | 17 | 20 | 1414 | 471  | 662  | 3940 | 2526 |
| 8-27/82 | 2 | 2 | 21 | 23 | 998  | 499  | 748  | 2466 | 1468 |
| 8-29/82 | 2 | 1 | 21 | 23 | 1407 | 703  | 1238 | 3097 | 1690 |
| 8-30/82 | 2 | 1 | 22 | 24 | 2657 | 1328 | 1503 | 4089 | 1432 |
| 8-31/82 | 2 | 1 | 10 | 11 | 436  | 436  | 436  | 4106 | 3670 |
| 8-31/82 | 2 | 2 | 21 | 23 | 1845 | 922  | 1568 | 3595 | 1750 |
| 9-01/82 | 2 | 1 | 11 | 14 | 4305 | 1435 | 2173 | 5791 | 1486 |
| 9-01/82 | 2 | 2 | 21 | 24 | 4135 | 1378 | 1920 | 5675 | 1540 |
| 9-02/82 | 2 | 1 | 11 | 13 | 4114 | 2057 | 2230 | 5854 | 1740 |
| 9-02/82 | 2 | 2 | 21 | 24 | 4129 | 1376 | 1724 | 5561 | 1432 |
| 9-03/82 | 2 | 1 | 14 | 16 | 513  | 256  | 380  | 5466 | 4953 |
| 9-03/82 | 2 | 2 | 17 | 19 | 877  | 438  | 714  | 4915 | 4038 |
| 9-03/82 | 2 | 3 | 21 | 24 | 2579 | 859  | 1860 | 4038 | 1459 |
| 9-04/82 | 2 | 1 | 21 | 23 | 2544 | 1272 | 1662 | 4174 | 1630 |
| 9-05/82 | 2 | 1 | 21 | 24 | 3291 | 1097 | 1597 | 4786 | 1495 |
| 9-06/82 | 2 | 1 | 14 | 16 | 595  | 297  | 374  | 4684 | 4089 |
| 9-06/82 | 2 | 2 | 21 | 23 | 2376 | 1188 | 1760 | 4106 | 1730 |
| 9-07/82 | 2 | 1 | 21 | 24 | 4232 | 1410 | 1859 | 5637 | 1405 |
| 9-08/82 | 2 | 1 | 21 | 24 | 4123 | 1374 | 1549 | 5618 | 1495 |
| 9-09/82 | 2 | 1 | 21 | 24 | 4251 | 1417 | 2280 | 5791 | 1540 |
| 9-10/82 | 2 | 1 | 21 | 24 | 4281 | 1427 | 2479 | 5713 | 1432 |
| 9-11/82 | 2 | 1 | 20 | 24 | 4314 | 1078 | 2011 | 5791 | 1477 |
| 9-12/82 | 2 | 1 | 14 | 15 | 437  | 437  | 437  | 1860 | 1423 |
| 9-13/82 | 2 | 1 | 13 | 14 | 722  | 722  | 722  | 5694 | 4972 |
| 9-13/82 | 2 | 2 | 16 | 17 | 745  | 745  | 745  | 4953 | 4208 |
| 9-13/82 | 2 | 3 | 20 | 23 | 2802 | 934  | 1665 | 4225 | 1423 |
| 9-14/82 | 2 | 1 | 13 | 14 | 774  | 774  | 774  | 5390 | 4616 |
| 9-14/82 | 2 | 2 | 16 | 19 | 1082 | 360  | 510  | 4497 | 3415 |
| 9-14/82 | 2 | 3 | 21 | 23 | 1728 | 864  | 1340 | 3214 | 1486 |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 9-15/82 | 2 | 1 | 17 | 20 | 2234 | 744  | 1197 | 5694 | 3460 |
| 9-15/82 | 2 | 2 | 22 | 24 | 2001 | 1000 | 1101 | 3460 | 1459 |
| 9-16/82 | 2 | 1 | 17 | 18 | 513  | 513  | 513  | 5656 | 5143 |
| 9-16/82 | 2 | 2 | 21 | 23 | 3499 | 1749 | 1925 | 5048 | 1549 |
| 9-17/82 | 2 | 1 | 15 | 17 | 1260 | 630  | 933  | 5791 | 4531 |
| 9-17/82 | 2 | 2 | 19 | 20 | 510  | 510  | 510  | 4480 | 3970 |
| 9-17/82 | 2 | 3 | 22 | 24 | 2439 | 1219 | 1565 | 3880 | 1441 |
| 9-18/82 | 2 | 1 | 22 | 24 | 1322 | 661  | 864  | 2754 | 1432 |
| 9-20/82 | 2 | 1 | 21 | 23 | 3109 | 1554 | 2070 | 4769 | 1660 |
| 9-21/82 | 2 | 1 | 12 | 14 | 1265 | 632  | 828  | 5371 | 4106 |
| 9-21/82 | 2 | 2 | 20 | 24 | 2423 | 605  | 661  | 4123 | 1700 |
| 9-22/82 | 2 | 1 | 15 | 16 | 510  | 510  | 510  | 4718 | 4208 |
| 9-22/82 | 2 | 2 | 20 | 24 | 2527 | 631  | 778  | 4004 | 1477 |
| 9-23/82 | 2 | 1 | 11 | 12 | 608  | 608  | 608  | 5504 | 4896 |
| 9-23/82 | 2 | 2 | 20 | 23 | 3090 | 1030 | 1622 | 4531 | 1441 |
| 9-24/82 | 2 | 1 | 16 | 18 | 1731 | 865  | 887  | 5656 | 3925 |
| 9-24/82 | 2 | 2 | 20 | 23 | 2475 | 825  | 1631 | 3880 | 1405 |
| 9-25/82 | 2 | 1 | 21 | 24 | 2714 | 904  | 1755 | 4191 | 1477 |
| 9-27/82 | 2 | 1 | 21 | 24 | 2665 | 888  | 1740 | 4106 | 1441 |
| 9-28/82 | 2 | 1 | 21 | 24 | 2157 | 719  | 1388 | 3625 | 1468 |
| 9-29/82 | 2 | 1 | 10 | 13 | 1885 | 628  | 714  | 5390 | 3505 |
| 9-29/82 | 2 | 2 | 21 | 23 | 2507 | 1253 | 1590 | 4157 | 1650 |
| 9-30/82 | 2 | 1 | 21 | 23 | 1280 | 640  | 755  | 2730 | 1450 |

| Date    | BEGIM | ENDIM | Ampl. | AvRat | BegFN | EndFN | BegFM | EndFM |       |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2-01-82 | 1 1   | 15    | 24    | 2516  | 279   | 7234  | 4718  | 0     | 0     |
| 2-02-82 | 1 1   | 1     | 4     | 740   | 246   | 5067  | 4327  | 0     | 0     |
| 2-02-82 | 1 2   | 20    | 24    | 490   | 122   | 5276  | 4786  | 0     | 0     |
| 2-03-82 | 1 1   | 10    | 16    | 943   | 157   | 5219  | 4276  | 0     | 0     |
| 2-04-82 | 1 1   | 1     | 3     | 703   | 351   | 6935  | 6232  | 0     | 0     |
| 2-05-82 | 1 1   | 23    | 29    | 691   | 115   | 7280  | 6589  | 0     | 0     |
| 2-06-82 | 1 1   | 11    | 13    | 1443  | 721   | 7234  | 5791  | 0     | 0     |
| 2-06-82 | 1 2   | 14    | 29    | 1939  | 129   | 7234  | 5295  | 0     | 0     |
| 2-07-82 | 1 1   | 7     | 8     | 1248  | 1248  | 6866  | 5618  | 0     | 0     |
| 2-07-82 | 1 2   | 11    | 13    | 1164  | 582   | 7165  | 6001  | 0     | 0     |
| 2-08-82 | 1 1   | 21    | 27    | 733   | 122   | 7280  | 6547  | 0     | 0     |
| 2-12-82 | 1 1   | 19    | 30    | 9147  | 831   | 16680 | 7533  | 0     | 0     |
| 2-16-82 | 1 1   | 6     | 16    | 1263  | 126   | 7579  | 6316  | 0     | 0     |
| 2-16-82 | 1 2   | 24    | 30    | 994   | 165   | 6232  | 528   | 12500 | 11550 |
| 2-19-82 | 1 1   | 24    | 29    | 783   | 156   | 6211  | 5428  | 10430 | 9630  |
| 2-20-82 | 1 1   | 9     | 13    | 551   | 137   | 5371  | 4820  | 9710  | 9670  |
| 2-22-82 | 1 1   | 13    | 17    | 419   | 104   | 5980  | 5561  | 9430  | 8870  |
| 2-23-82 | 1 1   | 22    | 29    | 2355  | 336   | 6085  | 3730  | 8870  | 6265  |
| 2-24-82 | 1 1   | 14    | 29    | 3538  | 235   | 5875  | 2337  | 8310  | 4550  |
| 2-25-82 | 1 1   | 10    | 11    | 496   | 496   | 5010  | 4514  | 7105  | 6335  |
| 2-25-82 | 1 2   | 13    | 18    | 1544  | 308   | 4446  | 2902  | 6650  | 5030  |
| 2-25-82 | 1 3   | 21    | 23    | 751   | 375   | 3253  | 202   | 5300  | 4550  |
| 2-26-82 | 1 1   | 20    | 25    | 1831  | 366   | 4157  | 2326  | 6090  | 4232  |
| 2-27-82 | 1 1   | 12    | 16    | 1426  | 356   | 4072  | 2646  | 5775  | 4460  |
| 2-27-82 | 1 2   | 19    | 26    | 1634  | 233   | 4004  | 2070  | 5705  | 4094  |
| 3-01-82 | 1 1   | 11    | 29    | 3403  | 189   | 5751  | 2348  | 7790  | 4400  |
| 3-02-82 | 1 1   | 19    | 29    | 3496  | 349   | 5833  | 2337  | 7790  | 4288  |
| 3-03-82 | 1 1   | 18    | 25    | 2408  | 344   | 6463  | 4055  | 8150  | 6230  |
| 3-04-82 | 1 1   | 2     | 4     | 884   | 442   | 4839  | 3955  | 6755  | 5880  |
| 3-04-82 | 1 2   | 14    | 18    | 582   | 145   | 5896  | 5314  | 7790  | 7070  |
| 3-04-82 | 1 3   | 21    | 28    | 2898  | 414   | 5352  | 2454  | 7175  | 4260  |
| 3-05-82 | 1 1   | 11    | 18    | 2178  | 311   | 5833  | 3655  | 7550  | 5390  |
| 3-05-82 | 1 2   | 20    | 29    | 1502  | 166   | 3850  | 2348  | 5600  | 3964  |
| 3-06-82 | 1 1   | 12    | 16    | 816   | 204   | 4004  | 3188  | 5570  | 4820  |
| 3-06-82 | 1 2   | 20    | 29    | 1234  | 137   | 3940  | 2706  | 5480  | 4260  |
| 3-08-82 | 1 1   | 10    | 17    | 1650  | 235   | 5485  | 3835  | 6895  | 5330  |
| 3-08-82 | 1 2   | 19    | 30    | 2689  | 244   | 5048  | 2359  | 6545  | 3938  |
| 3-09-82 | 1 1   | 9     | 15    | 2179  | 363   | 5523  | 3344  | 6895  | 5090  |
| 3-09-82 | 1 2   | 21    | 30    | 2160  | 240   | 4497  | 2337  | 6160  | 4016  |
| 3-10-82 | 1 1   | 12    | 21    | 937   | 104   | 5485  | 4548  | 7035  | 5270  |
| 3-10-82 | 1 2   | 22    | 30    | 1774  | 221   | 4089  | 2315  | 6300  | 4260  |
| 3-11-82 | 1 1   | 11    | 16    | 1443  | 288   | 5770  | 4327  | 7550  | 6125  |
| 3-11-82 | 1 2   | 21    | 30    | 2222  | 246   | 4548  | 2326  | 6370  | 4068  |
| 3-12-82 | 1 1   | 22    | 30    | 3365  | 420   | 5713  | 2348  | 7390  | 4042  |
| 3-13-82 | 1 1   | 14    | 18    | 2091  | 522   | 5791  | 3700  | 7350  | 5270  |
| 3-13-82 | 1 2   | 19    | 30    | 1979  | 179   | 4327  | 2348  | 5740  | 3964  |
| 3-14-82 | 1 1   | 14    | 18    | 1606  | 401   | 4072  | 2466  | 5670  | 3964  |
| 3-15-82 | 1 1   | 13    | 17    | 1162  | 290   | 6001  | 4839  | 7590  | 6335  |
| 3-15-82 | 1 2   | 21    | 26    | 2524  | 504   | 4839  | 2315  | 6615  | 3886  |
| 3-16-82 | 1 1   | 10    | 12    | 1692  | 846   | 5713  | 4021  | 7140  | 5540  |
| 3-16-82 | 1 2   | 22    | 30    | 2432  | 304   | 4769  | 2337  | 6300  | 3735  |
| 3-17-82 | 1 1   | 9     | 13    | 3364  | 841   | 5770  | 2406  | 6930  | 4820  |
| 3-17-82 | 1 2   | 15    | 19    | 1141  | 285   | 4004  | 2863  | 5480  | 4260  |
| 3-17-82 | 1 3   | 22    | 30    | 2228  | 278   | 4565  | 2337  | 5950  | 3710  |
| 3-18-82 | 1 1   | 9     | 11    | 2201  | 1100  | 5428  | 3227  | 6580  | 5360  |
| 3-18-82 | 1 2   | 13    | 20    | 1396  | 199   | 4259  | 2863  | 5845  | 4176  |
| 3-18-82 | 1 3   | 24    | 30    | 2228  | 371   | 4565  | 2337  | 5915  | 3660  |
| 3-19-82 | 1 1   | 9     | 10    | 985   | 985   | 5938  | 4953  | 6930  | 6020  |
| 3-19-82 | 1 2   | 11    | 23    | 2869  | 239   | 5371  | 2502  | 6790  | 3735  |

|         |   |   |    |    |      |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|------|
| 3-20-82 | 1 | 1 | 11 | 30 | 1961 | 103  | 4276 | 2315 | 5420 | 3514 |
| 3-21-82 | 1 | 1 | 7  | 8  | 1492 | 1492 | 2315 | 823  | 4490 | 3514 |
| 3-21-82 | 1 | 2 | 12 | 28 | 1157 | 72   | 3505 | 2348 | 4970 | 3538 |
| 3-22-82 | 1 | 1 | 11 | 20 | 2279 | 253  | 4616 | 2337 | 5600 | 3538 |
| 3-23-82 | 1 | 1 | 10 | 18 | 1848 | 231  | 4174 | 2326 | 5300 | 3538 |
| 3-23-82 | 1 | 2 | 20 | 29 | 1366 | 151  | 3670 | 2304 | 4700 | 3490 |
| 3-24-82 | 1 | 1 | 10 | 15 | 1558 | 311  | 3940 | 2382 | 5270 | 3586 |
| 3-25-82 | 1 | 1 | 11 | 16 | 1277 | 255  | 3625 | 2348 | 4790 | 3562 |
| 3-25-82 | 1 | 2 | 20 | 28 | 1494 | 186  | 3820 | 2326 | 5000 | 3610 |
| 3-26-82 | 1 | 1 | 11 | 17 | 1216 | 202  | 3610 | 2394 | 4910 | 3760 |
| 3-26-82 | 1 | 2 | 19 | 27 | 1000 | 125  | 3370 | 2370 | 4670 | 3735 |
| 3-27-82 | 1 | 1 | 9  | 17 | 1459 | 182  | 3865 | 2406 | 5150 | 3785 |
| 3-28-82 | 1 | 1 | 13 | 15 | 913  | 456  | 3880 | 2967 | 5240 | 4430 |
| 3-29-82 | 1 | 1 | 10 | 19 | 880  | 97   | 5428 | 4548 | 6615 | 5740 |
| 3-29-82 | 1 | 2 | 24 | 30 | 2250 | 375  | 4565 | 2315 | 5845 | 3586 |
| 3-30-82 | 1 | 1 | 20 | 30 | 2871 | 287  | 5219 | 2348 | 6405 | 3538 |
| 3-31-82 | 1 | 1 | 22 | 30 | 3517 | 439  | 5854 | 2337 | 7105 | 3562 |
| 4-01-82 | 1 | 1 | 10 | 21 | 744  | 67   | 5428 | 4684 | 6475 | 4288 |
| 4-01-82 | 1 | 2 | 22 | 29 | 2347 | 335  | 4684 | 2337 | 5845 | 3490 |
| 4-02-82 | 1 | 1 | 12 | 27 | 2228 | 148  | 4565 | 2337 | 5740 | 3466 |
| 4-03-82 | 1 | 1 | 21 | 24 | 1378 | 459  | 4072 | 2694 | 5150 | 3835 |
| 4-04-82 | 1 | 1 | 11 | 12 | 658  | 658  | 4208 | 3550 | 5210 | 4790 |
| 4-04-82 | 1 | 2 | 22 | 26 | 651  | 162  | 3865 | 3214 | 5000 | 4316 |
| 4-05-82 | 1 | 1 | 14 | 21 | 612  | 87   | 4701 | 4089 | 5915 | 4372 |
| 4-05-82 | 1 | 2 | 22 | 29 | 1532 | 218  | 3880 | 2348 | 5180 | 3442 |
| 4-06-82 | 1 | 1 | 12 | 21 | 475  | 52   | 5390 | 4915 | 6405 | 4316 |
| 4-06-82 | 1 | 2 | 22 | 29 | 2567 | 366  | 4915 | 2348 | 5950 | 3442 |
| 4-07-82 | 1 | 1 | 10 | 18 | 1264 | 158  | 5812 | 4548 | 6755 | 5540 |
| 4-08-82 | 1 | 1 | 2  | 5  | 2244 | 748  | 4548 | 2304 | 5570 | 3418 |
| 4-08-82 | 1 | 2 | 9  | 19 | 1070 | 107  | 5618 | 4548 | 6580 | 5480 |
| 4-08-82 | 1 | 3 | 21 | 30 | 1230 | 136  | 4548 | 3318 | 5570 | 4400 |
| 4-09-82 | 1 | 1 | 9  | 20 | 2523 | 229  | 5181 | 2658 | 6125 | 3710 |
| 4-10-82 | 1 | 1 | 11 | 19 | 464  | 58   | 2790 | 2326 | 3835 | 3370 |
| 4-12-82 | 1 | 1 | 10 | 11 | 709  | 709  | 5257 | 4548 | 7000 | 6405 |
| 4-12-82 | 1 | 2 | 21 | 29 | 2121 | 265  | 4480 | 2359 | 6300 | 4288 |
| 4-13-82 | 1 | 1 | 20 | 28 | 2713 | 339  | 5732 | 3019 | 7630 | 4430 |
| 4-14-82 | 1 | 1 | 13 | 28 | 3484 | 232  | 5854 | 2370 | 7470 | 3964 |
| 4-15-82 | 1 | 1 | 13 | 28 | 3373 | 224  | 5875 | 2502 | 7430 | 3938 |
| 4-16-82 | 1 | 1 | 8  | 27 | 3847 | 202  | 5854 | 2007 | 7140 | 3394 |
| 4-17-82 | 1 | 1 | 22 | 29 | 2141 | 305  | 4225 | 2084 | 5570 | 3466 |
| 4-18-82 | 1 | 1 | 16 | 19 | 567  | 189  | 3625 | 3058 | 4910 | 4372 |
| 4-18-82 | 1 | 2 | 21 | 28 | 1217 | 173  | 3279 | 2062 | 4520 | 3324 |
| 4-19-82 | 1 | 1 | 9  | 11 | 947  | 473  | 4752 | 3805 | 5880 | 4550 |
| 4-19-82 | 1 | 2 | 12 | 26 | 1866 | 133  | 3895 | 2029 | 5450 | 3232 |
| 4-20-82 | 1 | 1 | 12 | 14 | 634  | 317  | 3136 | 2502 | 4232 | 3710 |
| 4-20-82 | 1 | 2 | 16 | 28 | 602  | 50   | 2598 | 1996 | 3760 | 3209 |
| 4-21-82 | 1 | 1 | 8  | 11 | 609  | 203  | 2682 | 2073 | 3810 | 3278 |
| 4-21-82 | 1 | 2 | 19 | 28 | 674  | 74   | 2670 | 1996 | 4094 | 3418 |
| 4-22-82 | 1 | 1 | 12 | 14 | 685  | 342  | 3331 | 2646 | 4790 | 4316 |
| 4-22-82 | 1 | 2 | 18 | 30 | 1363 | 113  | 3370 | 2007 | 5210 | 4120 |
| 4-23-82 | 1 | 1 | 22 | 29 | 3410 | 487  | 5637 | 2227 | 7590 | 4204 |
| 4-24-82 | 1 | 1 | 14 | 19 | 1132 | 226  | 4463 | 3331 | 6265 | 5150 |
| 4-24-82 | 1 | 2 | 21 | 28 | 1537 | 219  | 3610 | 2073 | 5390 | 3860 |
| 4-25-82 | 1 | 1 | 23 | 29 | 2095 | 349  | 4157 | 2062 | 5845 | 3810 |
| 4-26-82 | 1 | 1 | 8  | 29 | 3600 | 171  | 5618 | 2018 | 7210 | 3860 |
| 4-27-82 | 1 | 1 | 15 | 18 | 1913 | 637  | 5523 | 3610 | 7280 | 5600 |
| 4-27-82 | 1 | 2 | 23 | 29 | 1769 | 294  | 3820 | 2051 | 5740 | 4148 |
| 4-28-82 | 1 | 1 | 15 | 27 | 3618 | 301  | 5713 | 2095 | 8110 | 4316 |
| 4-29-82 | 1 | 1 | 15 | 28 | 4097 | 315  | 6148 | 2051 | 8190 | 3964 |
| 4-30-82 | 1 | 1 | 12 | 30 | 3869 | 214  | 5599 | 1730 | 7390 | 3562 |
| 5-01-82 | 1 | 1 | 11 | 30 | 3906 | 205  | 5656 | 1750 | 7175 | 3760 |

|         |   |   |    |    |      |      |      |      |       |       |
|---------|---|---|----|----|------|------|------|------|-------|-------|
| 5-02-82 | 1 | 1 | 24 | 27 | 1460 | 486  | 5770 | 4310 | 7910  | 6475  |
| 5-03-82 | 1 | 1 | 23 | 26 | 2091 | 697  | 5791 | 3700 | 7830  | 5740  |
| 5-04-82 | 1 | 1 | 15 | 28 | 4519 | 347  | 7165 | 2646 | 9150  | 4520  |
| 5-05-82 | 1 | 1 | 21 | 29 | 4034 | 504  | 5854 | 1820 | 7590  | 3610  |
| 5-06-82 | 1 | 1 | 16 | 17 | 456  | 456  | 6169 | 5713 | 7910  | 7470  |
| 5-06-82 | 1 | 2 | 21 | 24 | 4040 | 1346 | 5770 | 1730 | 7590  | 3760  |
| 5-07-82 | 1 | 1 | 16 | 28 | 4503 | 375  | 6253 | 1750 | 8190  | 3760  |
| 5-08-82 | 1 | 1 | 14 | 29 | 3859 | 257  | 5599 | 1740 | 7430  | 3610  |
| 5-09-82 | 1 | 1 | 17 | 19 | 1792 | 896  | 5162 | 3370 | 6510  | 5360  |
| 5-09-82 | 1 | 2 | 22 | 28 | 2434 | 405  | 4174 | 1740 | 6090  | 3810  |
| 5-10-82 | 1 | 1 | 21 | 24 | 3667 | 1222 | 5938 | 2271 | 8350  | 5000  |
| 5-11-82 | 1 | 1 | 21 | 29 | 3330 | 416  | 6232 | 2902 | 8870  | 5450  |
| 5-12-82 | 1 | 1 | 21 | 27 | 4016 | 669  | 5896 | 1880 | 8430  | 4400  |
| 5-13-82 | 1 | 1 | 21 | 28 | 4471 | 638  | 6211 | 1740 | 8670  | 4288  |
| 5-14-82 | 1 | 1 | 12 | 13 | 1226 | 1226 | 6958 | 5732 | 9230  | 8510  |
| 5-14-82 | 1 | 2 | 19 | 24 | 4428 | 885  | 6148 | 1720 | 8710  | 4550  |
| 5-15-82 | 1 | 1 | 13 | 29 | 3874 | 242  | 5694 | 1820 | 8430  | 5210  |
| 5-16-82 | 1 | 1 | 13 | 21 | 2384 | 298  | 6694 | 4310 | 9975  | 5480  |
| 5-16-82 | 1 | 2 | 22 | 28 | 2356 | 392  | 4106 | 1750 | 7870  | 5450  |
| 5-17-82 | 1 | 1 | 24 | 30 | 1581 | 263  | 6610 | 5029 | 10290 | 8350  |
| 5-18-82 | 1 | 1 | 17 | 30 | 2147 | 165  | 7119 | 4972 | 10290 | 7670  |
| 5-19-82 | 1 | 1 | 19 | 30 | 2354 | 214  | 6715 | 4361 | 9550  | 7105  |
| 5-20-82 | 1 | 1 | 21 | 29 | 2915 | 364  | 6064 | 3149 | 9270  | 6510  |
| 5-21-82 | 1 | 1 | 20 | 24 | 2723 | 680  | 8745 | 6022 | 13250 | 8670  |
| 5-22-82 | 1 | 1 | 1  | 4  | 2388 | 796  | 6043 | 3655 | 10700 | 8150  |
| 5-22-82 | 1 | 2 | 9  | 12 | 475  | 158  | 5409 | 4934 | 10110 | 9110  |
| 5-22-82 | 1 | 3 | 15 | 24 | 6230 | 692  | 9145 | 2915 | 13550 | 6405  |
| 5-23-82 | 1 | 1 | 2  | 7  | 697  | 139  | 3045 | 2348 | 6790  | 5740  |
| 5-23-82 | 1 | 2 | 22 | 23 | 1702 | 1702 | 4276 | 2574 | 7390  | 5600  |
| 5-24-82 | 1 | 1 | 1  | 5  | 682  | 170  | 3805 | 3123 | 6720  | 6160  |
| 5-24-82 | 1 | 2 | 11 | 12 | 1152 | 1152 | 6295 | 5143 | 10200 | 8630  |
| 5-24-82 | 1 | 3 | 22 | 27 | 4710 | 942  | 8320 | 3610 | 13550 | 8830  |
| 5-25-82 | 1 | 1 | 22 | 24 | 1796 | 898  | 8070 | 6274 | 13250 | 8670  |
| 5-26-82 | 1 | 1 | 1  | 4  | 2526 | 842  | 6421 | 3895 | 11280 | 8470  |
| 5-26-82 | 1 | 2 | 6  | 7  | 463  | 463  | 6043 | 5580 | 10790 | 10020 |
| 5-26-82 | 1 | 3 | 23 | 29 | 3297 | 549  | 9550 | 6253 | 13400 | 9590  |
| 5-27-82 | 1 | 1 | 16 | 24 | 6520 | 815  | 9370 | 2850 | 12800 | 5670  |
| 5-28-82 | 1 | 1 | 1  | 5  | 877  | 219  | 3331 | 2454 | 6265  | 5510  |
| 5-28-82 | 1 | 2 | 15 | 20 | 480  | 96   | 6022 | 5542 | 8830  | 7070  |
| 5-28-82 | 1 | 3 | 22 | 24 | 1951 | 975  | 5561 | 3610 | 8750  | 6510  |
| 5-29-82 | 1 | 1 | 1  | 6  | 1242 | 248  | 4157 | 2915 | 7315  | 6090  |
| 5-29-82 | 1 | 2 | 18 | 30 | 2503 | 208  | 4293 | 1790 | 7510  | 5120  |
| 5-30-82 | 1 | 1 | 14 | 18 | 735  | 183  | 3910 | 3175 | 7140  | 6755  |
| 5-30-82 | 1 | 2 | 21 | 23 | 1481 | 740  | 3201 | 1720 | 7035  | 5670  |
| 5-31-82 | 1 | 1 | 22 | 24 | 2547 | 1273 | 4327 | 1780 | 14950 | 14100 |

| Date    | BEG | ENDGB | Ampl. | AvRat | MxRat | BegFG | EndFG |
|---------|-----|-------|-------|-------|-------|-------|-------|
| 2-02/83 | 1 1 | 22    | 24    | 1165  | 582   | 661   | 6935  |
| 2-03/83 | 1 1 | 16    | 18    | 1598  | 799   | 1142  | 6589  |
| 2-04/83 | 1 1 | 14    | 16    | 441   | 220   | 315   | 6484  |
| 2-04/83 | 1 2 | 18    | 19    | 779   | 779   | 779   | 5751  |
| 2-11/83 | 1 1 | 21    | 24    | 1545  | 515   | 882   | 5770  |
| 2-12/83 | 1 1 | 21    | 25    | 2681  | 670   | 1182  | 6889  |
| 2-13/83 | 1 1 | 22    | 24    | 808   | 404   | 546   | 6935  |
| 2-14/83 | 1 1 | 22    | 24    | 1405  | 702   | 714   | 6757  |
| 2-15/83 | 1 1 | 11    | 13    | 567   | 283   | 378   | 6463  |
| 2-16/83 | 1 1 | 16    | 18    | 861   | 430   | 504   | 6736  |
| 2-16/83 | 1 2 | 23    | 24    | 672   | 672   | 672   | 6799  |
| 2-18/83 | 1 1 | 23    | 25    | 1358  | 679   | 1010  | 6843  |
| 2-19/83 | 1 1 | 14    | 16    | 1083  | 541   | 798   | 6958  |
| 2-19/83 | 1 2 | 23    | 25    | 1725  | 862   | .082  | 6358  |
| 2-20/83 | 1 1 | 12    | 13    | 524   | 524   | 524   | 6085  |
| 2-20/83 | 1 2 | 23    | 25    | 715   | 357   | 408   | 4991  |
| 2-21/83 | 1 1 | 11    | 13    | 1102  | 551   | 798   | 6935  |
| 2-21/83 | 1 2 | 14    | 15    | 684   | 684   | 684   | 5618  |
| 2-21/83 | 1 3 | 23    | 24    | 912   | 912   | 912   | 5770  |
| 2-22/83 | 1 1 | 9     | 11    | 865   | 432   | 735   | 6866  |
| 2-22/83 | 1 2 | 22    | 25    | 3672  | 1224  | 1624  | 6912  |
| 2-23/83 | 1 1 | 12    | 15    | 1514  | 504   | 529   | 6866  |
| 2-23/83 | 1 2 | 21    | 25    | 3769  | 942   | 1496  | 6379  |
| 2-24/83 | 1 1 | 21    | 25    | 3581  | 895   | 1633  | 6912  |
| 2-25/83 | 1 1 | 21    | 25    | 4482  | 1120  | 1867  | 6912  |
| 2-26/83 | 1 1 | 13    | 15    | 756   | 378   | 546   | 6820  |
| 2-26/83 | 1 2 | 22    | 25    | 3304  | 1101  | 1713  | 5938  |
| 2-27/83 | 1 1 | 14    | 16    | 934   | 467   | 619   | 6935  |
| 2-27/83 | 1 2 | 22    | 25    | 3509  | 1169  | 1859  | 6866  |
| 2-28/83 | 1 1 | 23    | 25    | 2160  | 1080  | 1161  | 6912  |
| 3-01/83 | 1 1 | 23    | 25    | 2060  | 1030  | 1414  | 7165  |
| 3-02/83 | 1 1 | 22    | 25    | 2902  | 967   | 1669  | 6889  |
| 3-03/83 | 1 1 | 22    | 25    | 3055  | 1018  | 1794  | 6935  |
| 3-04/83 | 1 1 | 21    | 25    | 3528  | 882   | 1770  | 6958  |
| 3-05/83 | 1 1 | 22    | 25    | 3857  | 1285  | 1752  | 6889  |
| 3-06/83 | 1 1 | 21    | 25    | 3844  | 961   | 1666  | 6889  |
| 3-07/83 | 1 1 | 21    | 25    | 3181  | 795   | 1729  | 6866  |
| 3-08/83 | 1 1 | 21    | 24    | 3145  | 1048  | 1574  | 6935  |
| 3-09/83 | 1 1 | 21    | 25    | 3773  | 943   | 1599  | 6935  |
| 3-10/83 | 1 1 | 21    | 25    | 3601  | 900   | 1473  | 6958  |
| 3-11/83 | 1 1 | 21    | 24    | 2954  | 984   | 1632  | 6958  |
| 3-12/83 | 1 1 | 14    | 16    | 972   | 486   | 651   | 6889  |
| 3-12/83 | 1 2 | 21    | 25    | 3806  | 951   | 1677  | 6799  |
| 3-13/83 | 1 1 | 22    | 25    | 2732  | 910   | 1672  | 6889  |
| 3-14/83 | 1 1 | 22    | 25    | 2715  | 905   | 1605  | 6889  |
| 3-15/83 | 1 1 | 22    | 24    | 2550  | 1275  | 1320  | 6843  |
| 3-16/83 | 1 1 | 11    | 13    | 1384  | 692   | 1174  | 6736  |
| 3-16/83 | 1 2 | 20    | 21    | 422   | 422   | 422   | 5812  |
| 3-16/83 | 1 3 | 22    | 25    | 2033  | 677   | 1085  | 5390  |
| 3-17/83 | 1 1 | 15    | 17    | 2058  | 1029  | 1355  | 6935  |
| 3-17/83 | 1 2 | 18    | 19    | 493   | 493   | 493   | 4735  |
| 3-17/83 | 1 3 | 22    | 24    | 884   | 442   | 584   | 3955  |
| 3-18/83 | 1 1 | 15    | 18    | 1894  | 631   | 743   | 6866  |
| 3-18/83 | 1 2 | 21    | 25    | 2646  | 661   | 1375  | 4972  |
| 3-19/83 | 1 1 | 11    | 13    | 1153  | 576   | 1031  | 5854  |
| 3-20/83 | 1 1 | 2     | 4     | 1930  | 965   | 1045  | 4480  |
| 3-20/83 | 1 2 | 20    | 24    | 2235  | 558   | 712   | 5770  |
| 3-21/83 | 1 1 | 10    | 11    | 468   | 468   | 468   | 6889  |
| 3-21/83 | 1 2 | 21    | 25    | 3223  | 805   | 1338  | 5917  |

|         |   |   |    |    |      |      |      |       |      |
|---------|---|---|----|----|------|------|------|-------|------|
| 3-22/83 | 1 | 1 | 10 | 12 | 924  | 462  | 546  | 6820  | 5896 |
| 3-22/83 | 1 | 2 | 20 | 25 | 3902 | 780  | 1224 | 6778  | 2876 |
| 3-23/83 | 1 | 1 | 17 | 19 | 1656 | 828  | 858  | 6799  | 5143 |
| 3-23/83 | 1 | 2 | 21 | 24 | 3430 | 1143 | 1470 | 5896  | 2466 |
| 3-24/83 | 1 | 1 | 10 | 12 | 726  | 363  | 441  | 5257  | 4531 |
| 3-24/83 | 1 | 2 | 21 | 25 | 3143 | 785  | 1019 | 5447  | 2304 |
| 3-25/83 | 1 | 1 | 13 | 14 | 975  | 975  | 975  | 5833  | 4858 |
| 3-25/83 | 1 | 2 | 21 | 24 | 2463 | 821  | 1240 | 4953  | 2490 |
| 3-26/83 | 1 | 1 | 14 | 16 | 910  | 455  | 606  | 5713  | 4803 |
| 3-27/83 | 1 | 1 | 1  | 4  | 2295 | 765  | 1362 | 4599  | 2304 |
| 3-27/83 | 1 | 2 | 23 | 24 | 487  | 487  | 487  | 6866  | 6379 |
| 3-28/83 | 1 | 1 | 22 | 27 | 4435 | 887  | 1750 | 12880 | 8445 |
| 4-01/83 | 1 | 1 | 23 | 25 | 2024 | 1012 | 1058 | 7395  | 5371 |
| 4-02/83 | 1 | 1 | 21 | 24 | 1941 | 647  | 1014 | 5896  | 3955 |
| 4-03/83 | 1 | 1 | 14 | 16 | 984  | 492  | 837  | 6526  | 5542 |
| 4-03/83 | 1 | 2 | 19 | 23 | 1860 | 465  | 663  | 5485  | 3625 |
| 4-08/83 | 1 | 1 | 6  | 10 | 3867 | 966  | 1476 | 7372  | 3505 |
| 4-10/83 | 1 | 1 | 6  | 8  | 1518 | 759  | 783  | 7372  | 5854 |
| 4-10/83 | 1 | 2 | 22 | 25 | 2425 | 808  | 1611 | 7211  | 4786 |
| 4-11/83 | 1 | 1 | 10 | 13 | 1539 | 513  | 856  | 7372  | 5833 |
| 4-11/83 | 1 | 2 | 23 | 25 | 1407 | 703  | 776  | 5938  | 4531 |
| 4-12/83 | 1 | 1 | 10 | 12 | 1931 | 965  | 1313 | 7188  | 5257 |
| 4-12/83 | 1 | 2 | 21 | 25 | 2949 | 737  | 1168 | 6484  | 3535 |
| 4-13/83 | 1 | 1 | 8  | 12 | 1715 | 428  | 606  | 7257  | 5542 |
| 4-13/83 | 1 | 2 | 22 | 24 | 1495 | 747  | 824  | 6043  | 4548 |
| 4-14/83 | 1 | 1 | 22 | 25 | 2129 | 709  | 1504 | 7234  | 5105 |
| 4-15/83 | 1 | 1 | 22 | 24 | 874  | 437  | 759  | 7211  | 6337 |
| 4-16/83 | 1 | 1 | 10 | 11 | 971  | 971  | 971  | 6190  | 5219 |
| 4-16/83 | 1 | 2 | 18 | 23 | 2149 | 429  | 577  | 4531  | 2382 |
| 4-17/83 | 1 | 1 | 22 | 24 | 2104 | 1052 | 1509 | 4582  | 2478 |
| 4-18/83 | 1 | 1 | 9  | 11 | 1526 | 763  | 1051 | 5466  | 3940 |
| 4-20/83 | 1 | 1 | 14 | 18 | 2001 | 500  | 768  | 5896  | 3895 |
| 4-21/83 | 1 | 1 | 10 | 15 | 2736 | 547  | 819  | 6631  | 3895 |
| 4-21/83 | 1 | 2 | 22 | 23 | 562  | 562  | 562  | 3400  | 2838 |
| 4-22/83 | 1 | 1 | 10 | 13 | 3159 | 1053 | 1428 | 6889  | 3730 |
| 4-23/83 | 1 | 1 | 12 | 14 | 999  | 499  | 514  | 3292  | 2293 |
| 4-24/83 | 1 | 1 | 15 | 17 | 995  | 497  | 513  | 3123  | 2128 |
| 4-25/83 | 1 | 1 | 11 | 13 | 1788 | 894  | 1360 | 6912  | 5124 |
| 4-25/83 | 1 | 2 | 22 | 25 | 2635 | 878  | 1342 | 4752  | 2117 |
| 4-26/83 | 1 | 1 | 11 | 13 | 1226 | 613  | 743  | 5791  | 4565 |
| 4-26/83 | 1 | 2 | 17 | 21 | 2004 | 501  | 655  | 4446  | 2442 |
| 4-27/83 | 1 | 1 | 9  | 12 | 1917 | 639  | 890  | 5812  | 3895 |
| 4-27/83 | 1 | 2 | 23 | 25 | 1569 | 784  | 967  | 3565  | 1996 |
| 4-28/83 | 1 | 1 | 10 | 12 | 1968 | 984  | 990  | 5713  | 3745 |
| 4-28/83 | 1 | 2 | 23 | 25 | 2044 | 1022 | 1074 | 4106  | 2062 |
| 4-29/83 | 1 | 1 | 22 | 25 | 2259 | 753  | 1111 | 4310  | 2051 |
| 4-30/83 | 1 | 1 | 13 | 15 | 997  | 498  | 698  | 3279  | 2282 |
| 4-30/83 | 1 | 2 | 23 | 24 | 462  | 462  | 462  | 2634  | 2172 |
| 5-01/83 | 1 | 1 | 23 | 25 | 1391 | 695  | 790  | 3640  | 2249 |
| 5-02/83 | 1 | 1 | 11 | 13 | 691  | 345  | 558  | 5086  | 4395 |
| 5-02/83 | 1 | 2 | 22 | 25 | 2454 | 818  | 1163 | 4174  | 1720 |
| 5-03/83 | 1 | 1 | 14 | 16 | 1216 | 608  | 665  | 5713  | 4497 |
| 5-03/83 | 1 | 2 | 20 | 21 | 432  | 432  | 432  | 4327  | 3895 |
| 5-03/83 | 1 | 3 | 22 | 25 | 1950 | 650  | 1132 | 3640  | 1690 |
| 5-04/83 | 1 | 1 | 18 | 20 | 715  | 357  | 385  | 4310  | 3595 |
| 5-04/83 | 1 | 2 | 22 | 24 | 1515 | 757  | 926  | 3415  | 1900 |
| 5-05/83 | 1 | 1 | 14 | 16 | 703  | 351  | 570  | 5561  | 4858 |
| 5-05/83 | 1 | 2 | 19 | 21 | 735  | 367  | 561  | 4858  | 4123 |
| 5-05/83 | 1 | 3 | 22 | 24 | 450  | 225  | 315  | 3895  | 3445 |
| 5-06/83 | 1 | 1 | 10 | 13 | 2106 | 702  | 866  | 6484  | 4378 |
| 5-06/83 | 1 | 2 | 22 | 24 | 1620 | 810  | 896  | 3490  | 1870 |

|         |   |   |    |    |      |      |      |       |       |
|---------|---|---|----|----|------|------|------|-------|-------|
| 5-07/83 | 1 | 1 | 21 | 24 | 2525 | 841  | 1139 | 4991  | 2466  |
| 5-08/83 | 1 | 1 | 13 | 15 | 595  | 297  | 357  | 4752  | 4157  |
| 5-08/83 | 1 | 2 | 22 | 24 | 1916 | 958  | 1072 | 4514  | 2598  |
| 5-09/83 | 1 | 1 | 16 | 18 | 906  | 453  | 498  | 4786  | 3880  |
| 5-09/83 | 1 | 2 | 21 | 25 | 2165 | 541  | 1074 | 3865  | 1700  |
| 5-10/83 | 1 | 1 | 22 | 24 | 1036 | 518  | 629  | 4616  | 3580  |
| 5-11/83 | 1 | 1 | 22 | 24 | 567  | 283  | 304  | 5938  | 5371  |
| 5-12/83 | 1 | 1 | 22 | 25 | 3553 | 1184 | 1466 | 5333  | 1780  |
| 5-13/83 | 1 | 1 | 22 | 25 | 2951 | 983  | 1401 | 4701  | 1750  |
| 5-14/83 | 1 | 1 | 21 | 25 | 3297 | 824  | 1299 | 5447  | 2150  |
| 5-15/83 | 1 | 1 | 13 | 15 | 437  | 218  | 304  | 5523  | 5086  |
| 5-15/83 | 1 | 2 | 22 | 24 | 1624 | 812  | 924  | 4565  | 2941  |
| 5-16/83 | 1 | 1 | 22 | 25 | 3210 | 1070 | 1412 | 5580  | 2370  |
| 5-17/83 | 1 | 1 | 14 | 17 | 915  | 305  | 323  | 4735  | 3820  |
| 5-17/83 | 1 | 2 | 22 | 25 | 3605 | 1201 | 1498 | 5656  | 2051  |
| 5-18/83 | 1 | 1 | 12 | 15 | 1328 | 442  | 527  | 5238  | 3910  |
| 5-18/83 | 1 | 2 | 18 | 21 | 1309 | 436  | 496  | 3715  | 2406  |
| 5-18/83 | 1 | 3 | 22 | 23 | 489  | 489  | 489  | 2359  | 1870  |
| 5-19/83 | 1 | 1 | 11 | 13 | 784  | 392  | 563  | 4259  | 3475  |
| 5-19/83 | 1 | 2 | 21 | 25 | 1097 | 548  | 663  | 2967  | 1870  |
| 5-21/83 | 1 | 1 | 23 | 25 | 972  | 486  | 619  | 2802  | 1830  |
| 5-22/83 | 1 | 1 | 12 | 14 | 473  | 236  | 343  | 3071  | 2598  |
| 5-22/83 | 1 | 2 | 23 | 25 | 1650 | 825  | 1006 | 3400  | 1750  |
| 5-23/83 | 1 | 1 | 17 | 20 | 1877 | 625  | 787  | 5143  | 3266  |
| 5-23/83 | 1 | 2 | 22 | 25 | 1431 | 477  | 950  | 3460  | 2029  |
| 5-24/83 | 1 | 1 | 22 | 25 | 2835 | 945  | 1418 | 5409  | 2574  |
| 5-25/83 | 1 | 1 | 22 | 25 | 4011 | 1337 | 2277 | 7303  | 3292  |
| 5-26/83 | 1 | 1 | 14 | 16 | 641  | 320  | 388  | 7188  | 6547  |
| 5-26/83 | 1 | 2 | 23 | 25 | 2019 | 1009 | 1119 | 5854  | 3835  |
| 5-27/83 | 1 | 1 | 14 | 15 | 680  | 680  | 680  | 6912  | 6232  |
| 5-27/83 | 1 | 2 | 21 | 25 | 3568 | 892  | 1550 | 7073  | 3505  |
| 5-28/83 | 1 | 1 | 6  | 8  | 524  | 262  | 303  | 3266  | 2742  |
| 5-28/83 | 1 | 2 | 24 | 25 | 523  | 523  | 523  | 3253  | 2730  |
| 5-29/83 | 1 | 1 | 5  | 7  | 620  | 310  | 344  | 2682  | 2062  |
| 5-29/83 | 1 | 2 | 11 | 15 | 1212 | 303  | 380  | 6127  | 4915  |
| 5-29/83 | 1 | 3 | 20 | 21 | 482  | 482  | 482  | 6043  | 5561  |
| 5-29/83 | 1 | 4 | 22 | 25 | 2855 | 951  | 1348 | 5333  | 2478  |
| 5-30/83 | 1 | 1 | 11 | 14 | 1389 | 463  | 544  | 5580  | 4191  |
| 5-30/83 | 1 | 2 | 21 | 26 | 4770 | 954  | 1630 | 6610  | 1840  |
| 5-31/83 | 1 | 1 | 14 | 16 | 693  | 346  | 546  | 6778  | 6085  |
| 5-31/83 | 1 | 2 | 18 | 21 | 1649 | 549  | 1124 | 6526  | 4877  |
| 5-31/83 | 1 | 3 | 22 | 25 | 2327 | 775  | 1231 | 4877  | 2550  |
| 7-01/83 | 2 | 1 | 16 | 18 | 1070 | 535  | 745  | 4310  | 3240  |
| 7-04/83 | 2 | 1 | 22 | 25 | 2181 | 727  | 1134 | 3640  | 1459  |
| 7-06/83 | 2 | 1 | 12 | 14 | 996  | 498  | 544  | 5238  | 4242  |
| 7-06/83 | 2 | 2 | 16 | 18 | 753  | 376  | 390  | 4123  | 3370  |
| 7-06/83 | 2 | 3 | 19 | 20 | 546  | 546  | 546  | 3084  | 2538  |
| 7-07/83 | 2 | 1 | 19 | 22 | 1271 | 423  | 571  | 4701  | 3430  |
| 7-07/83 | 2 | 2 | 23 | 24 | 636  | 636  | 636  | 3318  | 2682  |
| 7-08/83 | 2 | 1 | 22 | 25 | 3189 | 1063 | 1639 | 6694  | 3505  |
| 7-09/83 | 2 | 1 | 22 | 25 | 3266 | 1088 | 1436 | 5295  | 2029  |
| 7-10/83 | 2 | 1 | 24 | 25 | 578  | 578  | 578  | 3188  | 2610  |
| 7-11/83 | 2 | 1 | 22 | 25 | 3969 | 1323 | 1852 | 7924  | 3955  |
| 7-12/83 | 2 | 1 | 22 | 25 | 2535 | 845  | 1468 | 7602  | 5067  |
| 7-14/83 | 2 | 1 | 13 | 15 | 1360 | 680  | 840  | 16120 | 14760 |
| 7-14/83 | 2 | 2 | 24 | 26 | 1720 | 860  | 1080 | 15360 | 13640 |
| 7-15/83 | 2 | 1 | 23 | 26 | 3270 | 1090 | 2010 | 13480 | 10210 |
| 7-16/83 | 2 | 1 | 6  | 9  | 1300 | 433  | 1020 | 11900 | 10600 |
| 7-16/83 | 2 | 2 | 10 | 15 | 4371 | 874  | 1353 | 10540 | 6169  |
| 7-18/83 | 2 | 1 | 22 | 24 | 1170 | 585  | 802  | 8220  | 7050  |
| 7-27/83 | 2 | 1 | 19 | 21 | 1041 | 520  | 831  | 6127  | 5086  |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 7-27/83 | 2 | 2 | 22 | 25 | 2334 | 778  | 1057 | 4896 | 2562 |
| 7-28/83 | 2 | 1 | 22 | 25 | 2797 | 932  | 1354 | 4497 | 1700 |
| 7-29/83 | 2 | 1 | 16 | 18 | 1000 | 500  | 722  | 5896 | 4896 |
| 7-29/83 | 2 | 2 | 19 | 21 | 837  | 418  | 446  | 4858 | 4021 |
| 7-29/83 | 2 | 3 | 22 | 24 | 1643 | 821  | 880  | 3925 | 2282 |
| 7-30/83 | 2 | 1 | 22 | 25 | 2537 | 845  | 1218 | 4599 | 2062 |
| 7-31/83 | 2 | 1 | 23 | 25 | 1990 | 995  | 1036 | 5295 | 3305 |
| 8-01/83 | 2 | 1 | 20 | 25 | 2986 | 597  | 1059 | 5812 | 2826 |
| 8-04/83 | 2 | 1 | 23 | 25 | 798  | 399  | 399  | 5732 | 4934 |
| 8-05/83 | 2 | 1 | 18 | 21 | 1050 | 350  | 551  | 5751 | 4701 |
| 8-05/83 | 2 | 2 | 23 | 25 | 820  | 410  | 425  | 4565 | 3745 |
| 8-06/83 | 2 | 1 | 15 | 17 | 476  | 238  | 306  | 4752 | 4276 |
| 8-06/83 | 2 | 2 | 23 | 25 | 937  | 468  | 497  | 4242 | 3305 |
| 8-08/83 | 2 | 1 | 22 | 25 | 2053 | 684  | 918  | 5371 | 3318 |
| 8-09/83 | 2 | 1 | 20 | 21 | 632  | 632  | 632  | 5333 | 4701 |
| 8-09/83 | 2 | 2 | 22 | 25 | 2176 | 725  | 1024 | 4582 | 2406 |
| 8-10/83 | 2 | 1 | 12 | 14 | 781  | 390  | 399  | 5295 | 4514 |
| 8-10/83 | 2 | 2 | 22 | 25 | 2132 | 710  | 958  | 4293 | 2161 |
| 8-14/83 | 2 | 1 | 13 | 16 | 2109 | 703  | 1131 | 6064 | 3955 |
| 8-15/83 | 2 | 1 | 14 | 17 | 1174 | 391  | 556  | 5875 | 4701 |
| 8-15/83 | 2 | 2 | 18 | 21 | 1149 | 383  | 621  | 4480 | 3331 |
| 8-15/83 | 2 | 3 | 22 | 24 | 1623 | 811  | 859  | 3253 | 1630 |
| 8-16/83 | 2 | 1 | 21 | 24 | 2983 | 994  | 1473 | 4633 | 1650 |
| 8-17/83 | 2 | 1 | 21 | 27 | 3370 | 561  | 769  | 4820 | 1450 |
| 8-18/83 | 2 | 1 | 22 | 25 | 3419 | 1139 | 1548 | 4896 | 1477 |
| 8-19/83 | 2 | 1 | 9  | 10 | 580  | 580  | 580  | 3370 | 2790 |
| 8-19/83 | 2 | 2 | 23 | 25 | 1012 | 506  | 563  | 2742 | 1730 |
| 8-20/83 | 2 | 1 | 22 | 25 | 2064 | 688  | 1194 | 3505 | 1441 |
| 8-22/83 | 2 | 1 | 22 | 25 | 1349 | 449  | 924  | 2754 | 1405 |
| 8-23/83 | 2 | 1 | 21 | 27 | 3313 | 552  | 703  | 4718 | 1405 |
| 8-24/83 | 2 | 1 | 20 | 24 | 3807 | 951  | 1174 | 5447 | 1640 |
| 8-25/83 | 2 | 1 | 12 | 16 | 1781 | 445  | 778  | 4463 | 2682 |
| 8-25/83 | 2 | 2 | 20 | 24 | 2865 | 716  | 988  | 4378 | 1513 |
| 8-26/83 | 2 | 1 | 19 | 21 | 949  | 474  | 483  | 3775 | 2826 |
| 8-26/83 | 2 | 2 | 22 | 24 | 1154 | 577  | 702  | 2622 | 1468 |
| 8-27/83 | 2 | 1 | 22 | 24 | 1133 | 566  | 728  | 2538 | 1405 |
| 8-29/83 | 2 | 1 | 16 | 18 | 467  | 233  | 365  | 4242 | 3775 |
| 8-29/83 | 2 | 2 | 19 | 20 | 408  | 408  | 408  | 3700 | 3292 |
| 8-29/83 | 2 | 3 | 21 | 23 | 1549 | 774  | 932  | 3071 | 1522 |
| 8-30/83 | 2 | 1 | 24 | 27 | 2970 | 990  | 1420 | 4582 | 1612 |
| 8-31/83 | 2 | 1 | 19 | 24 | 2985 | 597  | 768  | 4480 | 1495 |
| 9-01/83 | 2 | 1 | 22 | 25 | 3340 | 1113 | 1723 | 6022 | 2682 |
| 9-02/83 | 2 | 1 | 21 | 25 | 4075 | 1018 | 1469 | 5875 | 1800 |
| 9-03/83 | 2 | 1 | 22 | 25 | 3007 | 1002 | 1384 | 5124 | 2117 |
| 9-04/83 | 2 | 1 | 22 | 25 | 2612 | 870  | 1243 | 4718 | 2106 |
| 9-05/83 | 2 | 1 | 18 | 20 | 598  | 299  | 428  | 4463 | 3865 |
| 9-05/83 | 2 | 2 | 22 | 25 | 2277 | 759  | 1119 | 3700 | 1423 |
| 9-06/83 | 2 | 1 | 21 | 25 | 3118 | 779  | 1350 | 4514 | 1396 |
| 9-07/83 | 2 | 1 | 18 | 23 | 3010 | 602  | 814  | 4514 | 1504 |
| 9-08/83 | 2 | 1 | 17 | 18 | 418  | 418  | 418  | 5732 | 5314 |
| 9-08/83 | 2 | 2 | 21 | 23 | 1085 | 542  | 578  | 5854 | 4769 |
| 9-08/83 | 2 | 3 | 24 | 27 | 3175 | 1058 | 1491 | 4769 | 1594 |
| 9-09/83 | 2 | 1 | 21 | 24 | 3280 | 1093 | 1611 | 6022 | 2742 |
| 9-10/83 | 2 | 1 | 16 | 17 | 814  | 814  | 814  | 5938 | 5124 |
| 9-10/83 | 2 | 2 | 20 | 25 | 4257 | 851  | 1600 | 5917 | 1660 |
| 9-11/83 | 2 | 1 | 13 | 17 | 2217 | 554  | 760  | 5561 | 3344 |
| 9-11/83 | 2 | 2 | 22 | 24 | 1615 | 807  | 858  | 3475 | 1860 |
| 9-12/83 | 2 | 1 | 10 | 12 | 1109 | 554  | 653  | 6043 | 4934 |
| 9-12/83 | 2 | 2 | 18 | 20 | 438  | 219  | 324  | 5105 | 4667 |
| 9-12/83 | 2 | 3 | 22 | 24 | 2137 | 1068 | 1156 | 4531 | 2394 |
| 9-13/83 | 2 | 1 | 22 | 25 | 3121 | 1040 | 1299 | 5959 | 2838 |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 9-14/83 | 2 | 1 | 21 | 25 | 4491 | 1122 | 1659 | 5896 | 1405 |
| 9-15/83 | 2 | 1 | 12 | 13 | 409  | 409  | 409  | 5875 | 5466 |
| 9-15/83 | 2 | 2 | 14 | 15 | 450  | 450  | 450  | 5219 | 4769 |
| 9-15/83 | 2 | 3 | 22 | 25 | 3236 | 1078 | 1510 | 4650 | 1414 |
| 9-16/83 | 2 | 1 | 16 | 18 | 1625 | 812  | 937  | 5833 | 4208 |
| 9-16/83 | 2 | 2 | 22 | 24 | 1640 | 820  | 1294 | 4106 | 2466 |
| 9-17/83 | 2 | 1 | 21 | 24 | 1826 | 608  | 1192 | 4174 | 2348 |
| 9-18/83 | 2 | 1 | 22 | 24 | 2314 | 1157 | 1615 | 4174 | 1860 |
| 9-19/83 | 2 | 1 | 23 | 25 | 1151 | 575  | 742  | 4157 | 3006 |
| 9-20/83 | 2 | 1 | 22 | 24 | 1952 | 976  | 1390 | 4157 | 2205 |
| 9-21/83 | 2 | 1 | 22 | 24 | 1465 | 732  | 1132 | 4123 | 2658 |
| 9-22/83 | 2 | 1 | 22 | 24 | 1209 | 604  | 1032 | 4072 | 2863 |
| 9-23/83 | 2 | 1 | 23 | 24 | 720  | 720  | 720  | 4038 | 3318 |
| 9-24/83 | 2 | 1 | 22 | 24 | 1331 | 665  | 1069 | 4157 | 2826 |
| 9-25/83 | 2 | 1 | 14 | 16 | 738  | 369  | 420  | 4123 | 3385 |
| 9-25/83 | 2 | 2 | 22 | 24 | 926  | 463  | 692  | 3344 | 2418 |
| 9-26/83 | 2 | 1 | 22 | 24 | 1660 | 830  | 1306 | 4174 | 2514 |
| 9-27/83 | 2 | 1 | 22 | 25 | 2035 | 678  | 1183 | 4174 | 2139 |
| 9-28/83 | 2 | 1 | 22 | 25 | 1827 | 609  | 1177 | 4021 | 2194 |
| 9-29/83 | 2 | 1 | 21 | 24 | 1701 | 567  | 1161 | 3097 | 1396 |
| 9-30/83 | 2 | 1 | 21 | 24 | 2426 | 808  | 1201 | 4106 | 1680 |

| Date    | BEGIM | ENDIM | Ampl. | AvRat | BegFN | EndFN | BegFM | EndFM |      |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 2-02-83 | 1 1   | 22    | 28    | 1165  | 194   | 6935  | 5770  | 8350  | 7070 |
| 2-03-83 | 1 1   | 14    | 23    | 2082  | 231   | 7073  | 4991  | 8390  | 6265 |
| 2-04-83 | 1 1   | 14    | 21    | 1550  | 221   | 6484  | 4934  | 7790  | 6230 |
| 2-10-83 | 1 1   | 13    | 25    | 550   | 45    | 6866  | 6316  | 8070  | 7590 |
| 2-11-83 | 1 1   | 14    | 29    | 2007  | 133   | 6232  | 4225  | 8070  | 6615 |
| 2-12-83 | 1 1   | 21    | 29    | 2681  | 335   | 6889  | 4208  | 10200 | 7105 |
| 2-13-83 | 1 1   | 16    | 18    | 441   | 220   | 6799  | 6358  | 9430  | 9070 |
| 2-13-83 | 1 2   | 22    | 24    | 808   | 404   | 6935  | 6127  | 9510  | 8750 |
| 2-14-83 | 1 1   | 9     | 13    | 579   | 144   | 6958  | 6379  | 9350  | 8790 |
| 2-14-83 | 1 2   | 22    | 25    | 1595  | 531   | 6757  | 5162  | 9030  | 7315 |
| 2-15-83 | 1 1   | 11    | 18    | 567   | 81    | 6463  | 5896  | 8550  | 7870 |
| 2-15-83 | 1 2   | 23    | 25    | 544   | 272   | 5896  | 5352  | 7910  | 7470 |
| 2-16-83 | 1 1   | 16    | 19    | 861   | 287   | 6736  | 5875  | 8910  | 8030 |
| 2-16-83 | 1 2   | 23    | 28    | 840   | 168   | 6799  | 5959  | 8910  | 8190 |
| 2-18-83 | 1 1   | 23    | 27    | 1358  | 339   | 6843  | 5485  | 9590  | 8030 |
| 2-19-83 | 1 1   | 14    | 17    | 1104  | 368   | 6958  | 5854  | 9390  | 8230 |
| 2-19-83 | 1 2   | 23    | 30    | 1725  | 246   | 6358  | 4633  | 8830  | 7000 |
| 2-20-83 | 1 1   | 12    | 16    | 1151  | 287   | 6085  | 4934  | 8590  | 7510 |
| 2-20-83 | 1 2   | 23    | 25    | 715   | 357   | 4991  | 4276  | 7430  | 6685 |
| 2-21-83 | 1 1   | 11    | 16    | 2001  | 400   | 6935  | 4934  | 9230  | 7140 |
| 2-21-83 | 1 2   | 23    | 29    | 1137  | 189   | 5770  | 4633  | 8070  | 6860 |
| 2-22-83 | 1 1   | 9     | 16    | 1054  | 150   | 6866  | 5812  | 9190  | 8310 |
| 2-22-83 | 1 2   | 22    | 27    | 3724  | 744   | 6912  | 3188  | 9470  | 6055 |
| 2-23-83 | 1 1   | 12    | 16    | 1723  | 430   | 6866  | 5143  | 10430 | 8790 |
| 2-23-83 | 1 2   | 21    | 29    | 3769  | 471   | 6379  | 2610  | 9930  | 6125 |
| 2-24-83 | 1 1   | 21    | 25    | 3581  | 895   | 6912  | 3331  | 10470 | 6755 |
| 2-25-83 | 1 1   | 21    | 30    | 4482  | 498   | 6912  | 2430  | 9710  | 5000 |
| 2-26-83 | 1 1   | 13    | 17    | 1069  | 267   | 6820  | 5751  | 9190  | 8110 |
| 2-26-83 | 1 2   | 22    | 25    | 3304  | 1101  | 5938  | 2634  | 8230  | 4970 |
| 2-27-83 | 1 1   | 14    | 16    | 934   | 467   | 6935  | 6001  | 9070  | 8070 |
| 2-27-83 | 1 2   | 22    | 25    | 3509  | 1169  | 6866  | 3357  | 8950  | 5510 |
| 2-28-83 | 1 1   | 23    | 29    | 2177  | 362   | 6912  | 4735  | 9030  | 6545 |
| 3-01-83 | 1 1   | 23    | 29    | 2060  | 343   | 7165  | 5105  | 9310  | 6965 |
| 3-02-83 | 1 1   | 22    | 28    | 2919  | 486   | 6889  | 3970  | 8790  | 5810 |
| 3-03-83 | 1 1   | 22    | 25    | 3055  | 1018  | 6935  | 3880  | 8750  | 5740 |
| 3-04-83 | 1 1   | 21    | 30    | 3614  | 401   | 6958  | 3344  | 8710  | 5000 |
| 3-05-83 | 1 1   | 22    | 30    | 3896  | 487   | 6889  | 2993  | 8550  | 4640 |
| 3-06-83 | 1 1   | 21    | 29    | 3844  | 480   | 6889  | 3045  | 8550  | 4730 |
| 3-07-83 | 1 1   | 21    | 29    | 3181  | 397   | 6866  | 3685  | 8750  | 5540 |
| 3-08-83 | 1 1   | 21    | 29    | 3325  | 415   | 6935  | 3610  | 10020 | 7630 |
| 3-09-83 | 1 1   | 21    | 29    | 3786  | 473   | 6935  | 3149  | 8750  | 6825 |
| 3-10-83 | 1 1   | 21    | 25    | 3601  | 900   | 6958  | 3357  | 10650 | 6930 |
| 3-11-83 | 1 1   | 21    | 26    | 3183  | 636   | 6958  | 3775  | 8750  | 6370 |
| 3-12-83 | 1 1   | 14    | 16    | 972   | 486   | 6889  | 5917  | 8750  | 8230 |
| 3-12-83 | 1 2   | 21    | 25    | 3806  | 951   | 6799  | 2993  | 8750  | 5210 |
| 3-13-83 | 1 1   | 22    | 28    | 2732  | 455   | 6889  | 4157  | 9030  | 6300 |
| 3-14-83 | 1 1   | 22    | 25    | 2715  | 905   | 6889  | 4174  | 8950  | 6335 |
| 3-15-83 | 1 1   | 22    | 28    | 2601  | 433   | 6843  | 4242  | 8630  | 6020 |
| 3-16-83 | 1 1   | 11    | 14    | 1669  | 556   | 6736  | 5067  | 8470  | 6825 |
| 3-16-83 | 1 2   | 20    | 25    | 2455  | 491   | 5812  | 3357  | 7350  | 5090 |
| 3-17-83 | 1 1   | 15    | 29    | 3877  | 276   | 6935  | 3058  | 8470  | 4580 |
| 3-18-83 | 1 1   | 15    | 25    | 4540  | 454   | 6866  | 2326  | 8270  | 3835 |
| 3-19-83 | 1 1   | 11    | 19    | 1306  | 163   | 5854  | 4548  | 7070  | 5740 |
| 3-20-83 | 1 1   | 2     | 6     | 2154  | 538   | 4480  | 2326  | 5845  | 3710 |
| 3-20-83 | 1 2   | 20    | 25    | 2385  | 477   | 5770  | 3385  | 6965  | 4760 |
| 3-21-83 | 1 1   | 10    | 16    | 1366  | 227   | 6889  | 5523  | 7910  | 6720 |
| 3-21-83 | 1 2   | 21    | 28    | 3223  | 460   | 5917  | 2694  | 7140  | 4016 |
| 3-22-83 | 1 1   | 10    | 17    | 1008  | 144   | 6820  | 5812  | 7950  | 7000 |
| 3-22-83 | 1 2   | 20    | 28    | 3902  | 487   | 6778  | 2876  | 7990  | 4204 |

|         |   |   |    |    |      |      |       |      |       |      |
|---------|---|---|----|----|------|------|-------|------|-------|------|
| 3-23-83 | 1 | 1 | 17 | 19 | 1656 | 828  | 6799  | 5143 | 8070  | 6405 |
| 3-23-83 | 1 | 2 | 21 | 28 | 3570 | 510  | 5896  | 2326 | 7175  | 3635 |
| 3-24-83 | 1 | 1 | 10 | 13 | 811  | 270  | 5257  | 4446 | 6335  | 5600 |
| 3-24-83 | 1 | 2 | 21 | 25 | 3143 | 785  | 5447  | 2304 | 6545  | 3562 |
| 3-25-83 | 1 | 1 | 13 | 15 | 1234 | 617  | 5833  | 4599 | 6930  | 5670 |
| 3-25-83 | 1 | 2 | 21 | 25 | 2660 | 665  | 4953  | 2293 | 6020  | 3490 |
| 3-26-83 | 1 | 1 | 14 | 21 | 1131 | 161  | 5713  | 4582 | 6720  | 5600 |
| 3-27-83 | 1 | 1 | 1  | 6  | 2306 | 461  | 4599  | 2293 | 5670  | 3442 |
| 3-27-83 | 1 | 2 | 23 | 24 | 487  | 487  | 6866  | 6379 | 8550  | 7590 |
| 3-28-83 | 1 | 1 | 22 | 30 | 4933 | 616  | 12880 | 7947 | 14650 | 9230 |
| 4-01-83 | 1 | 1 | 23 | 25 | 2024 | 1012 | 7395  | 5371 | 9150  | 6930 |
| 4-02-83 | 1 | 1 | 21 | 24 | 1941 | 647  | 5896  | 3955 | 7280  | 5510 |
| 4-03-83 | 1 | 1 | 14 | 24 | 3051 | 305  | 6526  | 3475 | 7830  | 4880 |
| 4-04-83 | 1 | 1 | 19 | 29 | 451  | 45   | 3730  | 3279 | 5030  | 4550 |
| 4-08-83 | 1 | 1 | 6  | 13 | 3867 | 552  | 7372  | 3505 | 8670  | 4790 |
| 4-10-83 | 1 | 1 | 6  | 8  | 1518 | 759  | 7372  | 5854 | 8590  | 6895 |
| 4-10-83 | 1 | 2 | 10 | 15 | 455  | 91   | 5959  | 5504 | 7070  | 6580 |
| 4-10-83 | 1 | 3 | 22 | 26 | 2442 | 610  | 7211  | 4769 | 8350  | 5810 |
| 4-11-83 | 1 | 1 | 10 | 19 | 2381 | 264  | 7372  | 4991 | 8550  | 6055 |
| 4-11-83 | 1 | 2 | 23 | 26 | 1407 | 469  | 5938  | 4531 | 6930  | 5570 |
| 4-12-83 | 1 | 1 | 10 | 12 | 1931 | 965  | 7188  | 5257 | 8270  | 6335 |
| 4-12-83 | 1 | 2 | 21 | 29 | 2964 | 370  | 6484  | 3520 | 7390  | 4610 |
| 4-13-83 | 1 | 1 | 8  | 16 | 1791 | 223  | 7257  | 5466 | 8190  | 6405 |
| 4-13-83 | 1 | 2 | 22 | 29 | 1495 | 213  | 6043  | 4548 | 6965  | 5480 |
| 4-14-83 | 1 | 1 | 9  | 14 | 520  | 104  | 6043  | 5523 | 6895  | 6510 |
| 4-14-83 | 1 | 2 | 22 | 29 | 2167 | 309  | 7234  | 5067 | 8270  | 6020 |
| 4-15-83 | 1 | 1 | 12 | 18 | 463  | 77   | 7073  | 6610 | 8070  | 7590 |
| 4-15-83 | 1 | 2 | 22 | 30 | 958  | 119  | 7211  | 6253 | 8350  | 7245 |
| 4-16-83 | 1 | 1 | 10 | 24 | 3842 | 274  | 6190  | 2348 | 7280  | 3635 |
| 4-17-83 | 1 | 1 | 22 | 30 | 2278 | 284  | 4582  | 2304 | 5950  | 3735 |
| 4-18-83 | 1 | 1 | 9  | 11 | 1526 | 763  | 5466  | 3940 | 6650  | 5360 |
| 4-20-83 | 1 | 1 | 14 | 29 | 2271 | 151  | 5896  | 3625 | 7710  | 5845 |
| 4-21-83 | 1 | 1 | 10 | 30 | 3961 | 198  | 6631  | 2670 | 8670  | 4640 |
| 4-22-83 | 1 | 1 | 10 | 19 | 3234 | 359  | 6889  | 3655 | 8590  | 5420 |
| 4-23-83 | 1 | 1 | 7  | 21 | 1600 | 114  | 3640  | 2040 | 5540  | 4176 |
| 4-24-83 | 1 | 1 | 13 | 27 | 1412 | 100  | 3430  | 2018 | 5845  | 4176 |
| 4-25-83 | 1 | 1 | 11 | 21 | 2398 | 239  | 6912  | 4514 | 8710  | 4372 |
| 4-25-83 | 1 | 2 | 22 | 29 | 2701 | 385  | 4752  | 2051 | 6685  | 3860 |
| 4-26-83 | 1 | 1 | 11 | 16 | 1362 | 272  | 5791  | 4429 | 7315  | 5030 |
| 4-26-83 | 1 | 2 | 17 | 29 | 2406 | 200  | 4446  | 2040 | 6055  | 3610 |
| 4-27-83 | 1 | 1 | 9  | 21 | 2598 | 216  | 5812  | 3214 | 7000  | 3735 |
| 4-27-83 | 1 | 2 | 23 | 29 | 1569 | 261  | 3565  | 1996 | 5060  | 3490 |
| 4-28-83 | 1 | 1 | 10 | 19 | 2073 | 230  | 5713  | 3640 | 6825  | 5120 |
| 4-28-83 | 1 | 2 | 23 | 29 | 2099 | 349  | 4106  | 2007 | 5570  | 3660 |
| 4-29-83 | 1 | 1 | 18 | 30 | 2671 | 222  | 4667  | 1996 | 6230  | 3785 |
| 4-30-83 | 1 | 1 | 13 | 17 | 1140 | 285  | 3279  | 2139 | 4970  | 3912 |
| 4-30-83 | 1 | 2 | 23 | 30 | 638  | 91   | 2634  | 1996 | 4490  | 3860 |
| 5-01-83 | 1 | 1 | 23 | 25 | 1391 | 695  | 3640  | 2249 | 5390  | 4148 |
| 5-02-83 | 1 | 1 | 11 | 15 | 1251 | 312  | 5086  | 3835 | 6720  | 5540 |
| 5-02-83 | 1 | 2 | 22 | 29 | 2454 | 350  | 4174  | 1720 | 5810  | 3466 |
| 5-03-83 | 1 | 1 | 14 | 29 | 4023 | 268  | 5713  | 1690 | 7140  | 3394 |
| 5-04-83 | 1 | 1 | 18 | 29 | 2560 | 232  | 4310  | 1750 | 5740  | 3586 |
| 5-05-83 | 1 | 1 | 14 | 30 | 2412 | 150  | 5561  | 3149 | 7105  | 5030 |
| 5-06-83 | 1 | 1 | 10 | 29 | 4724 | 248  | 6484  | 1760 | 8070  | 3660 |
| 5-07-83 | 1 | 1 | 21 | 25 | 2797 | 699  | 4991  | 2194 | 6685  | 3990 |
| 5-08-83 | 1 | 1 | 13 | 16 | 595  | 198  | 4752  | 4157 | 6300  | 5635 |
| 5-08-83 | 1 | 2 | 22 | 29 | 2084 | 297  | 4514  | 2430 | 5985  | 3912 |
| 5-09-83 | 1 | 1 | 16 | 26 | 3086 | 308  | 4786  | 1700 | 6195  | 3118 |
| 5-10-83 | 1 | 1 | 22 | 29 | 1036 | 148  | 4616  | 3580 | 5880  | 4910 |
| 5-11-83 | 1 | 1 | 22 | 29 | 586  | 83   | 5938  | 5352 | 7210  | 6755 |
| 5-12-83 | 1 | 1 | 20 | 25 | 3933 | 786  | 5713  | 1780 | 7140  | 3785 |

|         |   |   |    |    |      |      |      |      |       |       |
|---------|---|---|----|----|------|------|------|------|-------|-------|
| 5-13-83 | 1 | 1 | 10 | 13 | 677  | 225  | 5276 | 4599 | 6790  | 6195  |
| 5-13-83 | 1 | 2 | 22 | 25 | 2951 | 983  | 4701 | 1750 | 6650  | 3938  |
| 5-14-83 | 1 | 1 | 21 | 26 | 3319 | 663  | 5447 | 2128 | 7105  | 4094  |
| 5-15-83 | 1 | 1 | 13 | 30 | 2634 | 154  | 5523 | 2889 | 7070  | 4490  |
| 5-16-83 | 1 | 1 | 22 | 25 | 3210 | 1070 | 5580 | 2370 | 6965  | 4042  |
| 5-17-83 | 1 | 1 | 14 | 17 | 915  | 305  | 4735 | 3820 | 6230  | 5360  |
| 5-17-83 | 1 | 2 | 22 | 25 | 3605 | 1201 | 5656 | 2051 | 7000  | 3938  |
| 5-18-83 | 1 | 1 | 12 | 16 | 1553 | 388  | 5238 | 3685 | 6720  | 4850  |
| 5-18-83 | 1 | 2 | 18 | 24 | 1995 | 332  | 3715 | 1720 | 5390  | 3586  |
| 5-19-83 | 1 | 1 | 11 | 25 | 2389 | 170  | 4259 | 1870 | 5775  | 4120  |
| 5-20-83 | 1 | 1 | 9  | 22 | 1650 | 126  | 3490 | 1840 | 5420  | 4850  |
| 5-21-83 | 1 | 1 | 13 | 18 | 1057 | 211  | 3240 | 2183 | 5880  | 5030  |
| 5-21-83 | 1 | 2 | 23 | 30 | 992  | 141  | 2802 | 1810 | 6020  | 4670  |
| 5-22-83 | 1 | 1 | 12 | 16 | 866  | 216  | 3071 | 2205 | 5740  | 5090  |
| 5-22-83 | 1 | 2 | 23 | 30 | 1680 | 240  | 3400 | 1720 | 6965  | 5060  |
| 5-23-83 | 1 | 1 | 17 | 20 | 1877 | 625  | 5143 | 3266 | 8390  | 6545  |
| 5-23-83 | 1 | 2 | 22 | 25 | 1431 | 477  | 3460 | 2029 | 7390  | 6090  |
| 5-24-83 | 1 | 1 | 22 | 29 | 2991 | 427  | 5409 | 2418 | 9590  | 6405  |
| 5-25-83 | 1 | 1 | 10 | 15 | 528  | 105  | 7096 | 6568 | 10610 | 9975  |
| 5-25-83 | 1 | 2 | 22 | 25 | 4011 | 1337 | 7303 | 3292 | 11370 | 7315  |
| 5-26-83 | 1 | 1 | 14 | 28 | 3383 | 241  | 7188 | 3805 | 10340 | 7470  |
| 5-27-83 | 1 | 1 | 14 | 15 | 680  | 680  | 6912 | 6232 | 10970 | 9470  |
| 5-27-83 | 1 | 2 | 21 | 30 | 3807 | 423  | 7073 | 3266 | 11330 | 6755  |
| 5-28-83 | 1 | 1 | 22 | 30 | 1339 | 167  | 3745 | 2406 | 935   | 6895  |
| 5-29-83 | 1 | 1 | 11 | 16 | 1212 | 242  | 6127 | 4915 | 10830 | 10650 |
| 5-29-83 | 1 | 2 | 20 | 26 | 3706 | 617  | 6043 | 2337 | 12700 | 7750  |
| 5-30-83 | 1 | 1 | 11 | 15 | 1685 | 421  | 5580 | 3895 | 9795  | 8590  |
| 5-30-83 | 1 | 2 | 21 | 30 | 4790 | 532  | 6610 | 1820 | 11960 | 6335  |
| 5-31-83 | 1 | 1 | 14 | 17 | 714  | 238  | 6778 | 6064 | 10200 | 8470  |
| 5-31-83 | 1 | 2 | 18 | 30 | 4084 | 340  | 6526 | 2442 | 10110 | 4550  |

| Date        | BEG | ENDGB | Ampl. | AvRat | MxRat | BegFG | EndFG |
|-------------|-----|-------|-------|-------|-------|-------|-------|
| 2-01/84 1 1 | 10  | 15    | 2517  | 503   | 726   | 5917  | 3400  |
| 2-02/84 1 1 | 13  | 15    | 713   | 356   | 371   | 5295  | 4582  |
| 2-02/84 1 2 | 22  | 24    | 2205  | 1102  | 1691  | 5980  | 3775  |
| 2-03/84 1 1 | 11  | 12    | 1192  | 1192  | 1192  | 3670  | 2478  |
| 2-04/84 1 1 | 13  | 15    | 1078  | 539   | 582   | 3580  | 2502  |
| 2-06/84 1 1 | 23  | 24    | 505   | 505   | 505   | 3175  | 2670  |
| 2-10/84 1 1 | 23  | 24    | 735   | 735   | 735   | 6589  | 5854  |
| 2-11/84 1 1 | 8   | 10    | 1074  | 537   | 684   | 5656  | 4582  |
| 2-11/84 1 2 | 21  | 24    | 3182  | 1060  | 1439  | 5732  | 2550  |
| 2-15/84 1 1 | 19  | 22    | 2109  | 703   | 1188  | 7119  | 5010  |
| 2-18/84 1 1 | 10  | 14    | 1804  | 451   | 552   | 6757  | 4953  |
| 2-18/84 1 2 | 20  | 23    | 2567  | 855   | 1228  | 4915  | 2348  |
| 2-19/84 1 1 | 22  | 23    | 1942  | 1942  | 1942  | 4896  | 2954  |
| 2-20/84 1 1 | 20  | 24    | 2113  | 528   | 763   | 7142  | 5029  |
| 2-23/84 1 1 | 14  | 15    | 1265  | 1265  | 1265  | 7119  | 5854  |
| 2-23/84 1 2 | 21  | 24    | 2934  | 978   | 1118  | 6694  | 3760  |
| 2-24/84 1 1 | 11  | 13    | 1148  | 574   | 622   | 5917  | 4769  |
| 2-24/84 1 2 | 22  | 23    | 504   | 504   | 504   | 6673  | 6169  |
| 2-27/84 1 1 | 22  | 24    | 525   | 262   | 399   | 6715  | 6190  |
| 2-29/84 1 1 | 16  | 18    | 966   | 483   | 651   | 6757  | 5791  |
| 2-29/84 1 2 | 23  | 24    | 608   | 608   | 608   | 5713  | 5105  |
| 3-01/84 1 1 | 9   | 11    | 912   | 456   | 456   | 5751  | 4839  |
| 3-01/84 1 2 | 15  | 17    | 1201  | 600   | 764   | 5732  | 4531  |
| 3-02/84 1 1 | 10  | 11    | 483   | 483   | 483   | 6652  | 6169  |
| 3-02/84 1 2 | 22  | 24    | 2255  | 1127  | 1310  | 6820  | 4565  |
| 3-03/84 1 1 | 20  | 24    | 4975  | 1243  | 2050  | 7257  | 2282  |
| 3-05/84 1 1 | 10  | 12    | 2284  | 1142  | 1600  | 7142  | 4858  |
| 3-06/84 1 1 | 10  | 12    | 1800  | 900   | 1325  | 6715  | 4915  |
| 3-07/84 1 1 | 10  | 12    | 1052  | 526   | 881   | 5770  | 4718  |
| 3-08/84 1 1 | 12  | 13    | 745   | 745   | 745   | 6935  | 6190  |
| 3-08/84 1 2 | 22  | 24    | 2455  | 1227  | 1563  | 6935  | 4480  |
| 3-09/84 1 1 | 22  | 24    | 1573  | 786   | 906   | 7096  | 5523  |
| 3-10/84 1 1 | 12  | 15    | 1446  | 482   | 765   | 6589  | 5143  |
| 3-10/84 1 2 | 22  | 25    | 2916  | 972   | 1635  | 5143  | 2227  |
| 3-11/84 1 1 | 22  | 24    | 1582  | 791   | 879   | 5637  | 4055  |
| 3-12/84 1 1 | 16  | 18    | 903   | 451   | 651   | 6694  | 5791  |
| 3-12/84 1 2 | 22  | 24    | 1332  | 666   | 1164  | 6190  | 4858  |
| 3-13/84 1 1 | 12  | 13    | 704   | 704   | 704   | 6379  | 5675  |
| 3-13/84 1 2 | 16  | 17    | 861   | 861   | 861   | 6736  | 5875  |
| 3-13/84 1 3 | 22  | 24    | 1932  | 966   | 1168  | 6463  | 4531  |
| 3-17/84 1 1 | 20  | 24    | 3779  | 944   | 1458  | 6694  | 2915  |
| 3-18/84 1 1 | 22  | 24    | 2461  | 1230  | 1321  | 6958  | 4497  |
| 3-19/84 1 1 | 22  | 24    | 2285  | 1142  | 1180  | 6799  | 4514  |
| 3-20/84 1 1 | 22  | 24    | 1416  | 708   | 882   | 6673  | 5257  |
| 3-21/84 1 1 | 22  | 23    | 1045  | 1045  | 1045  | 7004  | 5959  |
| 3-22/84 1 1 | 23  | 25    | 701   | 350   | 546   | 6912  | 6211  |
| 3-23/84 1 1 | 11  | 13    | 1891  | 945   | 1030  | 6694  | 4803  |
| 3-23/84 1 2 | 22  | 24    | 3307  | 1653  | 1733  | 5833  | 2526  |
| 3-25/84 1 1 | 22  | 24    | 987   | 493   | 672   | 6757  | 5770  |
| 3-26/84 1 1 | 9   | 12    | 1953  | 651   | 866   | 6484  | 4531  |
| 3-26/84 1 2 | 18  | 19    | 480   | 480   | 480   | 3850  | 3370  |
| 3-26/84 1 3 | 22  | 24    | 711   | 355   | 451   | 3357  | 2646  |
| 3-27/84 1 1 | 16  | 18    | 708   | 354   | 385   | 4633  | 3925  |
| 3-27/84 1 2 | 22  | 24    | 1551  | 775   | 1161  | 3910  | 2359  |
| 3-28/84 1 1 | 16  | 17    | 510   | 510   | 510   | 5938  | 5428  |
| 3-28/84 1 2 | 21  | 24    | 2771  | 923   | 1288  | 5333  | 2562  |
| 3-29/84 1 1 | 16  | 19    | 2358  | 786   | 994   | 5833  | 3475  |
| 3-30/84 1 1 | 11  | 13    | 705   | 352   | 401   | 5791  | 5086  |
| 3-30/84 1 2 | 16  | 17    | 425   | 425   | 425   | 4769  | 4344  |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 3-30/84 | 1 | 3 | 22 | 24 | 2115 | 1057 | 1258 | 4497 | 2382 |
| 3-31/84 | 1 | 1 | 21 | 24 | 2226 | 742  | 1263 | 4497 | 2271 |
| 4-01/84 | 1 | 1 | 8  | 10 | 1373 | 686  | 698  | 4548 | 3175 |
| 4-01/84 | 1 | 2 | 22 | 25 | 2471 | 823  | 1501 | 4786 | 2315 |
| 4-02/84 | 1 | 1 | 20 | 24 | 4300 | 1075 | 1521 | 6778 | 2478 |
| 4-03/84 | 1 | 1 | 20 | 24 | 3075 | 768  | 1712 | 6715 | 3640 |
| 4-04/84 | 1 | 1 | 22 | 24 | 2136 | 1068 | 1471 | 7165 | 5029 |
| 4-05/84 | 1 | 1 | 22 | 24 | 2254 | 1127 | 1292 | 7188 | 4934 |
| 4-06/84 | 1 | 1 | 14 | 17 | 1798 | 599  | 798  | 6694 | 4896 |
| 4-06/84 | 1 | 2 | 20 | 23 | 3619 | 1206 | 1285 | 6169 | 2550 |
| 4-07/84 | 1 | 1 | 21 | 24 | 3325 | 1108 | 1724 | 5618 | 2293 |
| 4-08/84 | 1 | 1 | 10 | 12 | 1042 | 521  | 937  | 6736 | 5694 |
| 4-08/84 | 1 | 2 | 13 | 14 | 456  | 456  | 456  | 5409 | 4953 |
| 4-08/84 | 1 | 3 | 22 | 23 | 866  | 866  | 866  | 4972 | 4106 |
| 4-09/84 | 1 | 1 | 22 | 24 | 1962 | 981  | 1332 | 6820 | 4858 |
| 4-10/84 | 1 | 1 | 12 | 14 | 1789 | 394  | 1264 | 6799 | 5010 |
| 4-10/84 | 1 | 2 | 21 | 23 | 792  | 396  | 564  | 4123 | 3331 |
| 4-11/84 | 1 | 1 | 9  | 11 | 966  | 483  | 525  | 6757 | 5791 |
| 4-11/84 | 1 | 2 | 13 | 15 | 1277 | 638  | 762  | 5791 | 4514 |
| 4-11/84 | 1 | 3 | 20 | 23 | 1935 | 645  | 853  | 4497 | 2562 |
| 4-12/84 | 1 | 1 | 10 | 12 | 1629 | 814  | 882  | 6715 | 5086 |
| 4-12/84 | 1 | 2 | 13 | 14 | 1104 | 1104 | 1104 | 5029 | 3925 |
| 4-12/84 | 1 | 3 | 22 | 23 | 405  | 405  | 405  | 3850 | 3445 |
| 4-13/84 | 1 | 1 | 15 | 17 | 792  | 396  | 504  | 4123 | 3331 |
| 4-13/84 | 1 | 2 | 20 | 21 | 745  | 745  | 745  | 3331 | 2586 |
| 4-14/84 | 1 | 1 | 10 | 12 | 600  | 300  | 457  | 3162 | 2562 |
| 4-16/84 | 1 | 1 | 9  | 11 | 689  | 344  | 461  | 5067 | 4378 |
| 4-16/84 | 1 | 2 | 12 | 14 | 534  | 267  | 347  | 4174 | 3640 |
| 4-16/84 | 1 | 3 | 18 | 21 | 1369 | 456  | 555  | 3640 | 2271 |
| 4-17/84 | 1 | 1 | 21 | 23 | 1444 | 722  | 1324 | 3910 | 2466 |
| 4-18/84 | 1 | 1 | 15 | 19 | 1997 | 499  | 595  | 4463 | 2466 |
| 4-19/84 | 1 | 1 | 10 | 13 | 1296 | 432  | 604  | 4497 | 3201 |
| 4-19/84 | 1 | 2 | 14 | 15 | 605  | 605  | 605  | 3071 | 2466 |
| 4-20/84 | 1 | 1 | 8  | 9  | 875  | 875  | 875  | 4089 | 3214 |
| 4-20/84 | 1 | 2 | 12 | 15 | 1717 | 572  | 928  | 3790 | 2073 |
| 4-21/84 | 1 | 1 | 12 | 14 | 1190 | 595  | 672  | 3318 | 2128 |
| 4-22/84 | 1 | 1 | 14 | 18 | 2766 | 691  | 820  | 5048 | 2282 |
| 4-22/84 | 1 | 2 | 23 | 24 | 405  | 405  | 405  | 2742 | 2337 |
| 4-23/84 | 1 | 1 | 12 | 13 | 620  | 620  | 620  | 4395 | 3775 |
| 4-23/84 | 1 | 2 | 22 | 24 | 1690 | 845  | 1324 | 3730 | 2040 |
| 4-24/84 | 1 | 1 | 11 | 13 | 1323 | 661  | 684  | 4858 | 3535 |
| 4-24/84 | 1 | 2 | 22 | 24 | 545  | 272  | 425  | 2838 | 2293 |
| 4-25/84 | 1 | 1 | 13 | 15 | 1376 | 688  | 862  | 5181 | 3805 |
| 4-25/84 | 1 | 2 | 21 | 22 | 614  | 614  | 614  | 3188 | 2574 |
| 4-26/84 | 1 | 1 | 10 | 12 | 987  | 493  | 612  | 4582 | 3595 |
| 4-26/84 | 1 | 2 | 15 | 18 | 805  | 268  | 389  | 3331 | 2526 |
| 4-27/84 | 1 | 1 | 10 | 12 | 638  | 319  | 495  | 4038 | 3400 |
| 4-27/84 | 1 | 2 | 13 | 14 | 684  | 684  | 684  | 3318 | 2634 |
| 4-29/84 | 1 | 1 | 8  | 9  | 576  | 576  | 576  | 3162 | 2586 |
| 4-29/84 | 1 | 2 | 13 | 14 | 437  | 437  | 437  | 3071 | 2634 |
| 4-30/84 | 1 | 1 | 20 | 23 | 3146 | 1048 | 1366 | 5732 | 2586 |
| 5-01/84 | 1 | 1 | 18 | 21 | 1308 | 436  | 510  | 5143 | 3835 |
| 5-01/84 | 1 | 2 | 22 | 24 | 1438 | 719  | 808  | 3775 | 2337 |
| 5-02/84 | 1 | 1 | 9  | 12 | 2742 | 914  | 1042 | 5917 | 3175 |
| 5-03/84 | 1 | 1 | 7  | 9  | 783  | 391  | 459  | 4633 | 3850 |
| 5-04/84 | 1 | 1 | 10 | 12 | 588  | 294  | 375  | 4123 | 3535 |
| 5-04/84 | 1 | 2 | 16 | 17 | 512  | 512  | 512  | 3110 | 2598 |
| 5-11/84 | 1 | 1 | 13 | 16 | 798  | 266  | 333  | 3895 | 3097 |
| 5-11/84 | 1 | 2 | 17 | 20 | 1129 | 376  | 456  | 2889 | 1760 |
| 5-12/84 | 1 | 1 | 10 | 13 | 761  | 253  | 327  | 3032 | 2271 |
| 5-12/84 | 1 | 2 | 14 | 15 | 445  | 445  | 445  | 2205 | 1760 |

|         |   |   |    |    |      |      |      |       |      |
|---------|---|---|----|----|------|------|------|-------|------|
| 5-13/84 | 1 | 1 | 9  | 10 | 648  | 648  | 648  | 2754  | 2106 |
| 5-13/84 | 1 | 2 | 18 | 19 | 900  | 900  | 900  | 4140  | 3240 |
| 5-13/84 | 1 | 3 | 20 | 22 | 2025 | 1012 | 1575 | 3925  | 1900 |
| 5-14/84 | 1 | 1 | 21 | 22 | 939  | 939  | 939  | 4140  | 3201 |
| 5-15/84 | 1 | 1 | 19 | 20 | 582  | 582  | 582  | 4327  | 3745 |
| 5-15/84 | 1 | 2 | 21 | 22 | 811  | 811  | 811  | 3505  | 2694 |
| 5-16/84 | 1 | 1 | 21 | 22 | 806  | 806  | 806  | 4191  | 3385 |
| 5-17/84 | 1 | 1 | 21 | 22 | 857  | 857  | 857  | 4123  | 3266 |
| 5-18/84 | 1 | 1 | 21 | 22 | 1224 | 1224 | 1224 | 3253  | 2029 |
| 5-19/84 | 1 | 1 | 17 | 19 | 967  | 483  | 552  | 3805  | 2838 |
| 5-19/84 | 1 | 2 | 21 | 22 | 524  | 524  | 524  | 2850  | 2326 |
| 5-20/84 | 1 | 1 | 20 | 22 | 1672 | 836  | 1162 | 3910  | 2238 |
| 5-21/84 | 1 | 1 | 19 | 22 | 2276 | 758  | 1423 | 4106  | 1830 |
| 5-22/84 | 1 | 1 | 19 | 21 | 747  | 373  | 460  | 3987  | 3240 |
| 5-23/84 | 1 | 1 | 9  | 13 | 1381 | 345  | 695  | 3520  | 2139 |
| 5-24/84 | 1 | 1 | 8  | 11 | 1617 | 539  | 631  | 390   | 2293 |
| 5-25/84 | 1 | 1 | 20 | 21 | 512  | 512  | 512  | 2442  | 1930 |
| 5-26/84 | 1 | 1 | 12 | 14 | 602  | 301  | 470  | 2730  | 2128 |
| 5-27/84 | 1 | 1 | 21 | 22 | 702  | 702  | 702  | 2622  | 1920 |
| 5-29/84 | 1 | 1 | 10 | 12 | 884  | 442  | 493  | 5143  | 4259 |
| 5-29/84 | 1 | 2 | 17 | 19 | 727  | 363  | 543  | 3385  | 2658 |
| 5-29/84 | 1 | 3 | 20 | 21 | 409  | 409  | 409  | 2658  | 2249 |
| 5-30/84 | 1 | 1 | 18 | 22 | 3533 | 883  | 1130 | 6526  | 2993 |
| 7-01/84 | 2 | 1 | 2  | 3  | 982  | 982  | 982  | 7004  | 6022 |
| 7-01/84 | 2 | 2 | 20 | 21 | 670  | 670  | 670  | 9490  | 8820 |
| 7-01/84 | 2 | 3 | 22 | 24 | 1517 | 758  | 942  | 8820  | 7303 |
| 7-02/84 | 2 | 1 | 9  | 11 | 1480 | 740  | 836  | 8645  | 7165 |
| 7-02/84 | 2 | 2 | 22 | 25 | 3333 | 1111 | 2262 | 7303  | 3970 |
| 7-03/84 | 2 | 1 | 13 | 15 | 1197 | 598  | 627  | 6169  | 4972 |
| 7-03/84 | 2 | 2 | 22 | 24 | 1862 | 931  | 1693 | 4972  | 3110 |
| 7-04/84 | 2 | 1 | 12 | 14 | 1068 | 534  | 540  | 5854  | 4786 |
| 7-04/84 | 2 | 2 | 22 | 24 | 1800 | 900  | 1490 | 4858  | 3058 |
| 7-05/84 | 2 | 1 | 14 | 17 | 2210 | 736  | 905  | 6843  | 4633 |
| 7-05/84 | 2 | 2 | 18 | 21 | 1676 | 558  | 798  | 4565  | 2889 |
| 7-07/84 | 2 | 1 | 15 | 16 | 1045 | 1045 | 1045 | 7004  | 5959 |
| 7-08/84 | 2 | 1 | 16 | 17 | 529  | 529  | 529  | 7487  | 6958 |
| 7-09/84 | 2 | 1 | 16 | 17 | 667  | 667  | 667  | 7556  | 6889 |
| 7-10/84 | 2 | 1 | 5  | 7  | 1667 | 833  | 1043 | 6981  | 5314 |
| 7-10/84 | 2 | 2 | 10 | 11 | 1002 | 1002 | 1002 | 5295  | 4293 |
| 7-11/84 | 2 | 1 | 15 | 16 | 627  | 627  | 627  | 7027  | 6400 |
| 7-13/84 | 2 | 1 | 14 | 15 | 537  | 537  | 537  | 6958  | 6421 |
| 7-14/84 | 2 | 1 | 11 | 12 | 560  | 560  | 560  | 6981  | 6421 |
| 7-14/84 | 2 | 2 | 22 | 23 | 1093 | 1093 | 1093 | 6673  | 5580 |
| 7-15/84 | 2 | 1 | 21 | 23 | 1055 | 527  | 693  | 6673  | 5618 |
| 7-17/84 | 2 | 1 | 12 | 13 | 483  | 483  | 483  | 7395  | 6912 |
| 7-18/84 | 2 | 1 | 21 | 24 | 2075 | 691  | 1360 | 10420 | 8345 |
| 7-19/84 | 2 | 1 | 9  | 11 | 1175 | 587  | 1000 | 8570  | 7395 |
| 7-19/84 | 2 | 2 | 16 | 17 | 560  | 560  | 560  | 6981  | 6421 |
| 7-20/84 | 2 | 1 | 10 | 11 | 587  | 587  | 587  | 7050  | 6463 |
| 7-20/84 | 2 | 2 | 22 | 24 | 2226 | 1113 | 1387 | 6400  | 4174 |
| 7-21/84 | 2 | 1 | 21 | 23 | 1399 | 699  | 773  | 5219  | 3820 |
| 7-22/84 | 2 | 1 | 21 | 22 | 487  | 487  | 487  | 4412  | 3925 |
| 7-23/84 | 2 | 1 | 16 | 17 | 575  | 575  | 575  | 7533  | 6958 |
| 7-23/84 | 2 | 2 | 22 | 24 | 2608 | 1304 | 2073 | 6935  | 4327 |
| 7-24/84 | 2 | 1 | 5  | 6  | 454  | 454  | 454  | 4934  | 4480 |
| 7-24/84 | 2 | 2 | 16 | 17 | 621  | 621  | 621  | 7487  | 6866 |
| 7-25/84 | 2 | 1 | 23 | 25 | 5086 | 2543 | 4534 | 12320 | 7234 |
| 7-26/84 | 2 | 1 | 21 | 23 | 1359 | 679  | 852  | 6958  | 5599 |
| 7-27/84 | 2 | 1 | 17 | 20 | 1993 | 664  | 1090 | 6694  | 4701 |
| 7-28/84 | 2 | 1 | 6  | 7  | 663  | 663  | 663  | 4769  | 4106 |
| 7-28/84 | 2 | 2 | 18 | 20 | 1317 | 658  | 909  | 5542  | 4225 |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 7-30/84 | 2 | 1 | 8  | 9  | 589  | 589  | 589  | 5447 | 4858 |
| 7-30/84 | 2 | 2 | 22 | 24 | 1416 | 708  | 911  | 4242 | 2826 |
| 7-31/84 | 2 | 1 | 19 | 20 | 621  | 621  | 621  | 7533 | 6912 |
| 7-31/84 | 2 | 2 | 22 | 24 | 2047 | 1023 | 1409 | 6799 | 4752 |
| 8-01/84 | 2 | 1 | 18 | 20 | 971  | 485  | 544  | 5162 | 4191 |
| 8-02/84 | 2 | 1 | 16 | 17 | 437  | 437  | 437  | 5656 | 5219 |
| 8-02/84 | 2 | 2 | 23 | 24 | 658  | 658  | 658  | 5896 | 5238 |
| 8-05/84 | 2 | 1 | 6  | 7  | 1056 | 1056 | 1056 | 6889 | 5833 |
| 8-05/84 | 2 | 2 | 23 | 24 | 917  | 917  | 917  | 6981 | 6064 |
| 8-06/84 | 2 | 1 | 7  | 8  | 750  | 750  | 750  | 6463 | 5713 |
| 8-06/84 | 2 | 2 | 19 | 21 | 1057 | 528  | 734  | 5656 | 4599 |
| 8-06/84 | 2 | 3 | 22 | 24 | 1659 | 829  | 1347 | 4548 | 2889 |
| 8-07/84 | 2 | 1 | 20 | 23 | 2616 | 872  | 1162 | 5713 | 3097 |
| 8-08/84 | 2 | 1 | 21 | 22 | 432  | 432  | 432  | 4072 | 3640 |
| 8-09/84 | 2 | 1 | 23 | 24 | 457  | 457  | 457  | 3580 | 3123 |
| 8-11/84 | 2 | 1 | 22 | 23 | 776  | 776  | 776  | 4191 | 3415 |
| 8-12/84 | 2 | 1 | 21 | 23 | 1056 | 528  | 697  | 5162 | 4106 |
| 8-14/84 | 2 | 1 | 21 | 25 | 4100 | 1025 | 1790 | 5523 | 1423 |
| 8-15/84 | 2 | 1 | 21 | 24 | 4781 | 1593 | 2065 | 6421 | 1640 |
| 8-16/84 | 2 | 1 | 22 | 24 | 803  | 401  | 659  | 2766 | 1963 |
| 8-20/84 | 2 | 1 | 15 | 17 | 455  | 227  | 335  | 2682 | 2227 |
| 8-21/84 | 2 | 1 | 22 | 24 | 1058 | 529  | 926  | 2718 | 1660 |
| 8-22/84 | 2 | 1 | 23 | 24 | 996  | 996  | 996  | 2646 | 1650 |
| 8-23/84 | 2 | 2 | 22 | 23 | 954  | 954  | 954  | 2694 | 1740 |
| 8-24/84 | 2 | 1 | 21 | 23 | 908  | 454  | 598  | 2394 | 1486 |
| 8-25/84 | 2 | 1 | 15 | 19 | 1064 | 266  | 420  | 2514 | 1450 |
| 8-27/84 | 2 | 1 | 21 | 24 | 2413 | 804  | 1727 | 6757 | 4344 |
| 8-28/84 | 2 | 1 | 10 | 13 | 1086 | 362  | 372  | 4786 | 3700 |
| 8-28/84 | 2 | 2 | 15 | 16 | 469  | 469  | 469  | 3475 | 3006 |
| 8-30/84 | 2 | 1 | 22 | 24 | 2532 | 1266 | 1478 | 4242 | 1710 |
| 8-31/84 | 2 | 1 | 20 | 21 | 1406 | 1406 | 1406 | 4208 | 2802 |
| 8-31/84 | 2 | 2 | 22 | 23 | 1097 | 1097 | 1097 | 2574 | 1477 |
| 9-01/84 | 2 | 1 | 21 | 23 | 2469 | 1234 | 1316 | 3955 | 1486 |
| 9-03/84 | 2 | 1 | 22 | 24 | 856  | 428  | 520  | 2706 | 1850 |
| 9-04/84 | 2 | 1 | 15 | 18 | 1129 | 376  | 496  | 3535 | 2406 |
| 9-05/84 | 2 | 1 | 9  | 10 | 541  | 541  | 541  | 3175 | 2634 |
| 9-05/84 | 2 | 2 | 23 | 25 | 1870 | 935  | 1417 | 3550 | 1680 |
| 9-06/84 | 2 | 1 | 22 | 24 | 2064 | 1032 | 1132 | 3550 | 1486 |
| 9-07/84 | 2 | 1 | 22 | 23 | 1256 | 1256 | 1256 | 2742 | 1486 |
| 9-08/84 | 2 | 1 | 22 | 23 | 604  | 604  | 604  | 3370 | 2766 |
| 9-09/84 | 2 | 1 | 22 | 24 | 1497 | 748  | 790  | 3460 | 1963 |
| 9-10/84 | 2 | 1 | 21 | 24 | 1505 | 501  | 1067 | 3415 | 1910 |
| 9-11/84 | 2 | 1 | 9  | 10 | 604  | 604  | 604  | 3610 | 3006 |
| 9-11/84 | 2 | 2 | 12 | 13 | 519  | 519  | 519  | 2790 | 2271 |
| 9-11/84 | 2 | 3 | 22 | 24 | 1133 | 566  | 648  | 2754 | 1621 |
| 9-12/84 | 2 | 1 | 24 | 26 | 1947 | 973  | 1325 | 3550 | 1603 |
| 9-13/84 | 2 | 1 | 24 | 26 | 2067 | 1033 | 1130 | 3535 | 1468 |
| 9-14/84 | 2 | 1 | 22 | 25 | 2270 | 756  | 1052 | 3910 | 1640 |
| 9-15/84 | 2 | 1 | 22 | 24 | 2058 | 1029 | 1057 | 3535 | 1477 |
| 9-16/84 | 2 | 1 | 22 | 24 | 1130 | 565  | 756  | 2526 | 1396 |
| 9-17/84 | 2 | 1 | 21 | 23 | 1795 | 897  | 1480 | 3715 | 1920 |
| 9-18/84 | 2 | 1 | 14 | 16 | 779  | 389  | 429  | 3655 | 2876 |
| 9-18/84 | 2 | 2 | 21 | 23 | 2050 | 1025 | 1552 | 3790 | 1740 |
| 9-19/84 | 2 | 1 | 24 | 25 | 1770 | 1770 | 1770 | 3490 | 1720 |
| 9-20/84 | 2 | 1 | 23 | 25 | 2202 | 1101 | 1304 | 3580 | 1378 |
| 9-21/84 | 2 | 1 | 22 | 24 | 2124 | 1062 | 1228 | 3565 | 1441 |
| 9-22/84 | 2 | 1 | 22 | 25 | 1705 | 568  | 774  | 3110 | 1405 |
| 9-23/84 | 2 | 1 | 22 | 24 | 1431 | 715  | 1005 | 4089 | 2658 |
| 9-24/84 | 2 | 1 | 22 | 25 | 2148 | 716  | 1421 | 3580 | 1432 |
| 9-25/84 | 2 | 1 | 22 | 24 | 1805 | 902  | 1480 | 3318 | 1513 |
| 9-27/84 | 2 | 1 | 2  | 5  | 2262 | 754  | 1625 | 3685 | 1423 |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 9-28/84 | 2 | 1 | 3  | 5  | 2013 | 1006 | 1535 | 3445 | 1432 |
| 9-28/84 | 2 | 2 | 23 | 24 | 695  | 695  | 695  | 2073 | 1378 |

| Date    | BEGIN | ENDIM | Ampl. | AvRat | BegFN | EndFN | BegFM | EndFM |       |      |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 2-01-84 | 1     | 1     | 10    | 22    | 2560  | 213   | 5917  | 3357  | 8470  | 5740 |
| 2-02-84 | 1     | 1     | 13    | 16    | 713   | 237   | 5295  | 4582  | 7550  | 6825 |
| 2-02-84 | 1     | 2     | 22    | 29    | 2475  | 353   | 5980  | 3505  | 8190  | 5670 |
| 2-03-84 | 1     | 1     | 8     | 12    | 1764  | 441   | 4242  | 2478  | 6370  | 5705 |
| 2-04-84 | 1     | 1     | 13    | 25    | 1287  | 107   | 3580  | 2293  | 5635  | 4288 |
| 2-06-84 | 1     | 1     | 10    | 16    | 489   | 81    | 4174  | 3685  | 6300  | 5845 |
| 2-06-84 | 1     | 2     | 21    | 29    | 1057  | 132   | 3715  | 2658  | 5845  | 4760 |
| 2-10-84 | 1     | 1     | 12    | 22    | 789   | 78    | 6958  | 6169  | 9030  | 7910 |
| 2-10-84 | 1     | 2     | 23    | 30    | 857   | 122   | 6589  | 5732  | 8470  | 7390 |
| 2-11-84 | 1     | 1     | 8     | 13    | 1074  | 214   | 5656  | 4582  | 7790  | 6685 |
| 2-11-84 | 1     | 2     | 21    | 29    | 3302  | 412   | 5732  | 2430  | 7830  | 4490 |
| 2-15-84 | 1     | 1     | 19    | 27    | 2109  | 263   | 7119  | 5010  | 9430  | 7105 |
| 2-18-84 | 1     | 1     | 10    | 18    | 2464  | 308   | 6757  | 4293  | 8790  | 6230 |
| 2-18-84 | 1     | 2     | 20    | 25    | 2644  | 528   | 4915  | 2271  | 6755  | 4068 |
| 2-19-84 | 1     | 1     | 22    | 23    | 1942  | 1942  | 4896  | 2954  | 5775  | 4970 |
| 2-20-84 | 1     | 1     | 20    | 24    | 2113  | 528   | 7142  | 5029  | 11240 | 8670 |
| 2-23-84 | 1     | 1     | 14    | 17    | 1368  | 456   | 7119  | 5751  | 9630  | 8110 |
| 2-23-84 | 1     | 2     | 21    | 29    | 2979  | 372   | 6694  | 3715  | 9070  | 5985 |
| 2-24-84 | 1     | 1     | 11    | 13    | 1148  | 574   | 5917  | 4769  | 8110  | 7070 |
| 2-24-84 | 1     | 2     | 22    | 23    | 504   | 504   | 6673  | 6169  | 8910  | 8390 |
| 2-27-84 | 1     | 1     | 11    | 25    | 1044  | 74    | 7234  | 6190  | 9390  | 8230 |
| 2-29-84 | 1     | 1     | 16    | 27    | 1671  | 151   | 6757  | 5086  | 8710  | 7035 |
| 3-01-84 | 1     | 1     | 9     | 11    | 912   | 456   | 5751  | 4839  | 7550  | 6895 |
| 3-01-84 | 1     | 2     | 15    | 23    | 1252  | 156   | 5732  | 4480  | 7630  | 6335 |
| 3-02-84 | 1     | 1     | 10    | 11    | 483   | 483   | 6652  | 6169  | 8590  | 8070 |
| 3-02-84 | 1     | 2     | 22    | 24    | 2255  | 1127  | 6820  | 4565  | 8790  | 6790 |
| 3-03-84 | 1     | 1     | 20    | 26    | 4975  | 829   | 7257  | 2282  | 9270  | 4068 |
| 3-05-84 | 1     | 1     | 10    | 15    | 2303  | 460   | 7142  | 4839  | 9070  | 6650 |
| 3-06-84 | 1     | 1     | 10    | 16    | 1876  | 312   | 6715  | 4839  | 8590  | 6650 |
| 3-07-84 | 1     | 1     | 10    | 15    | 1052  | 210   | 5770  | 4718  | 7630  | 6580 |
| 3-08-84 | 1     | 1     | 12    | 15    | 766   | 255   | 6935  | 6169  | 8870  | 8150 |
| 3-08-84 | 1     | 2     | 22    | 29    | 2523  | 360   | 6935  | 4412  | 9150  | 6545 |
| 3-09-84 | 1     | 1     | 22    | 30    | 1649  | 206   | 7096  | 5447  | 9430  | 7670 |
| 3-10-84 | 1     | 1     | 12    | 20    | 1446  | 180   | 6589  | 5143  | 8910  | 7350 |
| 3-10-84 | 1     | 2     | 22    | 25    | 2916  | 972   | 5143  | 2227  | 7510  | 4610 |
| 3-11-84 | 1     | 1     | 22    | 25    | 1582  | 527   | 5637  | 4055  | 7750  | 6265 |
| 3-12-84 | 1     | 1     | 16    | 18    | 903   | 451   | 6694  | 5791  | 9150  | 8230 |
| 3-12-84 | 1     | 2     | 22    | 27    | 1421  | 284   | 6190  | 4769  | 8550  | 7000 |
| 3-13-84 | 1     | 1     | 12    | 13    | 704   | 704   | 6379  | 5675  | 9070  | 8550 |
| 3-13-84 | 1     | 2     | 16    | 17    | 861   | 861   | 6736  | 5875  | 9070  | 8510 |
| 3-13-84 | 1     | 3     | 22    | 29    | 1932  | 276   | 6463  | 4531  | 8750  | 6650 |
| 3-17-84 | 1     | 1     | 20    | 27    | 3792  | 541   | 6694  | 2902  | 8870  | 5030 |
| 3-18-84 | 1     | 1     | 22    | 27    | 2478  | 495   | 6958  | 4480  | 9230  | 6615 |
| 3-19-84 | 1     | 1     | 22    | 28    | 2302  | 383   | 6799  | 4497  | 8990  | 6650 |
| 3-20-84 | 1     | 1     | 22    | 26    | 1644  | 411   | 6673  | 5029  | 10470 | 9190 |
| 3-21-84 | 1     | 1     | 22    | 29    | 1213  | 173   | 7004  | 5791  | 10380 | 8830 |
| 3-22-84 | 1     | 1     | 23    | 26    | 701   | 233   | 6912  | 6211  | 9795  | 9150 |
| 3-23-84 | 1     | 1     | 11    | 17    | 1908  | 318   | 6694  | 4786  | 9630  | 7630 |
| 3-23-84 | 1     | 2     | 22    | 30    | 3529  | 441   | 5833  | 2304  | 8670  | 4850 |
| 3-25-84 | 1     | 1     | 22    | 27    | 987   | 197   | 6757  | 5770  | 9150  | 8030 |
| 3-26-84 | 1     | 1     | 9     | 13    | 2191  | 547   | 6484  | 4293  | 8670  | 6510 |
| 3-26-84 | 1     | 2     | 16    | 29    | 1596  | 122   | 4242  | 2646  | 6510  | 4700 |
| 3-27-84 | 1     | 1     | 16    | 29    | 2318  | 178   | 4633  | 2315  | 6650  | 4316 |
| 3-28-84 | 1     | 1     | 16    | 25    | 3623  | 402   | 5938  | 2315  | 7910  | 4316 |
| 3-29-84 | 1     | 1     | 16    | 28    | 2554  | 212   | 5833  | 3279  | 7790  | 5180 |
| 3-30-84 | 1     | 1     | 11    | 13    | 705   | 352   | 5791  | 5086  | 7710  | 6720 |
| 3-30-84 | 1     | 2     | 14    | 17    | 837   | 279   | 5181  | 4344  | 7105  | 6300 |
| 3-30-84 | 1     | 3     | 22    | 30    | 2237  | 279   | 4497  | 2260  | 6370  | 4068 |
| 3-31-84 | 1     | 1     | 21    | 24    | 2226  | 742   | 4497  | 2271  | 6265  | 4068 |

|         |   |   |    |    |      |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|------|
| 4-01-84 | 1 | 1 | 8  | 13 | 1685 | 337  | 4548 | 2863 | 6300 | 4640 |
| 4-01-84 | 1 | 2 | 22 | 25 | 2471 | 823  | 4786 | 2315 | 6440 | 4068 |
| 4-02-84 | 1 | 1 | 20 | 24 | 4300 | 1075 | 6778 | 2478 | 8630 | 4372 |
| 4-03-84 | 1 | 1 | 20 | 24 | 3075 | 768  | 6715 | 3640 | 8590 | 5705 |
| 4-04-84 | 1 | 1 | 22 | 24 | 2136 | 1068 | 7165 | 5029 | 8990 | 6825 |
| 4-05-84 | 1 | 1 | 22 | 24 | 2254 | 1127 | 7188 | 4934 | 9070 | 6825 |
| 4-06-84 | 1 | 1 | 14 | 18 | 1817 | 454  | 6694 | 4877 | 8470 | 6650 |
| 4-06-84 | 1 | 2 | 20 | 27 | 3843 | 549  | 6169 | 2326 | 7870 | 4016 |
| 4-07-84 | 1 | 1 | 21 | 28 | 3325 | 475  | 5618 | 2293 | 7280 | 3990 |
| 4-08-84 | 1 | 1 | 10 | 14 | 1783 | 445  | 6736 | 4953 | 8470 | 6685 |
| 4-08-84 | 1 | 2 | 22 | 23 | 866  | 866  | 4972 | 4106 | 6685 | 5670 |
| 4-09-84 | 1 | 1 | 22 | 30 | 2000 | 250  | 6820 | 4820 | 8830 | 6545 |
| 4-10-84 | 1 | 1 | 12 | 28 | 3481 | 217  | 6799 | 3318 | 8630 | 5030 |
| 4-11-84 | 1 | 1 | 9  | 27 | 4387 | 243  | 6757 | 2370 | 8470 | 4042 |
| 4-12-84 | 1 | 1 | 10 | 20 | 2865 | 286  | 6715 | 3850 | 8510 | 5635 |
| 4-12-84 | 1 | 2 | 22 | 28 | 480  | 80   | 3850 | 3370 | 5740 | 5210 |
| 4-13-84 | 1 | 1 | 13 | 27 | 2323 | 165  | 4616 | 2293 | 6370 | 4068 |
| 4-14-84 | 1 | 1 | 10 | 15 | 880  | 176  | 3162 | 2282 | 5060 | 4288 |
| 4-16-84 | 1 | 1 | 9  | 26 | 2796 | 164  | 5067 | 2271 | 7470 | 4550 |
| 4-17-84 | 1 | 1 | 21 | 26 | 1606 | 321  | 3910 | 2304 | 6125 | 4400 |
| 4-18-84 | 1 | 1 | 10 | 26 | 2499 | 156  | 4803 | 2304 | 6860 | 4288 |
| 4-19-84 | 1 | 1 | 10 | 24 | 2501 | 178  | 4497 | 1996 | 6510 | 3886 |
| 4-20-84 | 1 | 1 | 8  | 10 | 1018 | 509  | 4089 | 3071 | 5670 | 5000 |
| 4-20-84 | 1 | 2 | 12 | 21 | 1772 | 196  | 3790 | 2018 | 5570 | 3835 |
| 4-21-84 | 1 | 1 | 12 | 15 | 1223 | 407  | 3318 | 2095 | 5000 | 3990 |
| 4-22-84 | 1 | 1 | 14 | 18 | 2766 | 691  | 5048 | 2282 | 6825 | 4344 |
| 4-22-84 | 1 | 2 | 23 | 25 | 548  | 274  | 2742 | 2194 | 4730 | 4176 |
| 4-23-84 | 1 | 1 | 10 | 14 | 1197 | 299  | 4972 | 3775 | 6895 | 5635 |
| 4-23-84 | 1 | 2 | 22 | 25 | 1690 | 563  | 3730 | 2040 | 5635 | 3886 |
| 4-24-84 | 1 | 1 | 11 | 27 | 2565 | 160  | 4858 | 2293 | 6685 | 3990 |
| 4-25-84 | 1 | 1 | 13 | 24 | 2877 | 261  | 5181 | 2304 | 6825 | 3938 |
| 4-26-84 | 1 | 1 | 10 | 18 | 2056 | 257  | 4582 | 2526 | 6160 | 4288 |
| 4-27-84 | 1 | 1 | 10 | 20 | 1632 | 163  | 4038 | 2406 | 5600 | 3938 |
| 4-29-84 | 1 | 1 | 8  | 9  | 576  | 576  | 3162 | 2586 | 4640 | 3964 |
| 4-29-84 | 1 | 2 | 13 | 19 | 665  | 110  | 3071 | 2406 | 4460 | 3912 |
| 4-30-84 | 1 | 1 | 13 | 16 | 437  | 145  | 5751 | 5314 | 7315 | 6895 |
| 4-30-84 | 1 | 2 | 20 | 25 | 3326 | 665  | 5732 | 2406 | 7315 | 4042 |
| 5-01-84 | 1 | 1 | 18 | 24 | 2806 | 467  | 5143 | 2337 | 6790 | 4316 |
| 5-02-84 | 1 | 1 | 9  | 18 | 3002 | 333  | 5917 | 2915 | 7750 | 4880 |
| 5-03-84 | 1 | 1 | 7  | 16 | 1432 | 159  | 4633 | 3201 | 6335 | 5090 |
| 5-04-84 | 1 | 1 | 10 | 27 | 1929 | 113  | 4123 | 2194 | 5880 | 3835 |
| 5-07-84 | 1 | 1 | 6  | 13 | 817  | 116  | 2802 | 1985 | 4316 | 3538 |
| 5-09-84 | 1 | 1 | 15 | 26 | 844  | 76   | 2634 | 1790 | 5060 | 4120 |
| 5-10-84 | 1 | 1 | 11 | 16 | 776  | 155  | 2526 | 1750 | 4850 | 4094 |
| 5-11-84 | 1 | 1 | 13 | 27 | 2205 | 157  | 3895 | 1690 | 6685 | 5270 |
| 5-12-84 | 1 | 1 | 8  | 23 | 2005 | 133  | 3685 | 1680 | 7105 | 4790 |
| 5-13-84 | 1 | 1 | 9  | 10 | 648  | 648  | 2754 | 2106 | 5670 | 5180 |
| 5-13-84 | 1 | 2 | 18 | 19 | 900  | 900  | 4140 | 3240 | 7870 | 7245 |
| 5-13-84 | 1 | 3 | 20 | 25 | 2205 | 441  | 3925 | 1720 | 7830 | 5740 |
| 5-14-84 | 1 | 1 | 21 | 28 | 978  | 139  | 4140 | 3162 | 7670 | 6405 |
| 5-15-84 | 1 | 1 | 19 | 23 | 1657 | 414  | 4327 | 2670 | 7350 | 5570 |
| 5-16-84 | 1 | 1 | 21 | 28 | 847  | 121  | 4191 | 3344 | 6825 | 5845 |
| 5-17-84 | 1 | 1 | 21 | 29 | 948  | 118  | 4123 | 3175 | 6545 | 5480 |
| 5-18-84 | 1 | 1 | 19 | 28 | 1870 | 207  | 3730 | 1860 | 6230 | 4372 |
| 5-19-84 | 1 | 1 | 17 | 20 | 991  | 330  | 3805 | 2814 | 8950 | 7830 |
| 5-19-84 | 1 | 2 | 21 | 23 | 810  | 405  | 2850 | 2040 | 8270 | 7470 |
| 5-20-84 | 1 | 1 | 20 | 23 | 1925 | 641  | 3910 | 1985 | 7630 | 5570 |
| 5-21-84 | 1 | 1 | 19 | 28 | 2286 | 254  | 4106 | 1820 | 7105 | 4520 |
| 5-22-84 | 1 | 1 | 19 | 21 | 747  | 373  | 3987 | 3240 | 7035 | 6405 |
| 5-23-84 | 1 | 1 | 9  | 27 | 1750 | 97   | 3520 | 1770 | 7175 | 4910 |
| 5-24-84 | 1 | 1 | 8  | 18 | 2060 | 206  | 3910 | 1850 | 6790 | 4730 |

|         |   |   |    |    |      |     |      |      |       |      |
|---------|---|---|----|----|------|-----|------|------|-------|------|
| 5-25-84 | 1 | 1 | 14 | 28 | 1217 | 86  | 3097 | 1880 | 5845  | 4670 |
| 5-26-84 | 1 | 1 | 12 | 21 | 870  | 96  | 2730 | 1860 | 6020  | 4940 |
| 5-27-84 | 1 | 1 | 10 | 15 | 616  | 123 | 2466 | 1850 | 5240  | 4820 |
| 5-27-84 | 1 | 2 | 21 | 28 | 752  | 107 | 2622 | 1870 | 5635  | 4970 |
| 5-29-84 | 1 | 1 | 10 | 16 | 1786 | 297 | 5143 | 3357 | 9470  | 8950 |
| 5-29-84 | 1 | 2 | 17 | 21 | 1136 | 284 | 3385 | 2249 | 9110  | 8590 |
| 5-30-84 | 1 | 1 | 18 | 29 | 3572 | 324 | 6526 | 2954 | 11460 | 7070 |
| 5-31-84 | 1 | 1 | 16 | 24 | 1306 | 163 | 3940 | 2634 | 7630  | 9430 |

| Date        | BEG | ENDGB | Ampl. | AvRat | MxRat | BegFG | EndFG |
|-------------|-----|-------|-------|-------|-------|-------|-------|
| 2/ 1/85 1 1 | 1   | 2     | 1380  | 1380  | 1380  | 3700  | 2320  |
| 2/ 1/85 1 2 | 23  | 26    | 3610  | 1203  | 1670  | 5880  | 2270  |
| 2/ 2/85 1 1 | 14  | 16    | 1040  | 520   | 750   | 3610  | 2570  |
| 2/ 2/85 1 2 | 23  | 25    | 1050  | 525   | 650   | 3430  | 2380  |
| 2/ 3/85 1 1 | 13  | 14    | 550   | 550   | 550   | 3150  | 2600  |
| 2/ 4/85 1 1 | 13  | 14    | 1700  | 1700  | 1700  | 6980  | 5280  |
| 2/ 4/85 1 2 | 23  | 25    | 2310  | 1155  | 1360  | 6570  | 4260  |
| 2/ 5/85 1 1 | 13  | 15    | 1180  | 590   | 660   | 6630  | 5450  |
| 2/ 5/85 1 2 | 23  | 24    | 720   | 720   | 720   | 6000  | 5280  |
| 2/ 6/85 1 1 | 1   | 2     | 780   | 780   | 780   | 5010  | 4230  |
| 2/ 6/85 1 2 | 22  | 23    | 1550  | 1550  | 1550  | 6000  | 4450  |
| 2/ 7/85 1 1 | 10  | 12    | 1060  | 530   | 560   | 5030  | 3970  |
| 2/ 7/85 1 2 | 21  | 23    | 1290  | 645   | 1120  | 5330  | 4040  |
| 2/ 8/85 1 1 | 9   | 12    | 1070  | 356   | 380   | 5030  | 3960  |
| 2/ 9/85 1 1 | 13  | 16    | 1190  | 396   | 560   | 4790  | 3600  |
| 2/ 9/85 1 2 | 22  | 23    | 640   | 640   | 640   | 4480  | 3840  |
| 2/10/85 1 1 | 14  | 15    | 610   | 610   | 610   | 5010  | 4400  |
| 2/10/85 1 2 | 20  | 23    | 3090  | 1030  | 2190  | 6720  | 3630  |
| 2/11/85 1 1 | 10  | 11    | 440   | 440   | 440   | 4900  | 4460  |
| 2/11/85 1 2 | 16  | 17    | 570   | 570   | 570   | 6630  | 6060  |
| 2/11/85 1 3 | 22  | 25    | 3140  | 1046  | 1680  | 5850  | 2710  |
| 2/12/85 1 1 | 13  | 15    | 1080  | 540   | 550   | 6870  | 5790  |
| 2/12/85 1 2 | 20  | 23    | 3060  | 1020  | 1850  | 5830  | 2770  |
| 2/13/85 1 1 | 22  | 24    | 4000  | 2000  | 2110  | 6780  | 2780  |
| 2/14/85 1 1 | 16  | 17    | 1390  | 1390  | 1390  | 6820  | 5430  |
| 2/14/85 1 2 | 19  | 22    | 2680  | 893   | 1460  | 5600  | 2920  |
| 2/17/85 1 1 | 21  | 22    | 970   | 970   | 970   | 5370  | 4400  |
| 2/17/85 1 2 | 23  | 24    | 400   | 400   | 400   | 4330  | 3930  |
| 2/18/85 1 1 | 22  | 23    | 800   | 800   | 800   | 5140  | 4340  |
| 2/19/85 1 1 | 21  | 23    | 1810  | 905   | 910   | 5390  | 3580  |
| 2/21/85 1 1 | 18  | 20    | 1370  | 685   | 840   | 5330  | 3960  |
| 2/22/85 1 1 | 22  | 25    | 2690  | 896   | 1090  | 5260  | 2570  |
| 2/23/85 1 1 | 23  | 25    | 1130  | 565   | 640   | 5240  | 4110  |
| 2/26/85 1 1 | 12  | 15    | 1890  | 630   | 790   | 5850  | 3960  |
| 2/27/85 1 1 | 22  | 24    | 1920  | 960   | 1070  | 6150  | 4230  |
| 2/28/85 1 1 | 21  | 22    | 400   | 400   | 400   | 5980  | 5580  |
| 2/28/85 1 2 | 23  | 24    | 1010  | 1010  | 1010  | 5300  | 4290  |
| 3/ 1/85 1 1 | 23  | 24    | 930   | 930   | 930   | 5580  | 4650  |
| 3/ 2/85 1 1 | 22  | 24    | 2440  | 1220  | 1960  | 5620  | 3180  |
| 3/ 4/85 1 1 | 11  | 12    | 1260  | 1260  | 1260  | 6570  | 5310  |
| 3/ 4/85 1 2 | 21  | 23    | 3100  | 1550  | 1770  | 6760  | 3660  |
| 3/ 5/85 1 1 | 8   | 10    | 1100  | 550   | 800   | 7100  | 6000  |
| 3/ 5/85 1 2 | 13  | 15    | 720   | 360   | 380   | 5900  | 5180  |
| 3/ 5/85 1 3 | 20  | 21    | 540   | 540   | 540   | 6690  | 6150  |
| 3/ 5/85 1 4 | 22  | 23    | 1540  | 1540  | 1540  | 6020  | 4480  |
| 3/ 6/85 1 1 | 12  | 13    | 690   | 690   | 690   | 6270  | 5580  |
| 3/ 6/85 1 2 | 21  | 23    | 1710  | 855   | 1070  | 5560  | 3850  |
| 3/ 8/85 1 1 | 19  | 24    | 3980  | 796   | 1080  | 6480  | 2500  |
| 3/ 9/85 1 1 | 19  | 24    | 4020  | 804   | 1090  | 6550  | 2530  |
| 3/10/85 1 1 | 11  | 14    | 1470  | 490   | 640   | 4410  | 2940  |
| 3/10/85 1 2 | 22  | 24    | 1360  | 680   | 880   | 3870  | 2510  |
| 3/11/85 1 1 | 8   | 11    | 1220  | 406   | 950   | 6800  | 5580  |
| 3/11/85 1 2 | 12  | 13    | 850   | 850   | 850   | 5450  | 4600  |
| 3/11/85 1 3 | 23  | 24    | 610   | 610   | 610   | 4210  | 3600  |
| 3/12/85 1 1 | 8   | 12    | 2880  | 720   | 1060  | 6270  | 3390  |
| 3/13/85 1 1 | 8   | 11    | 1620  | 540   | 1050  | 5140  | 3520  |
| 3/13/85 1 2 | 13  | 16    | 1100  | 366   | 640   | 3480  | 2380  |
| 3/14/85 1 1 | 9   | 11    | 1270  | 635   | 690   | 3700  | 2430  |
| 3/15/85 1 1 | 20  | 23    | 2240  | 746   | 1040  | 5010  | 2770  |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 3/16/85 | 1 | 1 | 22 | 24 | 1210 | 605  | 830  | 5120 | 3910 |
| 3/17/85 | 1 | 1 | 6  | 8  | 1110 | 555  | 680  | 3960 | 2850 |
| 3/18/85 | 1 | 1 | 10 | 11 | 590  | 590  | 590  | 4020 | 3430 |
| 3/18/85 | 1 | 2 | 22 | 23 | 750  | 750  | 750  | 3250 | 2500 |
| 3/20/85 | 1 | 1 | 21 | 24 | 2310 | 770  | 1650 | 5710 | 3400 |
| 3/21/85 | 1 | 1 | 12 | 13 | 420  | 420  | 420  | 5680 | 5260 |
| 3/21/85 | 1 | 2 | 21 | 23 | 2610 | 1305 | 1760 | 5900 | 3290 |
| 3/22/85 | 1 | 1 | 21 | 23 | 3660 | 1830 | 1940 | 6340 | 2680 |
| 3/23/85 | 1 | 1 | 21 | 23 | 2360 | 1180 | 1860 | 6400 | 4040 |
| 3/24/85 | 1 | 1 | 13 | 15 | 1330 | 665  | 680  | 6400 | 5070 |
| 3/24/85 | 1 | 2 | 21 | 24 | 3030 | 1010 | 1910 | 5920 | 2890 |
| 3/25/85 | 1 | 1 | 21 | 23 | 3470 | 1735 | 1780 | 6590 | 3120 |
| 3/26/85 | 1 | 1 | 21 | 23 | 2570 | 1285 | 1770 | 6440 | 3870 |
| 3/27/85 | 1 | 1 | 21 | 24 | 2800 | 933  | 2080 | 6400 | 3600 |
| 3/29/85 | 1 | 1 | 21 | 24 | 2460 | 820  | 1830 | 6360 | 3900 |
| 3/30/85 | 1 | 1 | 20 | 23 | 3830 | 1276 | 1880 | 6380 | 2550 |
| 3/31/85 | 1 | 1 | 22 | 23 | 1320 | 1320 | 1320 | 3930 | 2610 |
| 4/ 1/85 | 1 | 1 | 8  | 12 | 1210 | 302  | 420  | 3870 | 2660 |
| 4/ 3/85 | 1 | 1 | 21 | 23 | 2960 | 1480 | 1690 | 5330 | 2370 |
| 4/ 4/85 | 1 | 1 | 14 | 16 | 610  | 305  | 400  | 5540 | 4930 |
| 4/ 4/85 | 1 | 2 | 20 | 23 | 2510 | 836  | 1220 | 4950 | 2440 |
| 4/ 5/85 | 1 | 1 | 21 | 23 | 990  | 495  | 730  | 3840 | 2850 |
| 4/ 6/85 | 1 | 1 | 21 | 23 | 1060 | 530  | 820  | 3840 | 2780 |
| 4/ 7/85 | 1 | 1 | 21 | 23 | 1140 | 570  | 720  | 3510 | 2370 |
| 4/ 8/85 | 1 | 1 | 11 | 13 | 1000 | 500  | 770  | 3600 | 2600 |
| 4/11/85 | 1 | 1 | 12 | 14 | 830  | 415  | 560  | 3430 | 2600 |
| 4/11/85 | 1 | 2 | 21 | 23 | 700  | 350  | 440  | 3070 | 2370 |
| 4/12/85 | 1 | 1 | 20 | 23 | 2520 | 840  | 950  | 4750 | 2230 |
| 4/13/85 | 1 | 1 | 12 | 14 | 880  | 440  | 580  | 4700 | 3820 |
| 4/13/85 | 1 | 2 | 15 | 17 | 1070 | 535  | 710  | 3720 | 2650 |
| 4/18/85 | 1 | 1 | 13 | 15 | 900  | 450  | 530  | 4020 | 3120 |
| 4/18/85 | 1 | 2 | 21 | 22 | 690  | 690  | 690  | 2690 | 2000 |
| 4/19/85 | 1 | 1 | 12 | 14 | 700  | 350  | 400  | 3250 | 2550 |
| 4/20/85 | 1 | 1 | 13 | 14 | 430  | 430  | 430  | 2480 | 2050 |
| 4/22/85 | 1 | 1 | 22 | 24 | 2480 | 1240 | 1500 | 4550 | 2070 |
| 4/23/85 | 1 | 1 | 11 | 12 | 2650 | 2650 | 2650 | 3730 | 1080 |
| 4/24/85 | 1 | 1 | 13 | 16 | 1190 | 396  | 660  | 3570 | 2380 |
| 4/24/85 | 1 | 2 | 23 | 25 | 670  | 335  | 340  | 3960 | 3290 |
| 4/25/85 | 1 | 1 | 13 | 16 | 1490 | 496  | 580  | 3510 | 2020 |
| 4/25/85 | 1 | 2 | 23 | 24 | 440  | 440  | 440  | 2560 | 2120 |
| 4/26/85 | 1 | 1 | 22 | 25 | 2420 | 806  | 1170 | 4570 | 2150 |
| 4/27/85 | 1 | 1 | 21 | 25 | 2200 | 550  | 840  | 5690 | 3490 |
| 4/28/85 | 1 | 1 | 15 | 19 | 1850 | 462  | 710  | 3880 | 2030 |
| 4/29/85 | 1 | 1 | 13 | 15 | 450  | 225  | 320  | 2560 | 2110 |
| 5/ 1/85 | 1 | 1 | 17 | 20 | 1060 | 353  | 420  | 3010 | 1950 |
| 5/ 2/85 | 1 | 1 | 1  | 2  | 490  | 490  | 490  | 2320 | 1830 |
| 5/ 3/85 | 1 | 1 | 24 | 27 | 2530 | 843  | 1100 | 4260 | 1730 |
| 5/ 4/85 | 1 | 1 | 24 | 27 | 2440 | 813  | 1130 | 4240 | 1800 |
| 5/ 6/85 | 1 | 1 | 18 | 20 | 790  | 395  | 450  | 3510 | 2720 |
| 5/ 6/85 | 1 | 2 | 21 | 23 | 810  | 405  | 470  | 2620 | 1810 |
| 5/ 8/85 | 1 | 1 | 19 | 22 | 1440 | 480  | 660  | 4000 | 2560 |
| 5/ 9/85 | 1 | 1 | 3  | 5  | 730  | 365  | 410  | 2560 | 1830 |
| 5/ 9/85 | 1 | 2 | 19 | 22 | 1540 | 513  | 760  | 3320 | 1780 |
| 5/10/85 | 1 | 1 | 3  | 4  | 480  | 480  | 480  | 2420 | 1940 |
| 5/11/85 | 1 | 1 | 3  | 5  | 2290 | 1145 | 1200 | 4020 | 1730 |
| 5/11/85 | 1 | 2 | 14 | 16 | 630  | 315  | 330  | 3190 | 2560 |
| 5/11/85 | 1 | 3 | 21 | 22 | 430  | 430  | 430  | 2220 | 1790 |
| 5/12/85 | 1 | 1 | 15 | 16 | 470  | 470  | 470  | 2430 | 1960 |
| 5/13/85 | 1 | 1 | 18 | 20 | 1030 | 515  | 780  | 3330 | 2300 |
| 5/14/85 | 1 | 1 | 5  | 6  | 460  | 460  | 460  | 2210 | 1750 |
| 5/15/85 | 1 | 1 | 3  | 6  | 2330 | 776  | 900  | 4060 | 1730 |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 5/16/85 | 1 | 1 | 3  | 6  | 2380 | 793  | 1070 | 4140 | 1760 |
| 5/16/85 | 1 | 2 | 16 | 17 | 780  | 780  | 780  | 3720 | 2940 |
| 5/17/85 | 1 | 1 | 21 | 22 | 490  | 490  | 490  | 4480 | 3990 |
| 5/18/85 | 1 | 1 | 3  | 6  | 1830 | 610  | 810  | 4040 | 2210 |
| 5/18/85 | 1 | 2 | 20 | 21 | 470  | 470  | 470  | 3840 | 3370 |
| 5/19/85 | 1 | 1 | 5  | 7  | 1430 | 715  | 880  | 3780 | 2350 |
| 5/19/85 | 1 | 2 | 21 | 22 | 410  | 410  | 410  | 3840 | 3430 |
| 5/20/85 | 1 | 1 | 14 | 15 | 510  | 510  | 510  | 2850 | 2340 |
| 5/21/85 | 1 | 1 | 3  | 5  | 780  | 390  | 470  | 3210 | 2430 |
| 5/21/85 | 1 | 2 | 17 | 20 | 1070 | 356  | 500  | 3600 | 2530 |
| 5/22/85 | 1 | 1 | 7  | 8  | 650  | 650  | 650  | 3340 | 2690 |
| 5/22/85 | 1 | 2 | 11 | 12 | 720  | 720  | 720  | 4240 | 3520 |
| 5/22/85 | 1 | 3 | 14 | 15 | 440  | 440  | 440  | 4160 | 3720 |
| 5/22/85 | 1 | 4 | 18 | 19 | 510  | 510  | 510  | 3900 | 3390 |
| 5/24/85 | 1 | 1 | 6  | 7  | 710  | 710  | 710  | 3850 | 3140 |
| 5/24/85 | 1 | 2 | 20 | 21 | 430  | 430  | 430  | 4790 | 4360 |
| 5/24/85 | 1 | 3 | 24 | 25 | 470  | 470  | 470  | 4920 | 4450 |
| 5/25/85 | 1 | 1 | 6  | 7  | 510  | 510  | 510  | 4750 | 4240 |
| 5/25/85 | 1 | 2 | 15 | 17 | 480  | 240  | 330  | 4210 | 3730 |
| 5/26/85 | 1 | 1 | 1  | 3  | 660  | 330  | 330  | 4240 | 3580 |
| 5/26/85 | 1 | 2 | 22 | 25 | 1260 | 420  | 580  | 4040 | 2780 |
| 5/28/85 | 1 | 1 | 23 | 25 | 540  | 270  | 420  | 3900 | 3360 |
| 5/29/85 | 1 | 1 | 3  | 5  | 650  | 325  | 450  | 3360 | 2710 |
| 5/29/85 | 1 | 2 | 6  | 9  | 1000 | 333  | 510  | 2710 | 1710 |
| 5/30/85 | 1 | 1 | 7  | 9  | 2260 | 1130 | 1780 | 4140 | 1880 |
| 5/31/85 | 1 | 1 | 5  | 6  | 1010 | 1010 | 1010 | 3820 | 2810 |
| 5/31/85 | 1 | 2 | 8  | 9  | 630  | 630  | 630  | 2560 | 1930 |
| 5/31/85 | 1 | 3 | 24 | 25 | 1410 | 1410 | 1410 | 3910 | 2500 |
| 7/ 1/85 | 2 | 1 | 20 | 23 | 1410 | 470  | 740  | 5370 | 3960 |
| 7/ 2/85 | 2 | 1 | 20 | 23 | 2520 | 840  | 1770 | 6510 | 3990 |
| 7/ 3/85 | 2 | 1 | 21 | 22 | 1320 | 1320 | 1320 | 6940 | 5620 |
| 7/ 3/85 | 2 | 2 | 23 | 25 | 2390 | 1195 | 2010 | 5880 | 3490 |
| 7/ 4/85 | 2 | 1 | 19 | 23 | 2710 | 677  | 950  | 5490 | 2780 |
| 7/ 7/85 | 2 | 1 | 2  | 3  | 440  | 440  | 440  | 6840 | 6400 |
| 7/ 7/85 | 2 | 2 | 12 | 14 | 1950 | 975  | 1560 | 6380 | 4430 |
| 7/ 9/85 | 2 | 1 | 1  | 2  | 450  | 450  | 450  | 6910 | 6460 |
| 7/ 9/85 | 2 | 2 | 23 | 25 | 1580 | 790  | 850  | 6630 | 5050 |
| 7/10/85 | 2 | 1 | 21 | 23 | 1780 | 890  | 1160 | 5540 | 3760 |
| 7/13/85 | 2 | 1 | 2  | 3  | 770  | 770  | 770  | 6960 | 6190 |
| 7/13/85 | 2 | 2 | 5  | 6  | 460  | 460  | 460  | 6190 | 5730 |
| 7/13/85 | 2 | 3 | 13 | 14 | 1680 | 1680 | 1680 | 6820 | 5140 |
| 7/13/85 | 2 | 4 | 22 | 24 | 1280 | 640  | 950  | 6630 | 5350 |
| 7/14/85 | 2 | 1 | 1  | 2  | 720  | 720  | 720  | 5350 | 4630 |
| 7/15/85 | 2 | 1 | 22 | 25 | 3210 | 1070 | 1290 | 6820 | 3610 |
| 7/16/85 | 2 | 1 | 22 | 25 | 3020 | 1006 | 1300 | 6630 | 3610 |
| 7/17/85 | 2 | 1 | 2  | 3  | 740  | 740  | 740  | 3410 | 2670 |
| 7/17/85 | 2 | 2 | 22 | 26 | 3050 | 762  | 1220 | 6840 | 3790 |
| 7/18/85 | 2 | 1 | 22 | 23 | 1030 | 1030 | 1030 | 6820 | 5790 |
| 7/19/85 | 2 | 1 | 20 | 21 | 2040 | 2040 | 2040 | 6840 | 4800 |
| 7/19/85 | 2 | 2 | 24 | 25 | 800  | 800  | 800  | 5750 | 4950 |
| 7/20/85 | 2 | 1 | 2  | 5  | 1020 | 340  | 580  | 4930 | 3910 |
| 7/20/85 | 2 | 2 | 9  | 10 | 630  | 630  | 630  | 5450 | 4820 |
| 7/20/85 | 2 | 3 | 19 | 20 | 480  | 480  | 480  | 5680 | 5200 |
| 7/20/85 | 2 | 4 | 22 | 24 | 1890 | 945  | 1500 | 5140 | 3250 |
| 7/22/85 | 2 | 1 | 22 | 24 | 4180 | 2090 | 2690 | 7030 | 2850 |
| 7/23/85 | 2 | 1 | 22 | 25 | 4070 | 1356 | 2150 | 6780 | 2710 |
| 7/24/85 | 2 | 1 | 21 | 23 | 1470 | 735  | 1050 | 6820 | 5350 |
| 7/25/85 | 2 | 1 | 15 | 17 | 1000 | 500  | 530  | 6980 | 5980 |
| 7/25/85 | 2 | 2 | 21 | 25 | 3870 | 967  | 1750 | 6820 | 2950 |
| 7/26/85 | 2 | 1 | 16 | 18 | 680  | 340  | 460  | 6910 | 6230 |
| 7/26/85 | 2 | 2 | 22 | 25 | 3660 | 1220 | 2140 | 6720 | 3060 |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 7/27/85 | 2 | 1 | 14 | 16 | 640  | 320  | 490  | 5730 | 5090 |
| 7/27/85 | 2 | 2 | 20 | 24 | 2390 | 597  | 890  | 5620 | 3230 |
| 7/28/85 | 2 | 1 | 20 | 23 | 2460 | 820  | 1870 | 5520 | 3060 |
| 7/29/85 | 2 | 1 | 21 | 23 | 2530 | 1265 | 2390 | 6960 | 4430 |
| 7/29/85 | 2 | 2 | 24 | 25 | 1010 | 1010 | 1010 | 4580 | 3570 |
| 7/30/85 | 2 | 1 | 16 | 17 | 500  | 500  | 500  | 6840 | 6340 |
| 7/30/85 | 2 | 2 | 22 | 25 | 3530 | 1176 | 1630 | 6870 | 3340 |
| 7/31/85 | 2 | 1 | 23 | 26 | 4180 | 1393 | 2000 | 6800 | 2620 |
| 8/ 1/85 | 2 | 1 | 12 | 15 | 790  | 263  | 500  | 5490 | 4700 |
| 8/ 1/85 | 2 | 2 | 21 | 25 | 2120 | 530  | 650  | 5430 | 3310 |
| 8/ 2/85 | 2 | 1 | 3  | 5  | 1640 | 820  | 1020 | 3310 | 1670 |
| 8/ 2/85 | 2 | 2 | 11 | 13 | 720  | 360  | 540  | 2530 | 1810 |
| 8/ 2/85 | 2 | 3 | 22 | 24 | 1870 | 935  | 1060 | 5410 | 3540 |
| 8/ 3/85 | 2 | 1 | 7  | 9  | 1180 | 590  | 640  | 3330 | 2150 |
| 8/ 3/85 | 2 | 2 | 23 | 25 | 4010 | 2005 | 2200 | 5430 | 1420 |
| 8/ 4/85 | 2 | 1 | 20 | 25 | 4080 | 816  | 1580 | 5490 | 1410 |
| 8/ 5/85 | 2 | 1 | 20 | 25 | 3910 | 782  | 920  | 5370 | 1460 |
| 8/ 6/85 | 2 | 1 | 23 | 25 | 2080 | 1040 | 1280 | 5370 | 3290 |
| 8/ 7/85 | 2 | 1 | 21 | 24 | 1940 | 646  | 1060 | 4430 | 2490 |
| 8/ 8/85 | 2 | 1 | 20 | 25 | 3980 | 796  | 1210 | 5410 | 1430 |
| 8/ 9/85 | 2 | 1 | 23 | 25 | 3970 | 1985 | 2300 | 5370 | 1400 |
| 8/10/85 | 2 | 1 | 13 | 15 | 1330 | 665  | 740  | 6740 | 5410 |
| 8/10/85 | 2 | 2 | 22 | 25 | 2120 | 706  | 930  | 5450 | 3330 |
| 8/11/85 | 2 | 1 | 3  | 5  | 1690 | 845  | 950  | 3330 | 1640 |
| 8/11/85 | 2 | 2 | 23 | 25 | 2160 | 1080 | 1390 | 5470 | 3310 |
| 8/12/85 | 2 | 1 | 3  | 5  | 2050 | 1025 | 1590 | 3320 | 1270 |
| 8/12/85 | 2 | 2 | 19 | 22 | 1470 | 490  | 860  | 5540 | 4070 |
| 8/12/85 | 2 | 3 | 24 | 25 | 530  | 530  | 530  | 3820 | 3290 |
| 8/13/85 | 2 | 1 | 7  | 10 | 1610 | 536  | 700  | 3310 | 1700 |
| 8/13/85 | 2 | 2 | 19 | 22 | 1170 | 390  | 400  | 5410 | 4240 |
| 8/13/85 | 2 | 3 | 23 | 25 | 2520 | 1260 | 1450 | 3970 | 1450 |
| 8/14/85 | 2 | 1 | 20 | 21 | 490  | 490  | 490  | 5390 | 4900 |
| 8/14/85 | 2 | 2 | 22 | 25 | 3260 | 1086 | 1380 | 4700 | 1440 |
| 8/15/85 | 2 | 1 | 20 | 25 | 2090 | 418  | 660  | 5500 | 3410 |
| 8/16/85 | 2 | 1 | 3  | 4  | 1870 | 1870 | 1870 | 3360 | 1490 |
| 8/16/85 | 2 | 2 | 23 | 25 | 1960 | 980  | 1180 | 5410 | 3450 |
| 8/17/85 | 2 | 1 | 7  | 10 | 1950 | 650  | 810  | 3360 | 1410 |
| 8/17/85 | 2 | 2 | 23 | 25 | 3820 | 1910 | 1920 | 5410 | 1590 |
| 8/18/85 | 2 | 1 | 20 | 24 | 3720 | 930  | 1090 | 5350 | 1630 |
| 8/19/85 | 2 | 1 | 21 | 25 | 2130 | 532  | 850  | 5540 | 3410 |
| 8/20/85 | 2 | 1 | 9  | 11 | 970  | 485  | 580  | 2980 | 2010 |
| 8/22/85 | 2 | 1 | 23 | 25 | 1100 | 550  | 650  | 2560 | 1460 |
| 8/23/85 | 2 | 1 | 19 | 22 | 1110 | 370  | 490  | 2920 | 1810 |
| 8/25/85 | 2 | 1 | 21 | 23 | 620  | 310  | 420  | 2120 | 1500 |
| 8/26/85 | 2 | 1 | 22 | 24 | 1520 | 760  | 770  | 3100 | 1580 |
| 8/31/85 | 2 | 1 | 22 | 24 | 660  | 330  | 340  | 2690 | 2030 |
| 9/ 2/85 | 2 | 1 | 15 | 16 | 430  | 430  | 430  | 2100 | 1670 |
| 9/ 3/85 | 2 | 1 | 19 | 22 | 1840 | 613  | 740  | 3580 | 1740 |
| 9/ 4/85 | 2 | 1 | 14 | 17 | 710  | 236  | 400  | 3050 | 2340 |
| 9/ 4/85 | 2 | 2 | 21 | 23 | 860  | 430  | 520  | 2350 | 1490 |
| 9/ 5/85 | 2 | 1 | 21 | 22 | 540  | 540  | 540  | 3870 | 3330 |
| 9/ 7/85 | 2 | 1 | 21 | 24 | 2330 | 776  | 880  | 4060 | 1730 |
| 9/ 8/85 | 2 | 1 | 22 | 23 | 470  | 470  | 470  | 3240 | 2770 |
| 9/11/85 | 2 | 1 | 23 | 26 | 1680 | 560  | 890  | 4110 | 2430 |
| 9/12/85 | 2 | 1 | 15 | 18 | 1220 | 406  | 720  | 3750 | 2530 |
| 9/12/85 | 2 | 2 | 24 | 25 | 530  | 530  | 530  | 2390 | 1860 |
| 9/13/85 | 2 | 1 | 16 | 18 | 690  | 345  | 360  | 3960 | 3270 |
| 9/13/85 | 2 | 2 | 21 | 24 | 1660 | 553  | 940  | 3190 | 1530 |
| 9/14/85 | 2 | 1 | 14 | 16 | 900  | 450  | 600  | 3290 | 2390 |
| 9/14/85 | 2 | 2 | 20 | 22 | 920  | 460  | 770  | 2660 | 1740 |
| 9/16/85 | 2 | 1 | 20 | 23 | 1560 | 520  | 640  | 3630 | 2070 |

|         |   |   |    |    |      |     |     |      |      |
|---------|---|---|----|----|------|-----|-----|------|------|
| 9/17/85 | 2 | 1 | 18 | 19 | 500  | 500 | 500 | 4020 | 3520 |
| 9/17/85 | 2 | 2 | 21 | 23 | 650  | 325 | 360 | 3580 | 2930 |
| 9/17/85 | 2 | 3 | 24 | 25 | 500  | 500 | 500 | 2660 | 2160 |
| 9/18/85 | 2 | 1 | 11 | 13 | 1210 | 605 | 960 | 3880 | 2670 |
| 9/18/85 | 2 | 2 | 20 | 22 | 630  | 315 | 420 | 2490 | 1860 |
| 9/19/85 | 2 | 1 | 12 | 14 | 750  | 375 | 390 | 3520 | 2770 |
| 9/19/85 | 2 | 2 | 21 | 23 | 1180 | 590 | 740 | 3190 | 2010 |
| 9/20/85 | 2 | 1 | 20 | 23 | 1440 | 480 | 650 | 3550 | 2110 |
| 9/21/85 | 2 | 1 | 13 | 15 | 1360 | 680 | 690 | 3230 | 1870 |
| 9/22/85 | 2 | 1 | 12 | 14 | 630  | 315 | 320 | 2140 | 1510 |
| 9/23/85 | 2 | 1 | 12 | 14 | 550  | 275 | 370 | 3450 | 2900 |
| 9/23/85 | 2 | 2 | 21 | 23 | 1380 | 690 | 810 | 2900 | 1520 |
| 9/24/85 | 2 | 1 | 12 | 13 | 570  | 570 | 570 | 3370 | 2800 |
| 9/24/85 | 2 | 2 | 14 | 15 | 720  | 720 | 720 | 2790 | 2070 |
| 9/24/85 | 2 | 3 | 21 | 24 | 1000 | 333 | 440 | 2440 | 1440 |
| 9/25/85 | 2 | 1 | 21 | 23 | 750  | 375 | 450 | 2250 | 1500 |
| 9/26/85 | 2 | 1 | 17 | 19 | 670  | 335 | 370 | 3600 | 2930 |
| 9/26/85 | 2 | 2 | 23 | 24 | 500  | 500 | 500 | 2930 | 2430 |
| 9/27/85 | 2 | 1 | 2  | 3  | 640  | 640 | 640 | 2300 | 1660 |
| 9/27/85 | 2 | 2 | 13 | 14 | 550  | 550 | 550 | 2510 | 1960 |
| 9/28/85 | 2 | 1 | 21 | 22 | 770  | 770 | 770 | 2260 | 1490 |
| 9/29/85 | 2 | 1 | 22 | 24 | 990  | 495 | 700 | 2650 | 1660 |
| 9/30/85 | 2 | 1 | 15 | 16 | 440  | 440 | 440 | 3690 | 3250 |
| 9/30/85 | 2 | 2 | 22 | 24 | 920  | 460 | 650 | 2570 | 1650 |

| Date    | BEGIM | ENDIM | Ampl. | AvRat | BegFN | EndFN | BegFM | EndFM |      |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 2/ 1-85 | 1 1   | 1     | 4     | 1400  | 466   | 3700  | 2300  | 5510  | 3420 |
| 2/ 1-85 | 1 2   | 23    | 26    | 3610  | 1203  | 5880  | 2270  | 7040  | 3470 |
| 2/ 2-85 | 1 1   | 14    | 18    | 1260  | 315   | 3610  | 2350  | 4520  | 3420 |
| 2/ 2-85 | 1 2   | 23    | 30    | 1060  | 151   | 3430  | 2370  | 4400  | 3320 |
| 2/ 3-85 | 1 1   | 11    | 15    | 860   | 215   | 3390  | 2530  | 4320  | 3390 |
| 2/ 4-85 | 1 1   | 13    | 15    | 1740  | 870   | 6980  | 5240  | 7550  | 6200 |
| 2/ 4-85 | 1 2   | 23    | 30    | 2340  | 334   | 6570  | 4230  | 7630  | 5150 |
| 2/ 5-85 | 1 1   | 13    | 15    | 1180  | 590   | 6630  | 5450  | 7430  | 6580 |
| 2/ 5-85 | 1 2   | 23    | 27    | 1770  | 442   | 6000  | 4230  | 7000  | 5210 |
| 2/ 6-85 | 1 1   | 22    | 30    | 2000  | 250   | 6000  | 4000  | 7110  | 5030 |
| 2/ 7-85 | 1 1   | 10    | 17    | 1070  | 152   | 5030  | 3960  | 5950  | 4910 |
| 2/ 7-85 | 1 2   | 21    | 29    | 1310  | 163   | 5330  | 4020  | 6370  | 4940 |
| 2/ 8-85 | 1 1   | 9     | 13    | 1070  | 267   | 5030  | 3960  | 5950  | 4880 |
| 2/ 8-85 | 1 2   | 17    | 25    | 860   | 107   | 3870  | 3010  | 4880  | 3940 |
| 2/ 9-85 | 1 1   | 13    | 19    | 1190  | 198   | 4790  | 3600  | 5540  | 4490 |
| 2/ 9-85 | 1 2   | 22    | 25    | 640   | 213   | 4480  | 3840  | 5330  | 4760 |
| 2/10-85 | 1 1   | 14    | 16    | 610   | 305   | 5010  | 4400  | 6090  | 5330 |
| 2/10-85 | 1 2   | 20    | 30    | 3360  | 336   | 6720  | 3360  | 7870  | 4320 |
| 2/11-85 | 1 1   | 10    | 12    | 440   | 220   | 4900  | 4460  | 5810  | 5510 |
| 2/11-85 | 1 2   | 16    | 25    | 3920  | 435   | 6630  | 2710  | 7870  | 3890 |
| 2/12-85 | 1 1   | 13    | 16    | 1100  | 366   | 6870  | 5770  | 8150  | 6860 |
| 2/12-85 | 1 2   | 20    | 23    | 3060  | 1020  | 5830  | 2770  | 6970  | 3790 |
| 2/13-85 | 1 1   | 22    | 24    | 4000  | 2000  | 6780  | 2780  | 7990  | 3810 |
| 2/14-85 | 1 1   | 16    | 17    | 1390  | 1390  | 6820  | 5430  | 7790  | 6300 |
| 2/14-85 | 1 2   | 19    | 29    | 2790  | 279   | 5600  | 2810  | 6690  | 3860 |
| 2/17-85 | 1 1   | 21    | 25    | 1610  | 402   | 5370  | 3760  | 6300  | 4790 |
| 2/18-85 | 1 1   | 22    | 30    | 1140  | 142   | 5140  | 4000  | 6130  | 4970 |
| 2/19-85 | 1 1   | 21    | 30    | 2140  | 237   | 5390  | 3250  | 6480  | 4200 |
| 2/21-85 | 1 1   | 18    | 21    | 1520  | 506   | 5330  | 3810  | 6370  | 4910 |
| 2/22-85 | 1 1   | 22    | 25    | 2690  | 896   | 5260  | 2570  | 6440  | 3840 |
| 2/23-85 | 1 1   | 23    | 25    | 1130  | 565   | 5240  | 4110  | 6480  | 5390 |
| 2/26-85 | 1 1   | 12    | 17    | 1890  | 378   | 5850  | 3960  | 7430  | 5240 |
| 2/27-85 | 1 1   | 22    | 28    | 1920  | 320   | 6150  | 4230  | 7590  | 5420 |
| 2/28-85 | 1 1   | 21    | 24    | 1690  | 563   | 5980  | 4290  | 7550  | 5670 |
| 3/ 1-85 | 1 1   | 23    | 29    | 1030  | 171   | 5580  | 4550  | 6930  | 5710 |
| 3/ 2-85 | 1 1   | 22    | 25    | 2610  | 870   | 5620  | 3010  | 6860  | 4290 |
| 3/ 3-85 | 1 1   | 20    | 23    | 720   | 240   | 3930  | 3210  | 5030  | 4340 |
| 3/ 4-85 | 1 1   | 11    | 13    | 1450  | 725   | 6570  | 5120  | 7870  | 6300 |
| 3/ 4-85 | 1 2   | 21    | 24    | 3120  | 1040  | 6760  | 3640  | 8190  | 4790 |
| 3/ 5-85 | 1 1   | 8     | 17    | 1920  | 213   | 7100  | 5180  | 8470  | 6300 |
| 3/ 5-85 | 1 2   | 20    | 27    | 2260  | 322   | 6690  | 4430  | 8110  | 5450 |
| 3/ 6-85 | 1 1   | 10    | 21    | 1160  | 105   | 6720  | 5560  | 8110  | 5000 |
| 3/ 6-85 | 1 2   | 22    | 25    | 1100  | 366   | 4920  | 3820  | 6720  | 4940 |
| 3/ 8-85 | 1 1   | 19    | 28    | 3980  | 442   | 6480  | 2500  | 7830  | 3540 |
| 3/ 9-85 | 1 1   | 19    | 26    | 4060  | 580   | 6550  | 2490  | 7830  | 3540 |
| 3/10-85 | 1 1   | 11    | 18    | 1520  | 217   | 4410  | 2890  | 5330  | 3860 |
| 3/10-85 | 1 2   | 22    | 25    | 1360  | 453   | 3870  | 2510  | 4820  | 3560 |
| 3/11-85 | 1 1   | 8     | 29    | 3200  | 152   | 6800  | 3600  | 7990  | 4550 |
| 3/12-85 | 1 1   | 8     | 24    | 3080  | 192   | 6270  | 3190  | 7140  | 4090 |
| 3/13-85 | 1 1   | 8     | 23    | 2850  | 190   | 5140  | 2290  | 5990  | 3230 |
| 3/14-85 | 1 1   | 9     | 12    | 1430  | 476   | 3700  | 2270  | 4550  | 3230 |
| 3/15-85 | 1 1   | 8     | 10    | 450   | 225   | 3960  | 3510  | 4760  | 4400 |
| 3/15-85 | 1 2   | 20    | 29    | 2500  | 277   | 5010  | 2510  | 5920  | 3470 |
| 3/16-85 | 1 1   | 22    | 24    | 1210  | 605   | 5120  | 3910  | 6020  | 4880 |
| 3/17-85 | 1 1   | 6     | 25    | 1590  | 83    | 3960  | 2370  | 4910  | 3350 |
| 3/18-85 | 1 1   | 10    | 12    | 810   | 405   | 4020  | 3210  | 4940  | 4150 |
| 3/18-85 | 1 2   | 22    | 29    | 780   | 111   | 3250  | 2470  | 4230  | 3440 |
| 3/19-85 | 1 1   | 12    | 15    | 510   | 170   | 4020  | 3510  | 4940  | 4490 |
| 3/20-85 | 1 1   | 21    | 26    | 2310  | 462   | 5710  | 3400  | 6760  | 4460 |

|         |   |   |    |    |      |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|------|
| 3/21-85 | 1 | 1 | 12 | 15 | 460  | 153  | 5680 | 5220 | 6650 | 6130 |
| 3/21-85 | 1 | 2 | 21 | 25 | 2890 | 722  | 5900 | 3010 | 6970 | 4070 |
| 3/22-85 | 1 | 1 | 21 | 29 | 3970 | 496  | 6340 | 2370 | 7510 | 3440 |
| 3/23-85 | 1 | 1 | 21 | 25 | 2590 | 647  | 6400 | 3810 | 7630 | 4910 |
| 3/24-85 | 1 | 1 | 13 | 16 | 1520 | 506  | 6400 | 4880 | 7630 | 5920 |
| 3/24-85 | 1 | 2 | 21 | 25 | 3030 | 757  | 5920 | 2890 | 7040 | 4020 |
| 3/25-85 | 1 | 1 | 21 | 25 | 3570 | 892  | 6590 | 3020 | 7790 | 4070 |
| 3/26-85 | 1 | 1 | 21 | 29 | 2770 | 346  | 6440 | 3670 | 7590 | 4640 |
| 3/27-85 | 1 | 1 | 21 | 27 | 2800 | 466  | 6400 | 3600 | 7550 | 4580 |
| 3/29-85 | 1 | 1 | 21 | 28 | 2490 | 355  | 6360 | 3870 | 7430 | 4910 |
| 3/30-85 | 1 | 1 | 20 | 28 | 4010 | 501  | 6380 | 2370 | 7830 | 3690 |
| 3/31-85 | 1 | 1 | 22 | 29 | 1370 | 195  | 3930 | 2560 | 5240 | 3940 |
| 4/ 1-85 | 1 | 1 | 8  | 15 | 1540 | 220  | 3870 | 2330 | 5180 | 3860 |
| 4/ 3-85 | 1 | 1 | 21 | 23 | 2960 | 1480 | 5330 | 2370 | 7870 | 4580 |
| 4/ 4-85 | 1 | 1 | 14 | 19 | 610  | 122  | 5540 | 4930 | 7550 | 6020 |
| 4/ 4-85 | 1 | 2 | 20 | 29 | 2530 | 281  | 4950 | 2420 | 6930 | 4120 |
| 4/ 5-85 | 1 | 1 | 21 | 30 | 1050 | 116  | 3840 | 2790 | 5450 | 4370 |
| 4/ 6-85 | 1 | 1 | 21 | 29 | 1070 | 133  | 3840 | 2770 | 5420 | 4340 |
| 4/ 7-85 | 1 | 1 | 21 | 28 | 1140 | 162  | 3510 | 2370 | 5240 | 4120 |
| 4/ 8-85 | 1 | 1 | 11 | 18 | 1010 | 144  | 3600 | 2590 | 5300 | 4490 |
| 4/11-85 | 1 | 1 | 12 | 15 | 860  | 286  | 3430 | 2570 | 7000 | 6580 |
| 4/11-85 | 1 | 2 | 21 | 29 | 720  | 90   | 3070 | 2350 | 7830 | 6690 |
| 4/12-85 | 1 | 1 | 20 | 23 | 2520 | 840  | 4750 | 2230 | 9070 | 6130 |
| 4/13-85 | 1 | 1 | 12 | 27 | 2360 | 157  | 4700 | 2340 | 8270 | 5710 |
| 4/17-85 | 1 | 1 | 12 | 20 | 400  | 50   | 2570 | 2170 | 5270 | 4760 |
| 4/17-85 | 1 | 2 | 21 | 28 | 500  | 71   | 2530 | 2030 | 5000 | 4370 |
| 4/18-85 | 1 | 1 | 13 | 17 | 1330 | 332  | 4020 | 2690 | 6410 | 4880 |
| 4/18-85 | 1 | 2 | 21 | 22 | 690  | 690  | 2690 | 2000 | 4880 | 4120 |
| 4/19-85 | 1 | 1 | 10 | 16 | 1150 | 191  | 3690 | 2540 | 5510 | 4230 |
| 4/19-85 | 1 | 2 | 17 | 24 | 660  | 94   | 2660 | 2000 | 4460 | 3810 |
| 4/20-85 | 1 | 1 | 13 | 14 | 430  | 430  | 2480 | 2050 | 4150 | 3690 |
| 4/22-85 | 1 | 1 | 22 | 25 | 2520 | 840  | 4550 | 2030 | 5810 | 3510 |
| 4/23-85 | 1 | 1 | 11 | 12 | 2650 | 2650 | 3730 | 1080 | 5030 | 3490 |
| 4/23-85 | 1 | 2 | 15 | 25 | 710  | 71   | 2730 | 2020 | 4200 | 3470 |
| 4/24-85 | 1 | 1 | 13 | 18 | 1190 | 238  | 3570 | 2380 | 4940 | 3840 |
| 4/24-85 | 1 | 2 | 23 | 30 | 680  | 97   | 3960 | 3280 | 5300 | 4640 |
| 4/25-85 | 1 | 1 | 13 | 19 | 1500 | 250  | 3510 | 2010 | 4760 | 3390 |
| 4/25-85 | 1 | 2 | 23 | 30 | 550  | 78   | 2560 | 2010 | 3840 | 3320 |
| 4/26-85 | 1 | 1 | 22 | 26 | 2520 | 630  | 4570 | 2050 | 5850 | 4430 |
| 4/27-85 | 1 | 1 | 21 | 30 | 2260 | 251  | 5690 | 3430 | 9800 | 6580 |
| 4/28-85 | 1 | 1 | 15 | 27 | 1880 | 156  | 3880 | 2000 | 6300 | 4460 |
| 4/29-85 | 1 | 1 | 13 | 16 | 510  | 170  | 2560 | 2050 | 4610 | 4260 |
| 5/ 1-85 | 1 | 1 | 17 | 22 | 1230 | 246  | 3010 | 1780 | 4490 | 4320 |
| 5/ 2-85 | 1 | 1 | 1  | 8  | 570  | 81   | 2320 | 1750 | 4340 | 4400 |
| 5/ 2-85 | 1 | 2 | 22 | 27 | 830  | 166  | 2630 | 1800 | 5300 | 4940 |
| 5/ 3-85 | 1 | 1 | 24 | 30 | 2540 | 423  | 4260 | 1720 | 4700 | 4200 |
| 5/ 4-85 | 1 | 1 | 24 | 30 | 2510 | 418  | 4240 | 1730 | 4320 | 3760 |
| 5/ 6-85 | 1 | 1 | 15 | 29 | 2190 | 156  | 3910 | 1720 | 5090 | 3490 |
| 5/ 7-85 | 1 | 1 | 16 | 25 | 820  | 91   | 2530 | 1710 | 3470 | 3390 |
| 5/ 8-85 | 1 | 1 | 19 | 27 | 1440 | 180  | 4000 | 2560 | 4230 | 3440 |
| 5/ 9-85 | 1 | 1 | 19 | 22 | 1540 | 513  | 3320 | 1780 | 4040 | 3370 |
| 5/ 9-85 | 1 | 2 | 24 | 30 | 810  | 135  | 2540 | 1730 | 3660 | 3610 |
| 5/11-85 | 1 | 1 | 3  | 5  | 2290 | 1145 | 4020 | 1730 | 4730 | 4700 |
| 5/11-85 | 1 | 2 | 14 | 25 | 1480 | 134  | 3190 | 1710 | 3860 | 3230 |
| 5/12-85 | 1 | 1 | 15 | 22 | 500  | 71   | 2430 | 1930 | 3640 | 3160 |
| 5/12-85 | 1 | 2 | 24 | 30 | 440  | 73   | 2180 | 1740 | 3190 | 3120 |
| 5/13-85 | 1 | 1 | 18 | 23 | 1090 | 218  | 3330 | 2240 | 4070 | 3420 |
| 5/14-85 | 1 | 1 | 2  | 9  | 790  | 112  | 2540 | 1750 | 4120 | 4340 |
| 5/15-85 | 1 | 1 | 3  | 13 | 2340 | 234  | 4060 | 1720 | 3390 | 5570 |
| 5/16-85 | 1 | 1 | 3  | 13 | 2420 | 242  | 4140 | 1720 | 3890 | 5210 |
| 5/16-85 | 1 | 2 | 16 | 21 | 830  | 166  | 3720 | 2890 | 7670 | 7870 |

|         |   |   |    |    |      |     |      |      |       |       |
|---------|---|---|----|----|------|-----|------|------|-------|-------|
| 5/17-85 | 1 | 1 | 21 | 23 | 490  | 245 | 4480 | 3990 | 9270  | 7390  |
| 5/18-85 | 1 | 1 | 3  | 7  | 1870 | 467 | 4040 | 2170 | 7390  | 6580  |
| 5/18-85 | 1 | 2 | 20 | 21 | 470  | 470 | 3840 | 3370 | 8990  | 7350  |
| 5/19-85 | 1 | 1 | 5  | 8  | 1480 | 493 | 3780 | 2300 | 8110  | 7830  |
| 5/19-85 | 1 | 2 | 21 | 27 | 410  | 68  | 3840 | 3430 | 7510  | 6550  |
| 5/20-85 | 1 | 1 | 5  | 7  | 400  | 200 | 3250 | 2850 | 7280  | 6550  |
| 5/20-85 | 1 | 2 | 14 | 15 | 510  | 510 | 2850 | 2340 | 7070  | 6720  |
| 5/20-85 | 1 | 3 | 24 | 30 | 1030 | 171 | 3460 | 2430 | 5880  | 5670  |
| 5/21-85 | 1 | 1 | 17 | 25 | 1090 | 136 | 3600 | 2510 | 7510  | 7070  |
| 5/22-85 | 1 | 1 | 7  | 8  | 650  | 650 | 3340 | 2690 | 8430  | 7590  |
| 5/22-85 | 1 | 2 | 11 | 12 | 720  | 720 | 4240 | 3520 | 7910  | 7550  |
| 5/22-85 | 1 | 3 | 14 | 15 | 440  | 440 | 4160 | 3720 | 8350  | 7710  |
| 5/22-85 | 1 | 4 | 18 | 22 | 510  | 127 | 3900 | 3390 | 8910  | 8910  |
| 5/24-85 | 1 | 1 | 4  | 8  | 1200 | 300 | 4190 | 2990 | 10800 | 10500 |
| 5/24-85 | 1 | 2 | 20 | 22 | 430  | 215 | 4790 | 4360 | 10400 | 9510  |
| 5/24-85 | 1 | 3 | 24 | 27 | 470  | 156 | 4920 | 4450 | 9710  | 9070  |
| 5/25-85 | 1 | 1 | 4  | 13 | 690  | 76  | 4920 | 4230 | 9310  | 8510  |
| 5/25-85 | 1 | 2 | 15 | 17 | 480  | 240 | 4210 | 3730 | 8550  | 7630  |
| 5/26-85 | 1 | 1 | 1  | 15 | 1210 | 86  | 4240 | 3030 | 7250  | 6130  |
| 5/26-85 | 1 | 2 | 22 | 30 | 1700 | 212 | 4040 | 2340 | 6760  | 6410  |
| 5/28-85 | 1 | 1 | 23 | 30 | 1190 | 170 | 3900 | 2710 | 5330  | 4550  |
| 5/29-85 | 1 | 1 | 7  | 14 | 830  | 118 | 2540 | 1710 | 6690  | 6650  |
| 5/30-85 | 1 | 1 | 7  | 15 | 2410 | 301 | 4140 | 1730 | 7430  | 6650  |
| 5/31-85 | 1 | 1 | 1  | 16 | 2840 | 189 | 4650 | 1810 | 4550  | 6970  |
| 5/31-85 | 1 | 2 | 24 | 29 | 1940 | 388 | 3910 | 1970 | 5090  | 4150  |

| Date        | BEG | ENDGB | Ampl. | AvRat | MxRat | BegFG | EndFG |
|-------------|-----|-------|-------|-------|-------|-------|-------|
| 2/ 1/86 1 1 | 15  | 17    | 1280  | 640   | 840   | 7070  | 5790  |
| 2/ 1/86 1 2 | 23  | 25    | 1710  | 855   | 1030  | 7140  | 5430  |
| 2/ 2/86 1 1 | 18  | 19    | 480   | 480   | 480   | 7070  | 6590  |
| 2/ 2/86 1 2 | 20  | 22    | 630   | 315   | 480   | 6570  | 5940  |
| 2/ 2/86 1 3 | 23  | 26    | 1540  | 513   | 640   | 5710  | 4170  |
| 2/ 3/86 1 1 | 10  | 13    | 1910  | 636   | 900   | 5310  | 3400  |
| 2/ 3/86 1 2 | 19  | 20    | 570   | 570   | 570   | 4410  | 3840  |
| 2/ 3/86 1 3 | 23  | 24    | 630   | 630   | 630   | 3140  | 2510  |
| 2/ 4/86 1 1 | 22  | 24    | 900   | 450   | 530   | 5690  | 4790  |
| 2/ 5/86 1 1 | 15  | 17    | 1800  | 900   | 1170  | 7210  | 5410  |
| 2/ 5/86 1 2 | 22  | 25    | 2860  | 953   | 1910  | 5830  | 2970  |
| 2/ 6/86 1 1 | 18  | 20    | 1670  | 835   | 1100  | 5390  | 3720  |
| 2/ 7/86 1 1 | 21  | 23    | 870   | 435   | 530   | 5450  | 4580  |
| 2/ 8/86 1 , | 19  | 22    | 1490  | 496   | 710   | 6190  | 4700  |
| 2/ 9/86 1 1 | 14  | 15    | 570   | 570   | 570   | 6230  | 5660  |
| 2/ 9/86 1 2 | 16  | 17    | 740   | 740   | 740   | 5390  | 4650  |
| 2/ 9/86 1 3 | 20  | 22    | 1060  | 530   | 700   | 6870  | 5810  |
| 2/10/86 1 1 | 22  | 24    | 2330  | 1165  | 1510  | 7070  | 4740  |
| 2/11/86 1 1 | 23  | 24    | 1440  | 1440  | 1440  | 7100  | 5660  |
| 2/13/86 1 1 | 23  | 25    | 1280  | 640   | 860   | 7030  | 5750  |
| 2/14/86 1 1 | 13  | 15    | 1770  | 885   | 970   | 7140  | 5370  |
| 2/15/86 1 , | 9   | 11    | 630   | 315   | 460   | 6420  | 5790  |
| 2/15/86 1 2 | 12  | 14    | 950   | 475   | 490   | 5790  | 4840  |
| 2/15/86 1 3 | 15  | 17    | 1010  | 505   | 680   | 4650  | 3640  |
| 2/16/86 1 1 | 22  | 23    | 410   | 410   | 410   | 4040  | 3630  |
| 2/17/86 1 1 | 23  | 25    | 1750  | 875   | 1390  | 6800  | 5050  |
| 2/18/86 1 1 | 9   | 10    | 1290  | 1290  | 1290  | 7120  | 5830  |
| 2/19/86 1 1 | 10  | 11    | 830   | 830   | 830   | 7100  | 6270  |
| 2/19/86 1 2 | 13  | 15    | 1830  | 915   | 1140  | 6480  | 4650  |
| 2/19/86 1 3 | 22  | 24    | 2370  | 1185  | 1460  | 7120  | 4750  |
| 2/20/86 1 1 | 14  | 15    | 900   | 900   | 900   | 6940  | 6040  |
| 2/20/86 1 2 | 21  | 23    | 2360  | 1180  | 1310  | 6820  | 4460  |
| 2/21/86 1 1 | 9   | 10    | 1100  | 1100  | 1100  | 7000  | 5900  |
| 2/21/86 1 2 | 11  | 12    | 1150  | 1150  | 1150  | 5920  | 4770  |
| 2/21/86 1 3 | 13  | 14    | 450   | 450   | 450   | 4510  | 4060  |
| 2/21/86 1 4 | 19  | 21    | 1590  | 795   | 1250  | 5560  | 3970  |
| 2/22/86 1 1 | 13  | 15    | 1550  | 775   | 1240  | 7000  | 5450  |
| 2/22/86 1 2 | 16  | 18    | 770   | 385   | 400   | 5450  | 4680  |
| 2/22/86 1 3 | 20  | 22    | 1120  | 560   | 780   | 6190  | 5070  |
| 2/23/86 1 1 | 14  | 15    | 530   | 530   | 530   | 6870  | 6340  |
| 2/23/86 1 2 | 18  | 20    | 590   | 295   | 380   | 7260  | 6670  |
| 2/23/86 1 3 | 21  | 23    | 3360  | 1680  | 1900  | 6380  | 3020  |
| 2/24/86 1 1 | 16  | 18    | 2410  | 1205  | 1980  | 7670  | 5260  |
| 2/24/86 1 2 | 22  | 24    | 1730  | 865   | 1040  | 7860  | 6130  |
| 2/25/86 1 1 | 12  | 13    | 1490  | 1490  | 1490  | 7790  | 6300  |
| 2/25/86 1 2 | 17  | 18    | 1340  | 1340  | 1340  | 7030  | 5690  |
| 2/25/86 1 3 | 20  | 22    | 2290  | 1145  | 2150  | 7740  | 5450  |
| 2/26/86 1 1 | 12  | 13    | 1050  | 1050  | 1050  | 6800  | 5750  |
| 2/26/86 1 2 | 17  | 18    | 830   | 830   | 830   | 5620  | 4790  |
| 2/27/86 1 1 | 9   | 10    | 630   | 630   | 630   | 5470  | 4840  |
| 2/27/86 1 2 | 18  | 20    | 690   | 345   | 430   | 5030  | 4340  |
| 2/27/86 1 3 | 23  | 25    | 1790  | 895   | 1350  | 4340  | 2550  |
| 2/28/86 1 1 | 22  | 25    | 3210  | 1070  | 1790  | 5620  | 2410  |
| 3/ 1/86 1 1 | 20  | 23    | 2870  | 956   | 1820  | 5350  | 2480  |
| 3/ 2/86 1 1 | 21  | 24    | 3090  | 1030  | 1720  | 5430  | 2340  |
| 3/ 3/86 1 1 | 20  | 23    | 2890  | 963   | 1250  | 5330  | 2440  |
| 3/ 4/86 1 1 | 20  | 23    | 3000  | 1000  | 1720  | 5410  | 2410  |
| 3/ 5/86 1 1 | 21  | 23    | 2610  | 1305  | 1680  | 5260  | 2650  |
| 3/ 6/86 1 1 | 12  | 14    | 1280  | 640   | 940   | 5660  | 4380  |

|         |     |    |    |      |      |      |      |      |
|---------|-----|----|----|------|------|------|------|------|
| 3/ 6/86 | 1 2 | 21 | 23 | 2780 | 1390 | 1470 | 5330 | 2550 |
| 3/ 7/86 | 1 1 | 18 | 21 | 1430 | 476  | 750  | 5390 | 3960 |
| 3/ 8/86 | 1 1 | 21 | 23 | 1290 | 645  | 860  | 3780 | 2490 |
| 3/ 9/86 | 1 1 | 21 | 24 | 2940 | 980  | 1690 | 5370 | 2430 |
| 3/10/86 | 1 1 | 16 | 17 | 510  | 510  | 510  | 5110 | 4600 |
| 3/10/86 | 1 2 | 22 | 24 | 2250 | 1125 | 1220 | 4580 | 2330 |
| 3/11/86 | 1 1 | 21 | 24 | 2800 | 933  | 1680 | 5140 | 2340 |
| 3/12/86 | 1 1 | 20 | 24 | 4020 | 1005 | 1450 | 5710 | 1690 |
| 3/13/86 | 1 1 | 22 | 24 | 1910 | 955  | 1030 | 3690 | 1780 |
| 3/14/86 | 1 1 | 19 | 24 | 3940 | 788  | 1050 | 6380 | 2440 |
| 3/15/86 | 1 1 | 22 | 24 | 4040 | 2020 | 3400 | 6940 | 2900 |
| 3/16/86 | 1 1 | 22 | 24 | 3800 | 1900 | 3400 | 5980 | 2180 |
| 3/17/86 | 1 1 | 19 | 21 | 930  | 465  | 610  | 4900 | 3970 |
| 3/17/86 | 1 2 | 23 | 24 | 1830 | 1830 | 1830 | 4020 | 2190 |
| 3/18/86 | 1 1 | 21 | 24 | 2070 | 690  | 950  | 4580 | 2510 |
| 3/19/86 | 1 1 | 23 | 24 | 1900 | 1900 | 1900 | 4750 | 2850 |
| 3/20/86 | 1 1 | 21 | 24 | 2520 | 840  | 920  | 5300 | 2780 |
| 3/21/86 | 1 1 | 14 | 15 | 1320 | 1320 | 1320 | 5560 | 4240 |
| 3/21/86 | 1 2 | 22 | 24 | 1880 | 940  | 1380 | 4330 | 2450 |
| 3/22/86 | 1 1 | 21 | 24 | 2400 | 800  | 1190 | 5280 | 2880 |
| 3/23/86 | 1 1 | 21 | 24 | 2510 | 836  | 1100 | 5390 | 2880 |
| 3/24/86 | 1 1 | 21 | 23 | 2590 | 1295 | 1660 | 5220 | 2630 |
| 3/25/86 | 1 1 | 18 | 24 | 4230 | 705  | 990  | 6550 | 2320 |
| 3/26/86 | 1 1 | 20 | 22 | 1350 | 675  | 940  | 5660 | 4310 |
| 3/26/86 | 1 2 | 23 | 24 | 1860 | 1860 | 1860 | 4310 | 2450 |
| 3/27/86 | 1 1 | 13 | 14 | 540  | 540  | 540  | 4900 | 4360 |
| 3/27/86 | 1 2 | 18 | 20 | 2650 | 1325 | 1410 | 6060 | 3410 |
| 3/27/86 | 1 3 | 21 | 24 | 1860 | 620  | 1040 | 3410 | 1550 |
| 3/28/86 | 1 1 | 15 | 18 | 3990 | 1330 | 1940 | 6890 | 2900 |
| 3/29/86 | 1 1 | 19 | 21 | 2530 | 1265 | 1350 | 6530 | 4000 |
| 3/29/86 | 1 2 | 22 | 24 | 2680 | 1340 | 1400 | 5090 | 2410 |
| 3/30/86 | 1 1 | 20 | 23 | 4550 | 1516 | 1930 | 6870 | 2320 |
| 3/31/86 | 1 1 | 15 | 17 | 1520 | 760  | 870  | 6630 | 5110 |
| 3/31/86 | 1 2 | 18 | 19 | 1380 | 1380 | 1380 | 5110 | 3730 |
| 3/31/86 | 1 3 | 21 | 23 | 1890 | 945  | 980  | 3510 | 1620 |
| 4/ 1/86 | 1 1 | 17 | 20 | 3450 | 1150 | 2160 | 7140 | 3690 |
| 4/ 1/86 | 1 2 | 21 | 23 | 1750 | 875  | 930  | 3750 | 2000 |
| 4/ 2/86 | 1 1 | 12 | 14 | 1010 | 505  | 630  | 6420 | 5410 |
| 4/ 2/86 | 1 2 | 18 | 19 | 400  | 400  | 400  | 4800 | 4400 |
| 4/ 2/86 | 1 3 | 22 | 24 | 4050 | 2025 | 3280 | 5600 | 1550 |
| 4/ 3/86 | 1 1 | 19 | 23 | 3920 | 980  | 1130 | 5660 | 1740 |
| 4/ 4/86 | 1 1 | 16 | 18 | 1320 | 660  | 710  | 6270 | 4950 |
| 4/ 4/86 | 1 2 | 22 | 24 | 4020 | 2010 | 3220 | 6340 | 2320 |
| 4/ 5/86 | 1 1 | 14 | 15 | 1380 | 1380 | 1380 | 7230 | 5850 |
| 4/ 5/86 | 1 2 | 18 | 20 | 1610 | 805  | 1490 | 5430 | 3820 |
| 4/ 5/86 | 1 3 | 22 | 24 | 2040 | 1020 | 1340 | 3850 | 1810 |
| 4/ 6/86 | 1 1 | 14 | 16 | 840  | 420  | 490  | 5390 | 4550 |
| 4/ 6/86 | 1 2 | 20 | 24 | 4060 | 1015 | 1550 | 6480 | 2420 |
| 4/ 7/86 | 1 1 | 17 | 19 | 1210 | 605  | 610  | 5620 | 4410 |
| 4/ 7/86 | 1 2 | 20 | 23 | 2020 | 673  | 890  | 4450 | 2430 |
| 4/ 8/86 | 1 1 | 21 | 24 | 3850 | 1283 | 3260 | 5690 | 1840 |
| 4/ 9/86 | 1 1 | 17 | 19 | 3310 | 1655 | 1870 | 7070 | 3760 |
| 4/ 9/86 | 1 2 | 20 | 23 | 1880 | 626  | 880  | 3700 | 1820 |
| 4/10/86 | 1 1 | 16 | 23 | 5450 | 778  | 1170 | 7230 | 1780 |
| 4/11/86 | 1 1 | 16 | 17 | 620  | 620  | 620  | 6890 | 6270 |
| 4/11/86 | 1 2 | 18 | 23 | 4170 | 834  | 1160 | 6380 | 2210 |
| 4/12/86 | 1 1 | 17 | 18 | 1200 | 1200 | 1200 | 6230 | 5030 |
| 4/12/86 | 1 2 | 19 | 21 | 1090 | 545  | 920  | 5030 | 3940 |
| 4/12/86 | 1 3 | 22 | 23 | 1790 | 1790 | 1790 | 3970 | 2180 |
| 4/13/86 | 1 1 | 13 | 14 | 400  | 400  | 400  | 5580 | 5180 |
| 4/13/86 | 1 2 | 20 | 23 | 4110 | 1370 | 3390 | 6740 | 2630 |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 4/14/86 | 1 | 1 | 11 | 14 | 1500 | 500  | 930  | 5370 | 3870 |
| 4/14/86 | 1 | 2 | 21 | 22 | 620  | 620  | 620  | 4170 | 3550 |
| 4/17/86 | 1 | 1 | 21 | 23 | 1870 | 935  | 1190 | 5260 | 3390 |
| 4/18/86 | 1 | 1 | 20 | 23 | 3480 | 1160 | 1960 | 6870 | 3390 |
| 4/19/86 | 1 | 1 | 18 | 19 | 620  | 620  | 620  | 5520 | 4900 |
| 4/19/86 | 1 | 2 | 20 | 22 | 980  | 490  | 660  | 4700 | 3720 |
| 4/20/86 | 1 | 1 | 8  | 9  | 530  | 530  | 530  | 3730 | 3200 |
| 4/20/86 | 1 | 2 | 21 | 22 | 1230 | 1230 | 1230 | 5300 | 4070 |
| 4/21/86 | 1 | 1 | 20 | 23 | 3700 | 1233 | 1600 | 6190 | 2490 |
| 4/22/86 | 1 | 1 | 21 | 23 | 2550 | 1275 | 1740 | 7170 | 4620 |
| 4/23/86 | 1 | 1 | 23 | 24 | 1120 | 1120 | 1120 | 7650 | 6530 |
| 4/24/86 | 1 | 1 | 20 | 23 | 3500 | 1166 | 2070 | 6480 | 2980 |
| 4/25/86 | 1 | 1 | 20 | 23 | 4070 | 1356 | 1840 | 7050 | 2980 |
| 4/26/86 | 1 | 1 | 7  | 9  | 1010 | 505  | 750  | 3340 | 2330 |
| 4/26/86 | 1 | 2 | 21 | 23 | 1810 | 905  | 1620 | 5600 | 3790 |
| 4/27/86 | 1 | 1 | 14 | 16 | 1300 | 650  | 750  | 6250 | 4950 |
| 4/27/86 | 1 | 2 | 18 | 20 | 1610 | 805  | 1170 | 5430 | 3820 |
| 4/27/86 | 1 | 3 | 21 | 22 | 660  | 660  | 660  | 3690 | 3030 |
| 4/28/86 | 1 | 1 | 9  | 10 | 1440 | 1440 | 1440 | 6890 | 5450 |
| 4/28/86 | 1 | 2 | 19 | 22 | 3860 | 1286 | 1930 | 6910 | 3050 |
| 4/29/86 | 1 | 1 | 19 | 21 | 3180 | 1590 | 1830 | 6550 | 3370 |
| 4/30/86 | 1 | 1 | 9  | 11 | 1090 | 545  | 900  | 6630 | 5540 |
| 4/30/86 | 1 | 2 | 20 | 22 | 2970 | 1485 | 1760 | 6940 | 3970 |
| 5/ 1/86 | 1 | 1 | 11 | 14 | 2210 | 736  | 1480 | 6300 | 4090 |
| 5/ 1/86 | 1 | 2 | 21 | 23 | 3000 | 1500 | 1720 | 6840 | 3840 |
| 5/ 2/86 | 1 | 1 | 22 | 24 | 2330 | 1165 | 1590 | 5470 | 3140 |
| 5/ 3/86 | 1 | 1 | 17 | 18 | 690  | 690  | 690  | 6250 | 5560 |
| 5/ 3/86 | 1 | 2 | 21 | 24 | 2540 | 846  | 1020 | 6270 | 3730 |
| 5/ 4/86 | 1 | 1 | 21 | 24 | 2960 | 986  | 1970 | 6800 | 3840 |
| 5/ 5/86 | 1 | 1 | 22 | 23 | 980  | 980  | 980  | 5580 | 4600 |
| 5/ 6/86 | 1 | 1 | 22 | 23 | 1420 | 1420 | 1420 | 5350 | 3930 |
| 5/ 7/86 | 1 | 1 | 22 | 23 | 820  | 820  | 820  | 5280 | 4460 |
| 5/ 8/86 | 1 | 1 | 22 | 24 | 1730 | 865  | 1430 | 5300 | 3570 |
| 5/ 9/86 | 1 | 1 | 22 | 23 | 1290 | 1290 | 1290 | 5330 | 4040 |
| 5/10/86 | 1 | 1 | 22 | 23 | 1030 | 1030 | 1030 | 5580 | 4550 |
| 5/12/86 | 1 | 1 | 7  | 8  | 970  | 970  | 970  | 5450 | 4480 |
| 5/12/86 | 1 | 2 | 21 | 23 | 830  | 415  | 560  | 4230 | 3400 |
| 5/13/86 | 1 | 1 | 22 | 23 | 1040 | 1040 | 1040 | 4090 | 3050 |
| 5/14/86 | 1 | 1 | 22 | 24 | 1040 | 520  | 600  | 3930 | 2890 |
| 5/15/86 | 1 | 1 | 22 | 24 | 1100 | 550  | 760  | 3940 | 2840 |
| 5/16/86 | 1 | 1 | 21 | 23 | 1460 | 730  | 1100 | 4060 | 2600 |
| 5/17/86 | 1 | 1 | 12 | 14 | 860  | 430  | 690  | 3660 | 2800 |
| 5/18/86 | 1 | 1 | 22 | 24 | 1810 | 905  | 1220 | 5450 | 3640 |
| 5/19/86 | 1 | 1 | 22 | 23 | 1170 | 1170 | 1170 | 5430 | 4260 |
| 5/20/86 | 1 | 1 | 11 | 12 | 930  | 930  | 930  | 6510 | 5580 |
| 5/20/86 | 1 | 2 | 21 | 23 | 1620 | 810  | 1260 | 5500 | 3880 |
| 5/21/86 | 1 | 1 | 17 | 19 | 1290 | 645  | 760  | 5620 | 4330 |
| 5/21/86 | 1 | 2 | 22 | 23 | 410  | 410  | 410  | 4400 | 3990 |
| 5/22/86 | 1 | 1 | 9  | 10 | 1480 | 1480 | 1480 | 5390 | 3910 |
| 5/22/86 | 1 | 2 | 19 | 21 | 1050 | 525  | 810  | 4020 | 2970 |
| 5/22/86 | 1 | 3 | 22 | 24 | 1070 | 535  | 710  | 2950 | 1880 |
| 5/23/86 | 1 | 1 | 22 | 23 | 470  | 470  | 470  | 4160 | 3690 |
| 5/24/86 | 1 | 1 | 7  | 10 | 1080 | 360  | 540  | 3690 | 2610 |
| 5/24/86 | 1 | 2 | 14 | 16 | 620  | 310  | 460  | 2530 | 1910 |
| 5/25/86 | 1 | 1 | 22 | 23 | 720  | 720  | 720  | 3930 | 3210 |
| 5/26/86 | 1 | 1 | 20 | 23 | 4120 | 1373 | 2100 | 6980 | 2860 |
| 5/27/86 | 1 | 1 | 11 | 14 | 1700 | 566  | 970  | 5660 | 3960 |
| 5/27/86 | 1 | 2 | 22 | 23 | 1090 | 1090 | 1090 | 3990 | 2900 |
| 5/28/86 | 1 | 1 | 18 | 20 | 1680 | 840  | 1110 | 5490 | 3810 |
| 5/28/86 | 1 | 2 | 22 | 23 | 830  | 830  | 830  | 3720 | 2890 |
| 5/29/86 | 1 | 1 | 21 | 23 | 1980 | 990  | 1430 | 6020 | 4040 |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 5/30/86 | 1 | 1 | 21 | 23 | 2640 | 1320 | 1740 | 7210 | 4570 |
| 5/31/86 | 1 | 1 | 24 | 25 | 3130 | 3130 | 3130 | 7300 | 4170 |
| 7/ 1/86 | 2 | 1 | 10 | 11 | 800  | 800  | 800  | 5300 | 4500 |
| 7/ 1/86 | 2 | 2 | 22 | 23 | 680  | 680  | 680  | 5140 | 4460 |
| 7/ 2/86 | 2 | 1 | 18 | 20 | 2230 | 1115 | 2070 | 7830 | 5600 |
| 7/ 3/86 | 2 | 1 | 23 | 26 | 2310 | 770  | 1380 | 7280 | 4970 |
| 7/ 4/86 | 2 | 1 | 24 | 25 | 610  | 610  | 610  | 6910 | 6300 |
| 7/ 5/86 | 2 | 1 | 3  | 4  | 460  | 460  | 460  | 6940 | 6480 |
| 7/ 5/86 | 2 | 2 | 5  | 6  | 420  | 420  | 420  | 6320 | 5900 |
| 7/ 5/86 | 2 | 3 | 13 | 14 | 660  | 660  | 660  | 6980 | 6320 |
| 7/ 6/86 | 2 | 1 | 3  | 4  | 590  | 590  | 590  | 6090 | 5500 |
| 7/ 6/86 | 2 | 2 | 9  | 12 | 1730 | 576  | 930  | 5790 | 4060 |
| 7/ 7/86 | 2 | 1 | 12 | 14 | 950  | 475  | 650  | 5920 | 4970 |
| 7/ 8/86 | 2 | 1 | 17 | 18 | 560  | 560  | 560  | 4990 | 4430 |
| 7/ 8/86 | 2 | 2 | 19 | 21 | 850  | 425  | 430  | 4190 | 3340 |
| 7/ 9/86 | 2 | 1 | 8  | 10 | 890  | 445  | 560  | 4230 | 3340 |
| 7/11/86 | 2 | 1 | 22 | 23 | 480  | 480  | 480  | 5450 | 4970 |
| 7/13/86 | 2 | 1 | 18 | 20 | 480  | 240  | 360  | 4260 | 3780 |
| 7/14/86 | 2 | 1 | 17 | 18 | 530  | 530  | 530  | 4650 | 4120 |
| 7/16/86 | 2 | 1 | 21 | 23 | 670  | 335  | 420  | 4930 | 4260 |
| 7/17/86 | 2 | 1 | 13 | 15 | 1080 | 540  | 830  | 6170 | 5090 |
| 7/17/86 | 2 | 2 | 17 | 18 | 630  | 630  | 630  | 5090 | 4460 |
| 7/18/86 | 2 | 1 | 18 | 21 | 1110 | 370  | 420  | 4210 | 3100 |
| 7/19/86 | 2 | 1 | 12 | 15 | 1160 | 386  | 520  | 3970 | 2810 |
| 7/22/86 | 2 | 1 | 20 | 22 | 1960 | 980  | 1490 | 6910 | 4950 |
| 7/23/86 | 2 | 1 | 20 | 21 | 1050 | 1050 | 1050 | 6550 | 5500 |
| 7/23/86 | 2 | 2 | 23 | 25 | 720  | 360  | 490  | 6340 | 5620 |
| 7/24/86 | 2 | 1 | 7  | 10 | 1870 | 623  | 1030 | 5680 | 3810 |
| 7/25/86 | 2 | 1 | 19 | 21 | 820  | 410  | 660  | 3940 | 3120 |
| 7/26/86 | 2 | 1 | 23 | 24 | 430  | 430  | 430  | 5350 | 4920 |
| 7/27/86 | 2 | 1 | 11 | 13 | 800  | 400  | 420  | 4620 | 3820 |
| 7/28/86 | 2 | 1 | 4  | 7  | 1780 | 593  | 920  | 4720 | 2940 |
| 7/28/86 | 2 | 2 | 23 | 25 | 980  | 490  | 560  | 2890 | 1910 |
| 7/31/86 | 2 | 1 | 22 | 25 | 1070 | 356  | 430  | 2900 | 1830 |
| 8/ 3/86 | 2 | 1 | 24 | 27 | 2050 | 683  | 950  | 7100 | 5050 |
| 8/ 4/86 | 2 | 1 | 12 | 13 | 1040 | 1040 | 1040 | 6890 | 5850 |
| 8/ 4/86 | 2 | 2 | 14 | 15 | 550  | 550  | 550  | 5850 | 5300 |
| 8/ 4/86 | 2 | 3 | 16 | 17 | 1180 | 1180 | 1180 | 5110 | 3930 |
| 8/ 4/86 | 2 | 4 | 18 | 21 | 1580 | 526  | 550  | 3900 | 2320 |
| 8/ 5/86 | 2 | 1 | 19 | 20 | 750  | 750  | 750  | 5370 | 4620 |
| 8/ 5/86 | 2 | 2 | 21 | 24 | 1810 | 603  | 950  | 4620 | 2810 |
| 8/ 6/86 | 2 | 1 | 20 | 21 | 590  | 590  | 590  | 4550 | 3960 |
| 8/ 6/86 | 2 | 2 | 22 | 24 | 1590 | 795  | 810  | 3930 | 2340 |
| 8/ 7/86 | 2 | 1 | 21 | 24 | 3420 | 1140 | 1570 | 5640 | 2220 |
| 8/ 8/86 | 2 | 1 | 19 | 24 | 3500 | 700  | 1060 | 5730 | 2230 |
| 8/ 9/86 | 2 | 1 | 19 | 21 | 1420 | 710  | 740  | 4740 | 3320 |
| 8/ 9/86 | 2 | 2 | 22 | 24 | 1220 | 610  | 680  | 3290 | 2070 |
| 8/10/86 | 2 | 1 | 19 | 24 | 3550 | 710  | 1150 | 5560 | 2010 |
| 8/11/86 | 2 | 1 | 19 | 24 | 3850 | 770  | 1170 | 5880 | 2030 |
| 8/12/86 | 2 | 1 | 15 | 16 | 670  | 670  | 670  | 5620 | 4950 |
| 8/12/86 | 2 | 2 | 18 | 21 | 2050 | 683  | 940  | 5160 | 3110 |
| 8/12/86 | 2 | 3 | 22 | 25 | 1250 | 416  | 610  | 3100 | 1850 |
| 8/13/86 | 2 | 1 | 9  | 10 | 1280 | 1280 | 1280 | 5490 | 4210 |
| 8/13/86 | 2 | 2 | 19 | 24 | 4500 | 900  | 1900 | 6340 | 1840 |
| 8/14/86 | 2 | 1 | 20 | 23 | 1690 | 563  | 900  | 4070 | 2380 |
| 8/15/86 | 2 | 1 | 19 | 21 | 870  | 435  | 720  | 3660 | 2790 |
| 8/15/86 | 2 | 2 | 22 | 24 | 830  | 415  | 460  | 2750 | 1920 |
| 8/16/86 | 2 | 1 | 21 | 24 | 1410 | 470  | 650  | 3160 | 1750 |
| 8/17/86 | 2 | 1 | 10 | 11 | 500  | 500  | 500  | 2930 | 2430 |
| 8/18/86 | 2 | 1 | 22 | 24 | 1410 | 705  | 730  | 3790 | 2380 |
| 8/21/86 | 2 | 1 | 15 | 16 | 550  | 550  | 550  | 3490 | 2940 |

|         |   |   |    |    |      |     |      |      |      |
|---------|---|---|----|----|------|-----|------|------|------|
| 8/21/86 | 2 | 2 | 20 | 23 | 1040 | 346 | 650  | 2860 | 1820 |
| 8/22/86 | 2 | 1 | 16 | 20 | 1700 | 425 | 490  | 3810 | 2110 |
| 8/23/86 | 2 | 1 | 8  | 10 | 750  | 375 | 420  | 3820 | 3070 |
| 8/23/86 | 2 | 2 | 19 | 23 | 1530 | 382 | 470  | 3050 | 1520 |
| 8/25/86 | 2 | 1 | 19 | 21 | 700  | 350 | 400  | 3070 | 2370 |
| 8/25/86 | 2 | 2 | 22 | 24 | 480  | 240 | 330  | 2300 | 1820 |
| 8/26/86 | 2 | 1 | 19 | 20 | 490  | 490 | 490  | 3810 | 3320 |
| 8/26/86 | 2 | 2 | 21 | 23 | 940  | 470 | 610  | 3050 | 2110 |
| 8/27/86 | 2 | 1 | 21 | 23 | 940  | 470 | 720  | 3820 | 2880 |
| 8/28/86 | 2 | 1 | 20 | 24 | 2270 | 567 | 790  | 4040 | 1770 |
| 8/29/86 | 2 | 1 | 20 | 25 | 3510 | 702 | 950  | 5180 | 1670 |
| 8/30/86 | 2 | 1 | 21 | 24 | 1990 | 663 | 770  | 4040 | 2050 |
| 8/31/86 | 2 | 1 | 3  | 5  | 1080 | 540 | 600  | 2890 | 1810 |
| 8/31/86 | 2 | 2 | 8  | 11 | 1320 | 440 | 540  | 3990 | 2670 |
| 8/31/86 | 2 | 3 | 19 | 20 | 410  | 410 | 410  | 2410 | 2000 |
| 8/31/86 | 2 | 4 | 21 | 22 | 400  | 400 | 400  | 1950 | 1550 |
| 9/ 1/86 | 2 | 1 | 21 | 23 | 1580 | 790 | 900  | 4230 | 2650 |
| 9/ 2/86 | 2 | 1 | 1  | 3  | 660  | 330 | 340  | 2490 | 1830 |
| 9/ 2/86 | 2 | 2 | 21 | 23 | 1540 | 770 | 940  | 4170 | 2630 |
| 9/ 3/86 | 2 | 1 | 20 | 23 | 1640 | 546 | 840  | 4210 | 2570 |
| 9/ 4/86 | 2 | 1 | 20 | 23 | 1810 | 603 | 770  | 4160 | 2350 |
| 9/ 5/86 | 2 | 1 | 19 | 23 | 2260 | 565 | 860  | 4120 | 1860 |
| 9/ 6/86 | 2 | 1 | 21 | 23 | 1630 | 815 | 1310 | 3600 | 1970 |
| 9/ 8/86 | 2 | 1 | 10 | 11 | 510  | 510 | 510  | 3580 | 3070 |
| 9/ 8/86 | 2 | 2 | 19 | 21 | 600  | 300 | 450  | 2680 | 2080 |
| 9/ 9/86 | 2 | 1 | 15 | 16 | 710  | 710 | 710  | 3990 | 3280 |
| 9/ 9/86 | 2 | 2 | 20 | 22 | 1390 | 695 | 810  | 3120 | 1730 |
| 9/10/86 | 2 | 1 | 14 | 16 | 620  | 310 | 360  | 4020 | 3400 |
| 9/10/86 | 2 | 2 | 20 | 23 | 1740 | 580 | 730  | 3790 | 2050 |
| 9/11/86 | 2 | 1 | 17 | 18 | 440  | 440 | 440  | 3900 | 3460 |
| 9/11/86 | 2 | 2 | 20 | 22 | 1240 | 620 | 670  | 3400 | 2160 |
| 9/12/86 | 2 | 1 | 13 | 14 | 460  | 460 | 460  | 3690 | 3230 |
| 9/12/86 | 2 | 2 | 19 | 21 | 860  | 430 | 580  | 3210 | 2350 |
| 9/12/86 | 2 | 3 | 22 | 23 | 400  | 400 | 400  | 2150 | 1750 |
| 9/13/86 | 2 | 1 | 13 | 14 | 570  | 570 | 570  | 2530 | 1960 |
| 9/15/86 | 2 | 1 | 19 | 22 | 1620 | 540 | 770  | 3840 | 2220 |
| 9/16/86 | 2 | 1 | 21 | 24 | 1470 | 490 | 790  | 3250 | 1780 |
| 9/17/86 | 2 | 1 | 21 | 24 | 1520 | 506 | 1010 | 3870 | 2350 |
| 9/18/86 | 2 | 1 | 22 | 25 | 2370 | 790 | 1200 | 4060 | 1690 |
| 9/19/86 | 2 | 1 | 15 | 18 | 1090 | 363 | 460  | 3870 | 2780 |
| 9/19/86 | 2 | 2 | 20 | 22 | 960  | 480 | 580  | 2670 | 1710 |
| 9/20/86 | 2 | 1 | 15 | 16 | 430  | 430 | 430  | 3640 | 3210 |
| 9/20/86 | 2 | 2 | 20 | 23 | 2230 | 743 | 830  | 3900 | 1670 |
| 9/21/86 | 2 | 1 | 21 | 23 | 920  | 460 | 550  | 2420 | 1500 |
| 9/22/86 | 2 | 1 | 20 | 23 | 2230 | 743 | 760  | 3940 | 1710 |
| 9/24/86 | 2 | 1 | 20 | 23 | 1430 | 476 | 700  | 3610 | 2180 |
| 9/25/86 | 2 | 1 | 13 | 14 | 610  | 610 | 610  | 3640 | 3030 |
| 9/25/86 | 2 | 2 | 16 | 17 | 670  | 670 | 670  | 3200 | 2530 |
| 9/26/86 | 2 | 1 | 20 | 23 | 1090 | 363 | 440  | 3640 | 2550 |
| 9/27/86 | 2 | 1 | 15 | 17 | 900  | 450 | 650  | 3700 | 2800 |
| 9/27/86 | 2 | 2 | 21 | 22 | 430  | 430 | 430  | 2680 | 2250 |
| 9/28/86 | 2 | 1 | 22 | 23 | 690  | 690 | 690  | 3660 | 2970 |
| 9/29/86 | 2 | 1 | 23 | 25 | 800  | 400 | 690  | 3870 | 3070 |
| 9/30/86 | 2 | 1 | 20 | 23 | 1460 | 486 | 730  | 4000 | 2540 |

| Date    | BEGIM | ENDIM | Ampl. | AvRat | BegFN | EndFN | BegFM | EndFM |       |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2/ 1-86 | 1 1   | 15    | 17    | 1280  | 640   | 7070  | 5790  | 9230  | 7950  |
| 2/ 1-86 | 1 2   | 23    | 30    | 1710  | 244   | 7140  | 5430  | 9070  | 7110  |
| 2/ 2-86 | 1 1   | 18    | 28    | 2900  | 290   | 7070  | 4170  | 8630  | 5670  |
| 2/ 3-86 | 1 1   | 10    | 16    | 1920  | 320   | 5310  | 3390  | 6620  | 4790  |
| 2/ 3-86 | 1 2   | 19    | 25    | 1970  | 328   | 4410  | 2440  | 5480  | 3840  |
| 2/ 4-86 | 1 1   | 22    | 24    | 900   | 450   | 5690  | 4790  | 6860  | 6060  |
| 2/ 5-86 | 1 1   | 15    | 17    | 1800  | 900   | 7210  | 5410  | 8270  | 6480  |
| 2/ 5-86 | 1 2   | 22    | 30    | 2860  | 357   | 5830  | 2970  | 6830  | 4070  |
| 2/ 6-86 | 1 1   | 18    | 20    | 1670  | 835   | 5390  | 3720  | 6270  | 5120  |
| 2/ 7-86 | 1 1   | 21    | 28    | 990   | 141   | 5450  | 4460  | 6270  | 5300  |
| 2/ 8-86 | 1 1   | 19    | 23    | 1510  | 377   | 6190  | 4680  | 6860  | 5450  |
| 2/ 9-86 | 1 1   | 14    | 17    | 1580  | 526   | 6230  | 4650  | 6900  | 5810  |
| 2/ 9-86 | 1 2   | 20    | 28    | 1350  | 168   | 6870  | 5520  | 7470  | 6200  |
| 2/10-86 | 1 1   | 22    | 29    | 2590  | 370   | 7070  | 4480  | 7750  | 5210  |
| 2/11-86 | 1 1   | 23    | 24    | 1440  | 1440  | 7100  | 5660  | 7750  | 6370  |
| 2/13-86 | 1 1   | 23    | 25    | 1280  | 640   | 7030  | 5750  | 7590  | 6410  |
| 2/14-86 | 1 1   | 13    | 21    | 1790  | 223   | 7140  | 5350  | 7750  | 5880  |
| 2/15-86 | 1 1   | 9     | 22    | 2790  | 214   | 6420  | 3630  | 7110  | 4700  |
| 2/16-86 | 1 1   | 22    | 25    | 410   | 136   | 4040  | 3630  | 4850  | 4370  |
| 2/17-86 | 1 1   | 23    | 28    | 1770  | 354   | 6800  | 5030  | 7390  | 5600  |
| 2/18-86 | 1 1   | 9     | 19    | 1670  | 167   | 7120  | 5450  | 7470  | 5950  |
| 2/19-86 | 1 1   | 10    | 11    | 830   | 830   | 7100  | 6270  | 7590  | 6480  |
| 2/19-86 | 1 2   | 13    | 17    | 1850  | 462   | 6480  | 4630  | 7140  | 5270  |
| 2/19-86 | 1 3   | 22    | 27    | 2500  | 500   | 7120  | 4620  | 7670  | 5210  |
| 2/20-86 | 1 1   | 14    | 17    | 1110  | 370   | 6940  | 5830  | 7430  | 6410  |
| 2/20-86 | 1 2   | 21    | 30    | 2490  | 276   | 6820  | 4330  | 7320  | 4880  |
| 2/21-86 | 1 1   | 9     | 10    | 1100  | 1100  | 7000  | 5900  | 7350  | 5150  |
| 2/21-86 | 1 2   | 11    | 15    | 2100  | 525   | 5920  | 3820  | 6930  | 4460  |
| 2/21-86 | 1 3   | 19    | 26    | 1750  | 250   | 5560  | 3810  | 5990  | 4400  |
| 2/22-86 | 1 1   | 13    | 18    | 2320  | 464   | 7000  | 4680  | 7470  | 5300  |
| 2/22-86 | 1 2   | 20    | 25    | 1120  | 224   | 6190  | 5070  | 6480  | 5570  |
| 2/23-86 | 1 1   | 14    | 15    | 530   | 530   | 6870  | 6340  | 9590  | 7990  |
| 2/23-86 | 1 2   | 18    | 23    | 4240  | 848   | 7260  | 3020  | 11200 | 10300 |
| /24-86  | 1 1   | 16    | 18    | 2410  | 1205  | 7670  | 5260  | 19900 | 16300 |
| /24-86  | 1 2   | 22    | 24    | 1730  | 865   | 7860  | 6130  | 24800 | 23700 |
| 2/25-86 | 1 1   | 12    | 13    | 1490  | 1490  | 7790  | 6300  | 20700 | 17900 |
| /25-86  | 1 2   | 17    | 18    | 1340  | 1340  | 7030  | 5690  | 18000 | 16700 |
| /25-86  | 1 3   | 20    | 24    | 2500  | 625   | 7740  | 5240  | 18000 | 14000 |
| 2/26-86 | 1 1   | 12    | 18    | 2010  | 335   | 6800  | 4790  | 13100 | 9510  |
| 2/26-86 | 1 2   | 22    | 30    | 520   | 65    | 4880  | 4360  | 9510  | 8230  |
| /27-86  | 1 1   | 9     | 17    | 790   | 98    | 5470  | 4680  | 8910  | 7710  |
| -/27-86 | 1 2   | 18    | 27    | 2490  | 276   | 5030  | 2540  | 8430  | 5920  |
| 2/28-86 | 1 1   | 22    | 29    | 3230  | 461   | 5620  | 2390  | 7250  | 6200  |
| / 1-86  | 1 1   | 20    | 30    | 2990  | 299   | 5350  | 2360  | 5880  | 6440  |
| / 2-86  | 1 1   | 21    | 28    | 3090  | 441   | 5430  | 2340  | 5180  | 6760  |
| 3/ 3-86 | 1 1   | 20    | 24    | 2980  | 745   | 5330  | 2350  | 4400  | 4320  |
| / 4-86  | 1 1   | 20    | 29    | 3070  | 341   | 5410  | 2340  | 4230  | 6650  |
| / 5-86  | 1 1   | 21    | 29    | 2910  | 363   | 5260  | 2350  | 4790  | 5880  |
| / 6-86  | 1 1   | 12    | 15    | 1370  | 456   | 5660  | 4290  | 6650  | 4180  |
| / 6-86  | 1 2   | 21    | 29    | 2960  | 370   | 5330  | 2370  | 6720  | 8470  |
| / 7-86  | 1 1   | 18    | 30    | 1600  | 133   | 5390  | 3790  | 7280  | 6230  |
| / 8-86  | 1 1   | 21    | 28    | 1290  | 184   | 3780  | 2490  | 5570  | 5570  |
| 3/ 9-86 | 1 1   | 21    | 29    | 2940  | 367   | 5370  | 2430  | 6760  | 6020  |
| /10-86  | 1 1   | 16    | 29    | 2780  | 213   | 5110  | 2330  | 4020  | 6340  |
| /11-86  | 1 1   | 21    | 29    | 2810  | 351   | 5140  | 2330  | 6930  | 6720  |
| 3/12-86 | 1 1   | 20    | 24    | 4020  | 1005  | 5710  | 1690  | 4760  | 4760  |
| /13-86  | 1 1   | 22    | 30    | 1980  | 247   | 3690  | 1710  | 7070  | 4400  |
| /14-86  | 1 1   | 19    | 24    | 3940  | 788   | 6380  | 2440  | 6510  | 6370  |
| -/15-86 | 1 1   | 22    | 26    | 4210  | 1052  | 6940  | 2730  | 5850  | 5810  |

|         |   |   |    |    |      |      |      |      |       |      |
|---------|---|---|----|----|------|------|------|------|-------|------|
| 3/16-86 | 1 | 1 | 22 | 30 | 3950 | 493  | 5980 | 2030 | 5480  | 3050 |
| 3/17-86 | 1 | 1 | 19 | 21 | 930  | 465  | 4900 | 3970 | 5180  | 5150 |
| 3/17-86 | 1 | 2 | 23 | 30 | 2010 | 287  | 4020 | 2010 | 5210  | 3370 |
| 3/18-86 | 1 | 1 | 21 | 24 | 2070 | 690  | 4580 | 2510 | 5330  | 5300 |
| 3/19-86 | 1 | 1 | 23 | 30 | 2030 | 290  | 4750 | 2720 | 5810  | 3740 |
| 3/20-86 | 1 | 1 | 21 | 29 | 2530 | 316  | 5300 | 2770 | 5330  | 4040 |
| 3/21-86 | 1 | 1 | 14 | 15 | 1320 | 1320 | 5560 | 4240 | 5780  | 5570 |
| 3/21-86 | 1 | 2 | 22 | 24 | 1880 | 940  | 4330 | 2450 | 6020  | 4180 |
| 3/22-86 | 1 | 1 | 21 | 25 | 2400 | 600  | 5280 | 2880 | 6200  | 4040 |
| 3/23-86 | 1 | 1 | 21 | 28 | 2510 | 358  | 5390 | 2880 | 6060  | 3560 |
| 3/24-86 | 1 | 1 | 21 | 24 | 2860 | 953  | 5220 | 2360 | 7140  | 3540 |
| 3/25-86 | 1 | 1 | 18 | 29 | 4230 | 384  | 6550 | 2320 | 6900  | 3840 |
| 3/26-86 | 1 | 1 | 20 | 30 | 3320 | 332  | 5660 | 2340 | 5710  | 5740 |
| 3/27-86 | 1 | 1 | 13 | 14 | 540  | 540  | 4900 | 4360 | 10300 | 6130 |
| 3/27-86 | 1 | 2 | 18 | 25 | 4510 | 644  | 6060 | 1550 | 6130  | 5270 |
| 3/28-86 | 1 | 1 | 15 | 27 | 4550 | 379  | 6890 | 2340 | 8550  | 4880 |
| 3/29-86 | 1 | 1 | 19 | 21 | 2530 | 1265 | 6530 | 4000 | 6900  | 4370 |
| 3/29-86 | 1 | 2 | 22 | 26 | 2680 | 670  | 5090 | 2410 | 5450  | 5450 |
| 3/30-86 | 1 | 1 | 20 | 24 | 4550 | 1137 | 6870 | 2320 | 3760  | 3140 |
| 3/31-86 | 1 | 1 | 15 | 29 | 5110 | 365  | 6630 | 1520 | 6200  | 6650 |
| 4/ 1-86 | 1 | 1 | 17 | 20 | 3450 | 1150 | 7140 | 3690 | 6300  | 2790 |
| 4/ 1-86 | 1 | 2 | 21 | 29 | 1880 | 235  | 3750 | 1870 | 2860  | 5510 |
| 4/ 2-86 | 1 | 1 | 12 | 20 | 2160 | 270  | 6420 | 4260 | 6440  | 2880 |
| 4/ 2-86 | 1 | 2 | 22 | 30 | 4080 | 510  | 5600 | 1520 | 3560  | 6900 |
| 4/ 3-86 | 1 | 1 | 19 | 23 | 3920 | 980  | 5660 | 1740 | 3470  | 3370 |
| 4/ 4-86 | 1 | 1 | 13 | 19 | 1490 | 248  | 6440 | 4950 | 4940  | 2860 |
| 4/ 4-86 | 1 | 2 | 22 | 24 | 4020 | 2010 | 6340 | 2320 | 5850  | 2990 |
| 4/ 5-86 | 1 | 1 | 14 | 20 | 3410 | 568  | 7230 | 3820 | 5270  | 3390 |
| 4/ 5-86 | 1 | 2 | 22 | 24 | 2040 | 1020 | 3850 | 1810 | 6230  | 5950 |
| 4/ 6-86 | 1 | 1 | 14 | 17 | 840  | 280  | 5390 | 4550 | 5210  | 3690 |
| 4/ 6-86 | 1 | 2 | 20 | 29 | 4060 | 451  | 6480 | 2420 | 5150  | 6410 |
| 4/ 7-86 | 1 | 1 | 17 | 19 | 1210 | 605  | 5620 | 4410 | 3140  | 3070 |
| 4/ 7-86 | 1 | 2 | 20 | 27 | 2030 | 290  | 4450 | 2420 | 7630  | 7250 |
| 4/ 8-86 | 1 | 1 | 21 | 28 | 3860 | 551  | 5690 | 1830 | 7870  | 5850 |
| 4/ 9-86 | 1 | 1 | 17 | 29 | 5320 | 443  | 7070 | 1750 | 7110  | 4910 |
| /10-86  | 1 | 1 | 16 | 23 | 5450 | 778  | 7230 | 1780 | 5330  | 6900 |
| /11-86  | 1 | 1 | 16 | 17 | 620  | 620  | 6890 | 6270 | 5880  | 2940 |
| 4/11-86 | 1 | 2 | 18 | 23 | 4170 | 834  | 6380 | 2210 | 6130  | 5640 |
| /12-86  | 1 | 1 | 14 | 21 | 3000 | 428  | 6940 | 3940 | 5180  | 4550 |
| /12-86  | 1 | 2 | 22 | 29 | 2010 | 287  | 3970 | 1960 | 5670  | 4020 |
| 4/13-86 | 1 | 1 | 13 | 18 | 530  | 106  | 5580 | 5050 | 4490  | 4580 |
| '/13-86 | 1 | 2 | 20 | 30 | 4300 | 430  | 6740 | 2440 | 4760  | 4700 |
| /14-86  | 1 | 1 | 11 | 19 | 1530 | 191  | 5370 | 3840 | 4700  | 4180 |
| /14-86  | 1 | 2 | 21 | 28 | 900  | 128  | 4170 | 3270 | 4200  | 4150 |
| 4/17-86 | 1 | 1 | 21 | 27 | 1870 | 311  | 5260 | 3390 | 4150  | 4120 |
| /18-86  | 1 | 1 | 20 | 26 | 3500 | 583  | 6870 | 3370 | 7320  | 4070 |
| /19-86  | 1 | 1 | 18 | 26 | 1800 | 225  | 5520 | 3720 | 6020  | 4400 |
| 4/20-86 | 1 | 1 | 8  | 12 | 710  | 177  | 3730 | 3020 | 4490  | 3940 |
| /20-86  | 1 | 2 | 21 | 23 | 1490 | 745  | 5300 | 3810 | 6410  | 5150 |
| /21-86  | 1 | 1 | 20 | 28 | 3740 | 467  | 6190 | 2450 | 9890  | 5510 |
| /22-86  | 1 | 1 | 21 | 28 | 2550 | 364  | 7170 | 4620 | 9030  | 6270 |
| '/23-86 | 1 | 1 | 23 | 25 | 1120 | 560  | 7650 | 6530 | 8870  | 7670 |
| /24-86  | 1 | 1 | 9  | 18 | 1160 | 128  | 6550 | 5390 | 7590  | 6410 |
| /24-86  | 1 | 2 | 20 | 28 | 3500 | 437  | 6480 | 2980 | 7280  | 4200 |
| 4/25-86 | 1 | 1 | 18 | 28 | 4350 | 435  | 7330 | 2980 | 8110  | 4070 |
| /26-86  | 1 | 1 | 7  | 9  | 1010 | 505  | 3340 | 2330 | 4370  | 3540 |
| /26-86  | 1 | 2 | 21 | 23 | 1810 | 905  | 5600 | 3790 | 6410  | 5270 |
| 4/27-86 | 1 | 1 | 14 | 16 | 1300 | 650  | 6250 | 4950 | 7280  | 6200 |
| '/27-86 | 1 | 2 | 18 | 22 | 2400 | 600  | 5430 | 3030 | 6550  | 4520 |
| /28-86  | 1 | 1 | 9  | 11 | 1540 | 770  | 6890 | 5350 | 7790  | 6440 |
| ./28-86 | 1 | 2 | 19 | 22 | 3860 | 1286 | 6910 | 3050 | 7910  | 4340 |

|         |   |   |    |    |      |      |      |      |       |       |
|---------|---|---|----|----|------|------|------|------|-------|-------|
| 4/29-86 | 1 | 1 | 19 | 22 | 3370 | 1123 | 6550 | 3180 | 7390  | 4370  |
| 4/30-86 | 1 | 1 | 9  | 11 | 1090 | 545  | 6630 | 5540 | 7350  | 6580  |
| 4/30-86 | 1 | 2 | 20 | 23 | 3090 | 1030 | 6940 | 3850 | 7630  | 4880  |
| 5/ 1-86 | 1 | 1 | 9  | 14 | 2460 | 492  | 6550 | 4090 | 7140  | 5000  |
| 5/ 1-86 | 1 | 2 | 21 | 29 | 3020 | 377  | 6840 | 3820 | 7630  | 4820  |
| 5/ 2-86 | 1 | 1 | 22 | 24 | 2330 | 1165 | 5470 | 3140 | 6550  | 4460  |
| 5/ 3-86 | 1 | 1 | 17 | 18 | 690  | 690  | 6250 | 5560 | 7250  | 6580  |
| 5/ 3-86 | 1 | 2 | 21 | 24 | 2540 | 846  | 6270 | 3730 | 7250  | 5150  |
| 5/ 4-86 | 1 | 1 | 21 | 25 | 2960 | 740  | 6800 | 3840 | 7710  | 4970  |
| 5/ 5-86 | 1 | 1 | 22 | 29 | 1100 | 157  | 5580 | 4480 | 6370  | 5360  |
| 5/ 6-86 | 1 | 1 | 22 | 24 | 1540 | 770  | 5350 | 3810 | 6230  | 5090  |
| 5/ 7-86 | 1 | 1 | 22 | 26 | 820  | 205  | 5280 | 4460 | 6270  | 5450  |
| 5/ 8-86 | 1 | 1 | 22 | 24 | 1730 | 865  | 5300 | 3570 | 6270  | 4790  |
| 5/ 9-86 | 1 | 1 | 22 | 26 | 1510 | 377  | 5330 | 3820 | 6230  | 4850  |
| 5/10-86 | 1 | 1 | 22 | 28 | 1100 | 183  | 5580 | 4480 | 6410  | 5300  |
| 5/12-86 | 1 | 1 | 7  | 12 | 1260 | 252  | 5450 | 4190 | 6230  | 5120  |
| 5/12-86 | 1 | 2 | 21 | 23 | 830  | 415  | 4230 | 3400 | 6760  | 6550  |
| 5/13-86 | 1 | 1 | 22 | 27 | 1190 | 238  | 4090 | 2900 | 6020  | 4700  |
| 5/14-86 | 1 | 1 | 22 | 28 | 1040 | 173  | 3930 | 2890 | 5450  | 4370  |
| 5/15-86 | 1 | 1 | 22 | 29 | 1100 | 157  | 3940 | 2840 | 5270  | 4150  |
| 5/16-86 | 1 | 1 | 21 | 27 | 1470 | 245  | 4060 | 2590 | 5270  | 3890  |
| 5/17-86 | 1 | 1 | 12 | 21 | 1250 | 138  | 3660 | 2410 | 4850  | 3860  |
| 5/18-86 | 1 | 1 | 22 | 26 | 1810 | 452  | 5450 | 3640 | 8830  | 7320  |
| 5/19-86 | 1 | 1 | 22 | 24 | 1440 | 720  | 5430 | 3990 | 10400 | 9840  |
| 5/20-86 | 1 | 1 | 11 | 13 | 1010 | 505  | 6510 | 5500 | 11500 | 9630  |
| 5/20-86 | 1 | 2 | 21 | 29 | 1630 | 203  | 5500 | 3870 | 9430  | 7000  |
| 5/21-86 | 1 | 1 | 17 | 21 | 1310 | 327  | 5620 | 4310 | 8030  | 6090  |
| 5/21-86 | 1 | 2 | 22 | 27 | 560  | 112  | 4400 | 3840 | 6690  | 5920  |
| 5/22-86 | 1 | 1 | 9  | 10 | 1480 | 1480 | 5390 | 3910 | 7280  | 5920  |
| 5/22-86 | 1 | 2 | 19 | 26 | 2150 | 307  | 4020 | 1870 | 5810  | 3790  |
| 5/23-86 | 1 | 1 | 22 | 28 | 490  | 81   | 4160 | 3670 | 5540  | 5090  |
| 5/24-86 | 1 | 1 | 7  | 17 | 1810 | 181  | 3690 | 1880 | 5180  | 3710  |
| 5/25-86 | 1 | 1 | 22 | 26 | 950  | 237  | 3930 | 2980 | 8190  | 7140  |
| 5/26-86 | 1 | 1 | 20 | 30 | 4190 | 419  | 6980 | 2790 | 11600 | 6900  |
| 5/27-86 | 1 | 1 | 11 | 17 | 1720 | 286  | 5660 | 3940 | 9070  | 7870  |
| 5/27-86 | 1 | 2 | 22 | 30 | 1190 | 148  | 3990 | 2800 | 8430  | 6650  |
| 5/28-86 | 1 | 1 | 18 | 26 | 2800 | 350  | 5490 | 2690 | 9890  | 7110  |
| 5/29-86 | 1 | 1 | 14 | 16 | 420  | 210  | 6380 | 5960 | 11100 | 10300 |
| 5/29-86 | 1 | 2 | 21 | 23 | 1980 | 990  | 6020 | 4040 | 11700 | 9270  |
| 5/30-86 | 1 | 1 | 21 | 28 | 2710 | 387  | 7210 | 4500 | 13400 | 9310  |
| 5/31-86 | 1 | 1 | 24 | 29 | 3130 | 626  | 7300 | 4170 | 5670  | 5540  |

| Date    | BEG | ENDGB | Ampl. | AvRat | MxRat | BegFG | EndFG |
|---------|-----|-------|-------|-------|-------|-------|-------|
| 2/01/87 | 1 1 | 10    | 11    | 430   | 430   | 430   | 7460  |
| 2/01/87 | 1 2 | 14    | 16    | 1020  | 510   | 720   | 7210  |
| 2/02/87 | 1 1 | 8     | 9     | 570   | 570   | 570   | 7760  |
| 2/02/87 | 1 2 | 23    | 24    | 1380  | 1380  | 1380  | 7070  |
| 2/03/87 | 1 1 | 23    | 25    | 1140  | 570   | 690   | 7230  |
| 2/04/87 | 1 1 | 8     | 10    | 1730  | 865   | 950   | 7790  |
| 2/04/87 | 1 2 | 14    | 15    | 580   | 580   | 580   | 6960  |
| 2/05/87 | 1 1 | 11    | 12    | 660   | 660   | 660   | 7230  |
| 2/05/87 | 1 2 | 23    | 25    | 1460  | 730   | 1160  | 7120  |
| 2/06/87 | 1 1 | 19    | 20    | 660   | 660   | 660   | 7400  |
| 2/07/87 | 1 1 | 13    | 14    | 510   | 510   | 510   | 7490  |
| 2/09/87 | 1 1 | 10    | 11    | 540   | 540   | 540   | 7300  |
| 2/10/87 | 1 1 | 20    | 22    | 480   | 240   | 330   | 6820  |
| 2/11/87 | 1 1 | 15    | 16    | 840   | 840   | 840   | 7560  |
| 2/13/87 | 1 1 | 7     | 9     | 1090  | 545   | 980   | 7740  |
| 2/13/87 | 1 2 | 22    | 24    | 1630  | 815   | 1160  | 7100  |
| 2/14/87 | 1 1 | 22    | 24    | 2310  | 1155  | 1540  | 7030  |
| 2/15/87 | 1 1 | 13    | 14    | 410   | 410   | 410   | 6960  |
| 2/15/87 | 1 2 | 21    | 24    | 1680  | 560   | 720   | 7050  |
| 2/16/87 | 1 1 | 21    | 24    | 2130  | 710   | 990   | 7650  |
| 2/17/87 | 1 1 | 21    | 23    | 2130  | 1065  | 1390  | 6590  |
| 2/18/87 | 1 1 | 8     | 10    | 1470  | 735   | 880   | 7350  |
| 2/18/87 | 1 2 | 21    | 24    | 3000  | 1000  | 1400  | 7230  |
| 2/19/87 | 1 1 | 20    | 23    | 2880  | 960   | 1400  | 7210  |
| 2/20/87 | 1 1 | 20    | 21    | 1340  | 1340  | 1340  | 7300  |
| 2/21/87 | 1 1 | 22    | 24    | 2540  | 1270  | 1650  | 7190  |
| 2/22/87 | 1 1 | 22    | 24    | 1610  | 805   | 960   | 7210  |
| 2/23/87 | 1 1 | 22    | 24    | 1530  | 765   | 1050  | 7300  |
| 2/24/87 | 1 1 | 23    | 24    | 1190  | 1190  | 1190  | 7210  |
| 2/25/87 | 1 1 | 8     | 10    | 580   | 290   | 320   | 7490  |
| 2/25/87 | 1 2 | 22    | 23    | 810   | 810   | 810   | 7420  |
| 2/26/87 | 1 1 | 22    | 24    | 1820  | 910   | 1360  | 7760  |
| 2/27/87 | 1 1 | 12    | 13    | 1100  | 1100  | 1100  | 7420  |
| 2/27/87 | 1 2 | 22    | 23    | 1860  | 1860  | 1860  | 7760  |
| 2/28/87 | 1 1 | 22    | 23    | 870   | 870   | 870   | 7460  |
| 3/01/87 | 1 1 | 16    | 18    | 620   | 310   | 310   | 6940  |
| 3/01/87 | 1 2 | 22    | 23    | 440   | 440   | 440   | 6340  |
| 3/02/87 | 1 1 | 11    | 12    | 550   | 550   | 550   | 7740  |
| 3/02/87 | 1 2 | 22    | 23    | 1740  | 1740  | 1740  | 7300  |
| 3/03/87 | 1 1 | 22    | 24    | 2030  | 1015  | 1420  | 7630  |
| 3/04/87 | 1 1 | 13    | 14    | 440   | 440   | 440   | 7330  |
| 3/04/87 | 1 2 | 20    | 23    | 1700  | 566   | 820   | 7280  |
| 3/05/87 | 1 1 | 9     | 10    | 540   | 540   | 540   | 7230  |
| 3/05/87 | 1 2 | 14    | 15    | 590   | 590   | 590   | 7100  |
| 3/05/87 | 1 3 | 23    | 24    | 1630  | 1630  | 1630  | 7670  |
| 3/06/87 | 1 1 | 12    | 15    | 1370  | 456   | 570   | 7330  |
| 3/06/87 | 1 2 | 22    | 24    | 1430  | 715   | 1060  | 7490  |
| 3/07/87 | 1 1 | 22    | 23    | 590   | 590   | 590   | 7280  |
| 3/08/87 | 1 1 | 18    | 19    | 530   | 530   | 530   | 7790  |
| 3/08/87 | 1 2 | 23    | 25    | 1720  | 860   | 1440  | 7490  |
| 3/09/87 | 1 1 | 23    | 25    | 1570  | 785   | 880   | 7490  |
| 3/11/87 | 1 1 | 23    | 24    | 670   | 670   | 670   | 6840  |
| 3/12/87 | 1 1 | 22    | 23    | 790   | 790   | 790   | 6980  |
| 3/13/87 | 1 1 | 22    | 24    | 1290  | 645   | 730   | 7210  |
| 3/14/87 | 1 1 | 21    | 23    | 2960  | 1480  | 2130  | 7100  |
| 3/15/87 | 1 1 | 21    | 23    | 2340  | 1170  | 1840  | 6380  |
| 3/16/87 | 1 1 | 22    | 24    | 2690  | 1345  | 1970  | 5900  |
| 3/17/87 | 1 1 | 17    | 18    | 400   | 400   | 400   | 6320  |
| 3/17/87 | 1 2 | 19    | 20    | 1040  | 1040  | 1040  | 5900  |
| 3/17/87 | 1 2 | 19    | 20    | 1040  | 1040  | 1040  | 4860  |

|         |   |   |    |    |      |      |      |      |      |
|---------|---|---|----|----|------|------|------|------|------|
| 3/17/87 | 1 | 3 | 21 | 22 | 1040 | 1040 | 1040 | 4580 | 3540 |
| 3/18/87 | 1 | 1 | 21 | 24 | 3380 | 1126 | 2210 | 6980 | 3600 |
| 3/19/87 | 1 | 1 | 12 | 14 | 1450 | 725  | 770  | 5980 | 4530 |
| 3/19/87 | 1 | 2 | 21 | 22 | 670  | 670  | 670  | 4190 | 3520 |
| 3/20/87 | 1 | 1 | 10 | 11 | 420  | 420  | 420  | 6610 | 6190 |
| 3/20/87 | 1 | 2 | 12 | 14 | 650  | 325  | 420  | 6190 | 5540 |
| 3/20/87 | 1 | 3 | 21 | 23 | 1790 | 895  | 1640 | 5520 | 3730 |
| 3/21/87 | 1 | 1 | 12 | 14 | 1350 | 675  | 1020 | 6300 | 4950 |
| 3/21/87 | 1 | 2 | 22 | 23 | 1390 | 1390 | 1390 | 4930 | 3540 |
| 3/22/87 | 1 | 1 | 11 | 12 | 1040 | 1040 | 1040 | 6940 | 5900 |
| 3/22/87 | 1 | 2 | 20 | 24 | 2390 | 597  | 860  | 5580 | 3190 |
| 3/23/87 | 1 | 1 | 20 | 24 | 3220 | 805  | 1300 | 6420 | 3200 |
| 3/24/87 | 1 | 1 | 9  | 10 | 490  | 490  | 490  | 6110 | 5620 |
| 3/24/87 | 1 | 2 | 11 | 13 | 860  | 430  | 730  | 5370 | 4510 |
| 3/24/87 | 1 | 3 | 22 | 24 | 1760 | 880  | 1150 | 5240 | 3480 |
| 3/25/87 | 1 | 1 | 20 | 24 | 3120 | 780  | 1480 | 6460 | 3340 |
| 3/26/87 | 1 | 1 | 20 | 24 | 3500 | 875  | 1370 | 6870 | 3370 |
| 3/27/87 | 1 | 1 | 9  | 10 | 570  | 570  | 570  | 6250 | 5680 |
| 3/27/87 | 1 | 2 | 18 | 19 | 410  | 410  | 410  | 6890 | 6480 |
| 3/27/87 | 1 | 3 | 21 | 23 | 3110 | 1555 | 1940 | 6440 | 3330 |
| 3/28/87 | 1 | 1 | 12 | 14 | 1240 | 620  | 630  | 5750 | 4510 |
| 3/28/87 | 1 | 2 | 15 | 16 | 700  | 700  | 700  | 4480 | 3780 |
| 3/28/87 | 1 | 3 | 21 | 23 | 710  | 355  | 420  | 4040 | 3330 |
| 3/29/87 | 1 | 1 | 22 | 23 | 470  | 470  | 470  | 3780 | 3310 |
| 3/30/87 | 1 | 1 | 9  | 10 | 840  | 840  | 840  | 4630 | 3790 |
| 3/30/87 | 1 | 2 | 22 | 23 | 530  | 530  | 530  | 3760 | 3230 |
| 3/31/87 | 1 | 1 | 12 | 13 | 790  | 790  | 790  | 4670 | 3880 |
| 3/31/87 | 1 | 2 | 21 | 23 | 1530 | 765  | 1150 | 4040 | 2510 |
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| /08/87  | 1 | 1 | 20 | 22 | 1050 | 525  | 810  | 4720 | 3670 |
| /09/87  | 1 | 1 | 22 | 24 | 1480 | 740  | 780  | 3850 | 2370 |
| 4/16/87 | 1 | 1 | 10 | 12 | 810  | 405  | 450  | 3370 | 2560 |
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| 4/28/87 | 1 | 1 | 14 | 15 | 450  | 450  | 450  | 3780 | 3330 |
| /28/87  | 1 | 2 | 17 | 19 | 660  | 330  | 340  | 3290 | 2630 |
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| 4/29/87 | 1 | 2 | 20 | 21 | 710  | 710  | 710  | 3330 | 2620 |
| 5/01/87 | 1 | 1 | 11 | 12 | 650  | 650  | 650  | 4860 | 4210 |
| 5/01/87 | 1 | 2 | 13 | 15 | 700  | 350  | 450  | 4060 | 3360 |
| 5/01/87 | 1 | 3 | 18 | 20 | 760  | 380  | 560  | 3360 | 2600 |
| 5/02/87 | 1 | 1 | 22 | 24 | 770  | 385  | 590  | 3930 | 3160 |
| /03/87  | 1 | 1 | 22 | 24 | 910  | 455  | 600  | 3930 | 3020 |
| /04/87  | 1 | 1 | 8  | 11 | 1540 | 513  | 680  | 3320 | 1780 |
| 5/06/87 | 1 | 1 | 18 | 20 | 980  | 490  | 770  | 3960 | 2980 |
| /08/87  | 1 | 1 | 22 | 24 | 1440 | 720  | 980  | 4770 | 3330 |
| /09/87  | 1 | 1 | 22 | 24 | 1340 | 670  | 680  | 4190 | 2850 |
| /12/87  | 1 | 1 | 20 | 24 | 3450 | 862  | 1600 | 7490 | 4040 |
| /13/87  | 1 | 1 | 9  | 10 | 530  | 530  | 530  | 5600 | 5070 |
| /13/87  | 1 | 2 | 18 | 20 | 960  | 480  | 660  | 4950 | 3990 |
| /13/87  | 1 | 3 | 22 | 23 | 490  | 490  | 490  | 3810 | 3320 |
| 5/14/87 | 1 | 1 | 18 | 21 | 1640 | 546  | 740  | 5520 | 3880 |
| /14/87  | 1 | 2 | 22 | 23 | 480  | 480  | 480  | 3870 | 3390 |
| /15/87  | 1 | 1 | 21 | 23 | 1570 | 785  | 1280 | 5450 | 3880 |
| 5/16/87 | 1 | 1 | 18 | 20 | 920  | 460  | 470  | 5350 | 4430 |
| /16/87  | 1 | 2 | 22 | 23 | 800  | 800  | 800  | 4500 | 3700 |
| /18/87  | 1 | 1 | 22 | 23 | 1730 | 1730 | 1730 | 6740 | 5010 |
| /20/87  | 1 | 1 | 6  | 10 | 2190 | 547  | 1010 | 5090 | 2900 |
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| 8/17/87 | 2 | 1 | 22 | 26 | 2060 | 515  | 723  | 3760 | 1700 |
| 8/18/87 | 2 | 1 | 22 | 24 | 4914 | 2457 | 4155 | 7174 | 2260 |
| 8/19/87 | 2 | 1 | 14 | 15 | 1586 | 1586 | 1586 | 5896 | 4310 |
| 8/19/87 | 2 | 2 | 22 | 25 | 1001 | 333  | 353  | 4293 | 3292 |
| 8/20/87 | 2 | 1 | 18 | 22 | 1880 | 470  | 796  | 4514 | 2634 |
| 8/24/87 | 2 | 1 | 20 | 23 | 1642 | 547  | 696  | 3715 | 2073 |
| 8/25/87 | 2 | 1 | 20 | 21 | 540  | 540  | 540  | 3910 | 3370 |
| 8/25/87 | 2 | 2 | 22 | 24 | 862  | 431  | 490  | 3292 | 2430 |
| 8/26/87 | 2 | 1 | 20 | 23 | 1921 | 640  | 772  | 4038 | 2117 |
| 8/27/87 | 2 | 1 | 20 | 23 | 1948 | 649  | 705  | 3955 | 2007 |
| 8/28/87 | 2 | 1 | 20 | 23 | 1915 | 638  | 747  | 3955 | 2040 |
| 8/29/87 | 2 | 1 | 20 | 23 | 1547 | 515  | 740  | 3565 | 2018 |
| 8/30/87 | 2 | 1 | 17 | 18 | 518  | 518  | 518  | 2514 | 1996 |

| Date    | BEGIM | ENDIM | Ampl. | AvRat | BegFN | EndFN | BegFM | EndFM |       |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2/01-87 | 1 1   | 10    | 11    | 430   | 430   | 7460  | 7030  | 10300 | 9430  |
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| 2/02-87 | 1 1   | 8     | 14    | 620   | 103   | 7760  | 7140  | 9590  | 8790  |
| 2/02-87 | 1 2   | 23    | 30    | 1580  | 225   | 7070  | 5490  | 8710  | 6790  |
| 2/03-87 | 1 1   | 23    | 29    | 1140  | 190   | 7230  | 6090  | 8670  | 7280  |
| 2/04-87 | 1 1   | 8     | 13    | 1770  | 354   | 7790  | 6020  | 9150  | 7180  |
| 2/04-87 | 1 2   | 14    | 15    | 580   | 580   | 6960  | 6380  | 8390  | 8070  |
| 2/05-87 | 1 1   | 11    | 12    | 660   | 660   | 7230  | 6570  | 8870  | 8190  |
| 2/05-87 | 1 2   | 23    | 25    | 1460  | 730   | 7120  | 5660  | 8670  | 7210  |
| 2/06-87 | 1 1   | 19    | 28    | 680   | 75    | 7400  | 6720  | 8990  | 8110  |
| 2/07-87 | 1 1   | 13    | 15    | 550   | 275   | 7490  | 6940  | 8990  | 8350  |
| 2/09-87 | 1 1   | 10    | 13    | 560   | 186   | 7300  | 6740  | 8910  | 8150  |
| 2/10-87 | 1 1   | 10    | 16    | 640   | 106   | 7440  | 6800  | 9150  | 8390  |
| 2/10-87 | 1 2   | 20    | 29    | 520   | 57    | 6820  | 6300  | 8510  | 7750  |
| 2/11-87 | 1 1   | 15    | 17    | 840   | 420   | 7560  | 6720  | 9510  | 8710  |
| 2/13-87 | 1 1   | 7     | 17    | 1170  | 117   | 7740  | 6570  | 9430  | 8110  |
| 2/13-87 | 1 2   | 22    | 25    | 1650  | 550   | 7100  | 5450  | 8750  | 6970  |
| 2/14-87 | 1 1   | 22    | 30    | 2450  | 306   | 7030  | 4580  | 8590  | 5780  |
| 2/15-87 | 1 1   | 13    | 15    | 520   | 260   | 6960  | 6440  | 8350  | 7790  |
| 2/15-87 | 1 2   | 21    | 24    | 1680  | 560   | 7050  | 5370  | 8390  | 6480  |
| 2/16-87 | 1 1   | 21    | 24    | 2130  | 710   | 7650  | 5520  | 9150  | 6720  |
| 2/17-87 | 1 1   | 21    | 28    | 2280  | 325   | 6590  | 4310  | 7710  | 5300  |
| 2/18-87 | 1 1   | 8     | 15    | 1500  | 214   | 7350  | 5850  | 8270  | 6830  |
| 2/18-87 | 1 2   | 21    | 28    | 3000  | 428   | 7230  | 4230  | 8390  | 5180  |
| 2/19-87 | 1 1   | 20    | 25    | 3040  | 608   | 7210  | 4170  | 8150  | 5150  |
| 2/20-87 | 1 1   | 20    | 24    | 1830  | 457   | 7300  | 5470  | 8270  | 6410  |
| 2/21-87 | 1 1   | 22    | 24    | 2540  | 1270  | 7190  | 4650  | 8110  | 5850  |
| 2/22-87 | 1 1   | 22    | 25    | 1740  | 580   | 7210  | 5470  | 8150  | 6130  |
| 2/23-87 | 1 1   | 22    | 24    | 1530  | 765   | 7300  | 5770  | 8150  | 6620  |
| 2/24-87 | 1 1   | 23    | 24    | 1190  | 1190  | 7210  | 6020  | 8350  | 7320  |
| 2/25-87 | 1 1   | 8     | 18    | 620   | 62    | 7490  | 6870  | 8550  | 7790  |
| 2/25-87 | 1 2   | 22    | 27    | 940   | 188   | 7420  | 6480  | 8430  | 7320  |
| 2/26-87 | 1 1   | 22    | 30    | 2070  | 258   | 7760  | 5690  | 8830  | 6480  |
| 2/27-87 | 1 1   | 12    | 15    | 1120  | 373   | 7420  | 6300  | 8350  | 7140  |
| 2/27-87 | 1 2   | 22    | 29    | 2030  | 290   | 7760  | 5730  | 8830  | 6510  |
| 2/28-87 | 1 1   | 22    | 29    | 1160  | 165   | 7460  | 6300  | 8430  | 7000  |
| 1/01-87 | 1 1   | 16    | 20    | 620   | 155   | 6940  | 6320  | 7750  | 6900  |
| 1/01-87 | 1 2   | 22    | 28    | 440   | 73    | 6340  | 5900  | 7140  | 6620  |
| 3/02-87 | 1 1   | 11    | 12    | 550   | 550   | 7740  | 7190  | 8830  | 8190  |
| 3/02-87 | 1 2   | 22    | 26    | 1930  | 482   | 7300  | 5370  | 8710  | 6900  |
| /03-87  | 1 1   | 22    | 30    | 2050  | 256   | 7630  | 5580  | 14300 | 11500 |
| /04-87  | 1 1   | 13    | 17    | 570   | 142   | 7330  | 6760  | 13200 | 12000 |
| 3/04-87 | 1 2   | 20    | 29    | 1720  | 191   | 7280  | 5560  | 12500 | 9550  |
| /05-87  | 1 1   | 9     | 10    | 540   | 540   | 7230  | 6690  | 11500 | 11100 |
| /05-87  | 1 2   | 14    | 16    | 640   | 320   | 7100  | 6460  | 11600 | 10700 |
| 3/05-87 | 1 3   | 23    | 30    | 1670  | 238   | 7670  | 6000  | 12900 | 10400 |
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| /06-87  | 1 2   | 22    | 28    | 1470  | 245   | 7490  | 6020  | 11200 | 9110  |
| /07-87  | 1 1   | 22    | 26    | 650   | 162   | 7280  | 6630  | 10000 | 9190  |
| 3/08-87 | 1 1   | 18    | 19    | 530   | 530   | 7790  | 7260  | 10000 | 9550  |
| /08-87  | 1 2   | 23    | 30    | 1760  | 251   | 7490  | 5730  | 9750  | 7670  |
| /09-87  | 1 1   | 23    | 27    | 1570  | 392   | 7490  | 5920  | 9670  | 7790  |
| 3/10-87 | 1 1   | 19    | 25    | 660   | 110   | 7460  | 6800  | 9630  | 8750  |
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| /12-87  | 1 1   | 22    | 30    | 1100  | 137   | 6980  | 5880  | 9310  | 8110  |
| 3/13-87 | 1 1   | 22    | 29    | 1290  | 184   | 7210  | 5920  | 9750  | 8110  |
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| /15-87  | 1 1   | 21    | 29    | 2540  | 317   | 6380  | 3840  | 8070  | 5330  |
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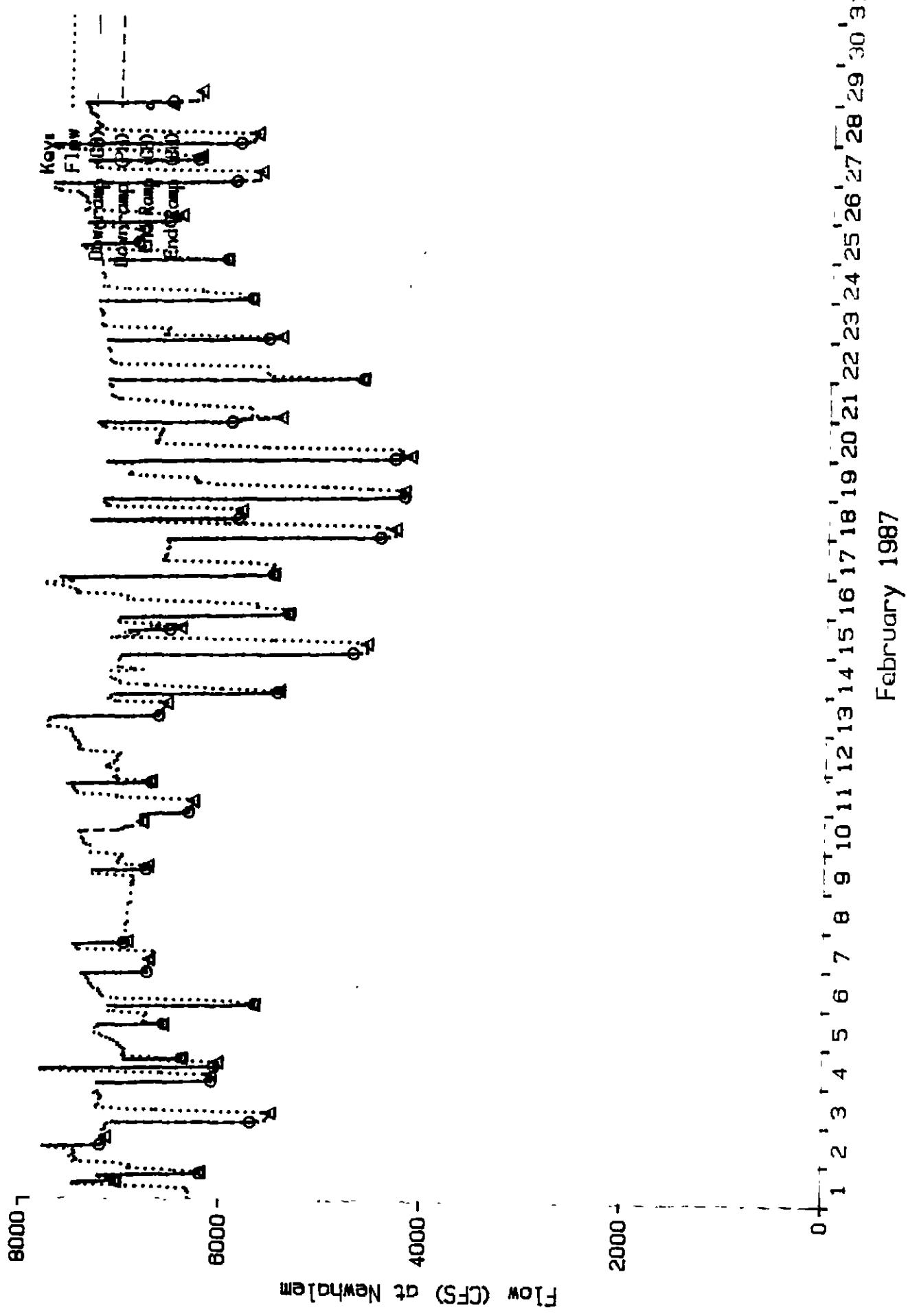
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| 5/23/87 | 1 | 1 | 22 | 23 | 780  | 780  | 780  | 3370 | 2590 |
| 5/24/87 | 1 | 1 | 14 | 15 | 440  | 440  | 440  | 3810 | 3370 |
| 5/24/87 | 1 | 2 | 22 | 23 | 1110 | 1110 | 1110 | 3850 | 2740 |
| 5/26/87 | 1 | 1 | 18 | 20 | 1600 | 800  | 1390 | 6820 | 5220 |
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| 5/27/87 | 1 | 1 | 21 | 23 | 2620 | 1310 | 1610 | 6380 | 3760 |
| 5/28/87 | 1 | 1 | 18 | 19 | 570  | 570  | 570  | 5560 | 4990 |
| 5/28/87 | 1 | 2 | 22 | 24 | 1940 | 970  | 1350 | 4860 | 2920 |
| 5/29/87 | 1 | 1 | 21 | 23 | 1130 | 565  | 970  | 3730 | 2600 |
| 5/30/87 | 1 | 1 | 14 | 15 | 1050 | 1050 | 1050 | 5560 | 4510 |
| 5/30/87 | 1 | 2 | 22 | 23 | 1490 | 1490 | 1490 | 5730 | 4240 |
| 5/31/87 | 1 | 1 | 11 | 12 | 460  | 460  | 460  | 5280 | 4820 |
| 5/31/87 | 1 | 2 | 13 | 14 | 480  | 480  | 480  | 4650 | 4170 |
| 5/31/87 | 1 | 3 | 22 | 23 | 1270 | 1270 | 1270 | 5750 | 4480 |
| 7/06/87 | 2 | 1 | 22 | 23 | 630  | 630  | 630  | 6040 | 5410 |
| 7/07/87 | 2 | 1 | 22 | 24 | 1120 | 560  | 920  | 5690 | 4570 |
| 7/08/87 | 2 | 1 | 1  | 2  | 500  | 500  | 500  | 4380 | 3880 |
| 7/08/87 | 2 | 2 | 15 | 16 | 570  | 570  | 570  | 5580 | 5010 |
| 7/08/87 | 2 | 3 | 19 | 20 | 480  | 480  | 480  | 5660 | 5180 |
| 7/08/87 | 2 | 4 | 22 | 24 | 1350 | 675  | 680  | 5310 | 3960 |
| 7/10/87 | 2 | 1 | 11 | 13 | 600  | 300  | 450  | 3990 | 3390 |
| 7/10/87 | 2 | 2 | 17 | 20 | 1160 | 386  | 510  | 3480 | 2320 |
| 7/11/87 | 2 | 1 | 21 | 23 | 1070 | 535  | 630  | 3330 | 2260 |
| 7/12/87 | 2 | 1 | 12 | 14 | 770  | 385  | 650  | 3970 | 3200 |
| 7/12/87 | 2 | 2 | 20 | 24 | 2710 | 677  | 870  | 4770 | 2060 |
| 7/13/87 | 2 | 1 | 21 | 26 | 3770 | 754  | 1860 | 5900 | 2130 |
| 7/14/87 | 2 | 1 | 21 | 24 | 2060 | 686  | 1080 | 5880 | 3820 |
| 7/15/87 | 2 | 1 | 21 | 24 | 1980 | 660  | 840  | 5180 | 3200 |
| 7/16/87 | 2 | 1 | 2  | 4  | 620  | 310  | 370  | 3100 | 2480 |
| 7/16/87 | 2 | 2 | 21 | 23 | 1330 | 665  | 900  | 4650 | 3320 |
| 7/16/87 | 2 | 3 | 24 | 26 | 1180 | 590  | 620  | 3180 | 2000 |
| 7/17/87 | 2 | 1 | 9  | 10 | 600  | 600  | 600  | 4880 | 4280 |
| 7/17/87 | 2 | 2 | 20 | 24 | 1950 | 487  | 790  | 3900 | 1950 |
| 7/19/87 | 2 | 1 | 9  | 10 | 570  | 570  | 570  | 2560 | 1990 |
| 7/20/87 | 2 | 1 | 22 | 24 | 820  | 410  | 450  | 2850 | 2030 |
| 7/21/87 | 2 | 1 | 22 | 24 | 550  | 275  | 320  | 2840 | 2290 |
| 7/22/87 | 2 | 1 | 21 | 22 | 410  | 410  | 410  | 2600 | 2190 |
| 7/23/87 | 2 | 1 | 17 | 19 | 490  | 245  | 380  | 2540 | 2050 |
| 7/24/87 | 2 | 1 | 12 | 14 | 510  | 255  | 340  | 2550 | 2040 |
| 7/28/87 | 2 | 1 | 19 | 21 | 820  | 410  | 410  | 2830 | 2010 |
| 7/29/87 | 2 | 1 | 22 | 23 | 780  | 780  | 780  | 2920 | 2140 |
| 7/31/87 | 2 | 1 | 6  | 7  | 820  | 820  | 820  | 3940 | 3120 |
| /31/87  | 2 | 2 | 22 | 24 | 590  | 295  | 320  | 4290 | 3700 |
| /01/87  | 2 | 1 | 1  | 4  | 1640 | 546  | 710  | 3700 | 2060 |
| 8/01/87 | 2 | 2 | 22 | 26 | 3820 | 955  | 1550 | 5880 | 2060 |
| /02/87  | 2 | 1 | 22 | 24 | 1420 | 710  | 750  | 4360 | 2940 |
| /03/87  | 2 | 1 | 1  | 2  | 610  | 610  | 610  | 2850 | 2240 |
| /03/87  | 2 | 2 | 22 | 25 | 2410 | 803  | 1050 | 5750 | 3340 |
| /04/87  | 2 | 1 | 4  | 5  | 440  | 440  | 440  | 2880 | 2440 |
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| 8/06/87 | 2 | 1 | 17 | 19 | 800  | 400  | 600  | 4260 | 3460 |
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| /07/87  | 2 | 1 | 24 | 26 | 880  | 440  | 600  | 3060 | 2180 |
| 8/08/87 | 2 | 1 | 22 | 25 | 3060 | 1020 | 1320 | 5310 | 2250 |
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| /10/87  | 2 | 1 | 22 | 25 | 2390 | 796  | 900  | 4450 | 2060 |
| /11/87  | 2 | 1 | 22 | 24 | 2290 | 1145 | 1380 | 4480 | 2190 |
| 8/14/87 | 2 | 1 | 24 | 25 | 2327 | 2327 | 2327 | 4290 | 1963 |
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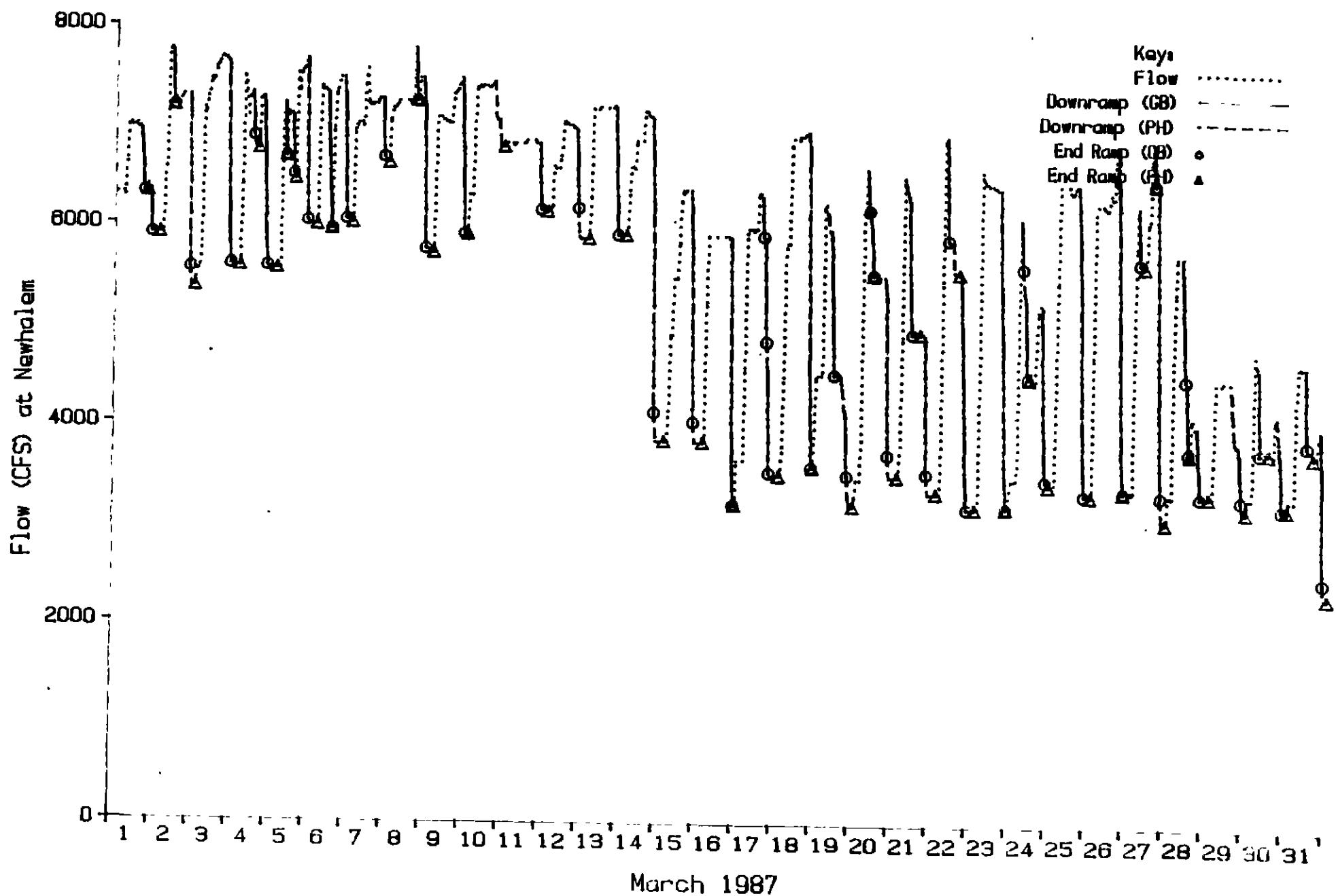
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| 3/17-87 | 1 | 1 | 17 | 28 | 2810 | 255 | 6320 | 3510 | 8030  | 4970 |
| 3/18-87 | 1 | 1 | 21 | 25 | 3380 | 845 | 6980 | 3600 | 8550  | 5060 |
| 3/19-87 | 1 | 1 | 10 | 26 | 2940 | 183 | 6150 | 3210 | 7630  | 4460 |
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| 3/22-87 | 1 | 1 | 11 | 19 | 1380 | 172 | 6940 | 5560 | 7910  | 5880 |
| 3/22-87 | 1 | 2 | 20 | 29 | 2390 | 265 | 5580 | 3190 | 6550  | 4200 |
| 3/23-87 | 1 | 1 | 20 | 24 | 3220 | 805 | 6420 | 3200 | 7510  | 4290 |
| 3/24-87 | 1 | 1 | 9  | 14 | 1600 | 320 | 6110 | 4510 | 6790  | 5360 |
| 3/24-87 | 1 | 2 | 22 | 26 | 1810 | 452 | 5240 | 3430 | 6090  | 4400 |
| 3/25-87 | 1 | 1 | 20 | 28 | 3130 | 391 | 6460 | 3330 | 7470  | 4320 |
| 3/26-87 | 1 | 1 | 20 | 24 | 3500 | 875 | 6870 | 3370 | 7790  | 4340 |
| 3/27-87 | 1 | 1 | 9  | 13 | 610  | 152 | 6250 | 5640 | 6930  | 6440 |
| 3/27-87 | 1 | 2 | 18 | 19 | 410  | 411 | 6890 | 6480 | 7750  | 6160 |
| 3/27-87 | 1 | 3 | 21 | 26 | 3380 | 676 | 6440 | 3060 | 7350  | 3990 |
| 3/28-87 | 1 | 1 | 12 | 17 | 1990 | 398 | 5750 | 3760 | 6550  | 4670 |
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| 3/29-87 | 1 | 1 | 17 | 26 | 1210 | 134 | 4400 | 3190 | 5240  | 3990 |
| 3/30-87 | 1 | 1 | 9  | 15 | 840  | 143 | 4630 | 3790 | 5330  | 4520 |
| 3/30-87 | 1 | 2 | 20 | 26 | 930  | 155 | 4160 | 3230 | 4910  | 4070 |
| 3/31-87 | 1 | 1 | 12 | 17 | 910  | 182 | 4670 | 3760 | 5390  | 4580 |
| 3/31-87 | 1 | 2 | 21 | 26 | 1690 | 378 | 4040 | 2350 | 4820  | 3320 |
| 4/07-87 | 1 | 1 | 22 | 28 | 470  | 78  | 4160 | 3690 | 5450  | 5120 |
| 4/08-87 | 1 | 1 | 20 | 27 | 1210 | 172 | 4720 | 3510 | 6060  | 4790 |
| 4/09-87 | 1 | 1 | 19 | 30 | 1870 | 170 | 4230 | 2360 | 5360  | 3610 |
| 4/10-87 | 1 | 1 | 18 | 29 | 440  | 40  | 2740 | 2300 | 4610  | 3890 |
| 4/16-87 | 1 | 1 | 10 | 13 | 930  | 310 | 3370 | 2440 | 6020  | 5210 |
| 4/17-87 | 1 | 1 | 22 | 29 | 510  | 72  | 2830 | 2320 | 4820  | 4070 |
| 4/20-87 | 1 | 1 | 15 | 25 | 440  | 44  | 2560 | 2120 | 3810  | 3320 |
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| 4/28-87 | 1 | 1 | 14 | 30 | 1230 | 76  | 3780 | 2550 | 7750  | 6440 |
| 4/29-87 | 1 | 1 | 17 | 27 | 1590 | 159 | 4120 | 2530 | 7790  | 6720 |
| 4/01-87 | 1 | 1 | 11 | 30 | 2290 | 120 | 4860 | 2570 | 9230  | 5180 |
| 5/02-87 | 1 | 1 | 22 | 30 | 780  | 97  | 3930 | 3150 | 6550  | 5360 |
| 5/03-87 | 1 | 1 | 22 | 27 | 910  | 182 | 3930 | 3020 | 5920  | 4970 |
| 5/04-87 | 1 | 1 | 8  | 14 | 1550 | 258 | 3320 | 1770 | 5270  | 3710 |
| 5/06-87 | 1 | 1 | 18 | 21 | 980  | 326 | 3960 | 2980 | 7590  | 6900 |
| 5/07-87 | 1 | 1 | 7  | 14 | 510  | 72  | 3400 | 2890 | 7250  | 6900 |
| 5/08-87 | 1 | 1 | 18 | 30 | 2060 | 171 | 5370 | 3310 | 11600 | 7630 |
| 5/09-87 | 1 | 1 | 22 | 30 | 1390 | 173 | 4190 | 2800 | 9030  | 6200 |
| 5/12-87 | 1 | 1 | 20 | 24 | 3450 | 862 | 7490 | 4040 | 14000 | 8910 |
| 5/13-87 | 1 | 1 | 9  | 10 | 530  | 530 | 5600 | 5070 | 9550  | 8390 |
| 5/13-87 | 1 | 2 | 19 | 26 | 1460 | 208 | 4650 | 3190 | 8110  | 6370 |
| 5/14-87 | 1 | 1 | 18 | 23 | 2130 | 426 | 5520 | 3390 | 11700 | 8550 |
| 5/15-87 | 1 | 1 | 21 | 25 | 1790 | 447 | 5450 | 3660 | 8750  | 6620 |
| 5/16-87 | 1 | 1 | 18 | 20 | 920  | 460 | 5350 | 4430 | 7870  | 6650 |
| 5/16-87 | 1 | 2 | 22 | 28 | 1090 | 181 | 4500 | 3410 | 7000  | 5740 |
| 5/18-87 | 1 | 1 | 22 | 24 | 1900 | 950 | 6740 | 4840 | 8870  | 6830 |
| 5/20-87 | 1 | 1 | 6  | 10 | 2190 | 547 | 5090 | 2900 | 6620  | 4760 |
| 5/20-87 | 1 | 2 | 17 | 21 | 1590 | 397 | 6340 | 4750 | 7750  | 6370 |
| 5/21-87 | 1 | 1 | 21 | 29 | 2080 | 260 | 5450 | 3370 | 6930  | 4820 |
| 5/22-87 | 1 | 1 | 20 | 29 | 4590 | 510 | 6800 | 2210 | 8310  | 3740 |
| 5/23-87 | 1 | 1 | 22 | 29 | 800  | 114 | 3370 | 2570 | 4970  | 4200 |
| 5/24-87 | 1 | 1 | 14 | 15 | 440  | 440 | 3810 | 3370 | 5300  | 4940 |
| 5/24-87 | 1 | 2 | 22 | 29 | 1160 | 165 | 3850 | 2690 | 5640  | 4460 |
| 5/26-87 | 1 | 1 | 18 | 29 | 3060 | 278 | 6820 | 3760 | 8710  | 5600 |
| 5/27-87 | 1 | 1 | 21 | 27 | 2690 | 448 | 6380 | 3690 | 8310  | 5480 |

|         |   |   |    |    |      |      |      |      |       |      |
|---------|---|---|----|----|------|------|------|------|-------|------|
| 5/28-87 | 1 | 1 | 18 | 24 | 2640 | 440  | 5560 | 2920 | 7470  | 4820 |
| 5/29-87 | 1 | 1 | 21 | 26 | 1140 | 228  | 3730 | 2590 | 5420  | 4490 |
| 5/30-87 | 1 | 1 | 14 | 15 | 1050 | 1050 | 5560 | 4510 | 10200 | 8990 |
| 5/30-87 | 1 | 2 | 22 | 30 | 1690 | 211  | 5730 | 4040 | 10300 | 7470 |
| 5/31-87 | 1 | 1 | 11 | 15 | 1220 | 305  | 5280 | 4060 | 8510  | 7630 |
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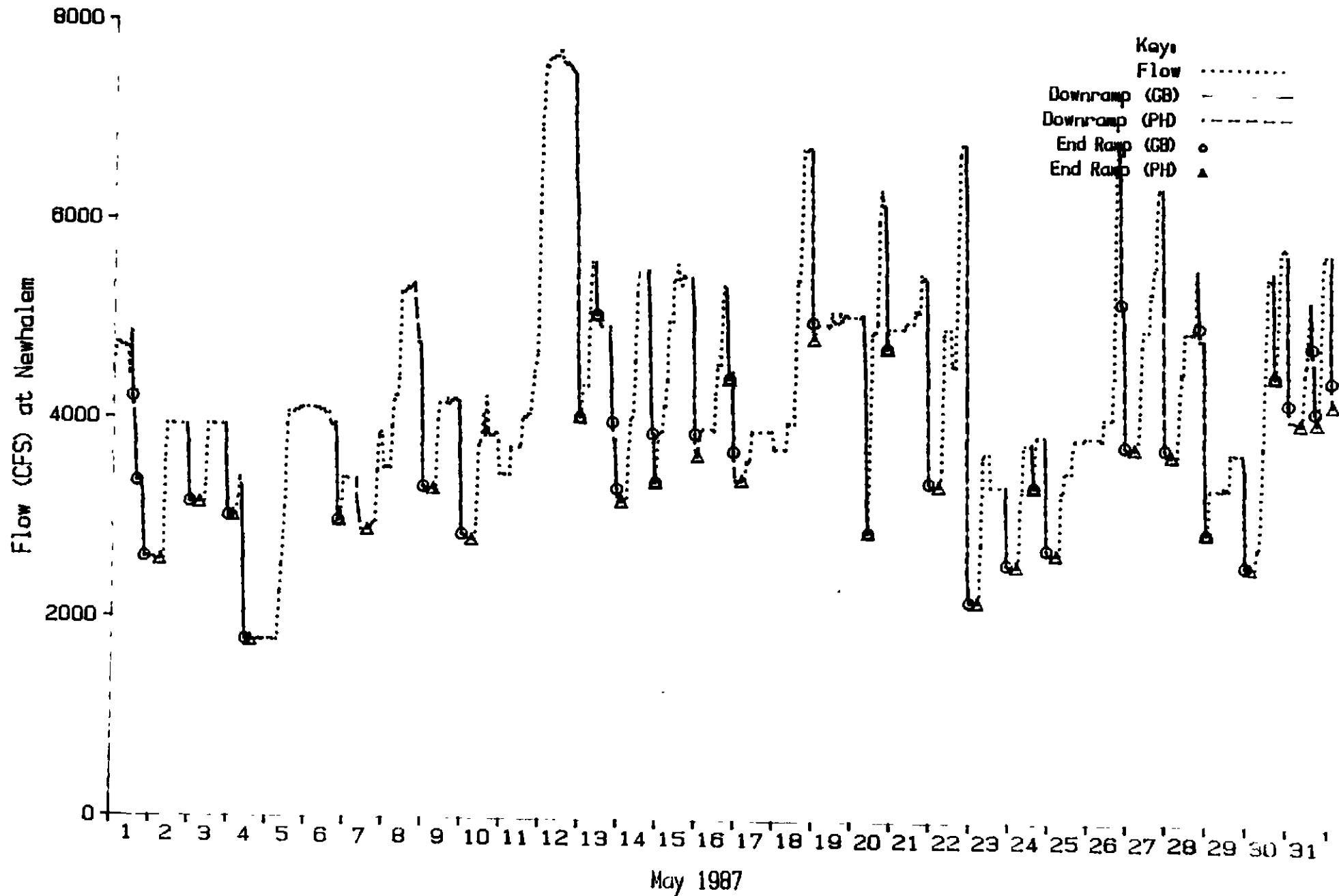
**APPENDIX C**

**DOWNRAMP EVENT HYDROGRAPHS DERIVED  
FROM THE DOWNRAMP EVENT PROGRAM**



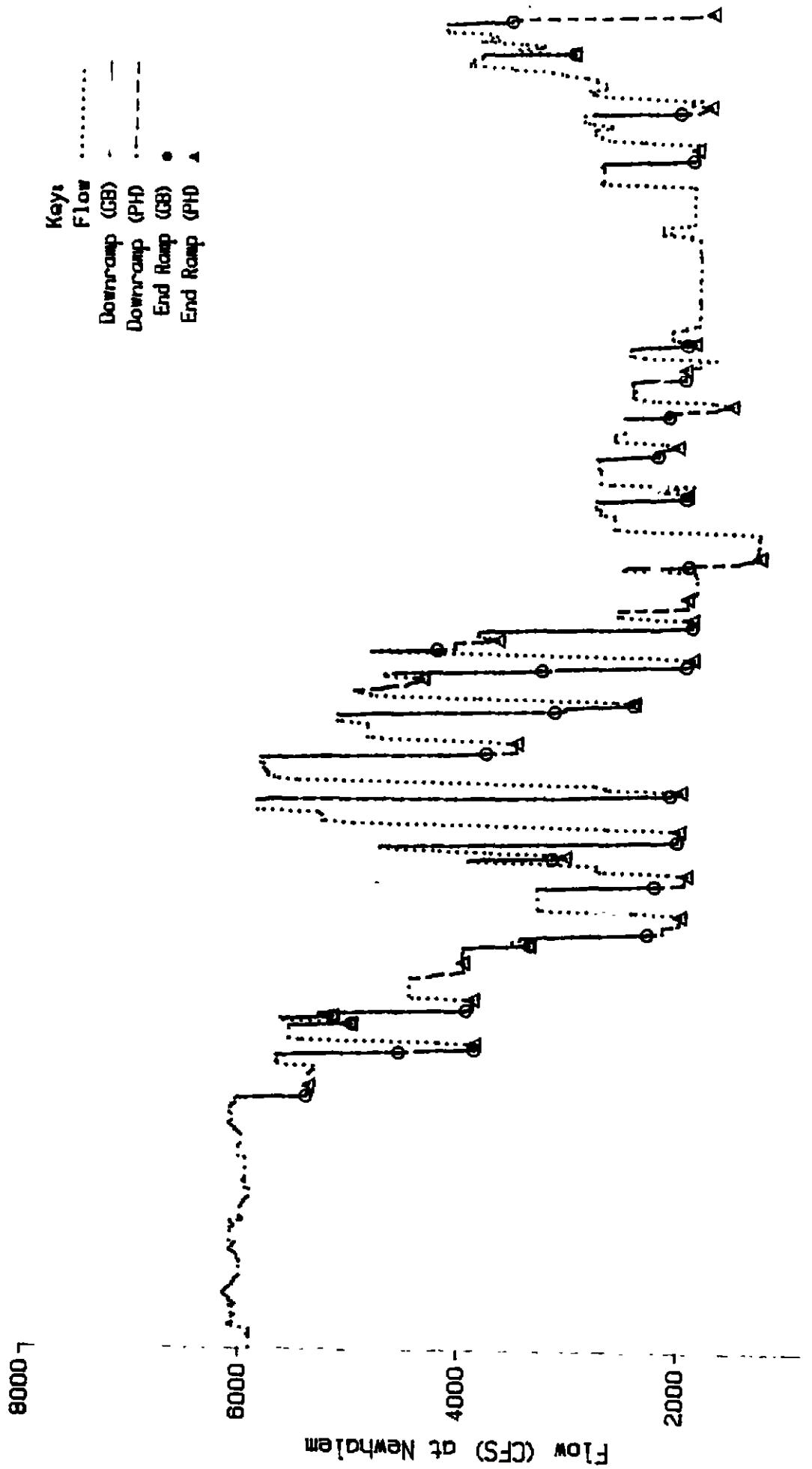


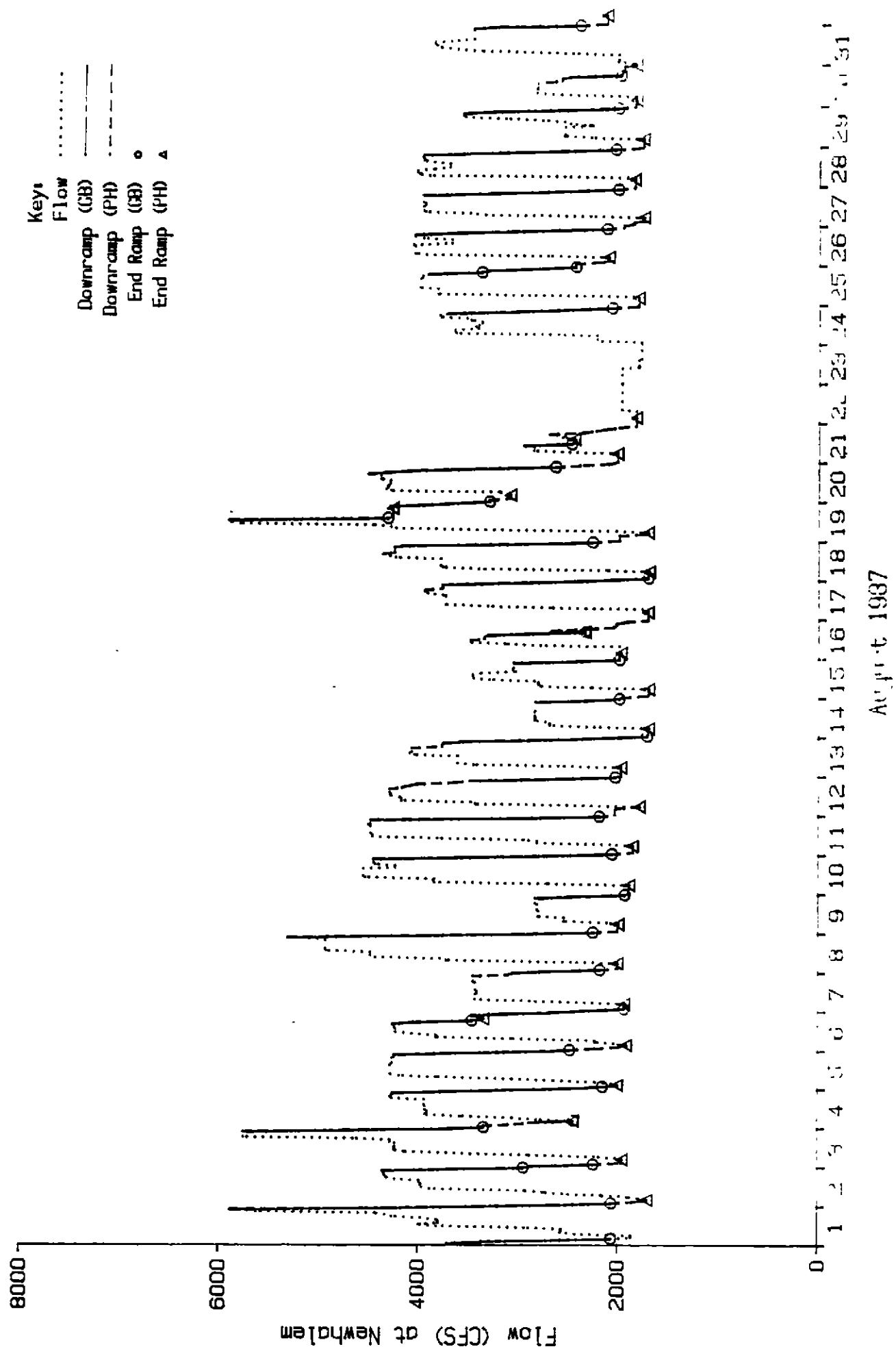


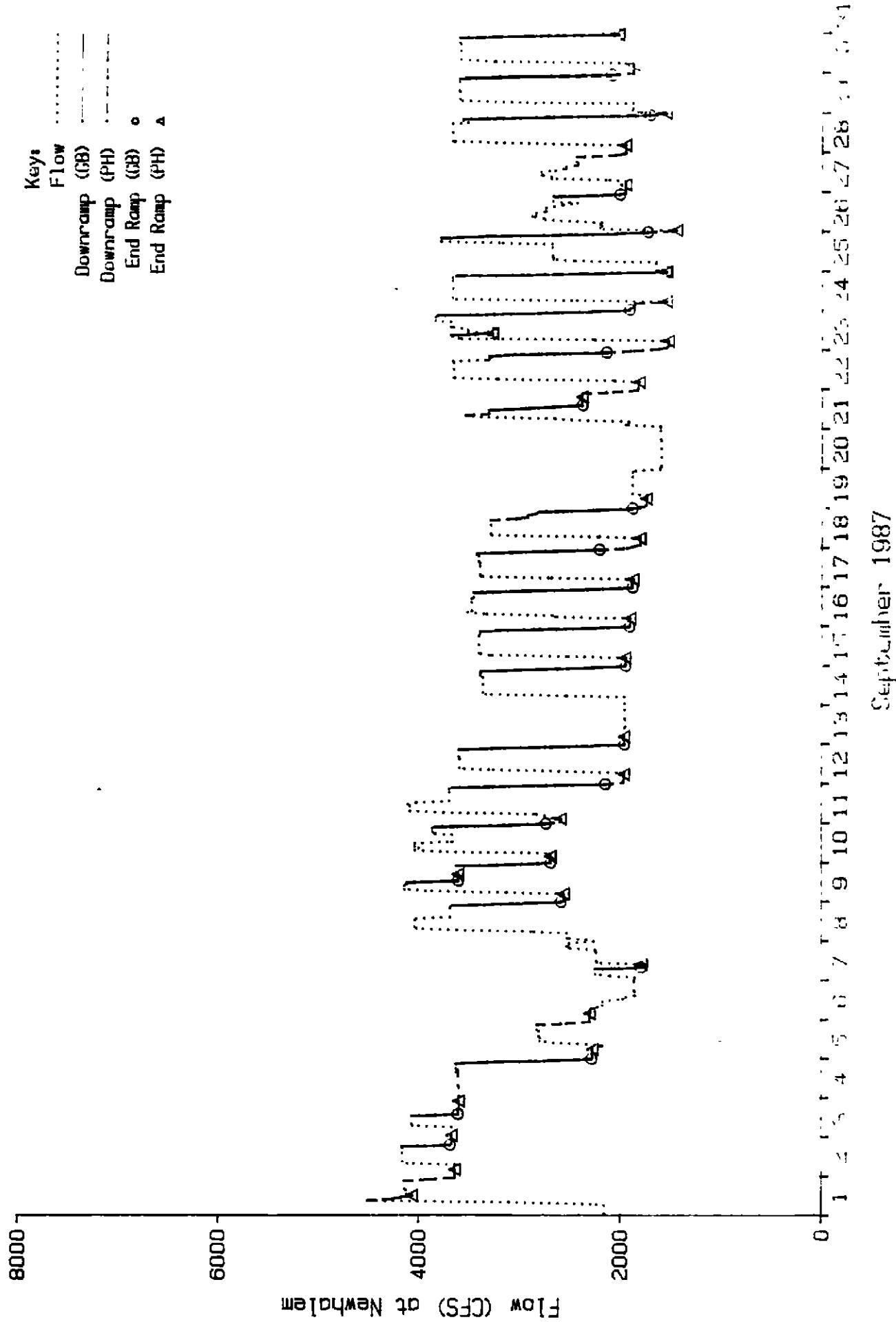


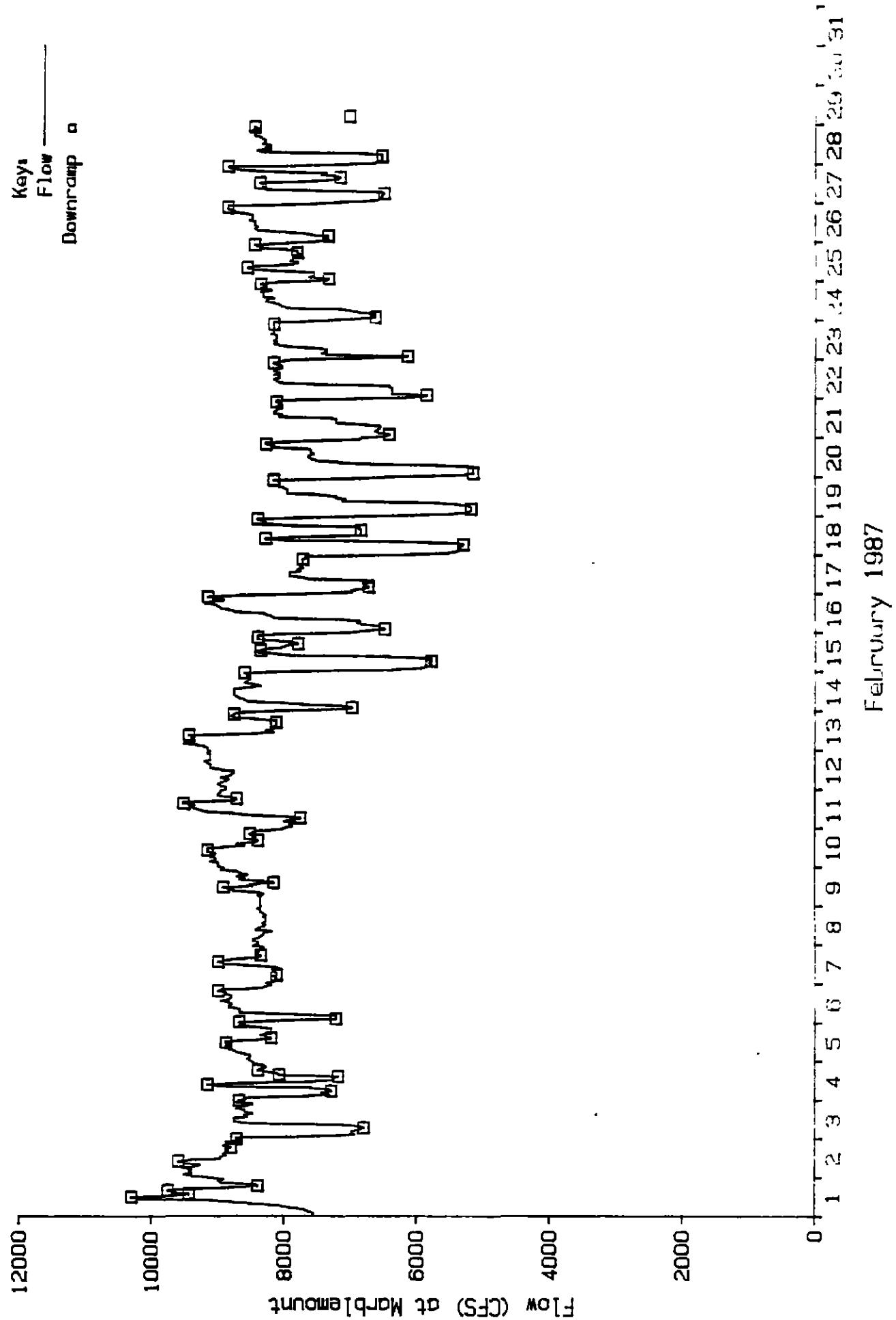
July 1987

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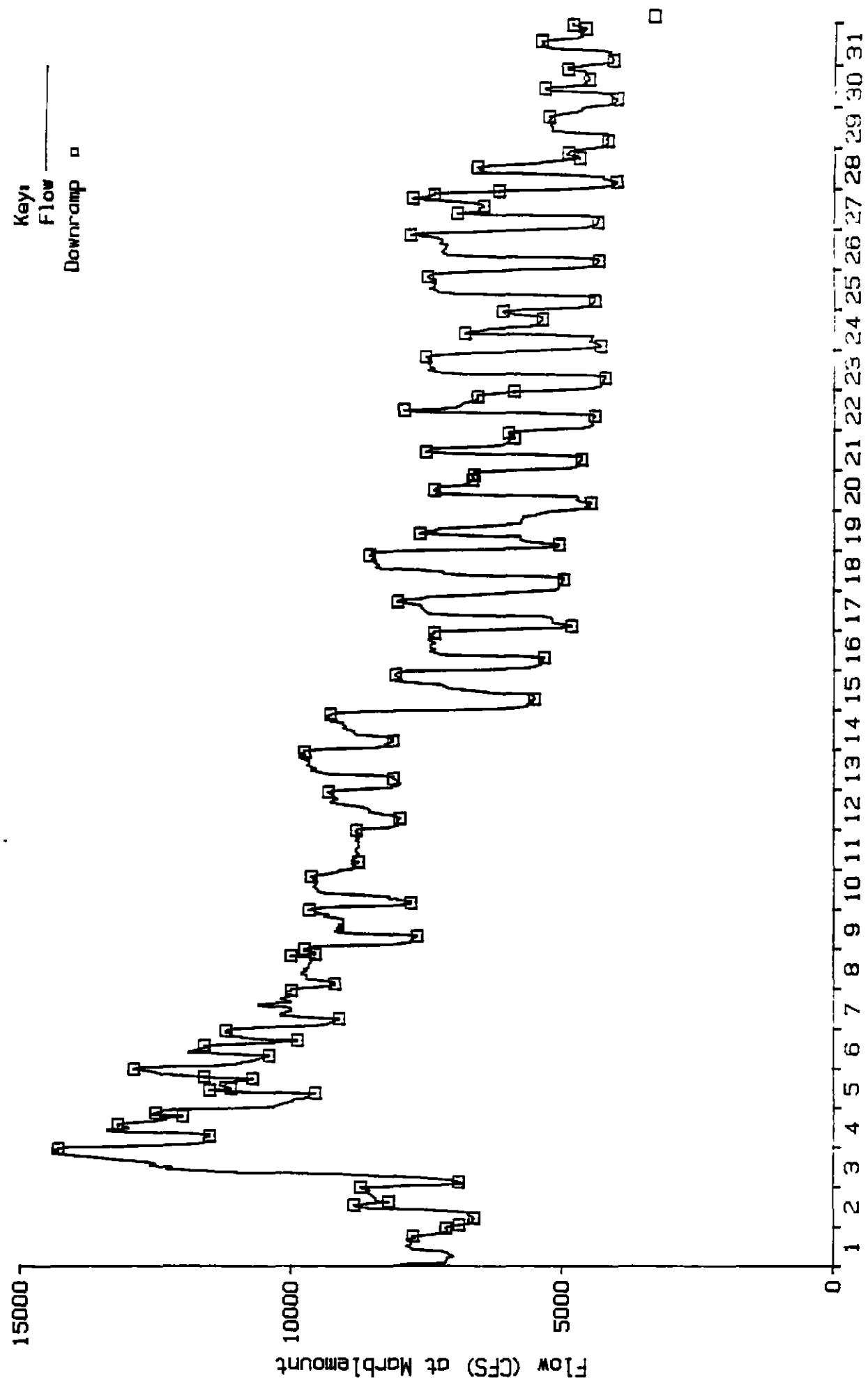


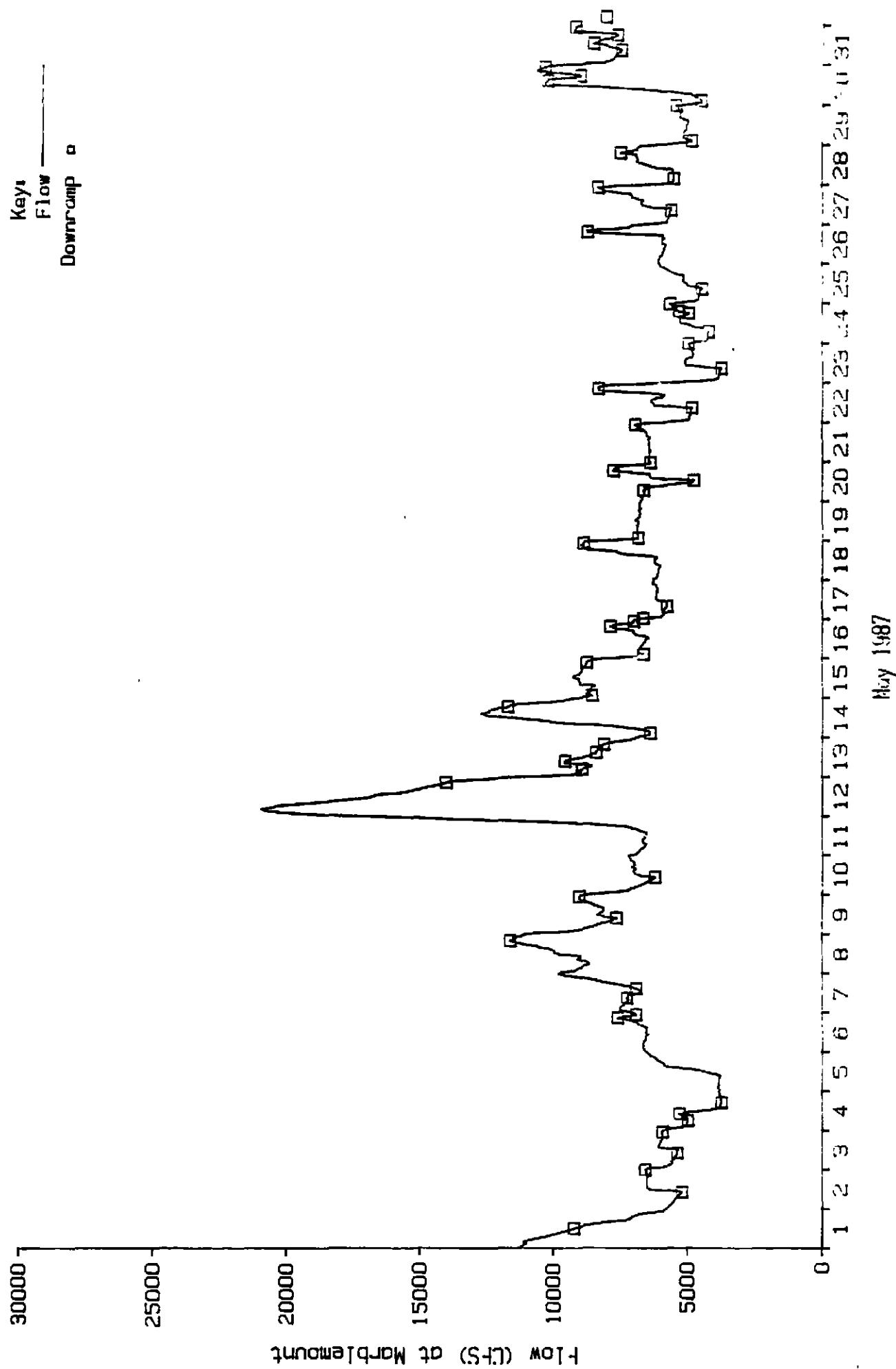


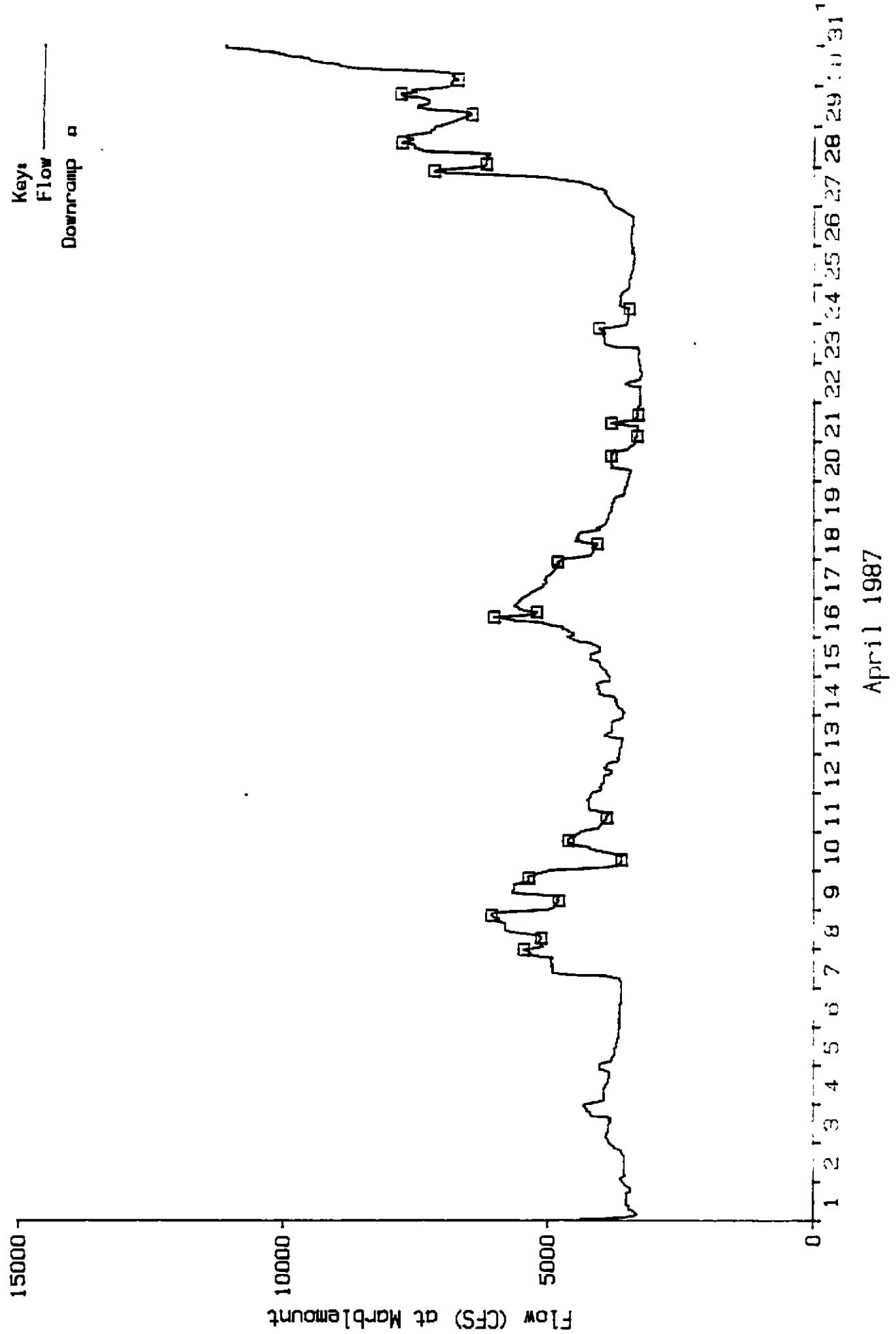


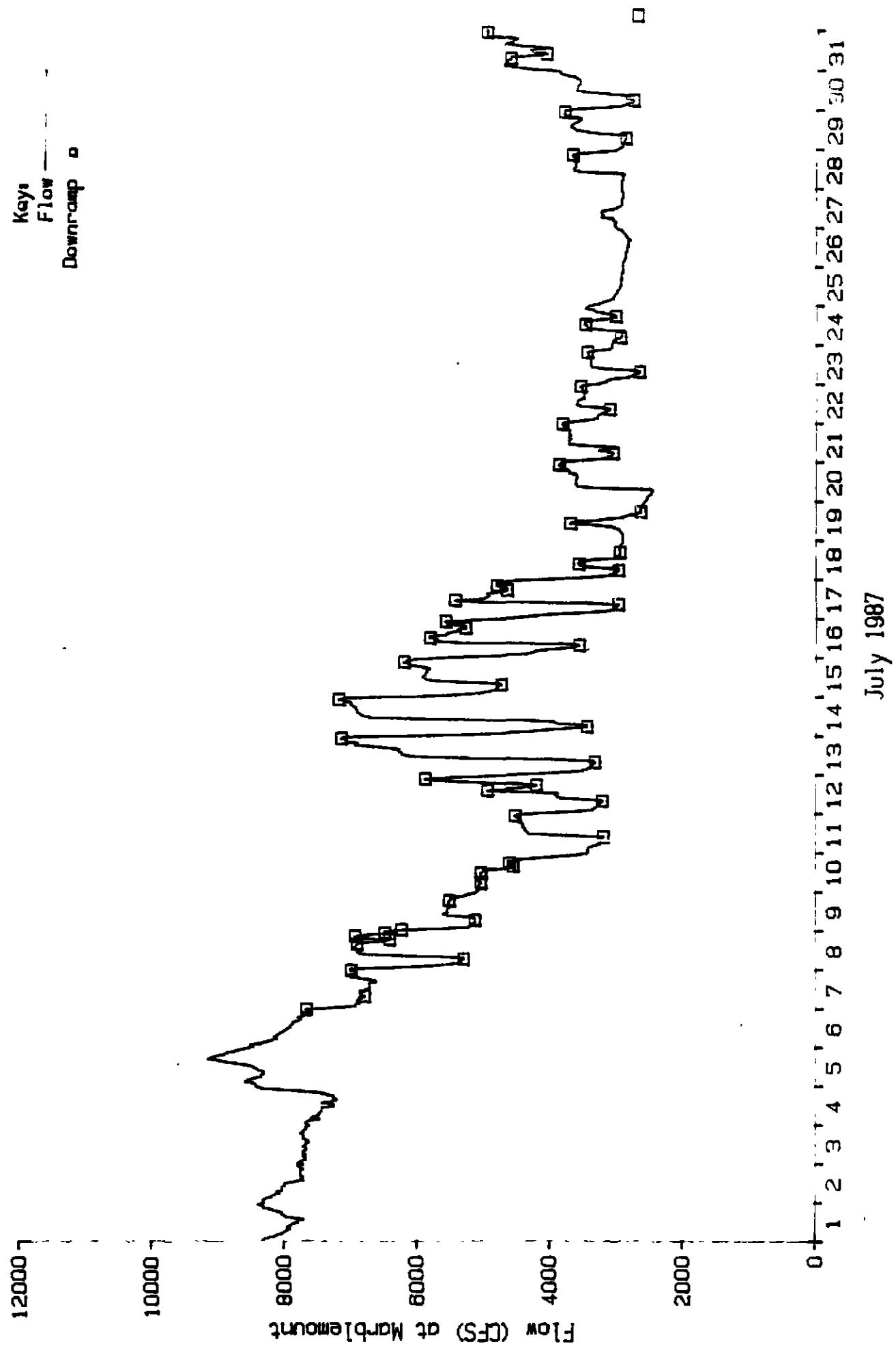


March 1987

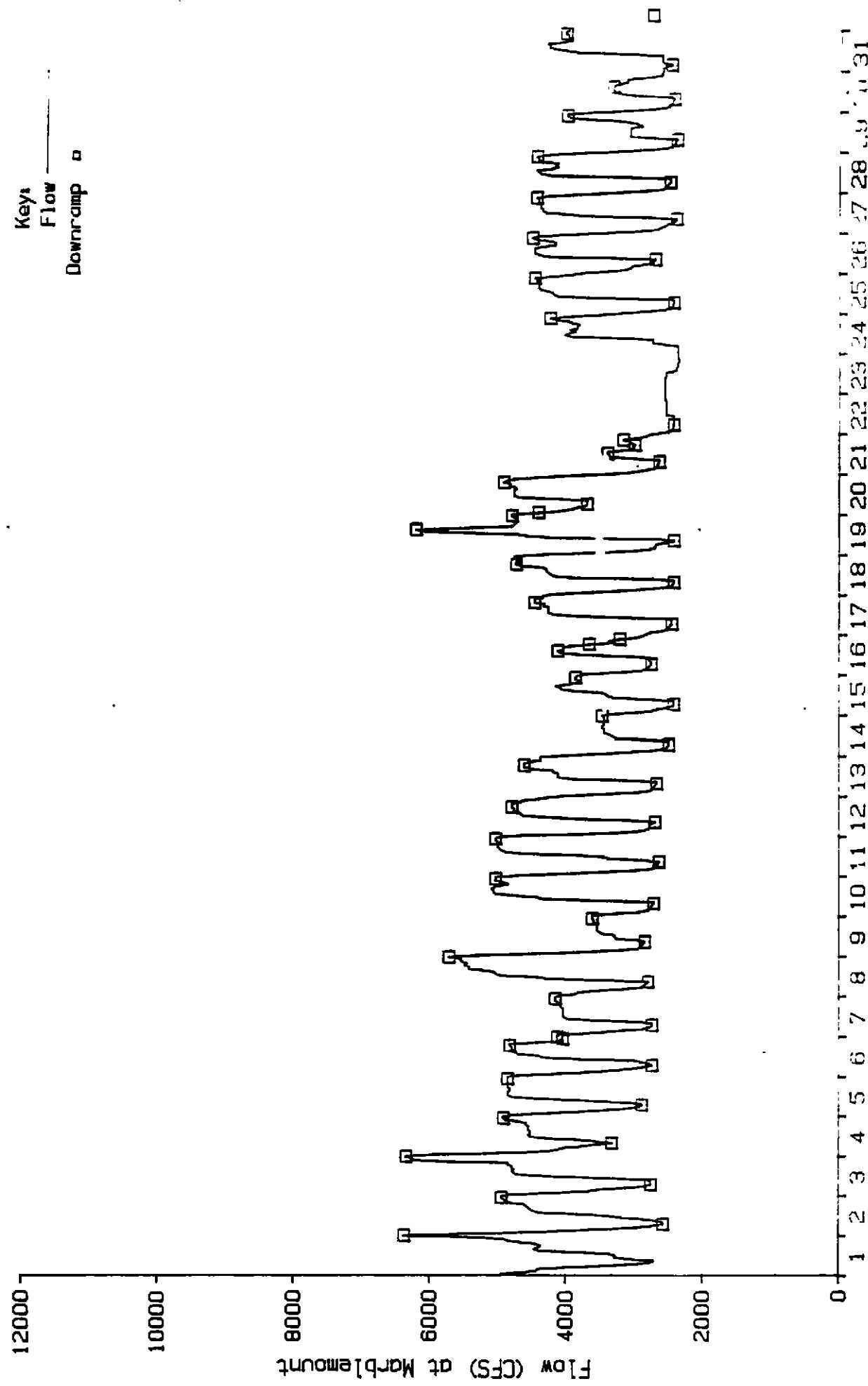


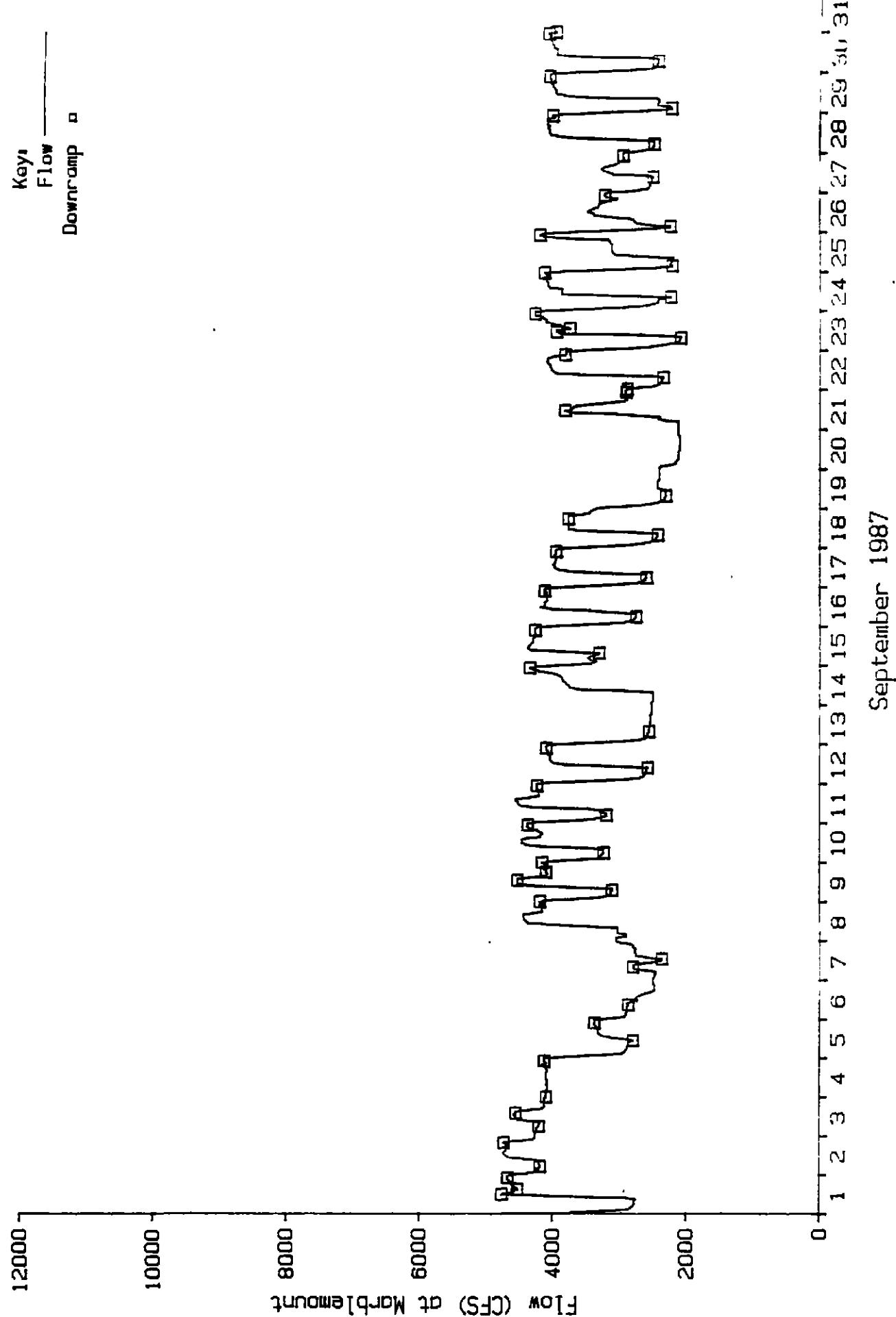


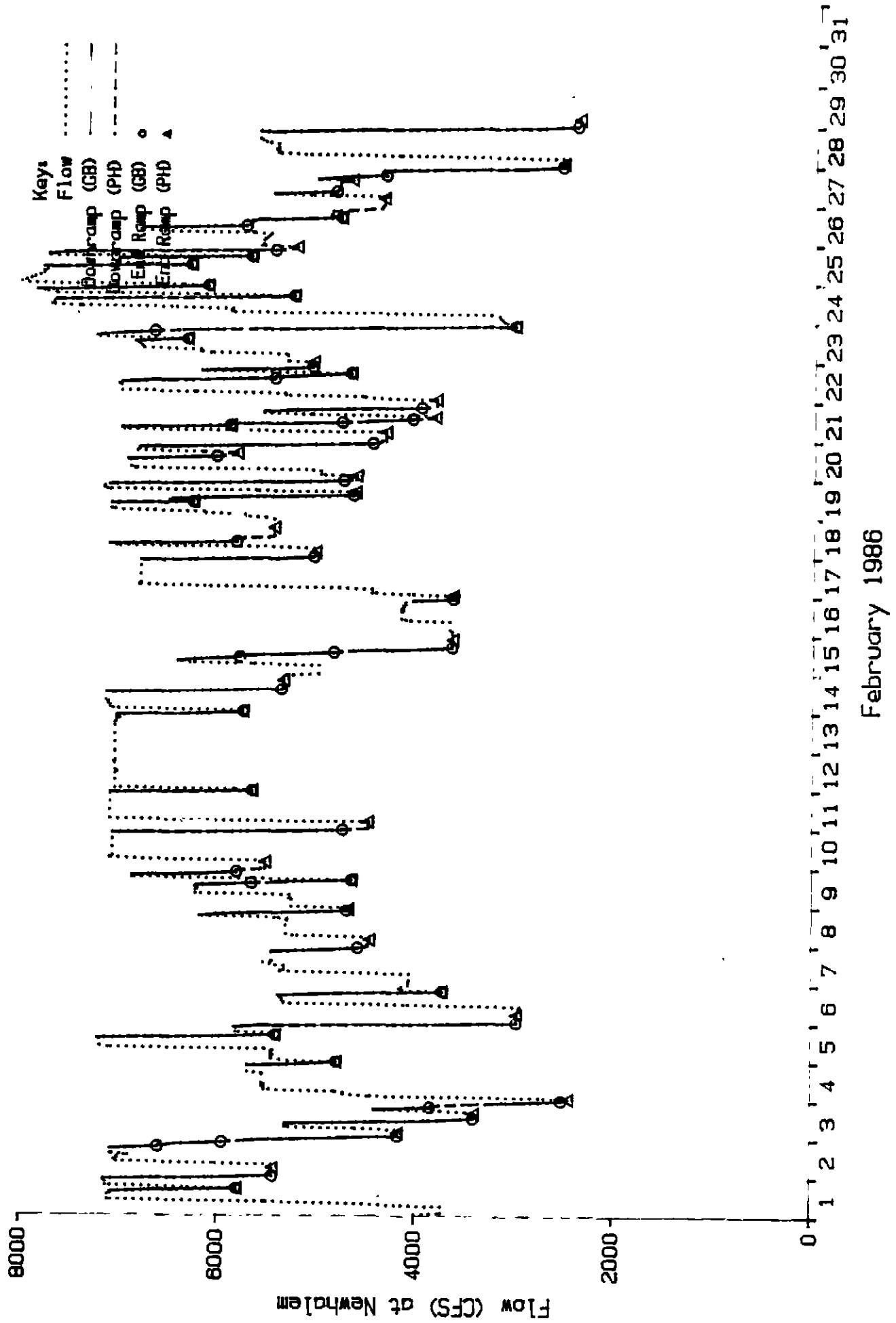




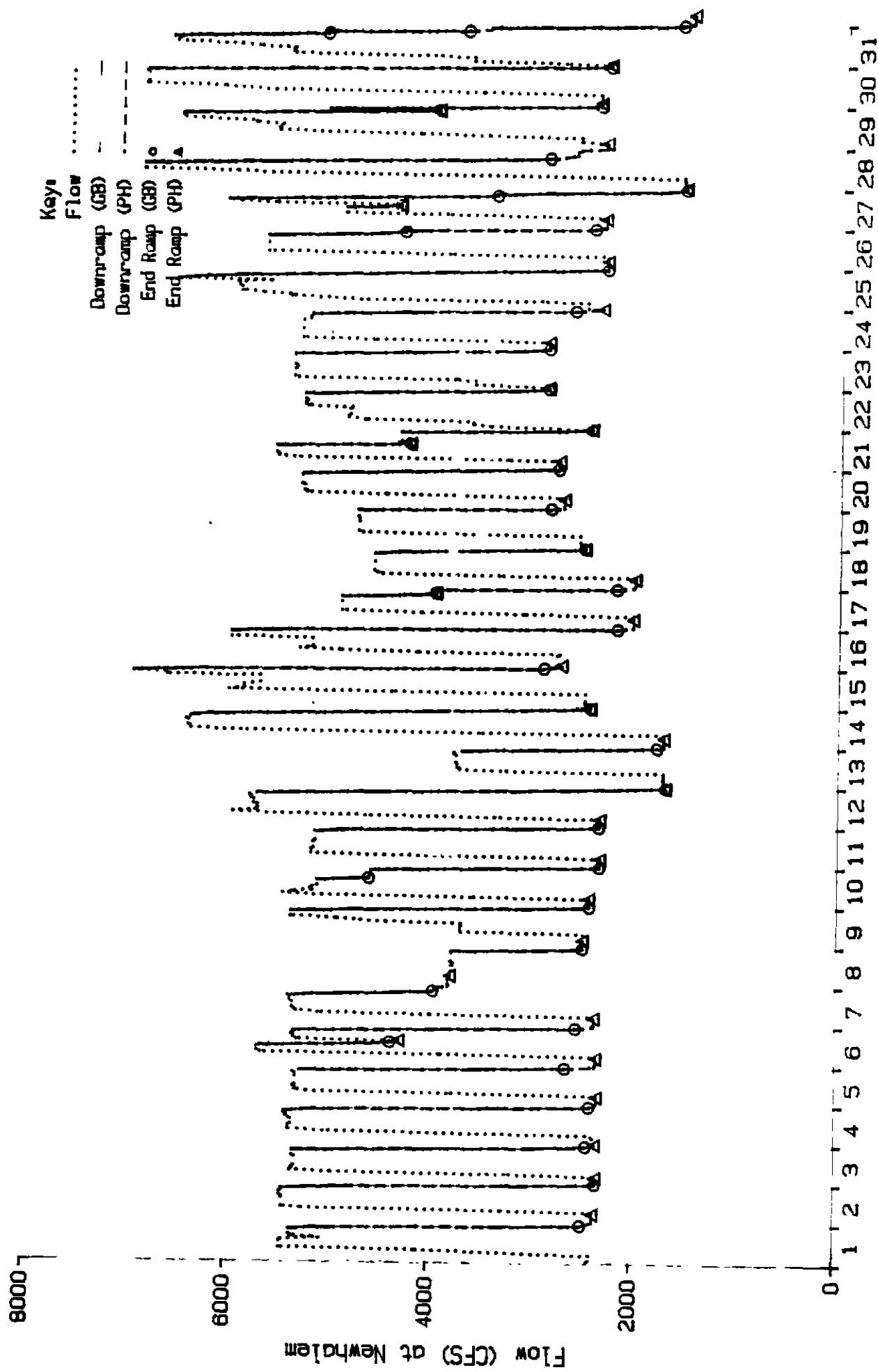
August 1987



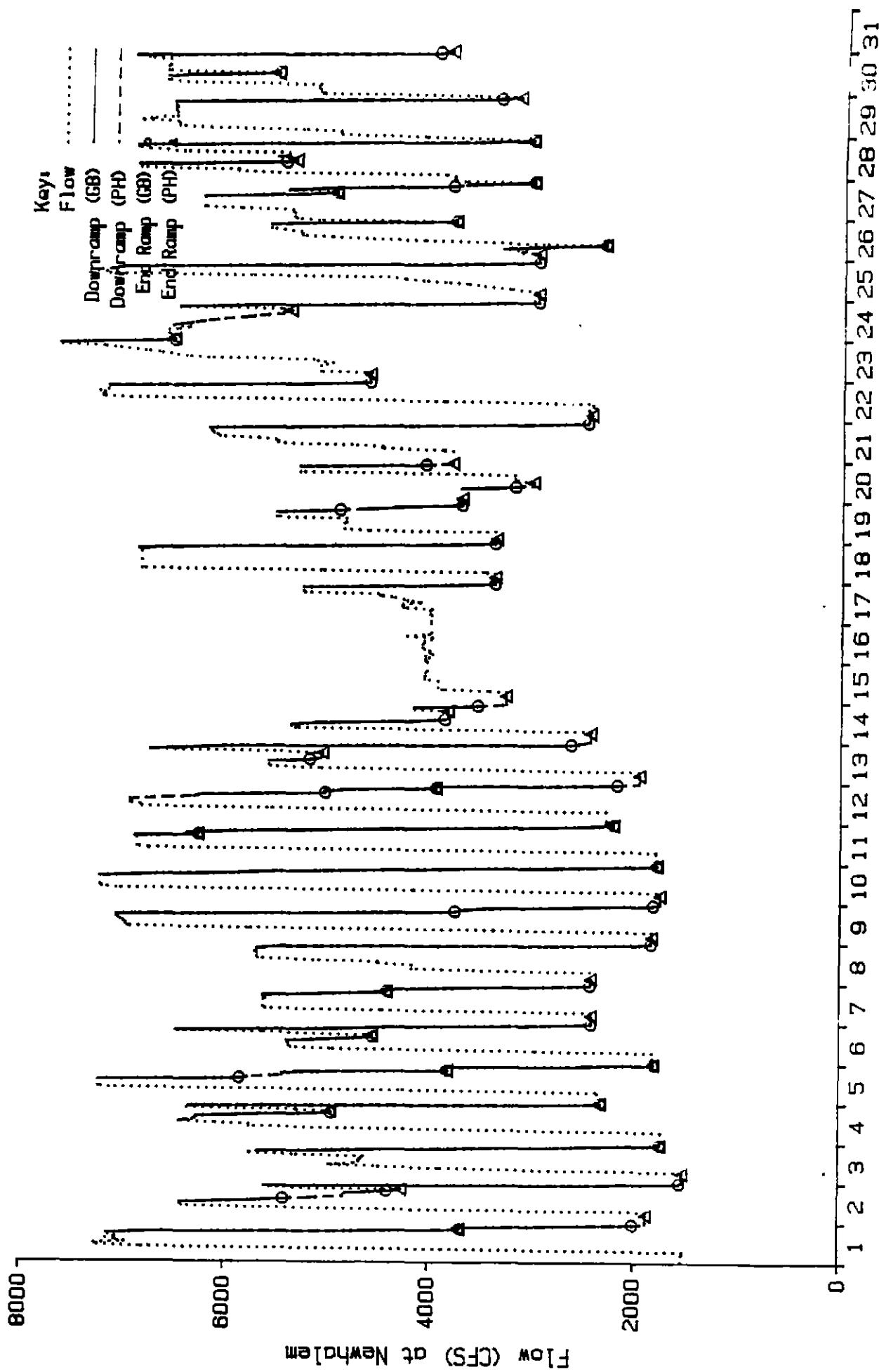


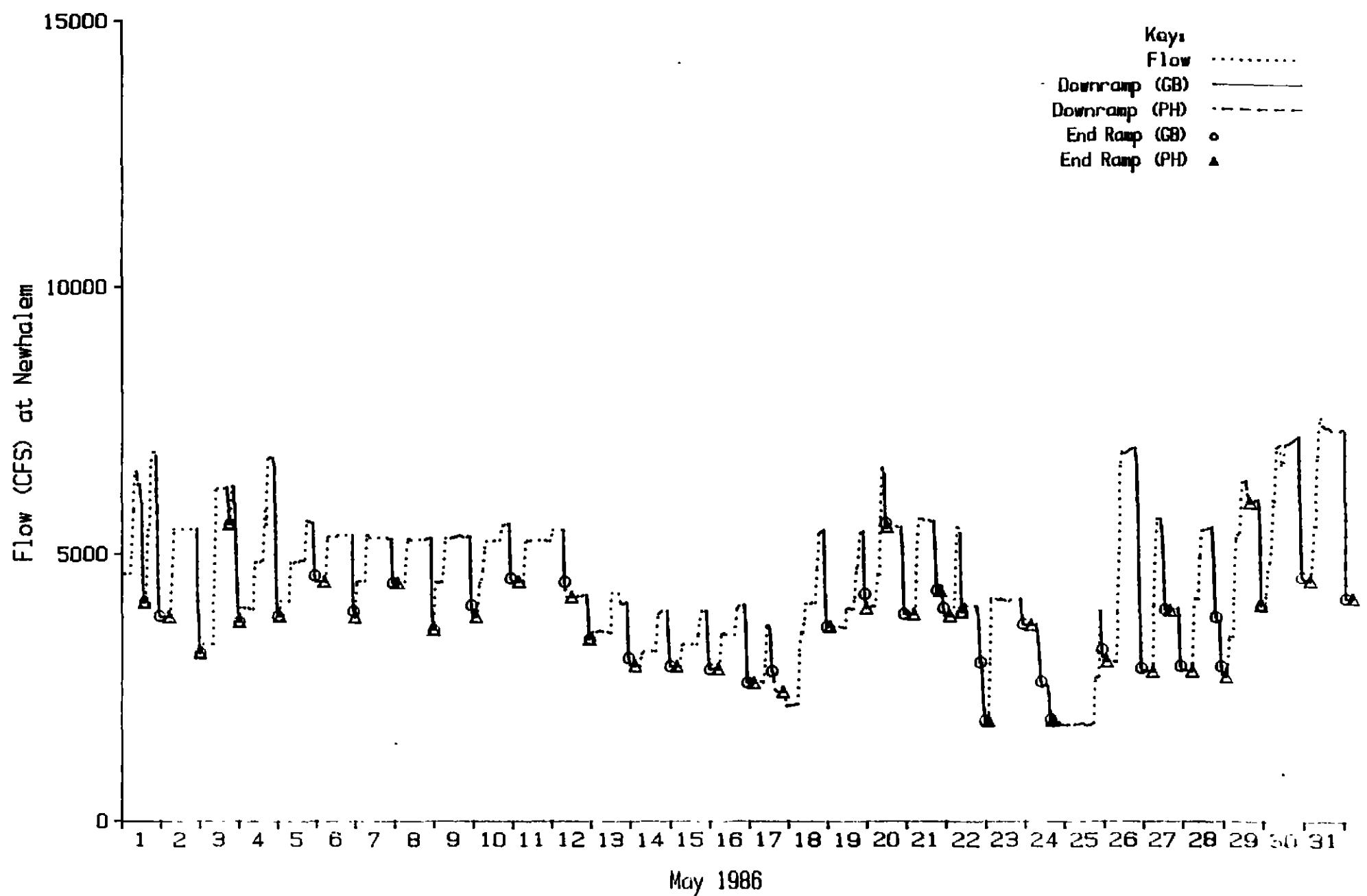


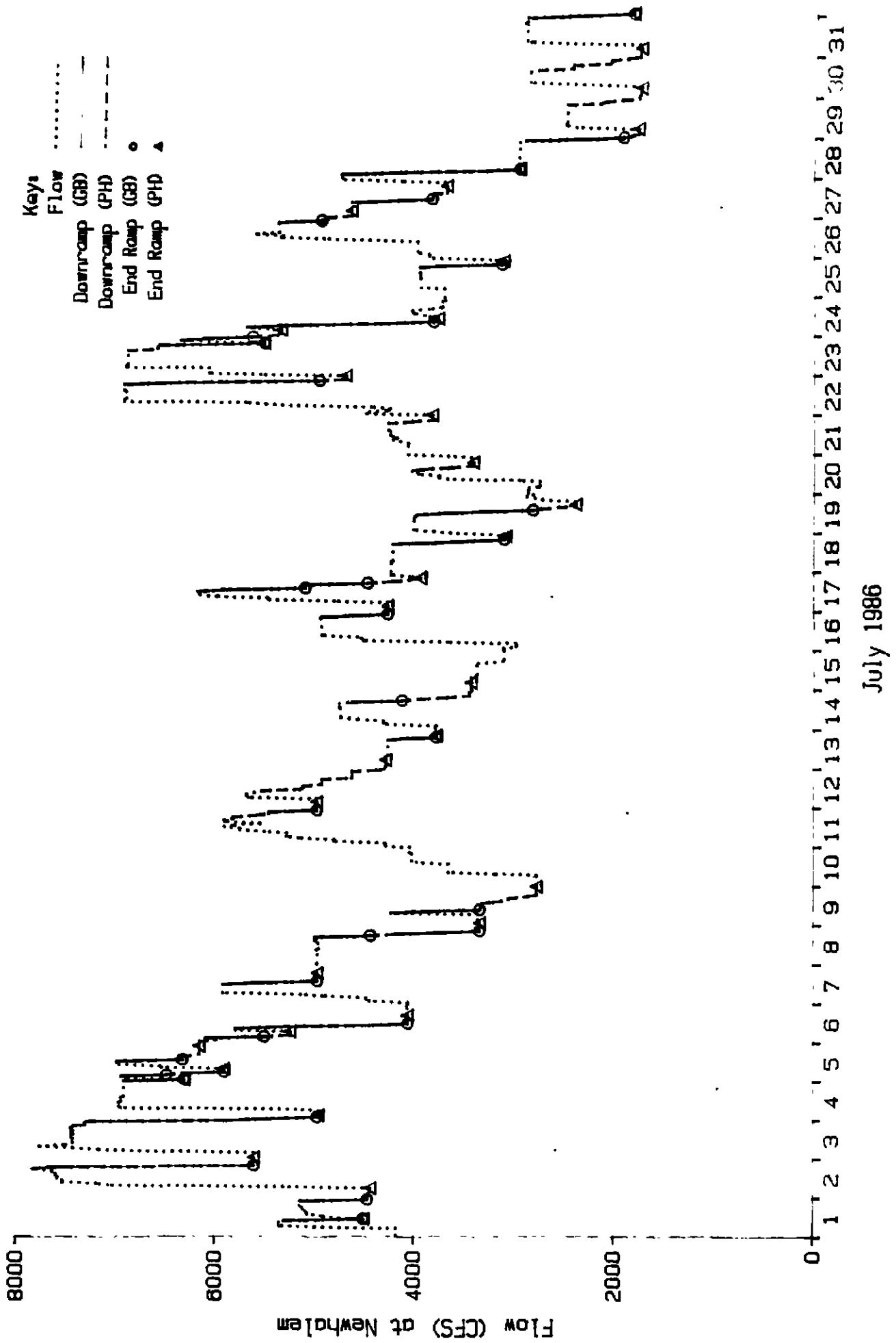
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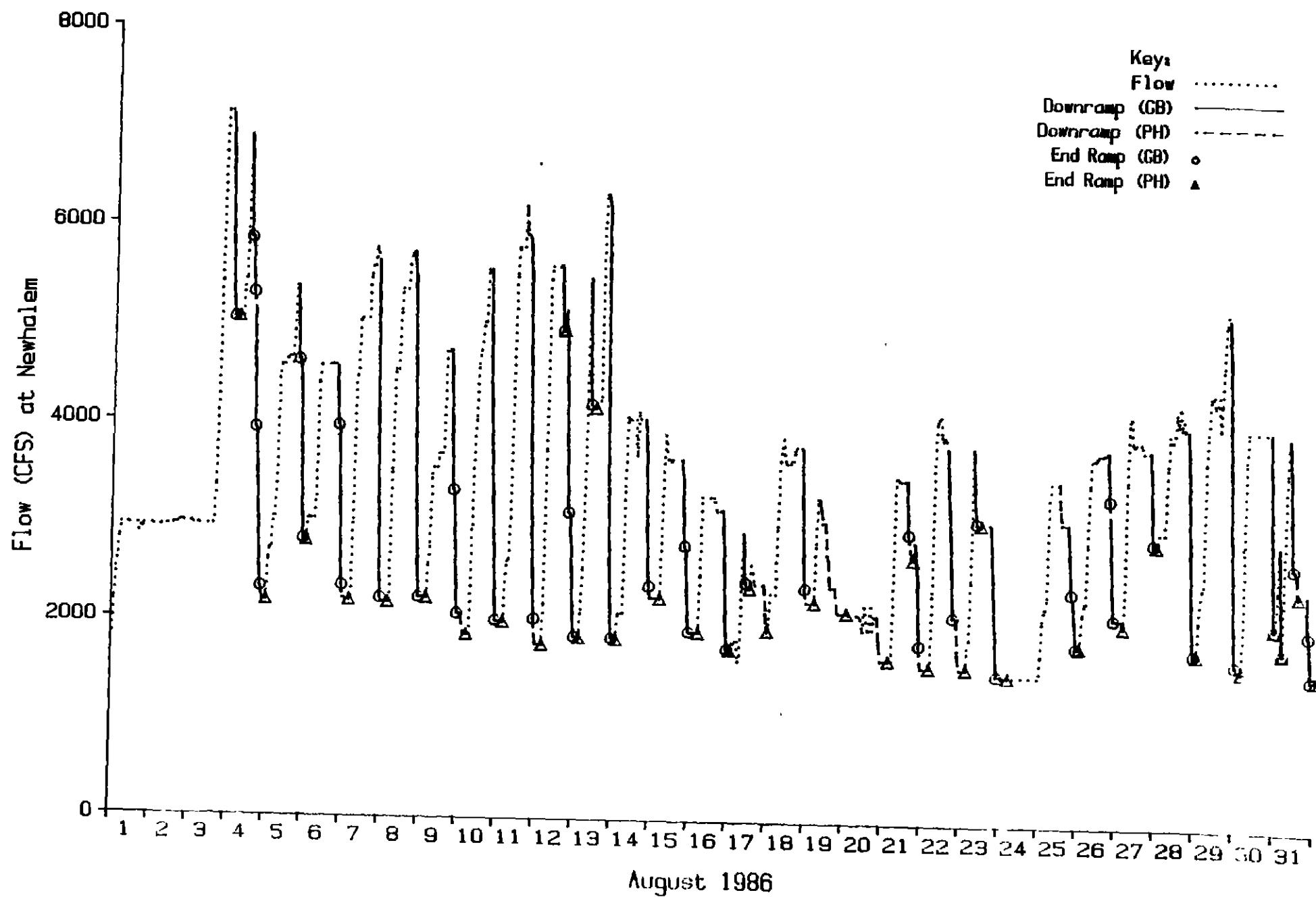


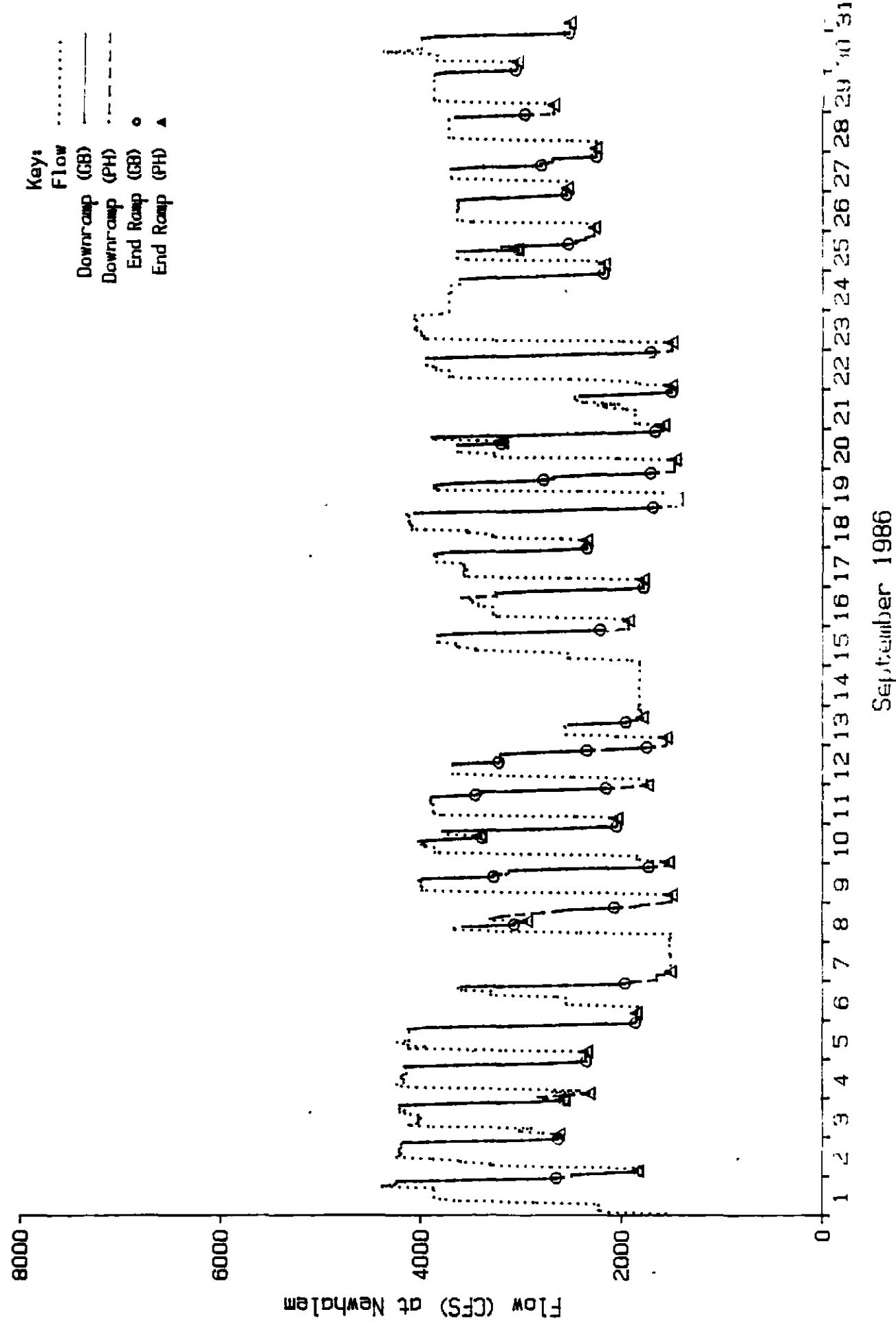
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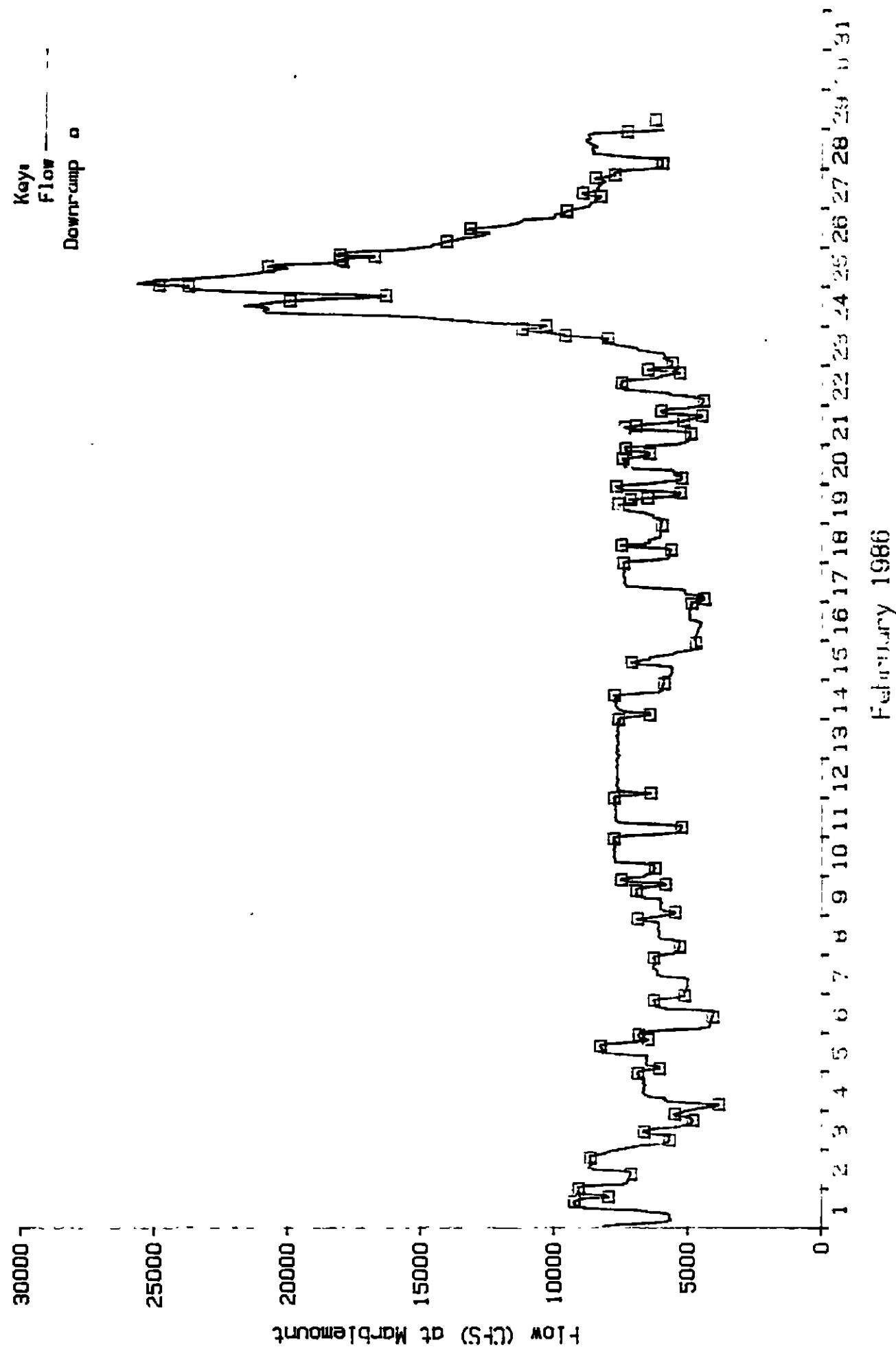


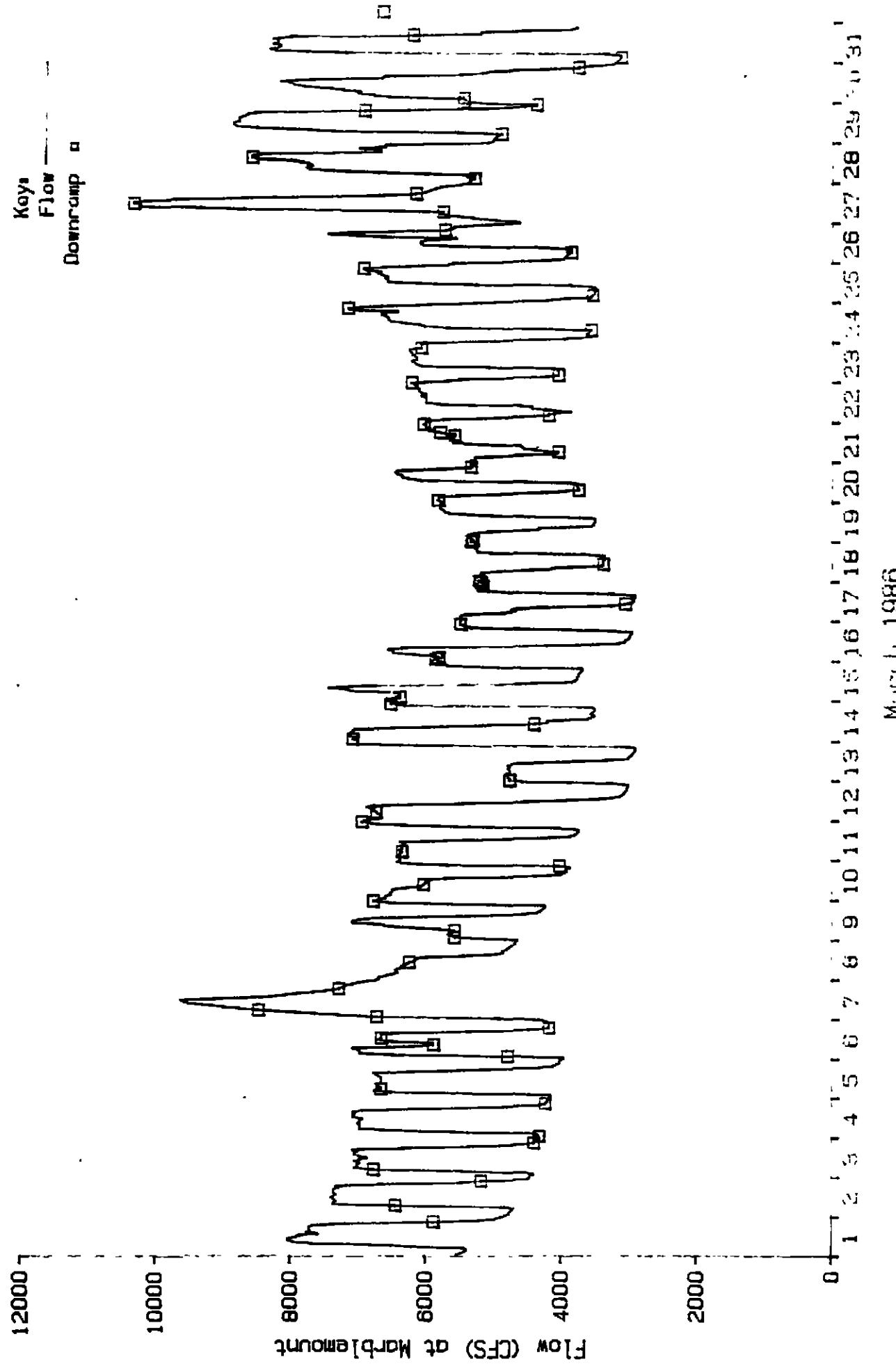


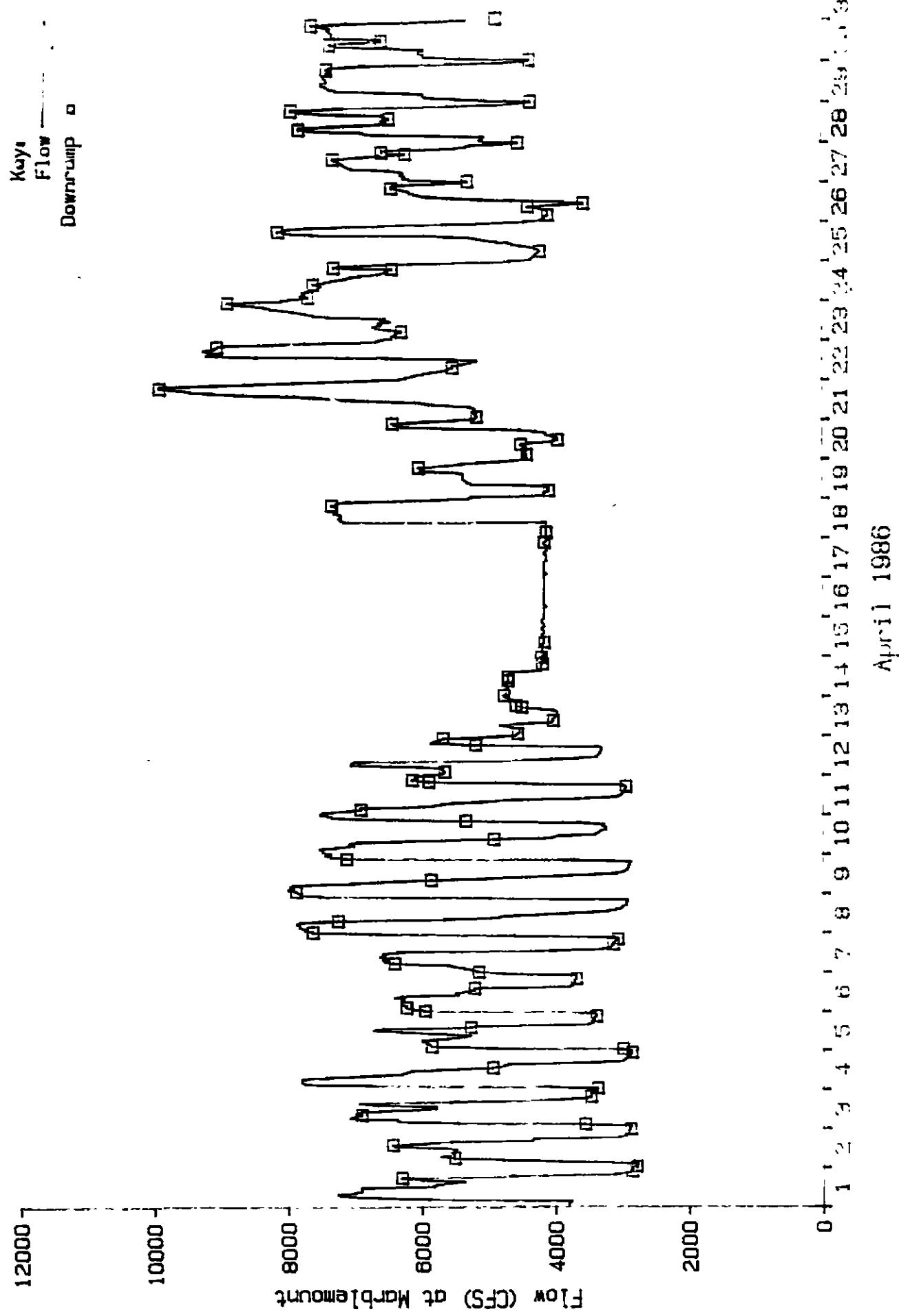






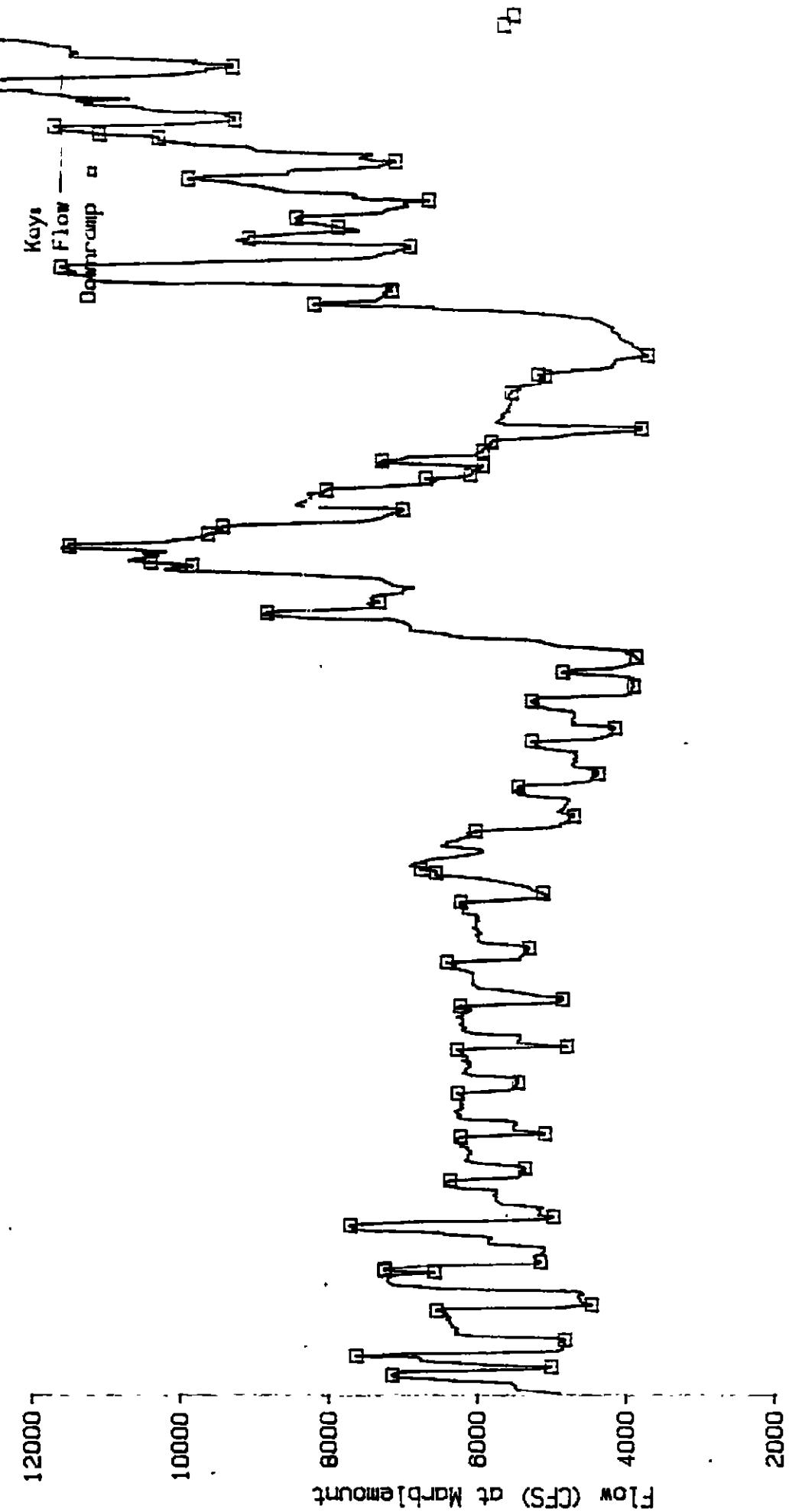


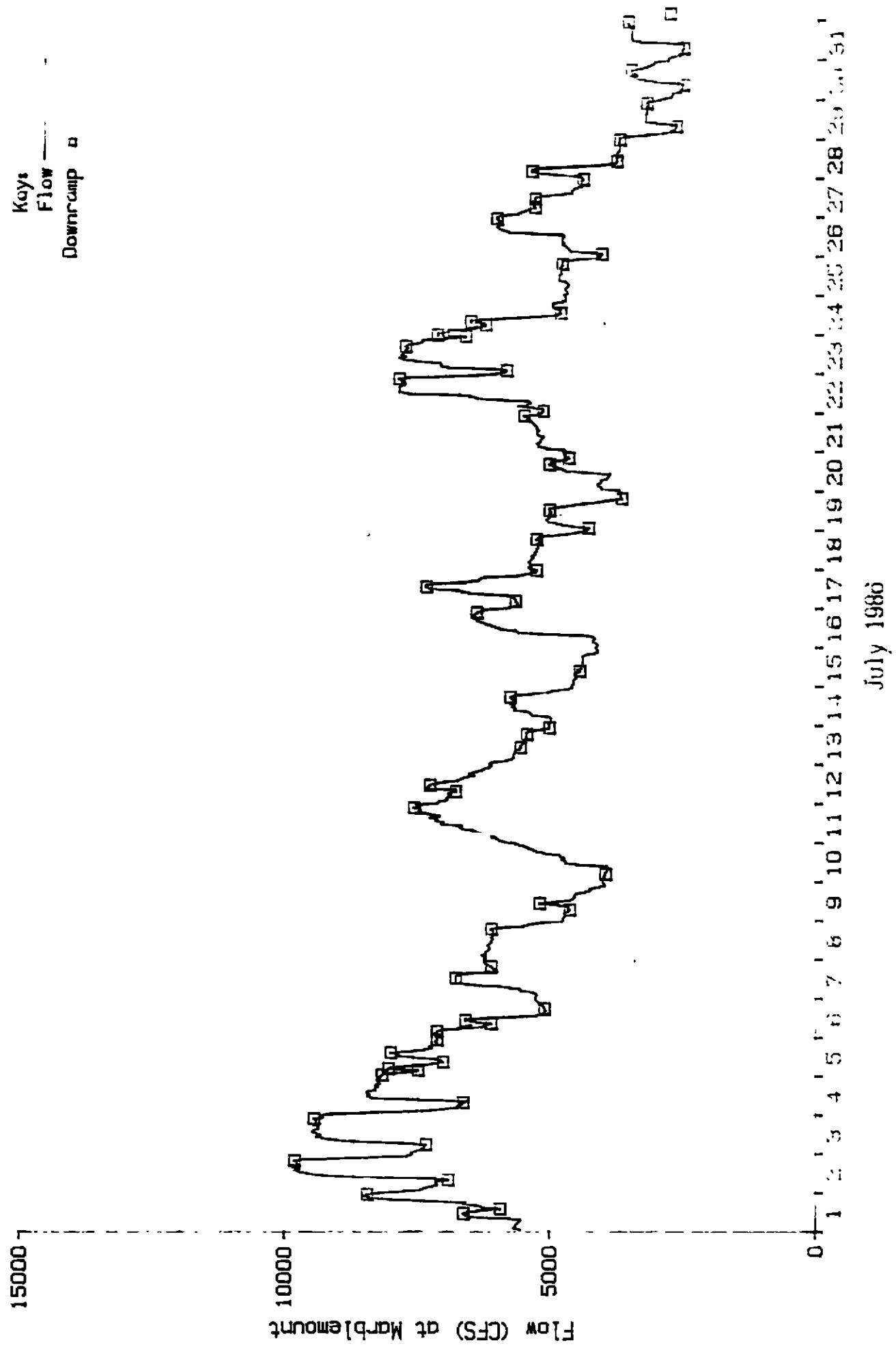


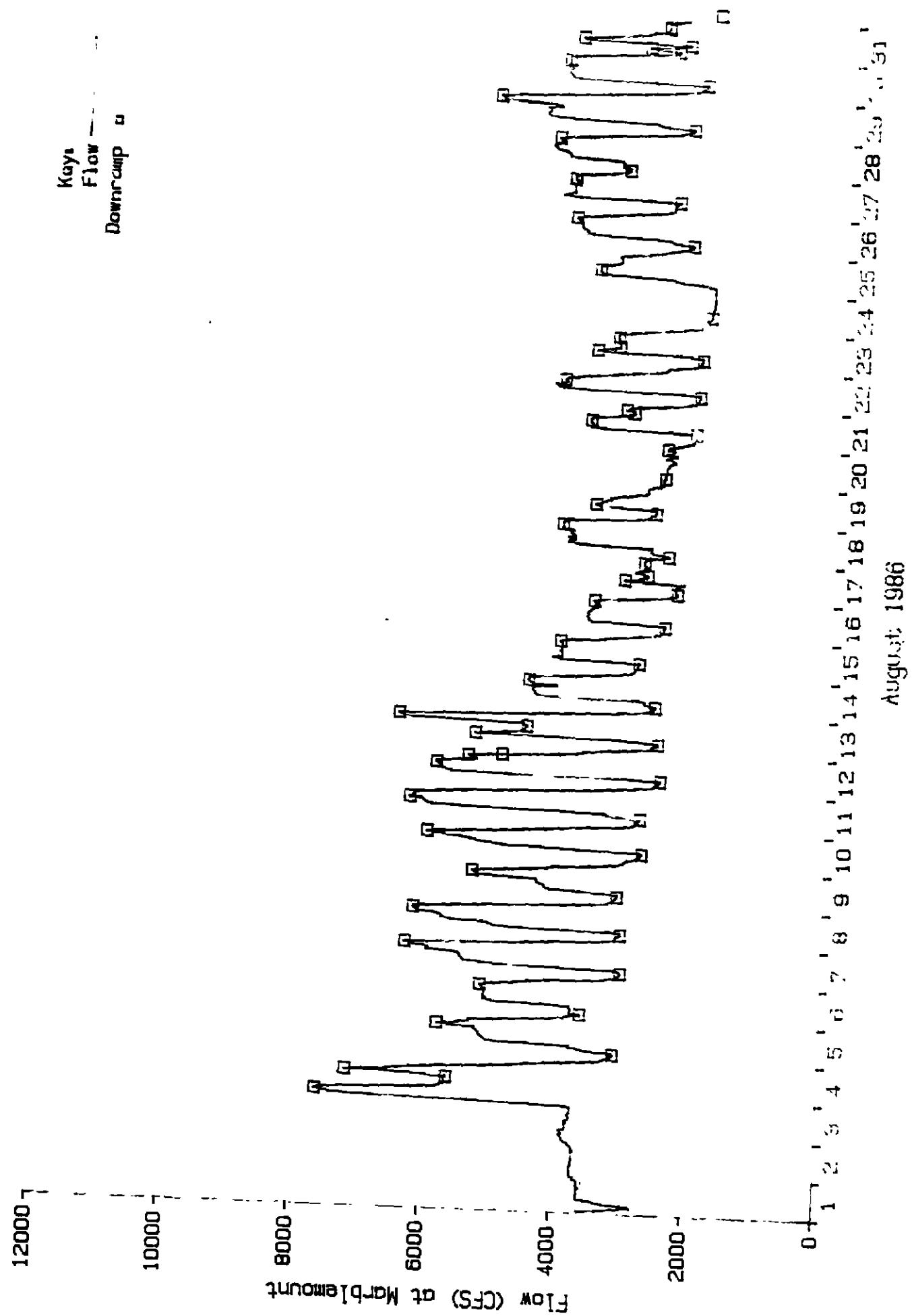


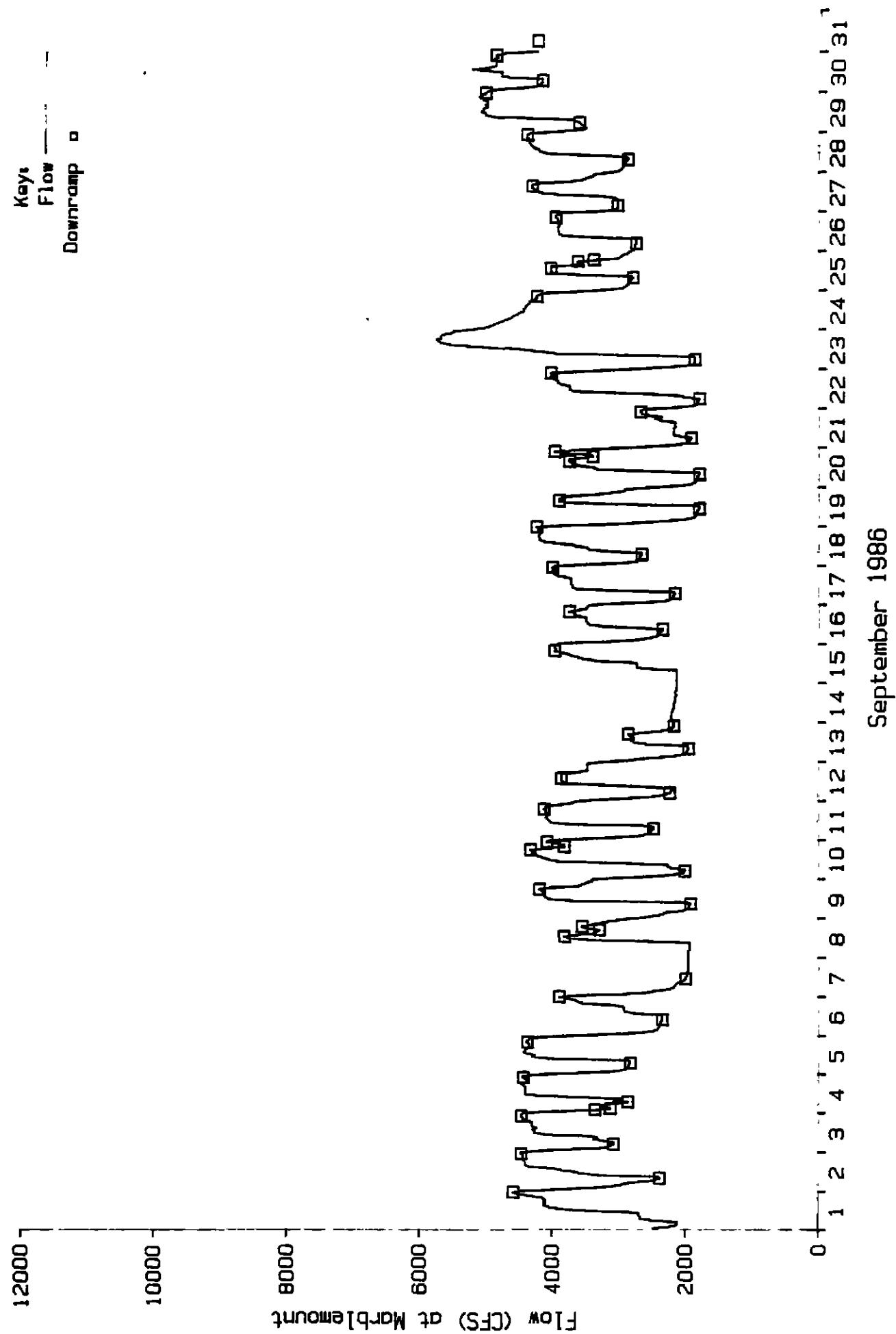
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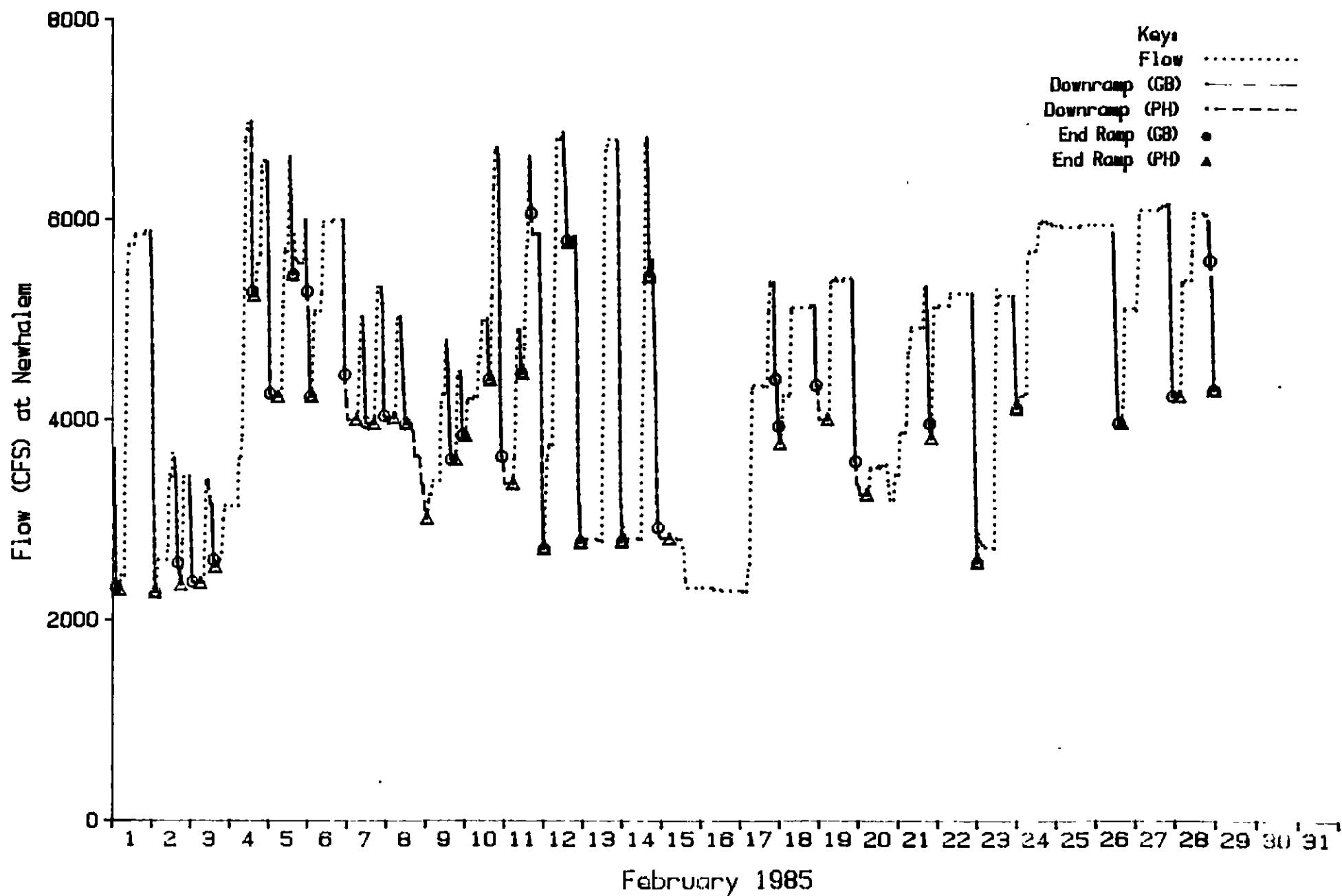
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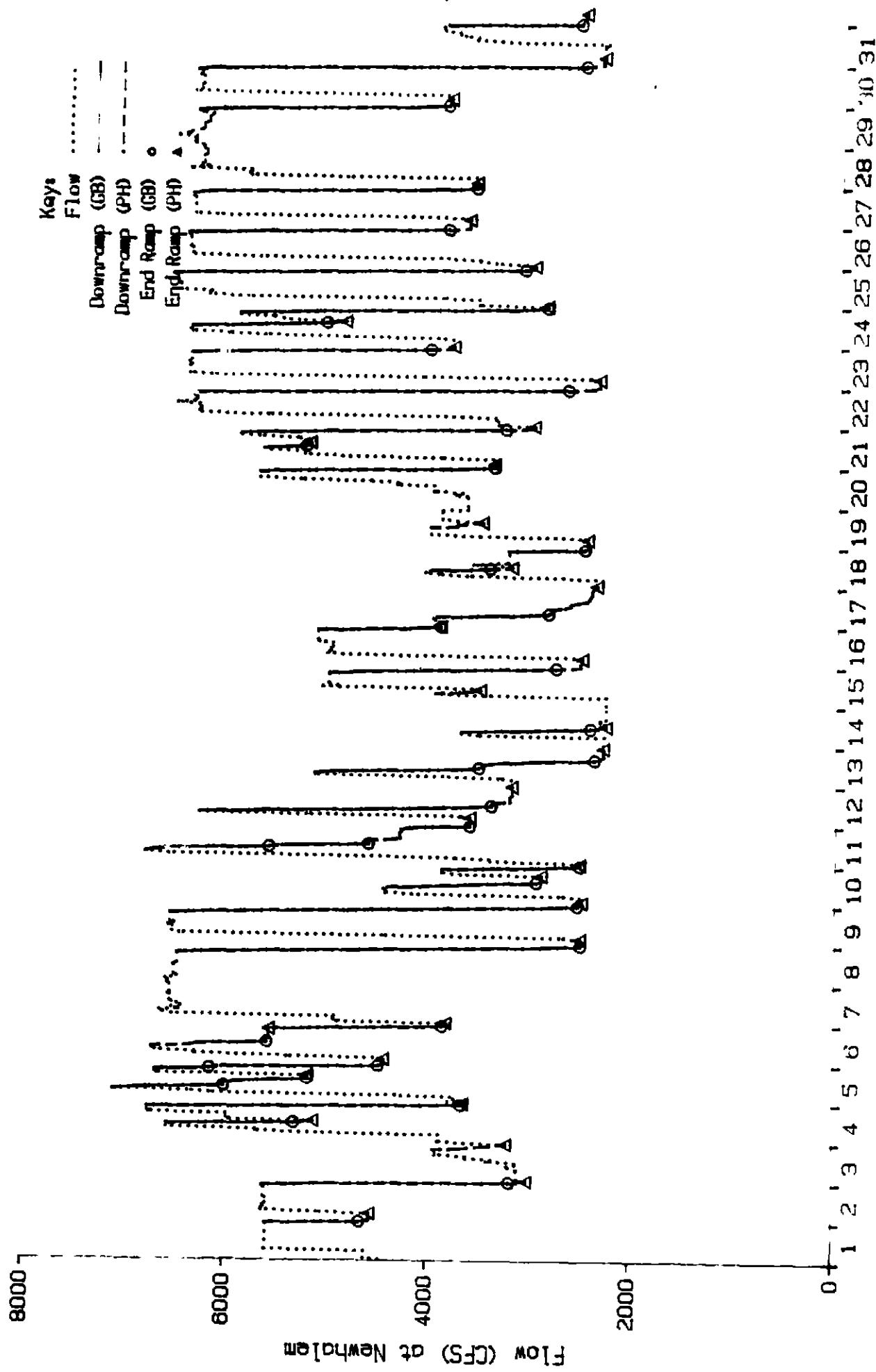


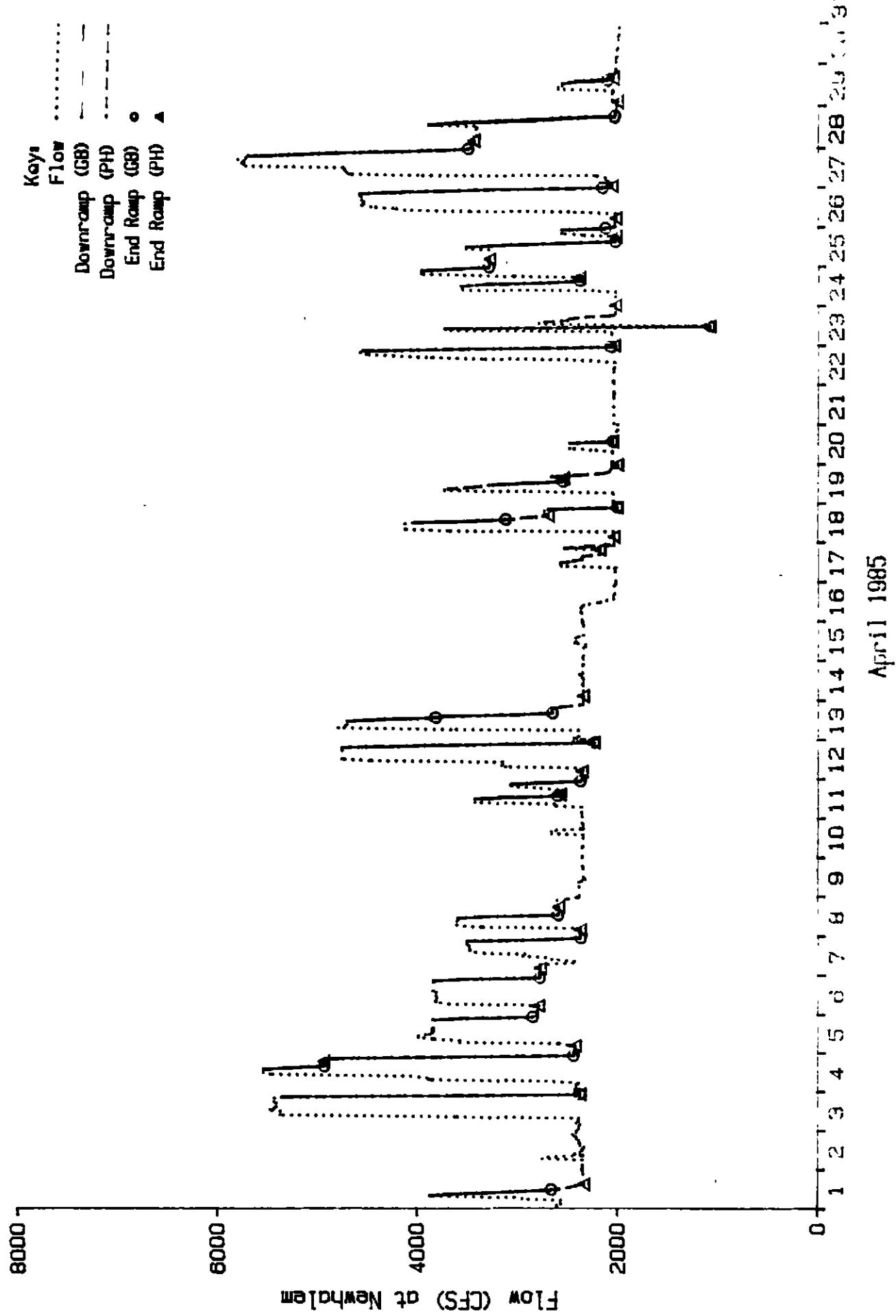


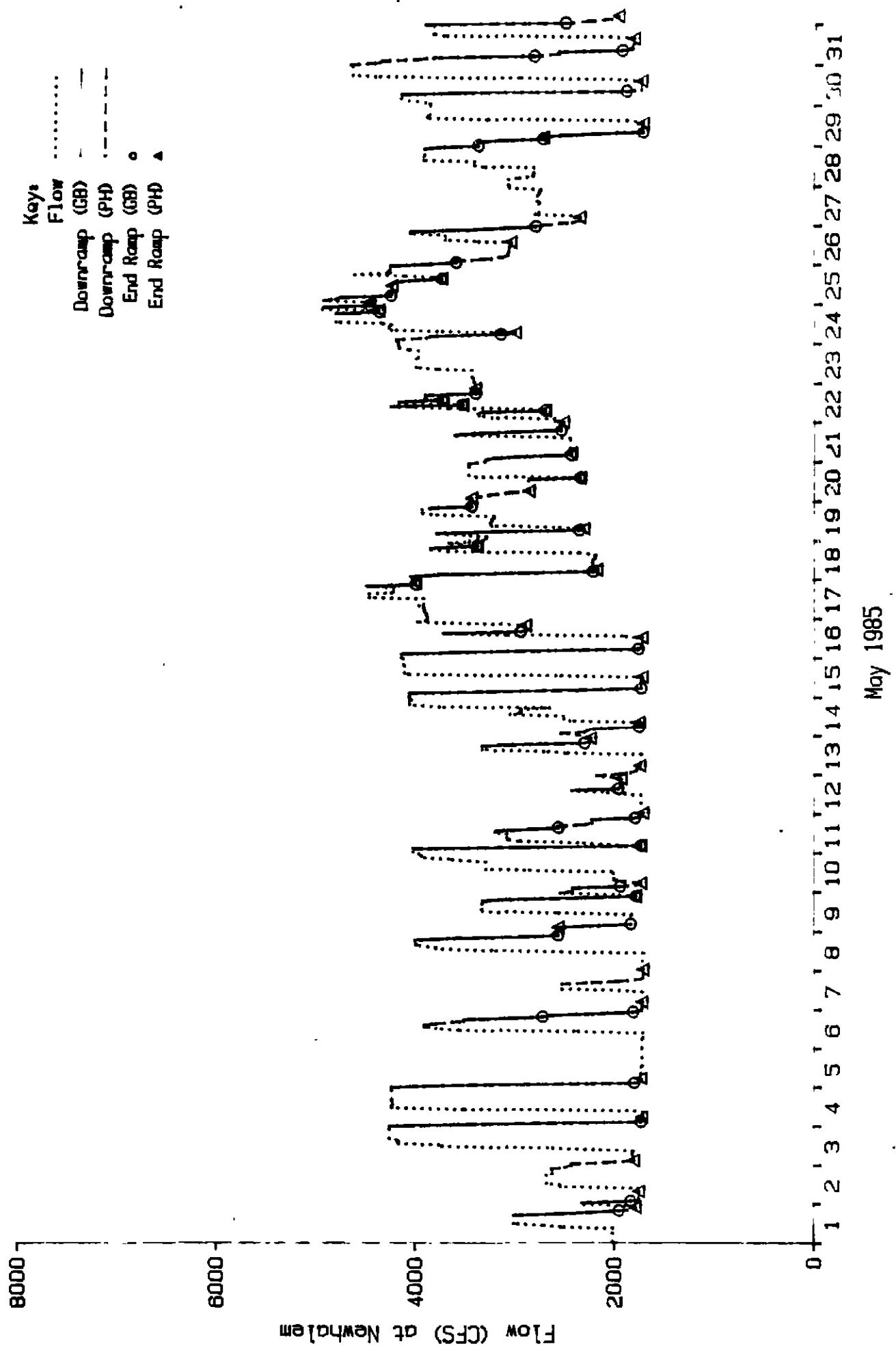


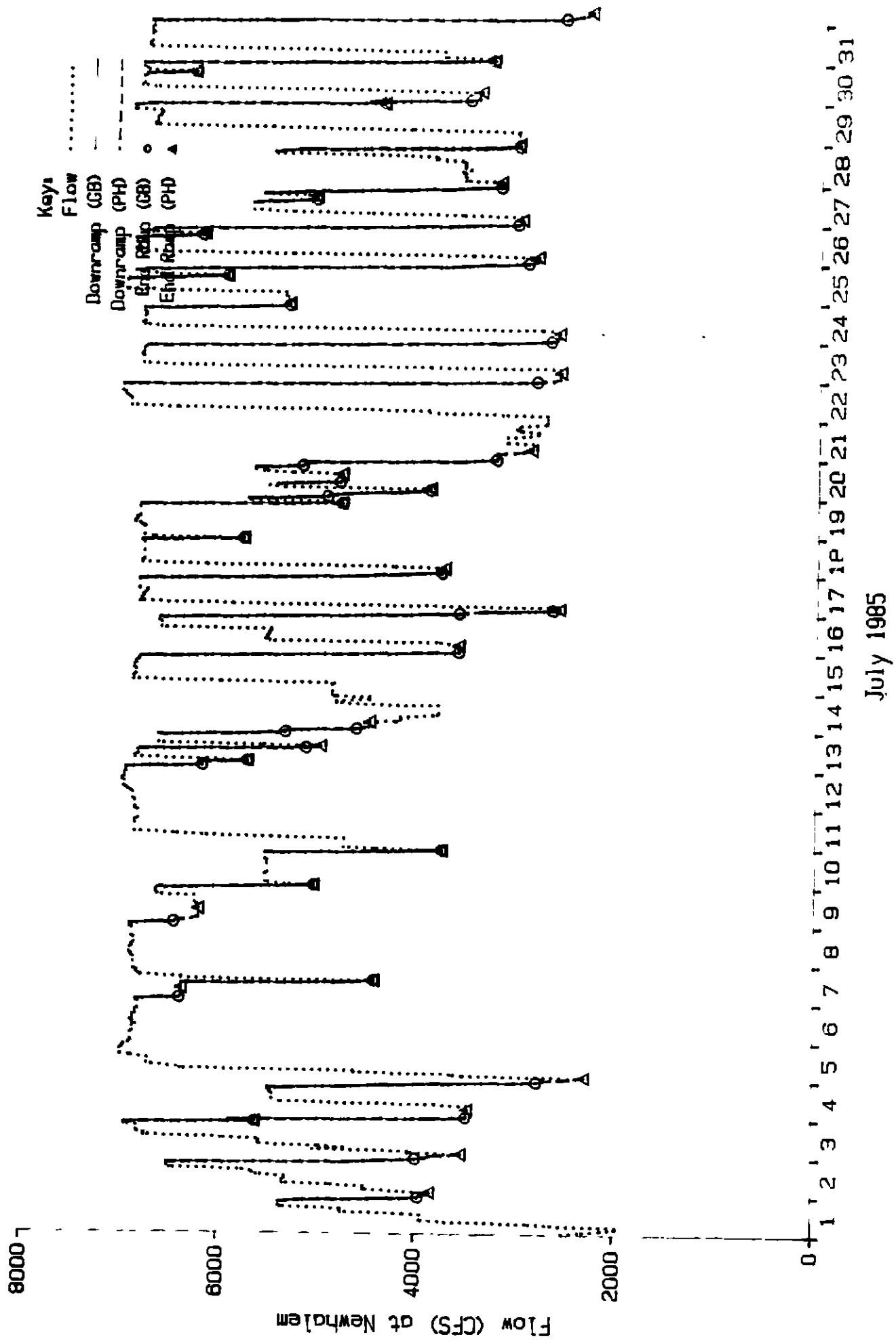


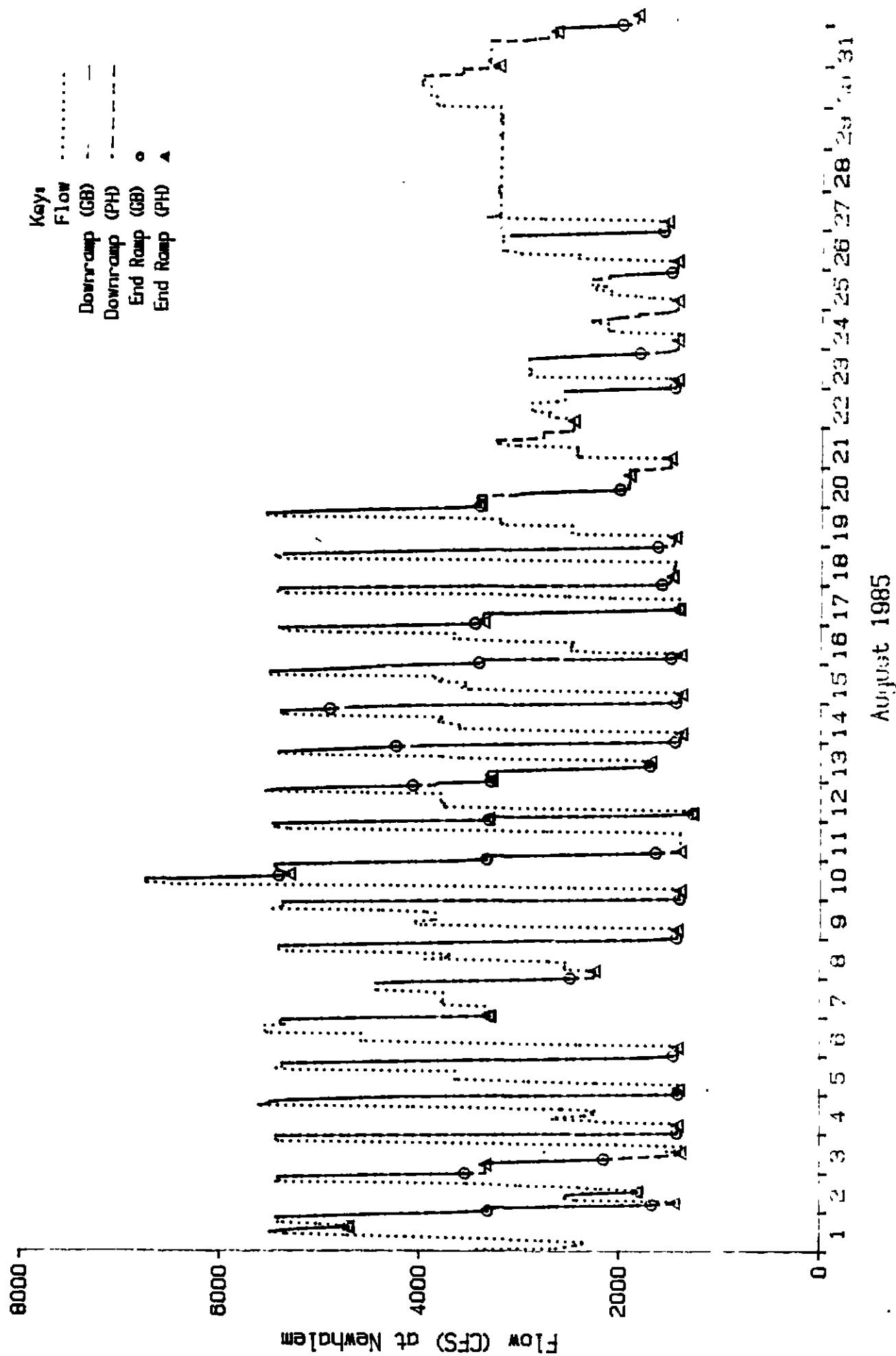
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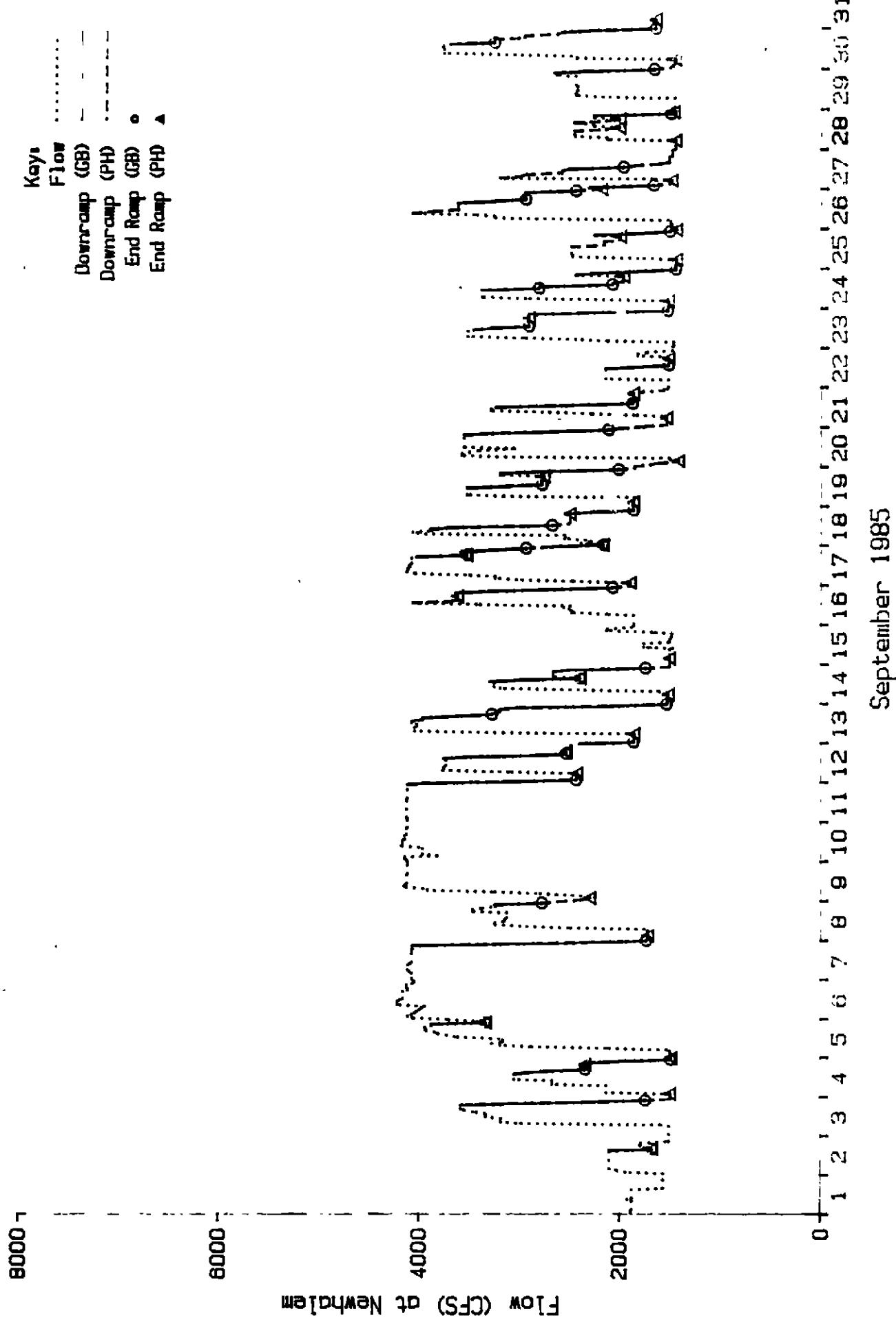


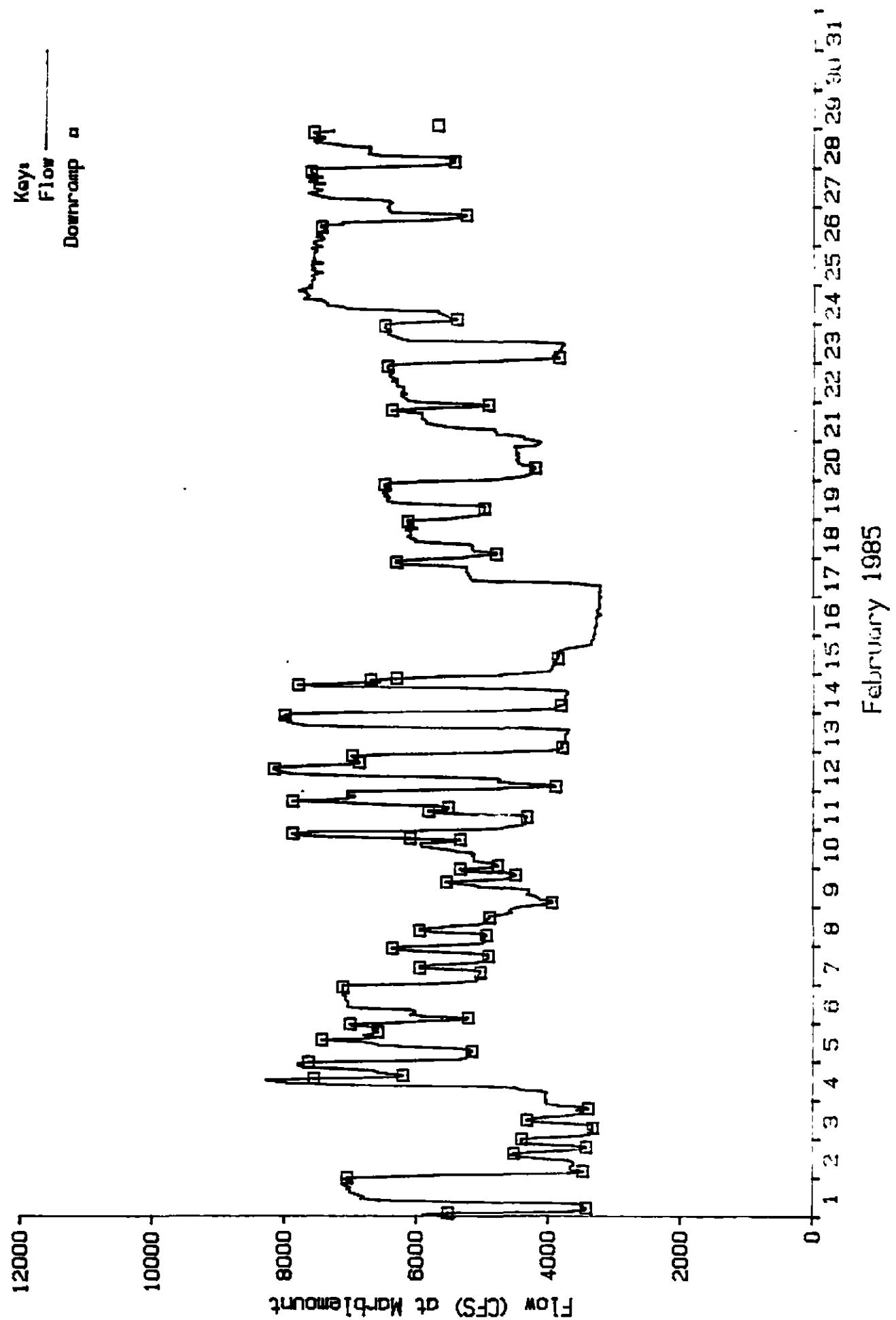


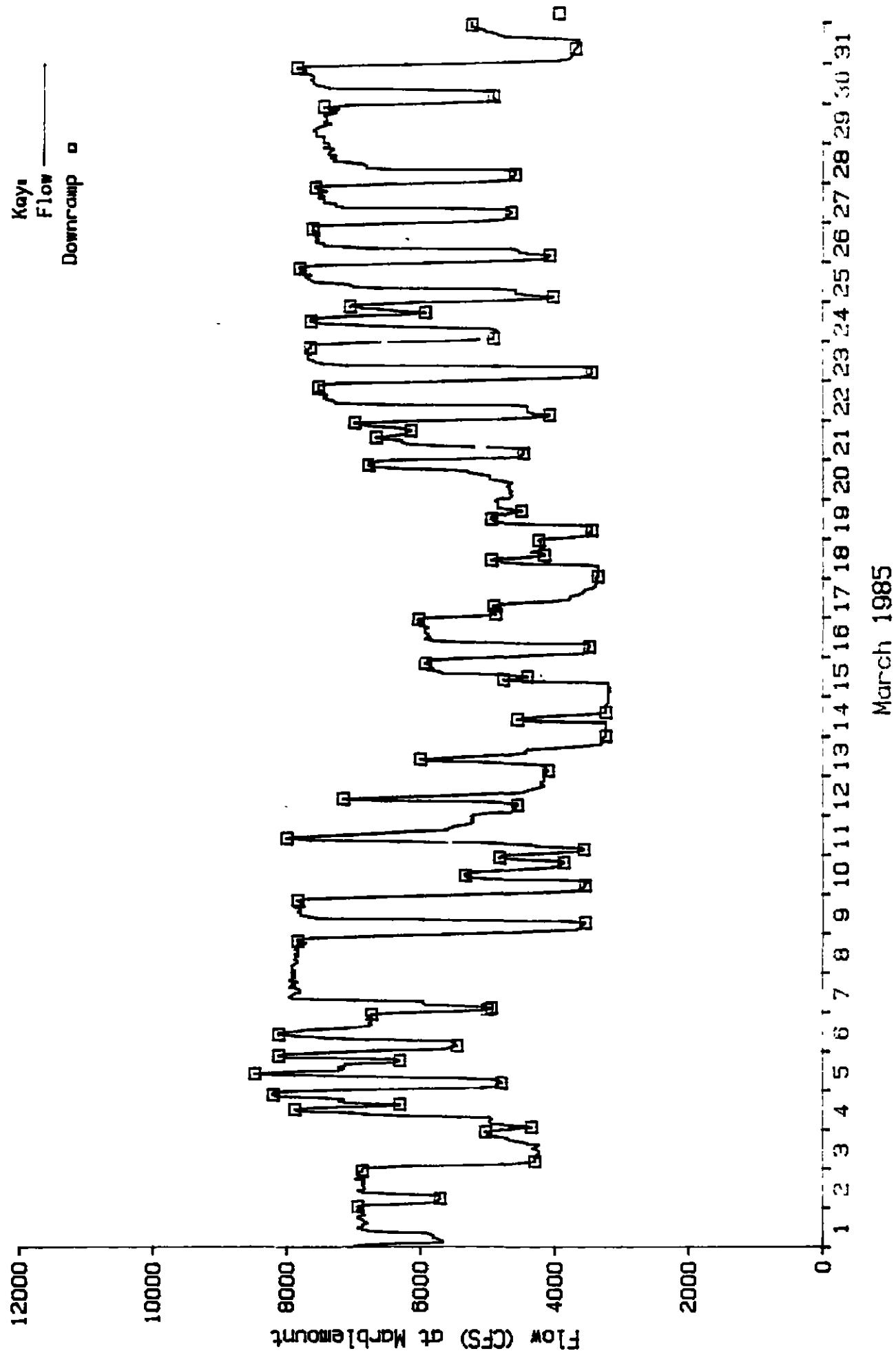


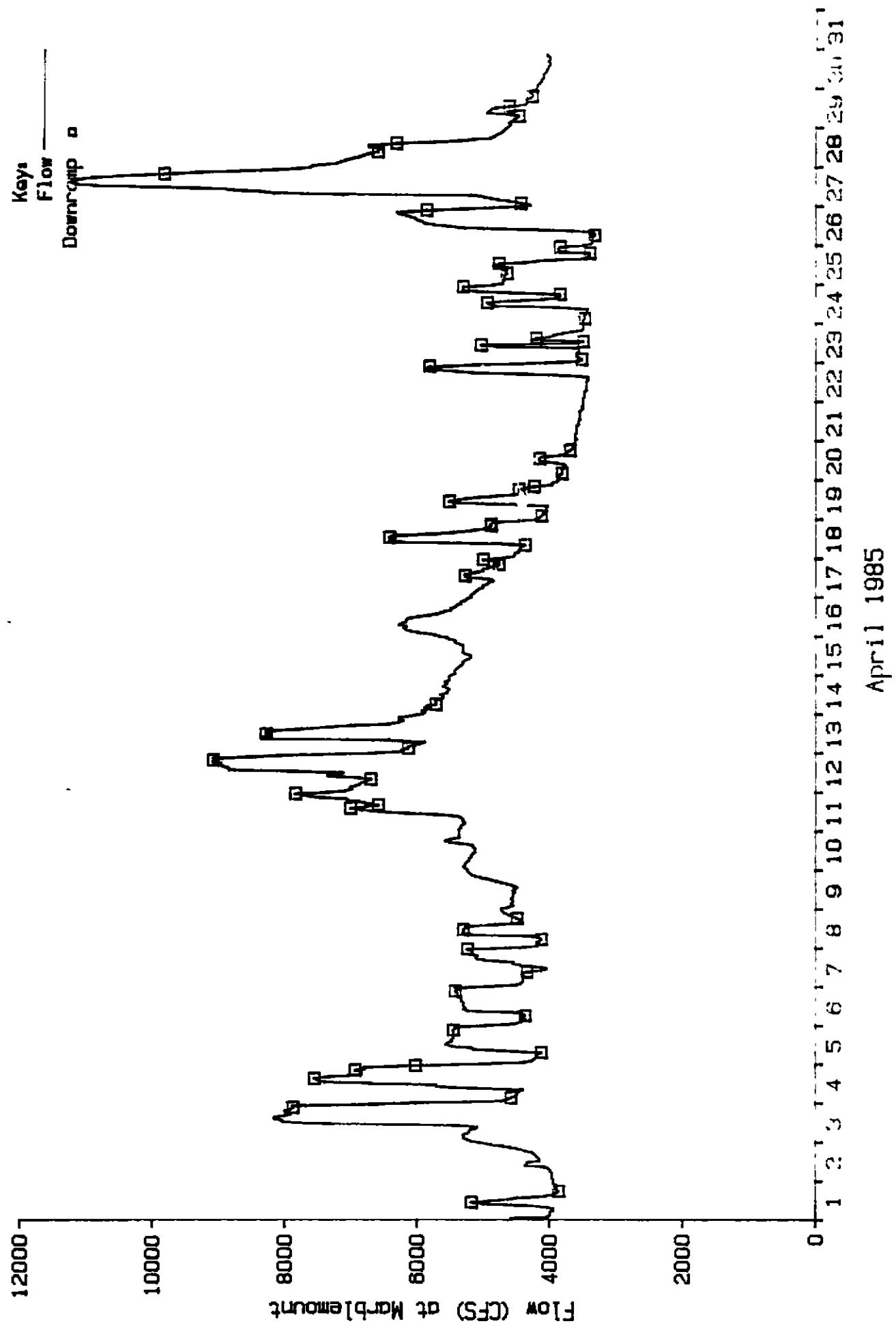


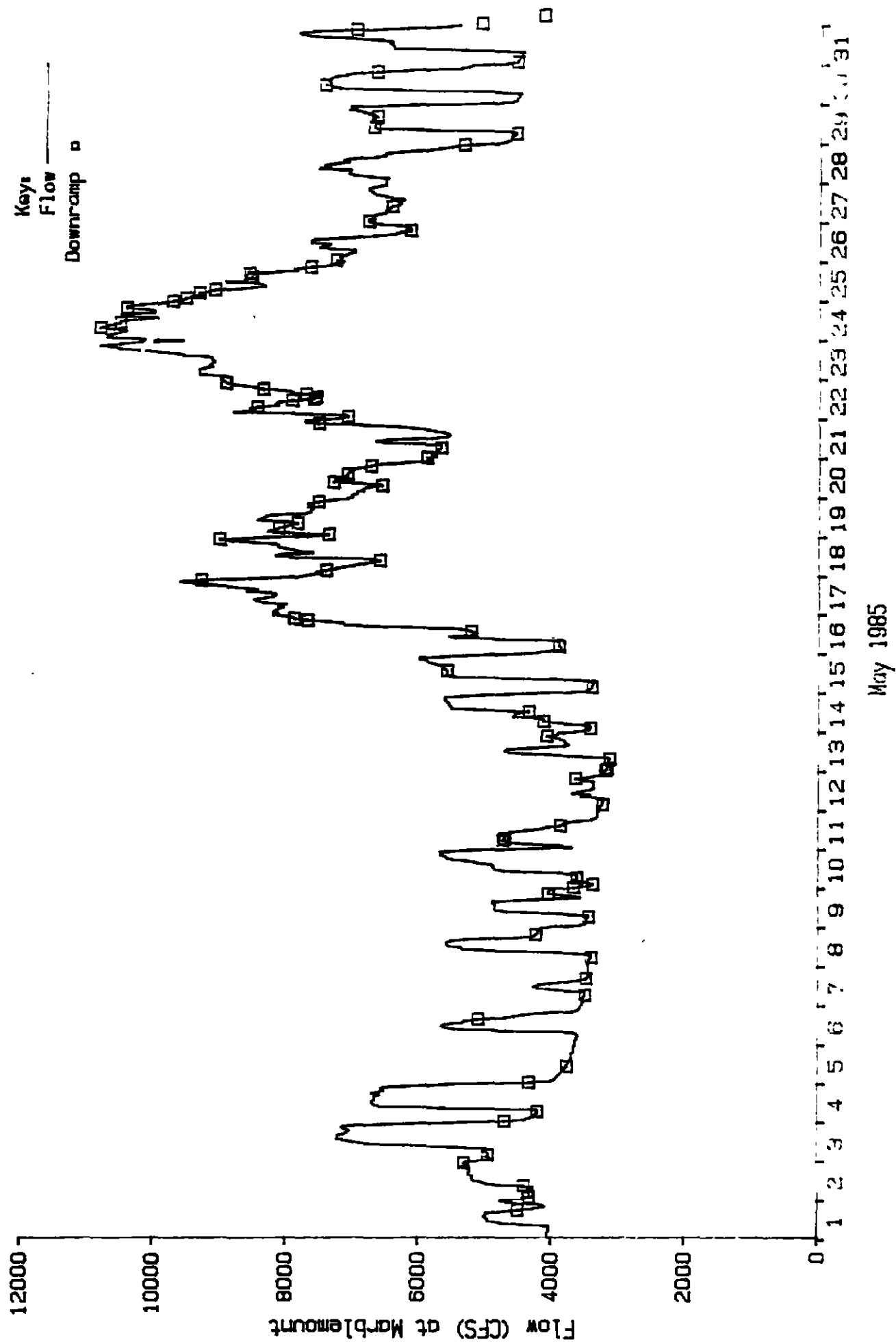


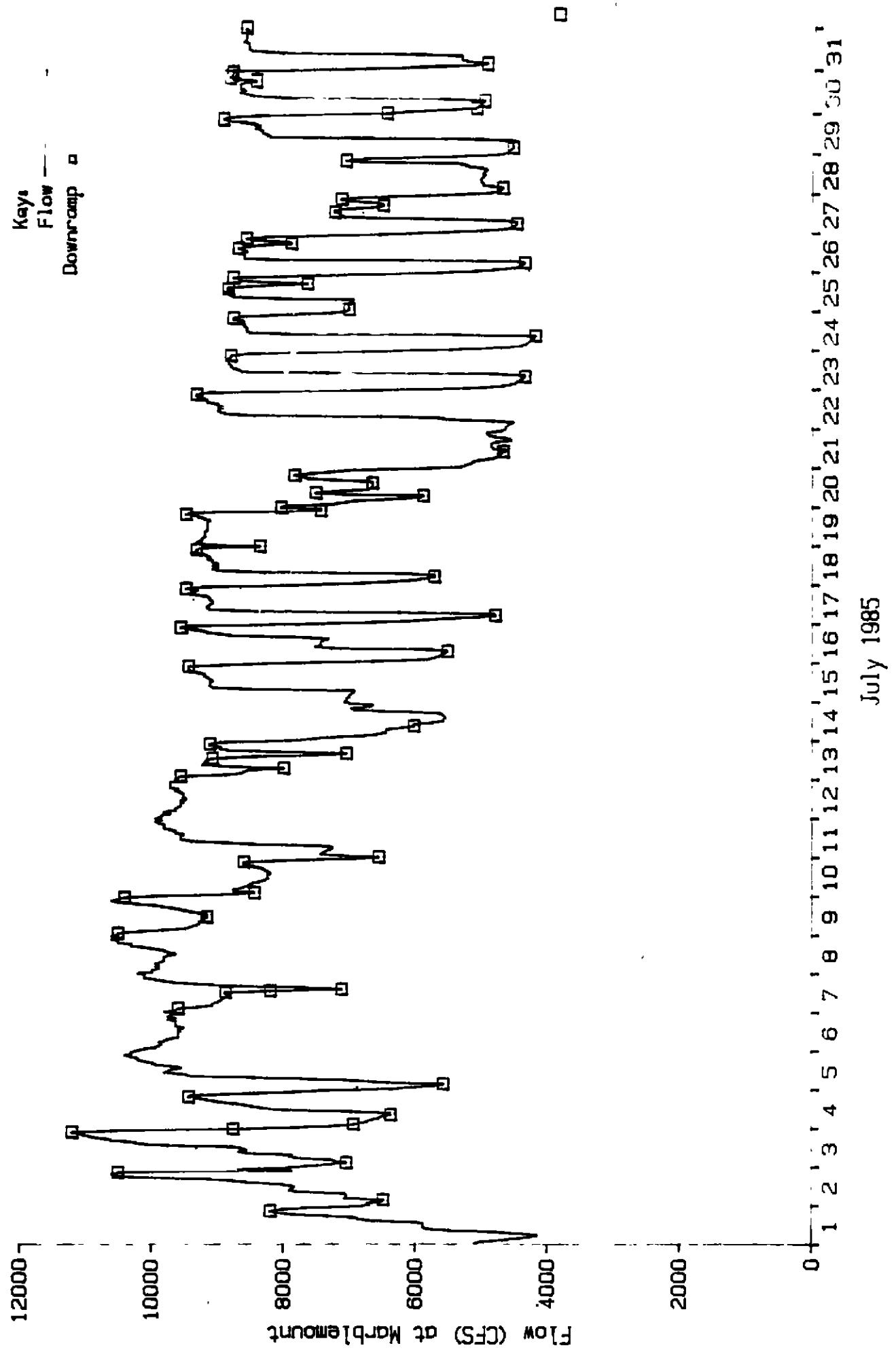




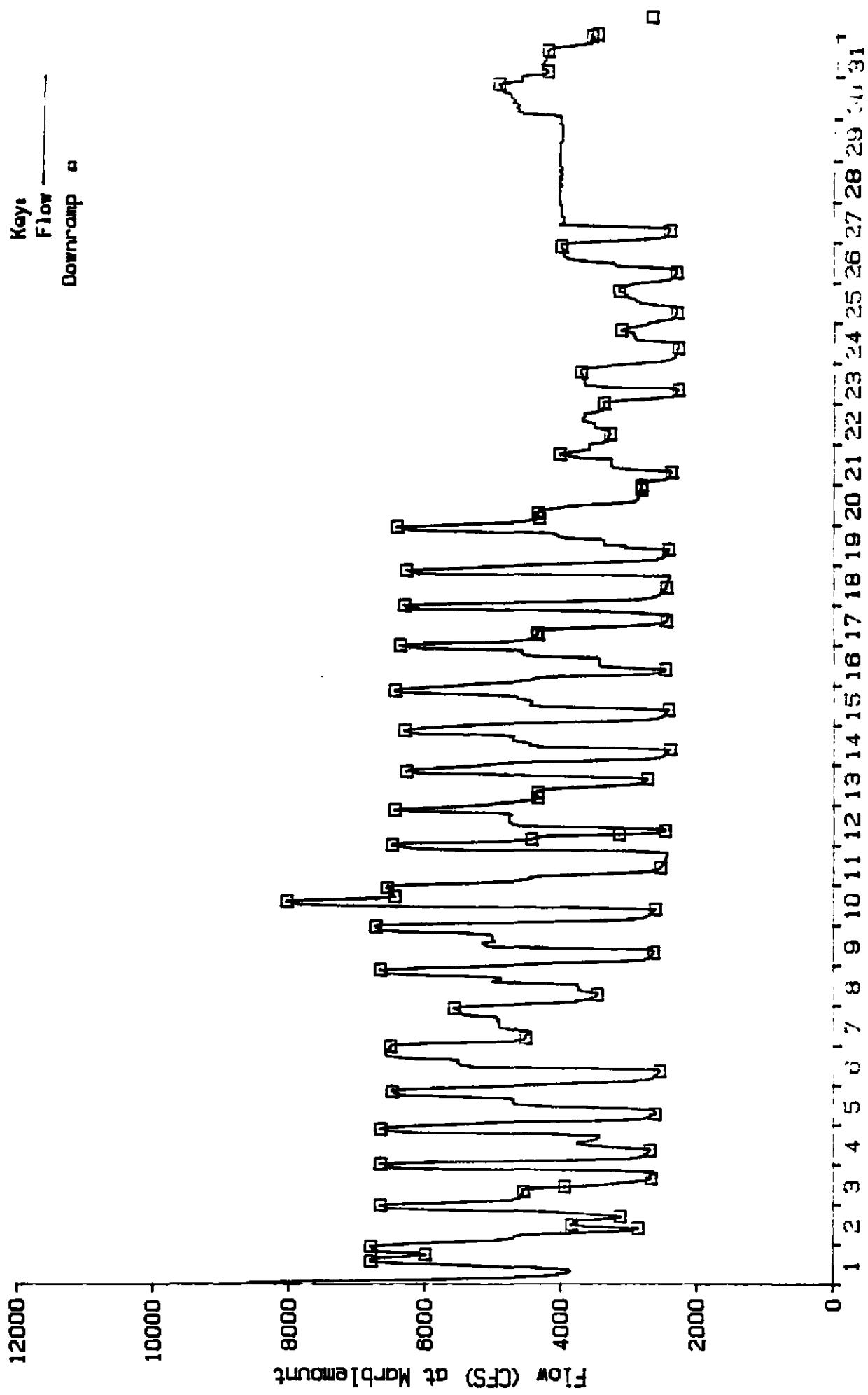


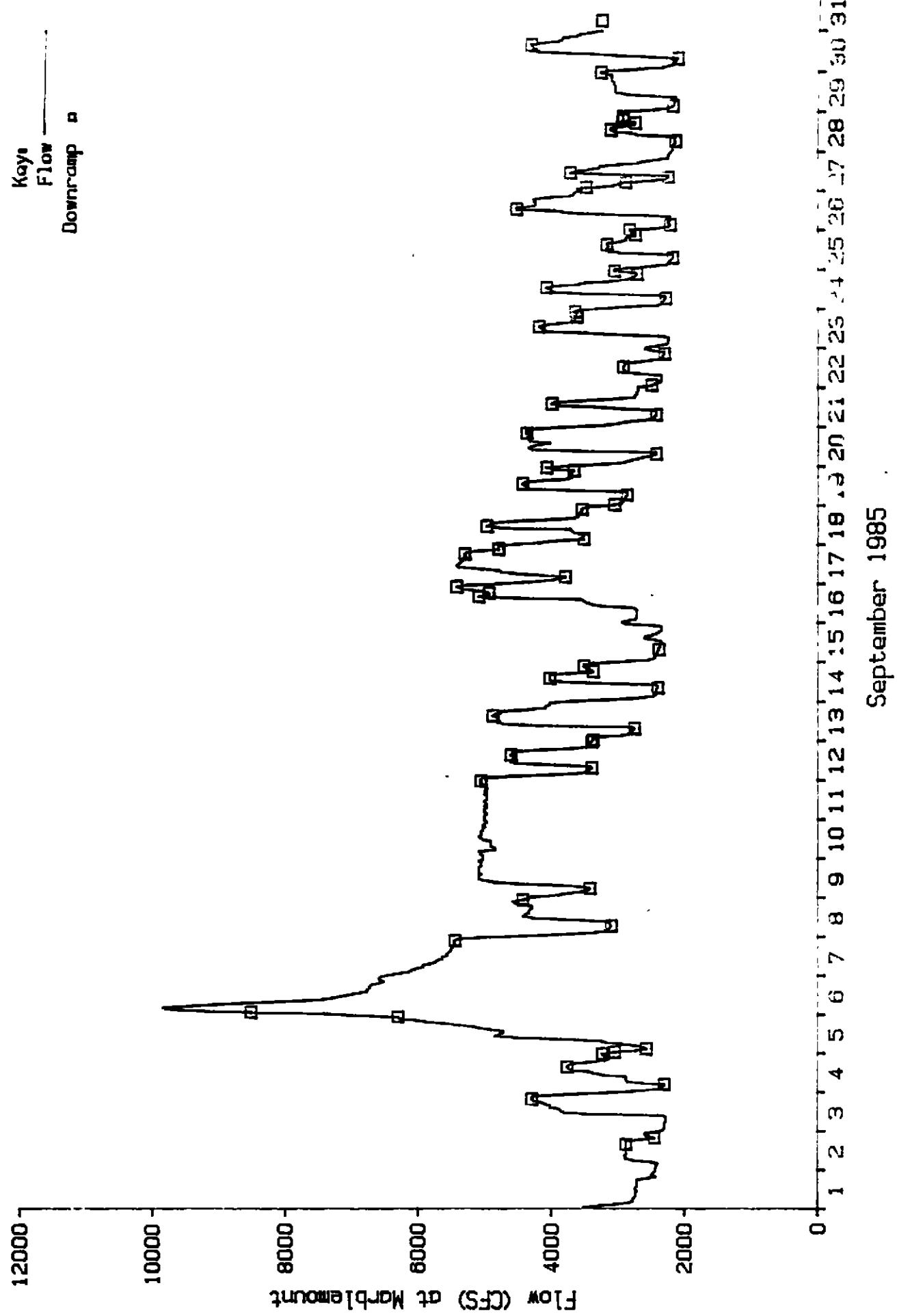


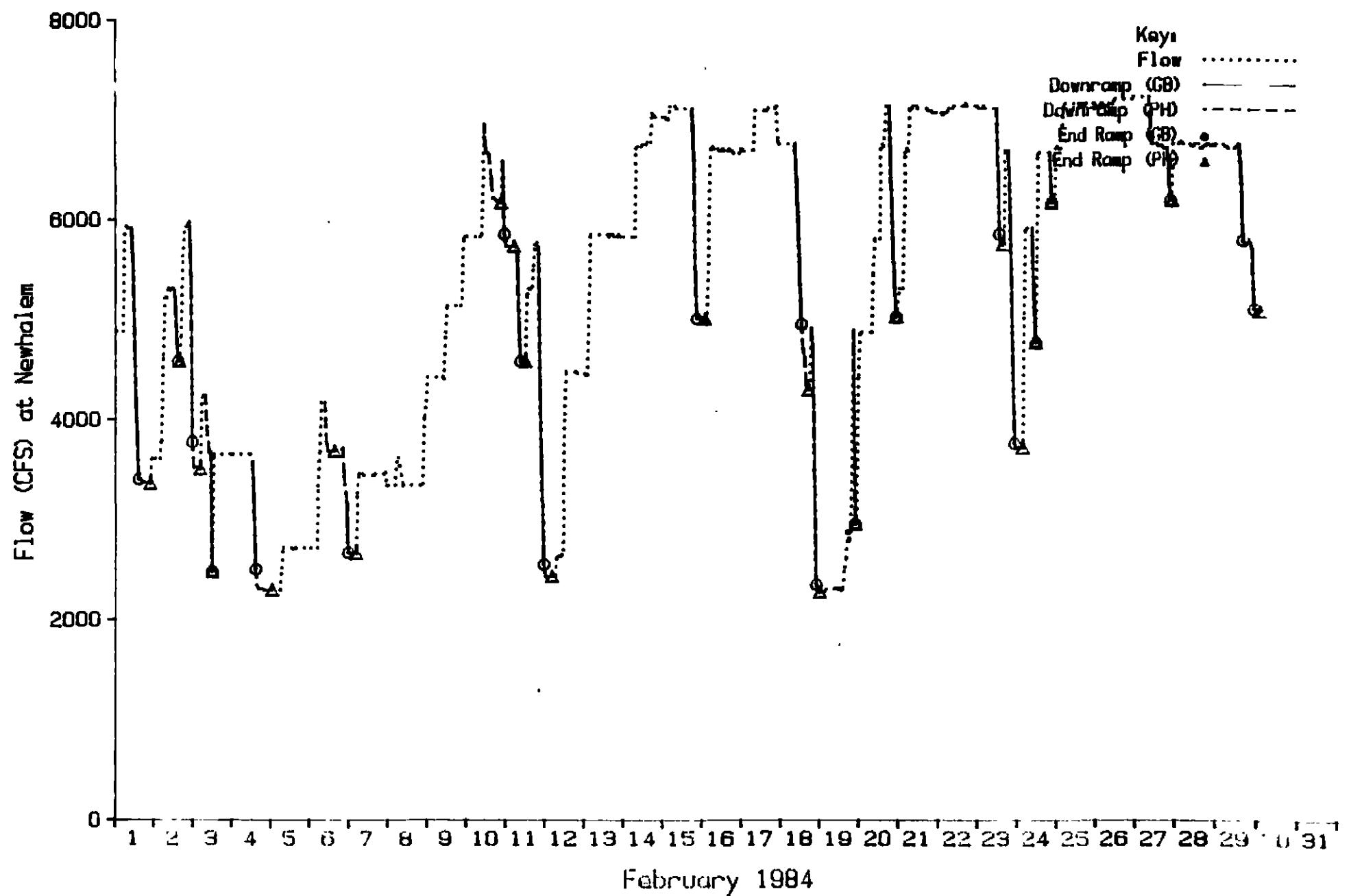


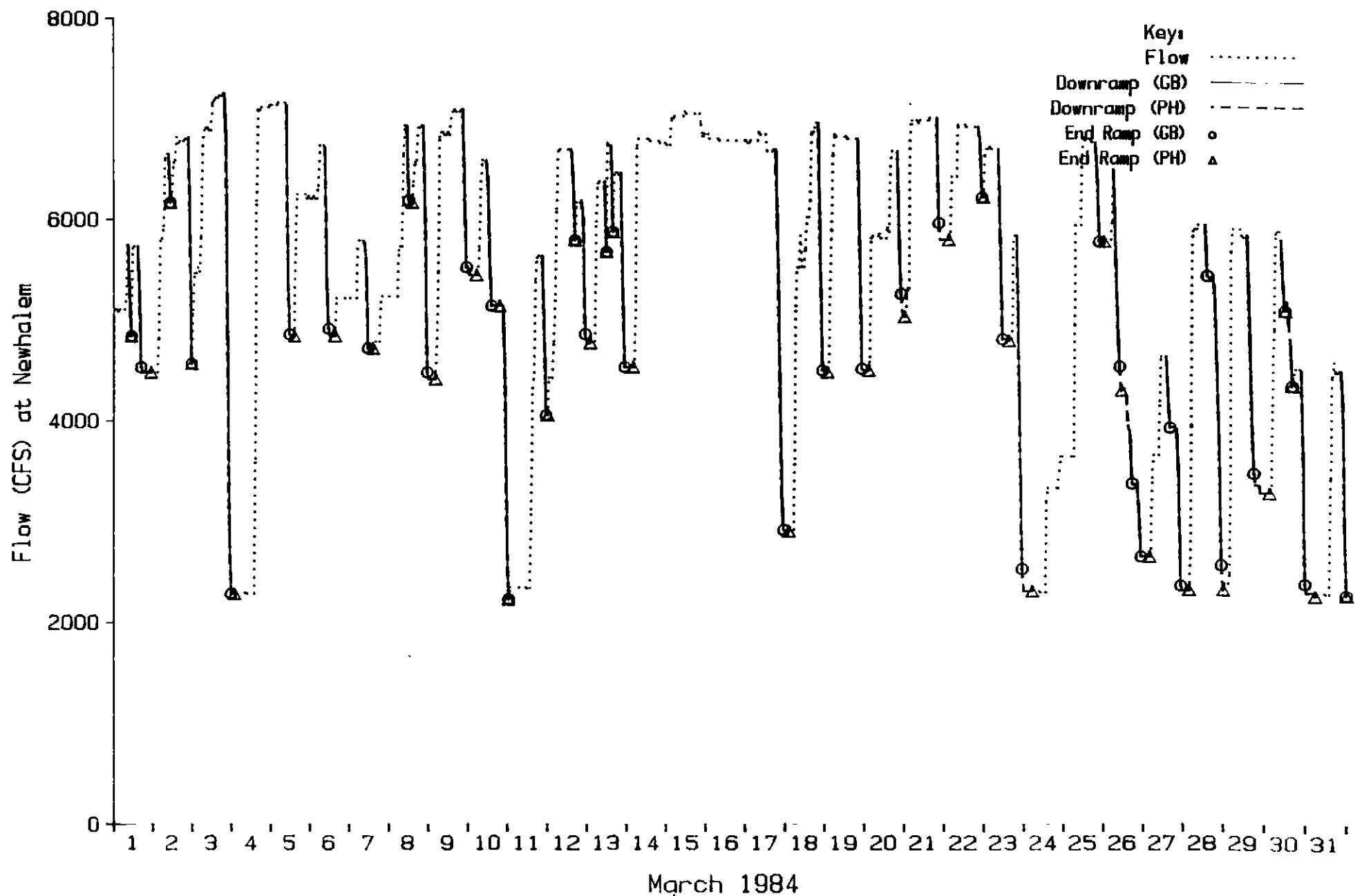


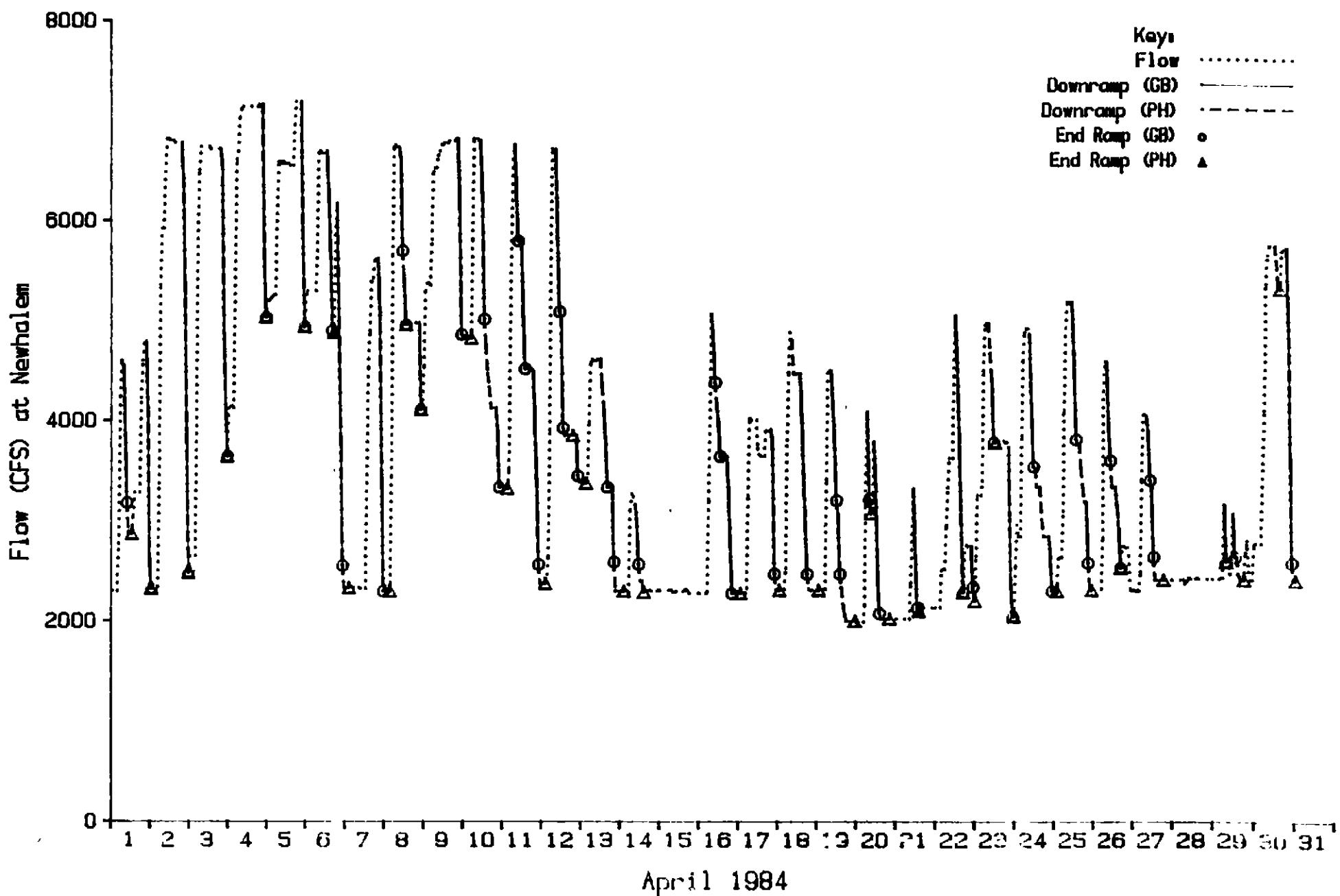
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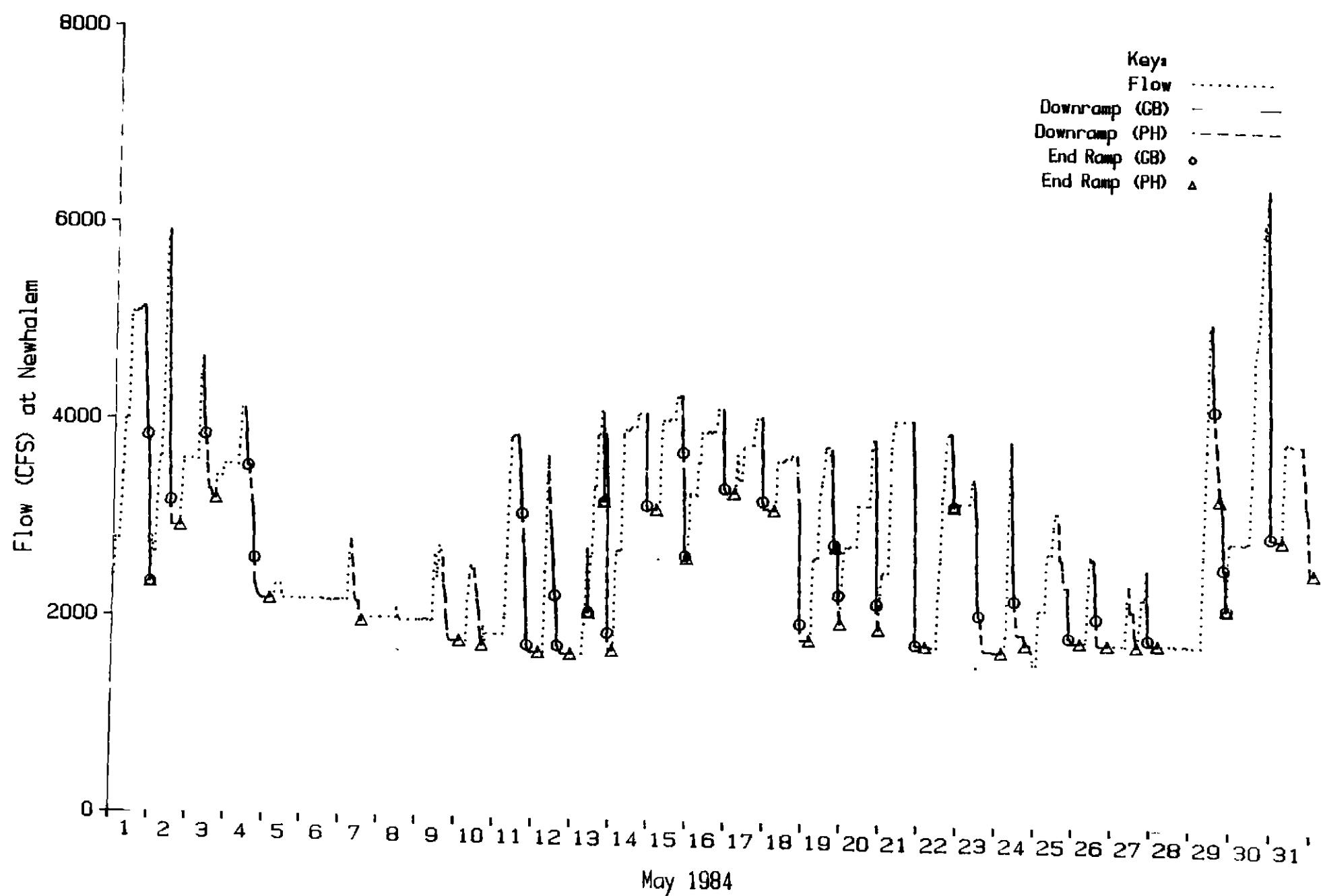


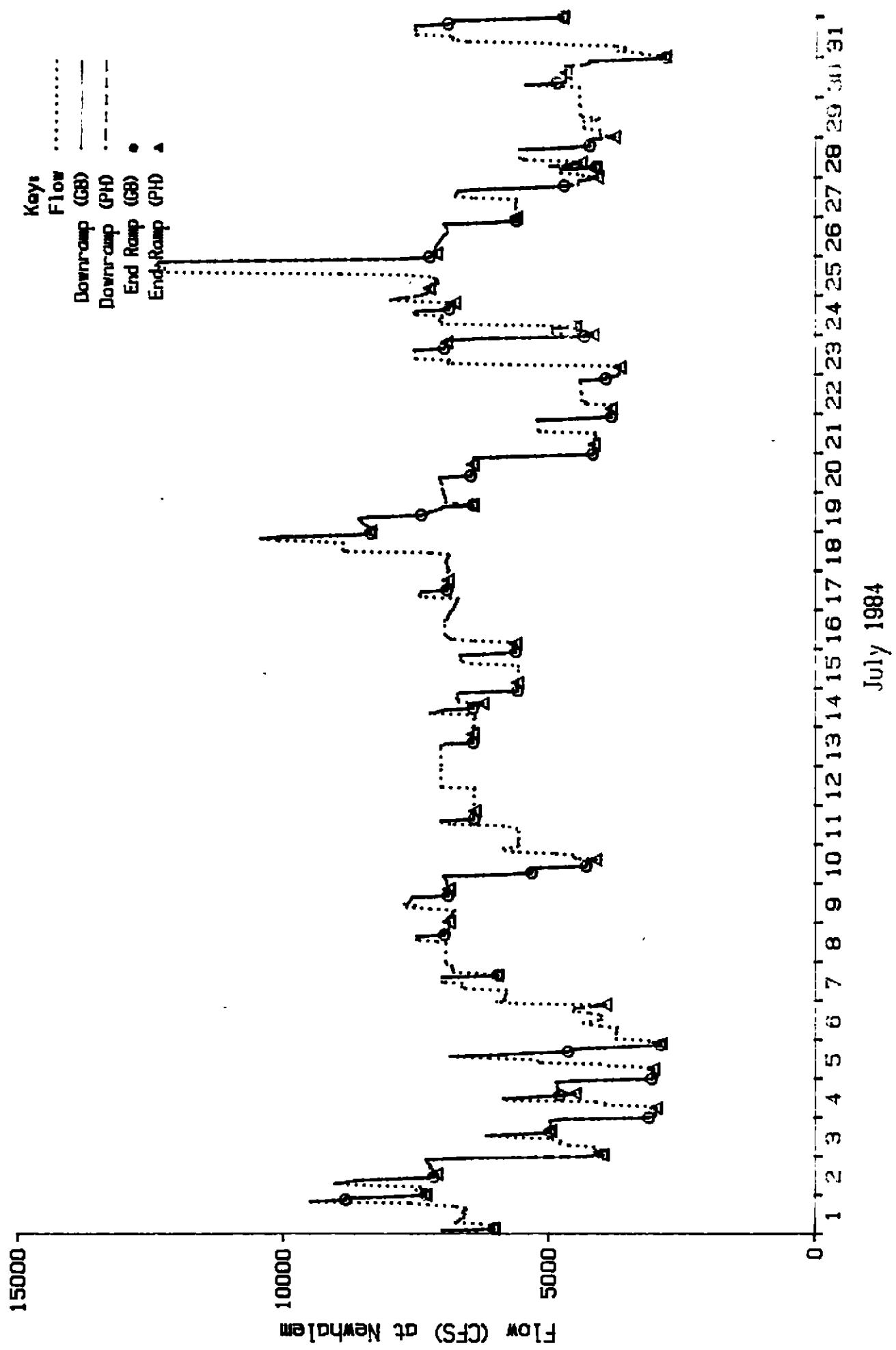


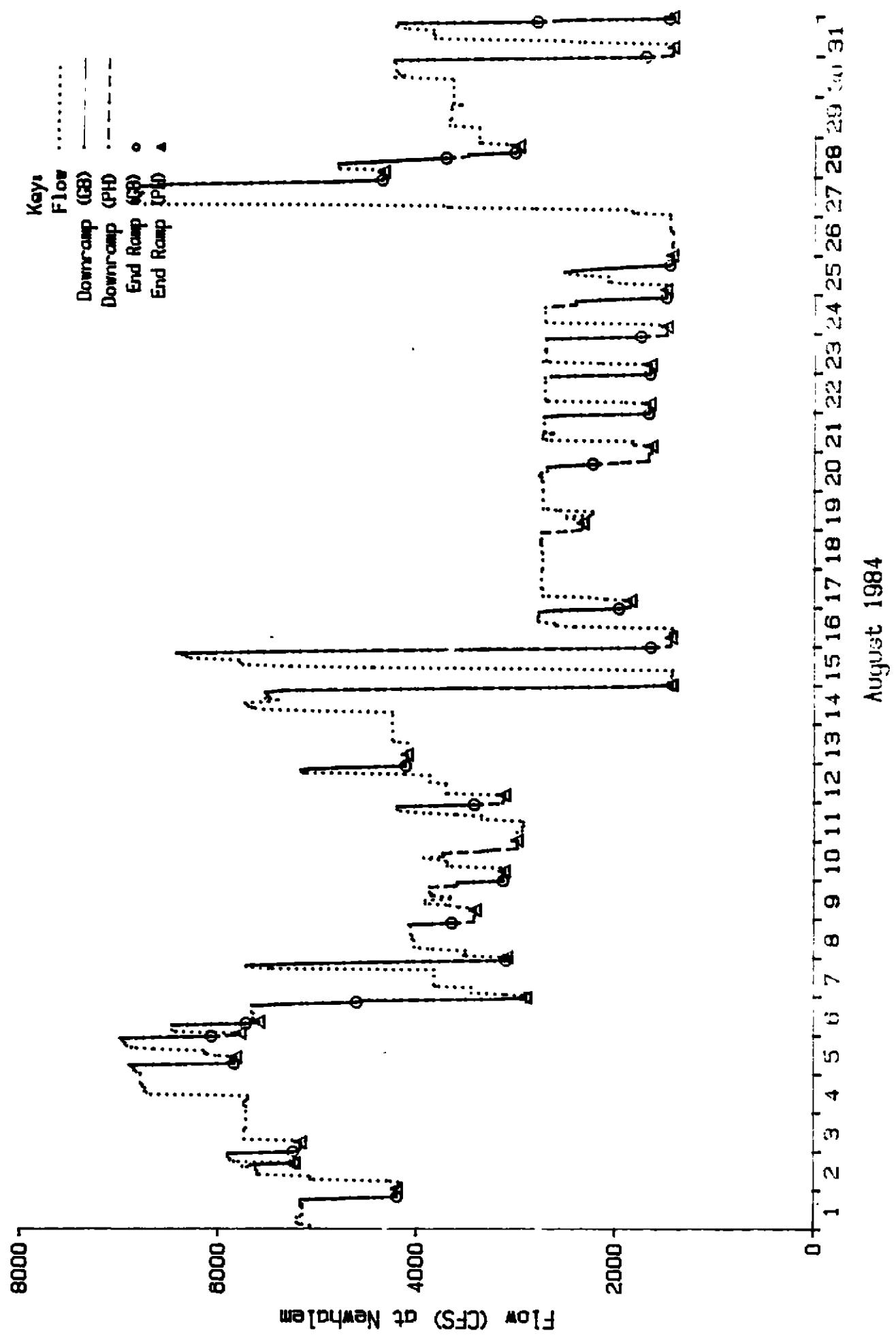


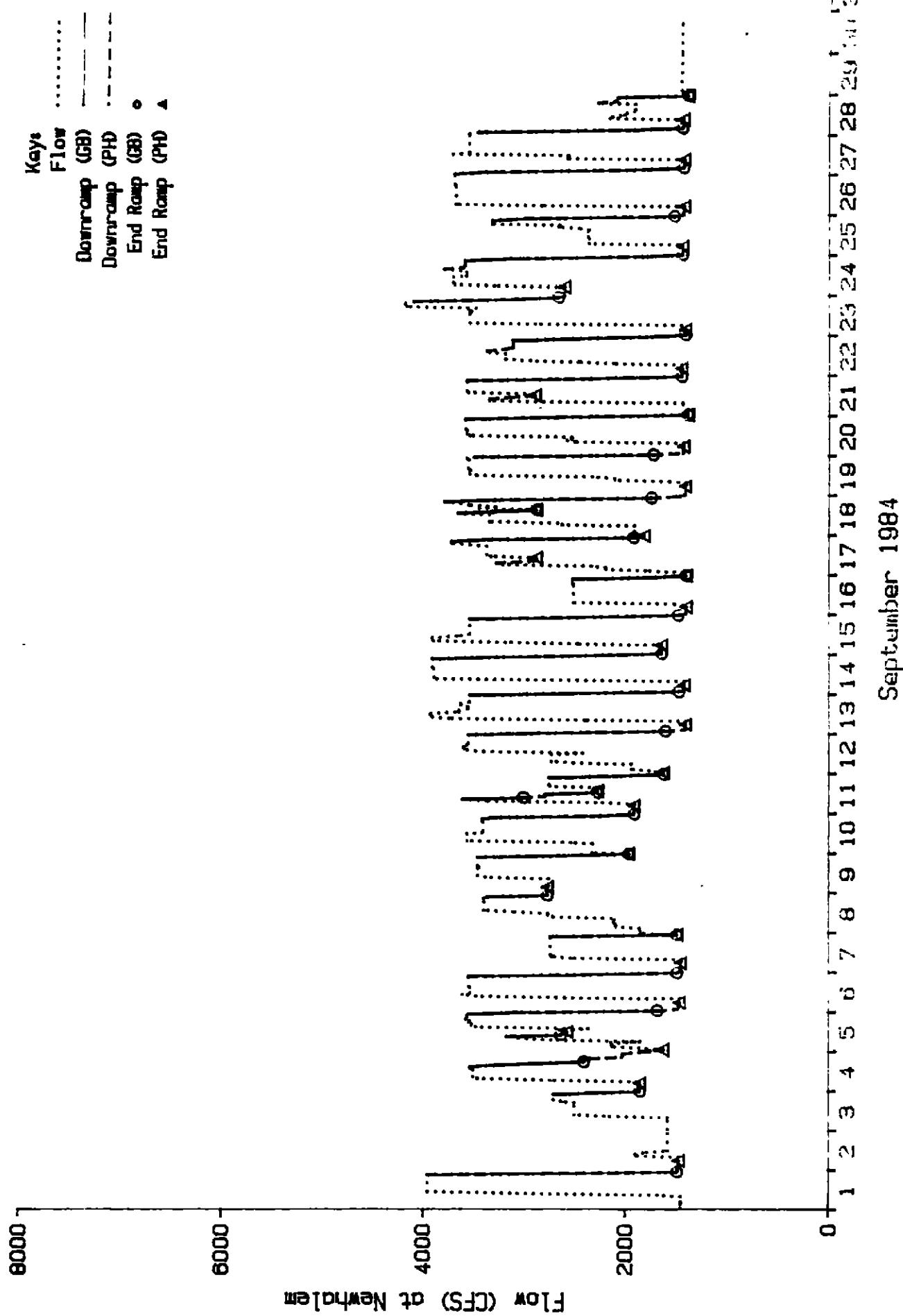


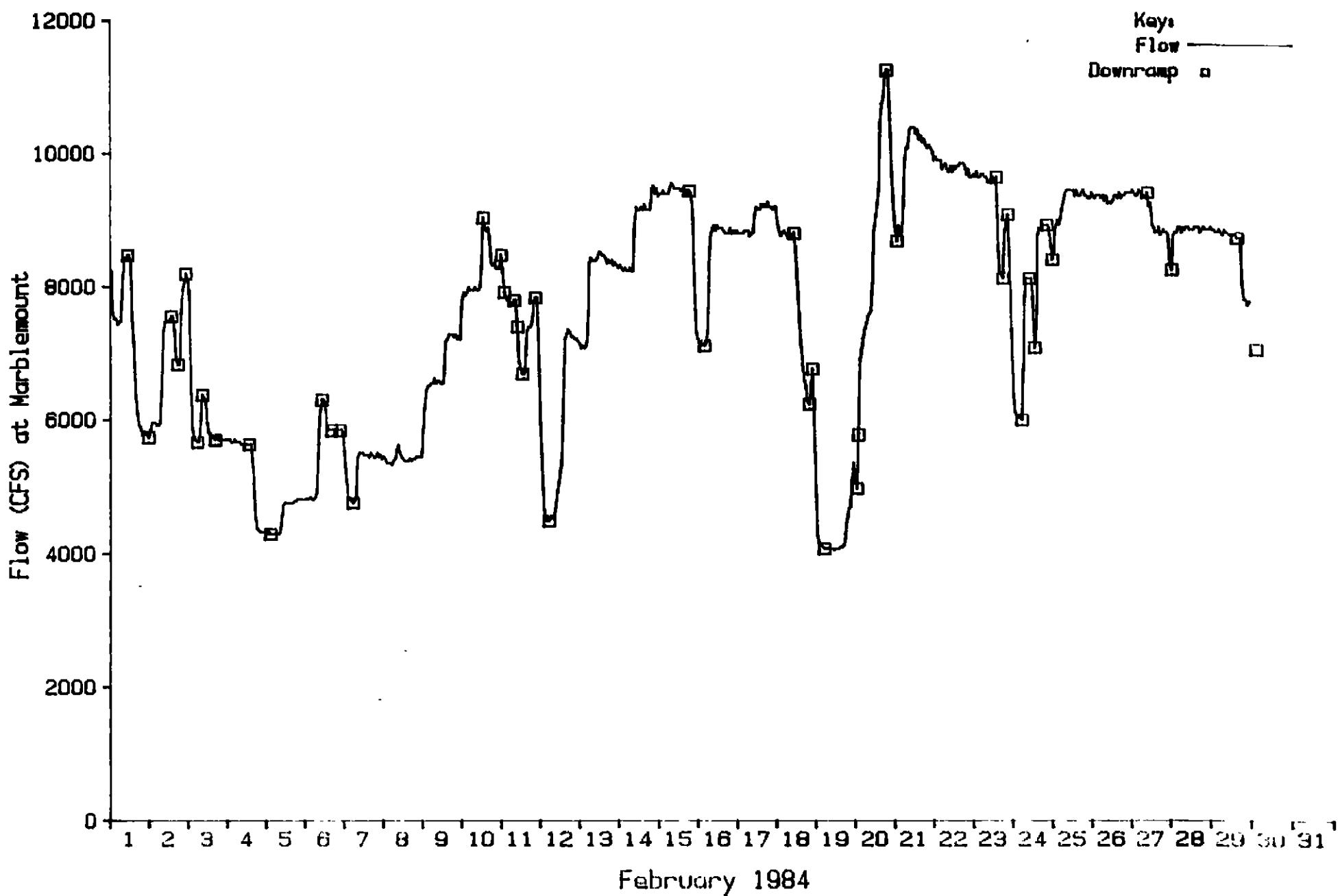


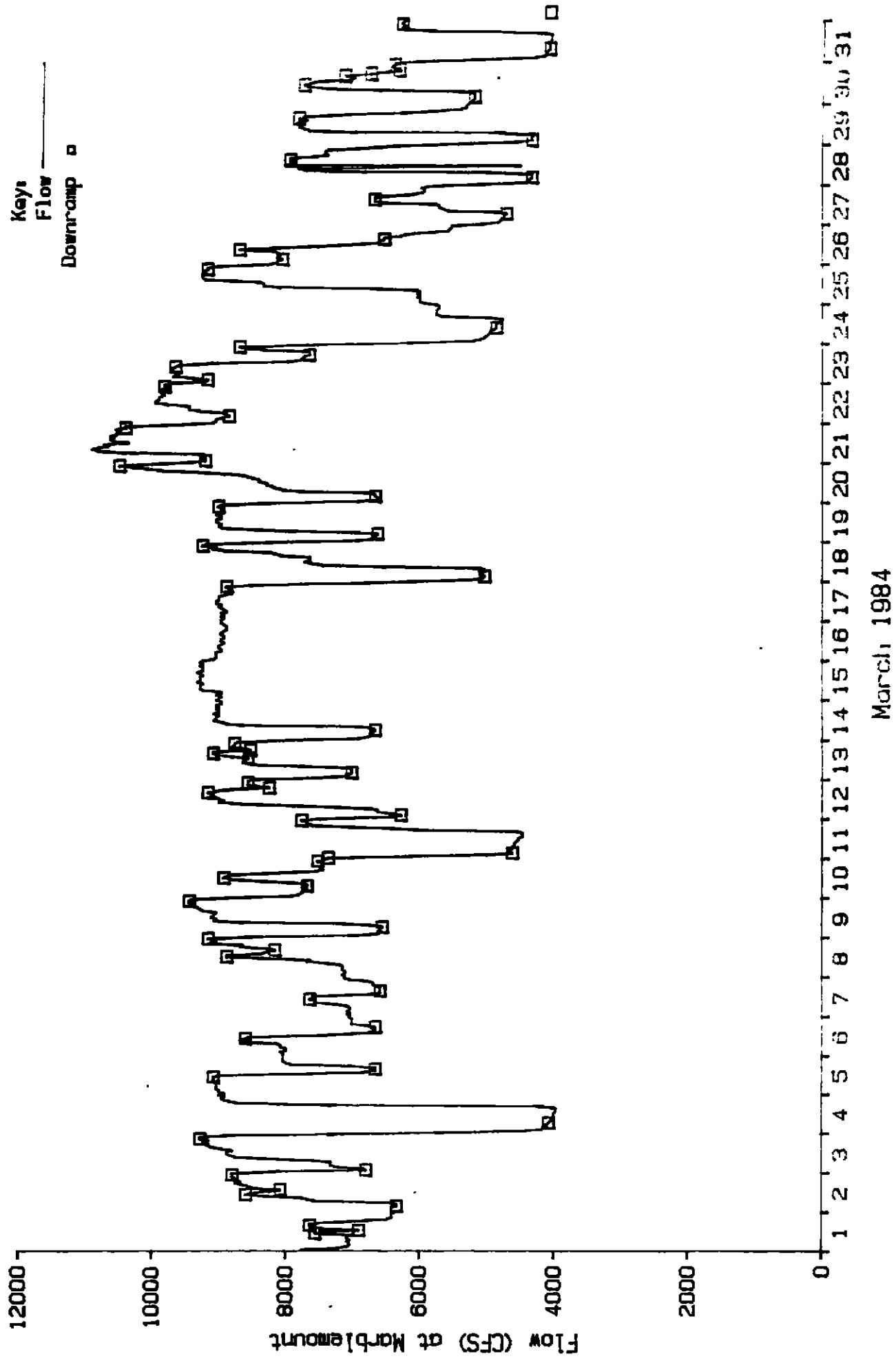


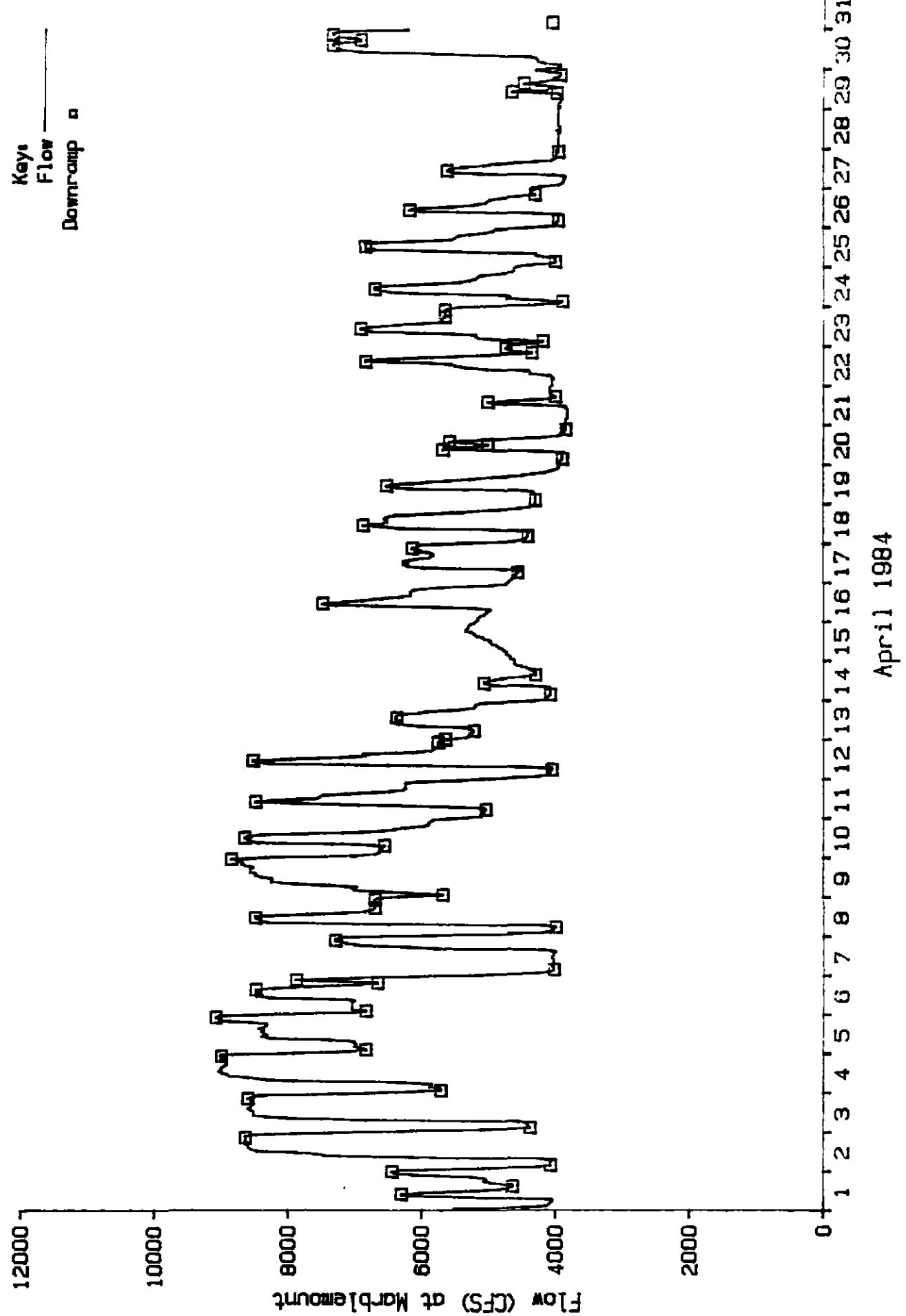


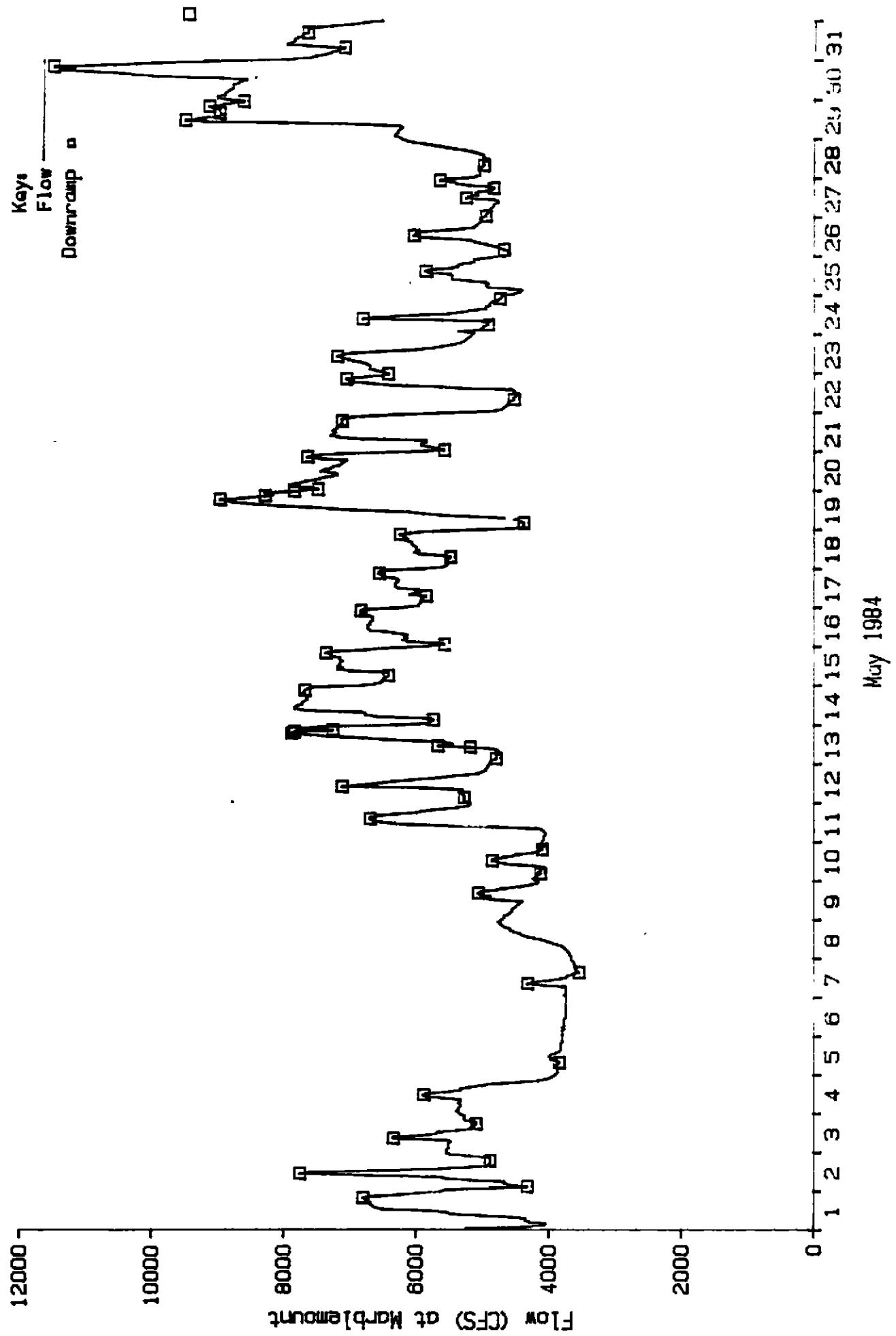


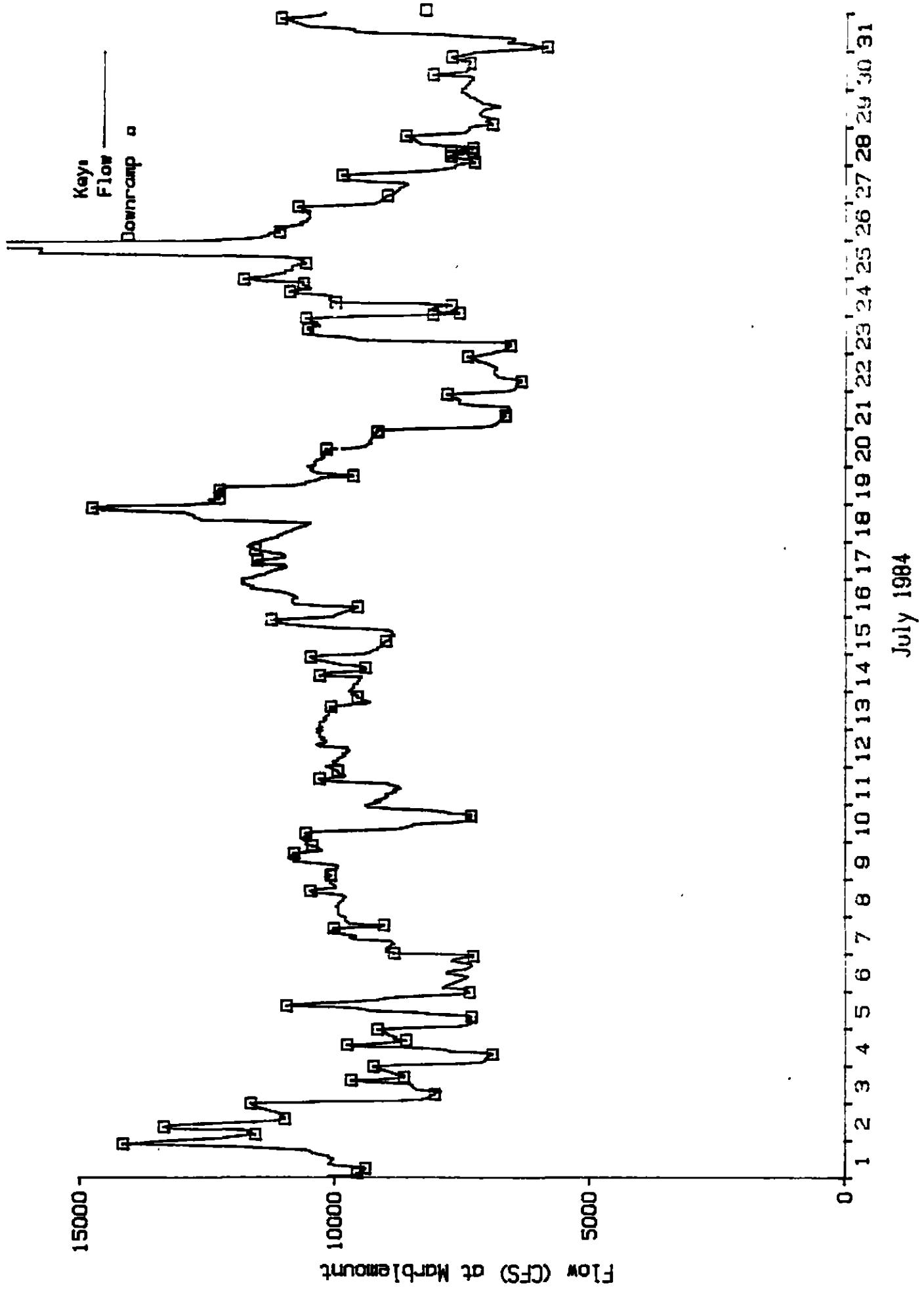


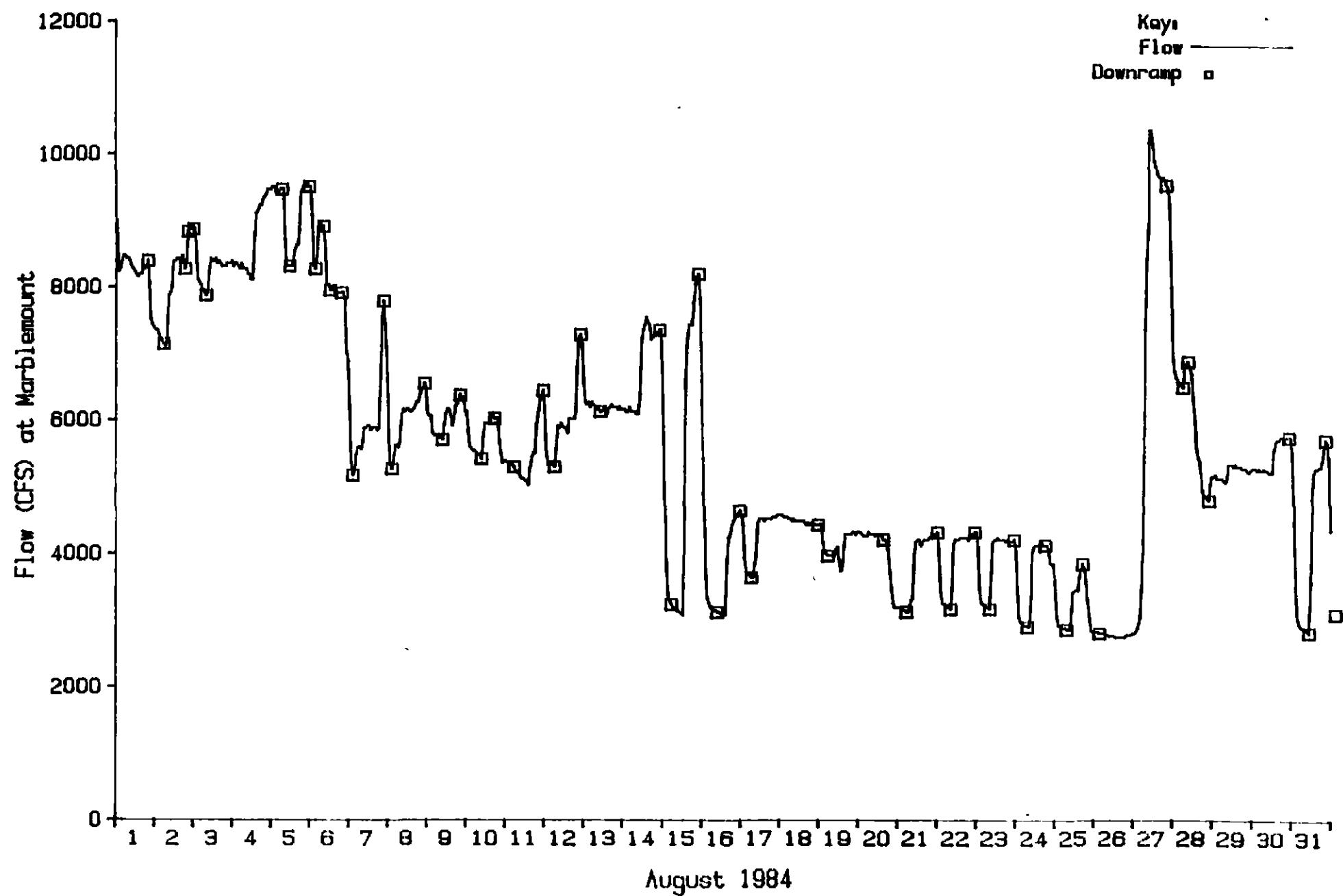


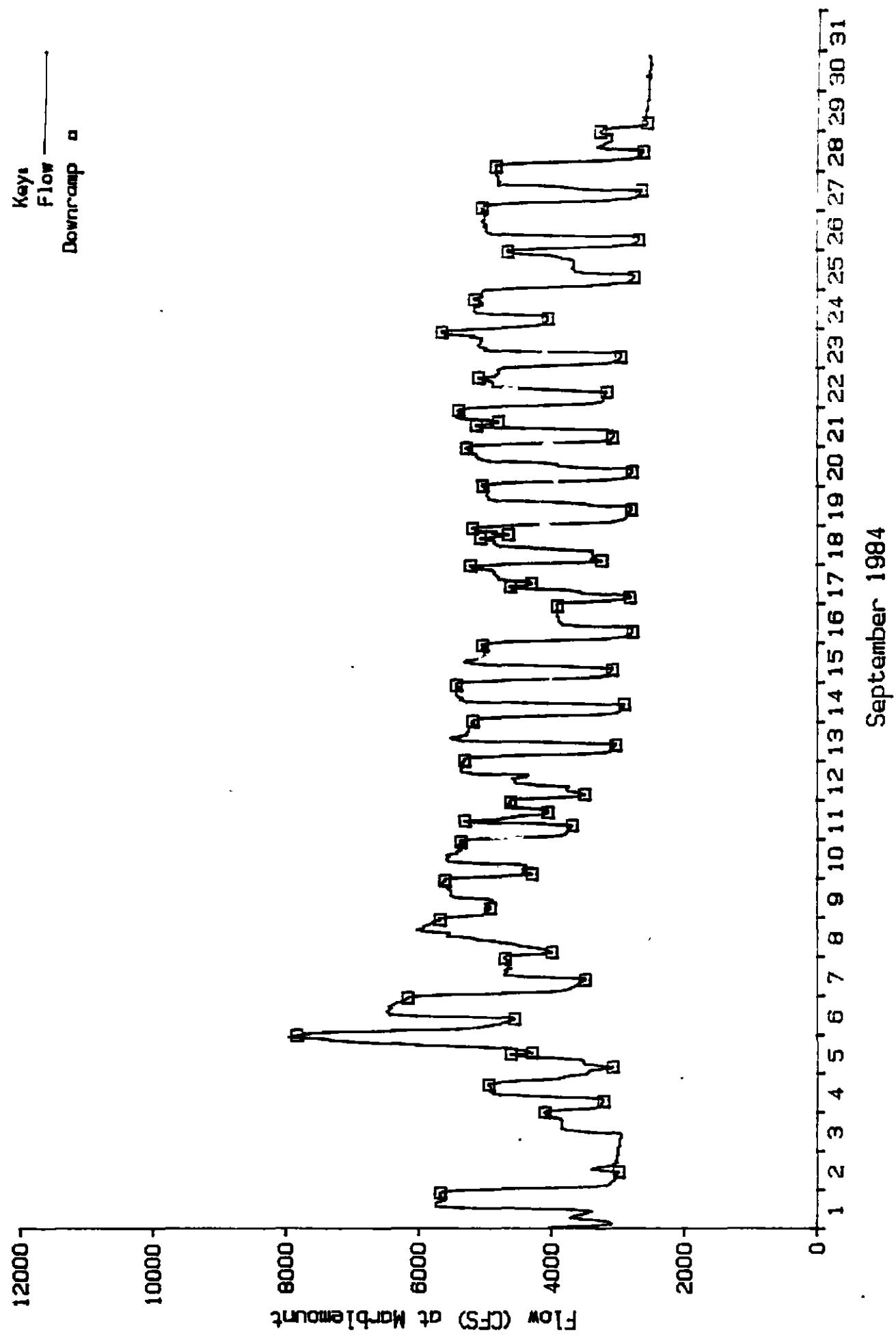




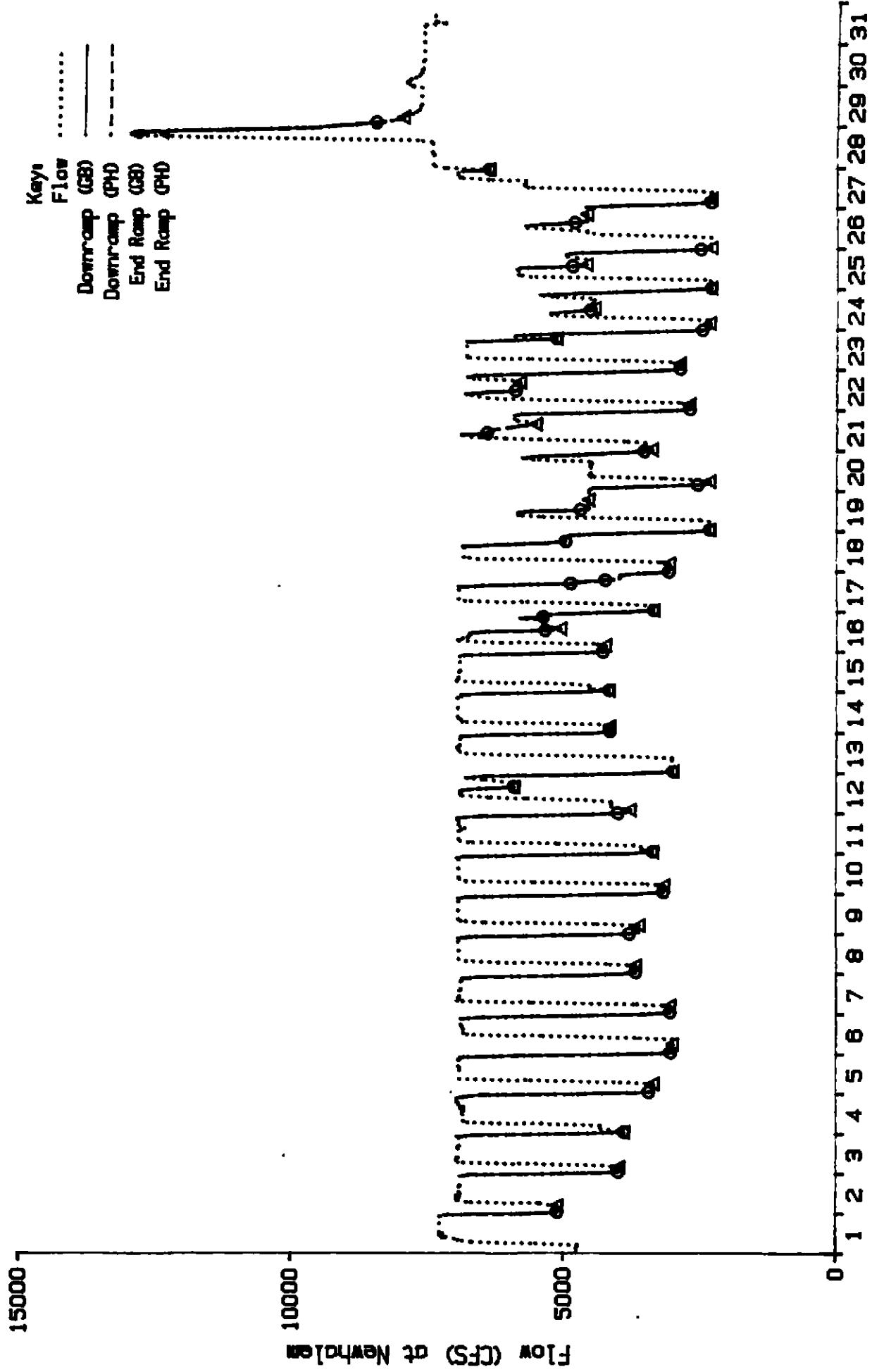




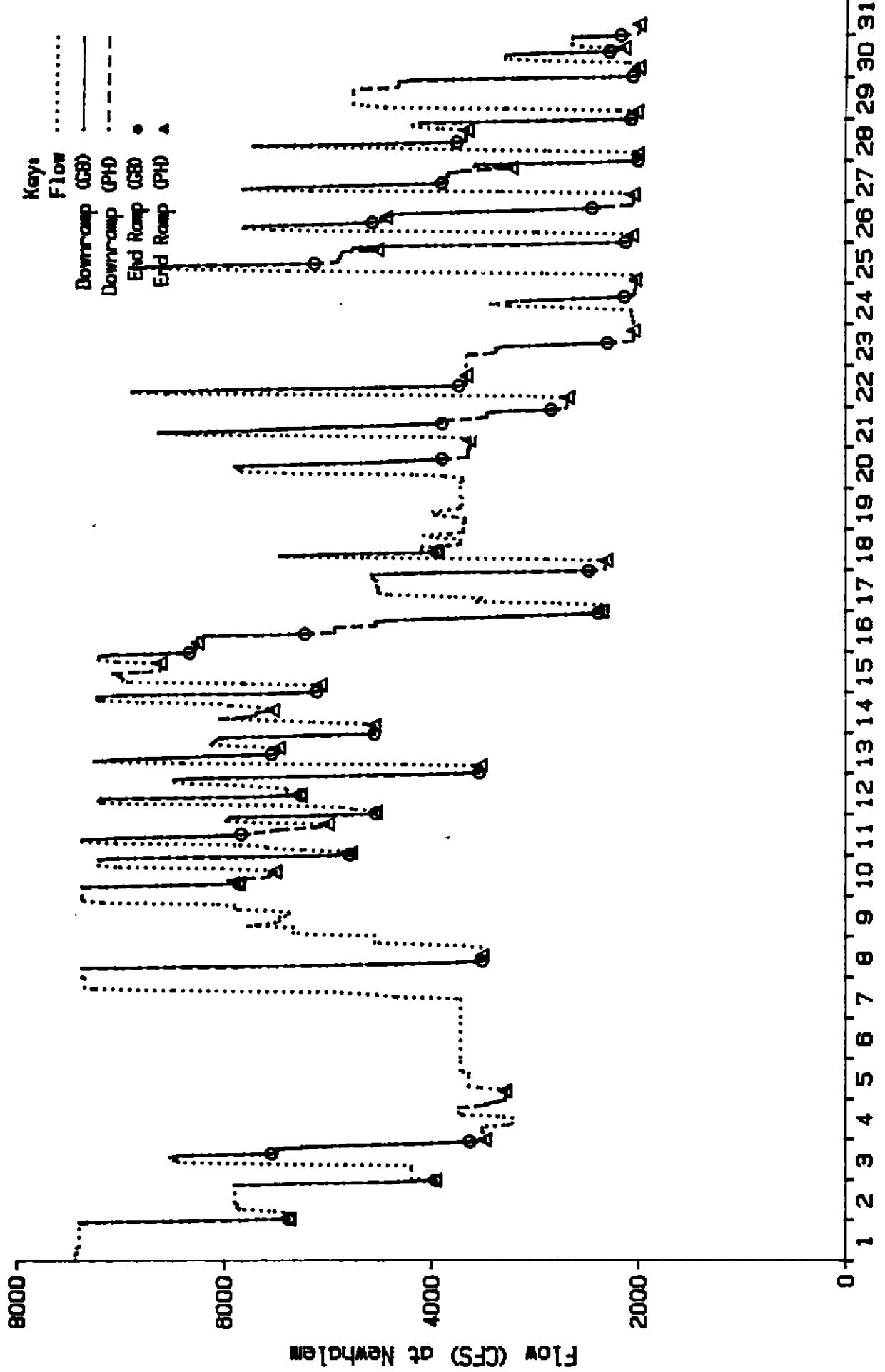


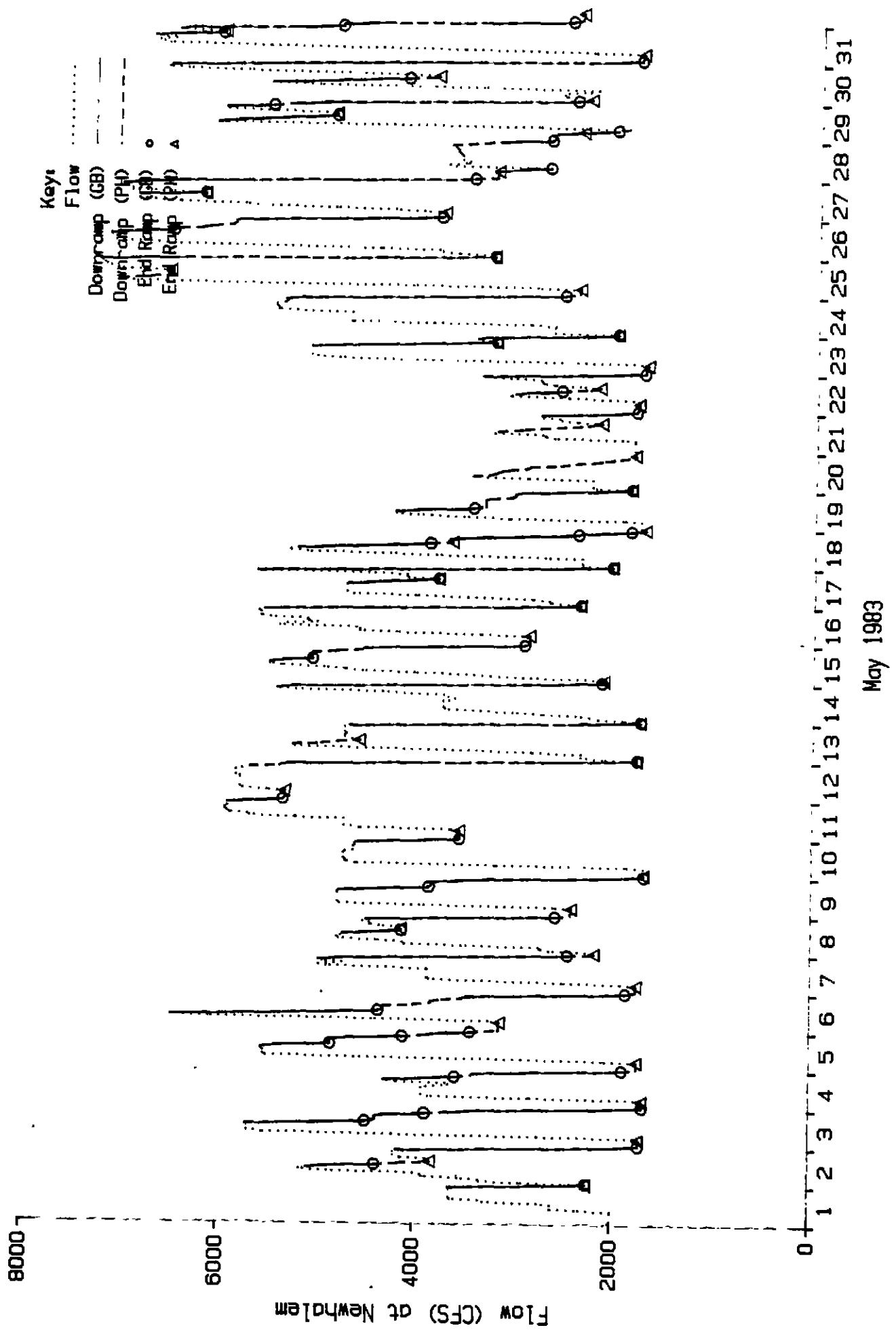


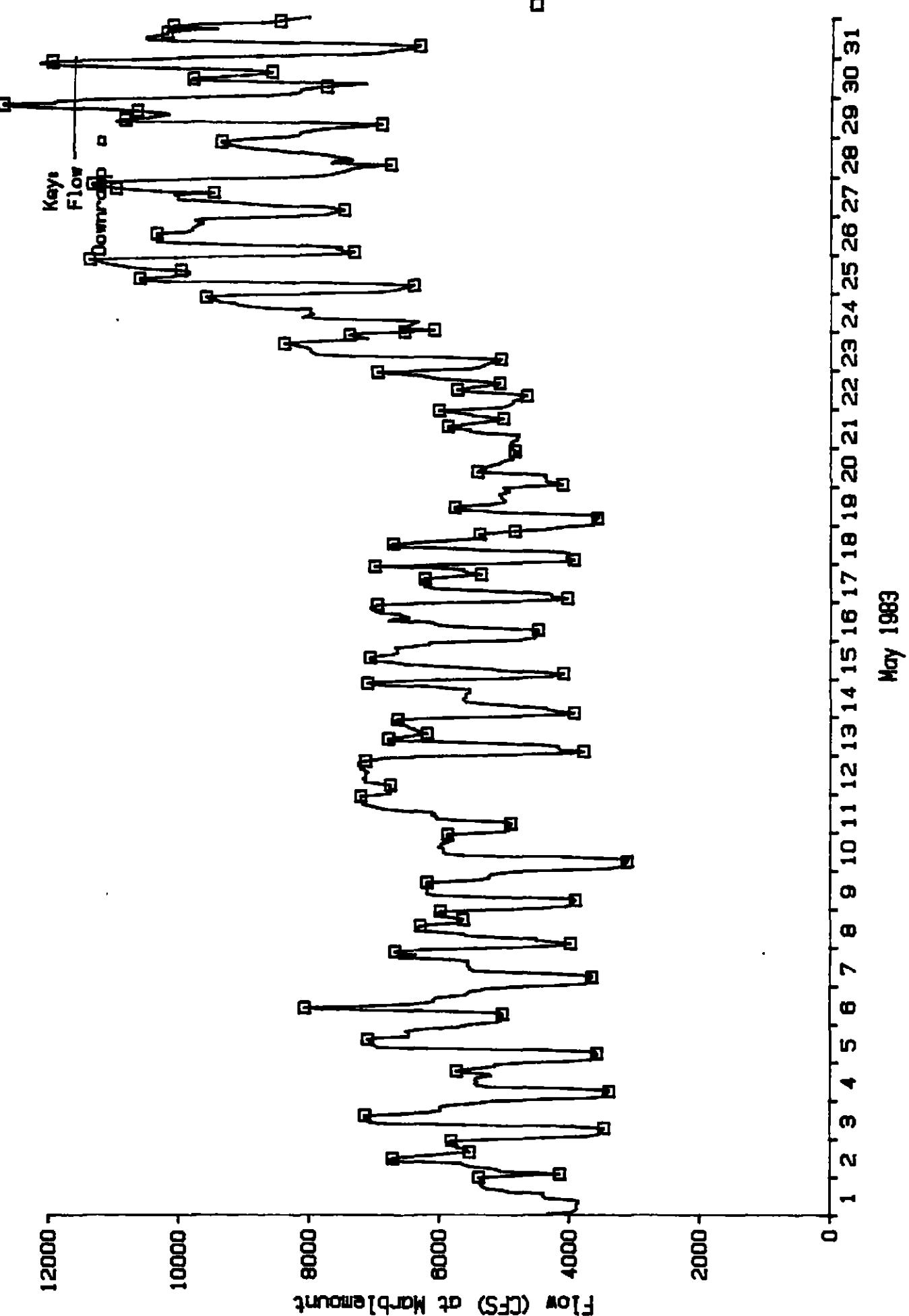
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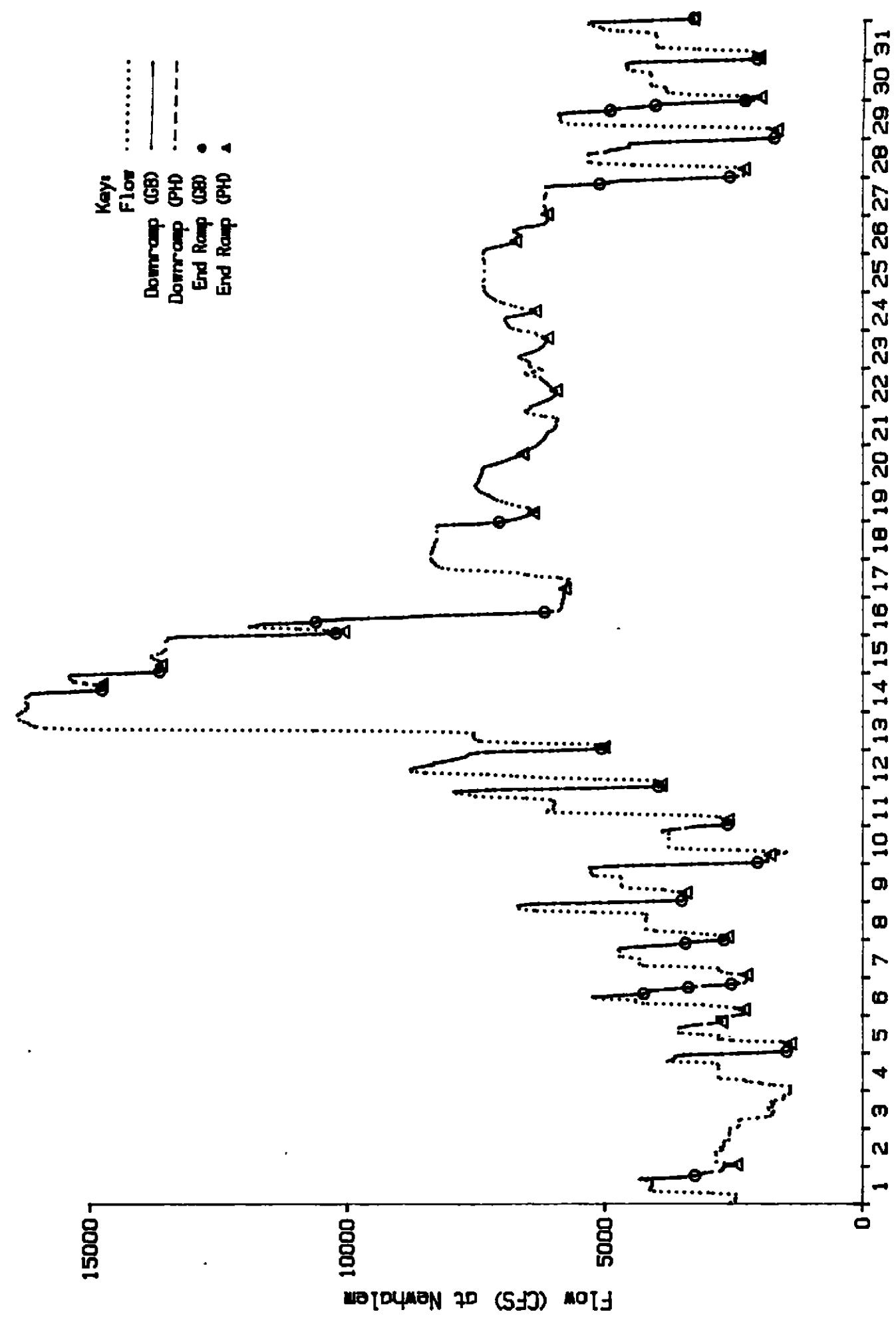
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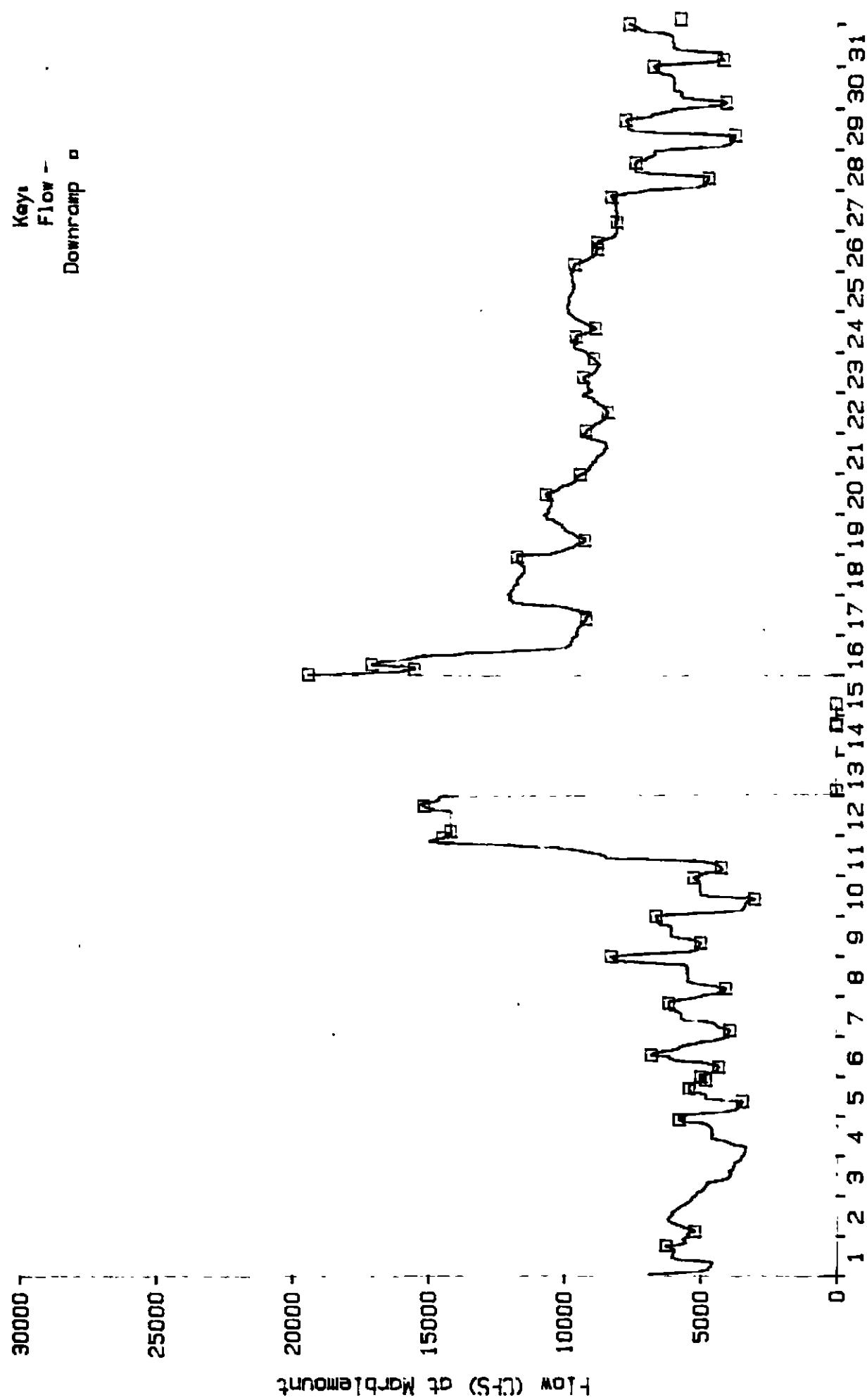




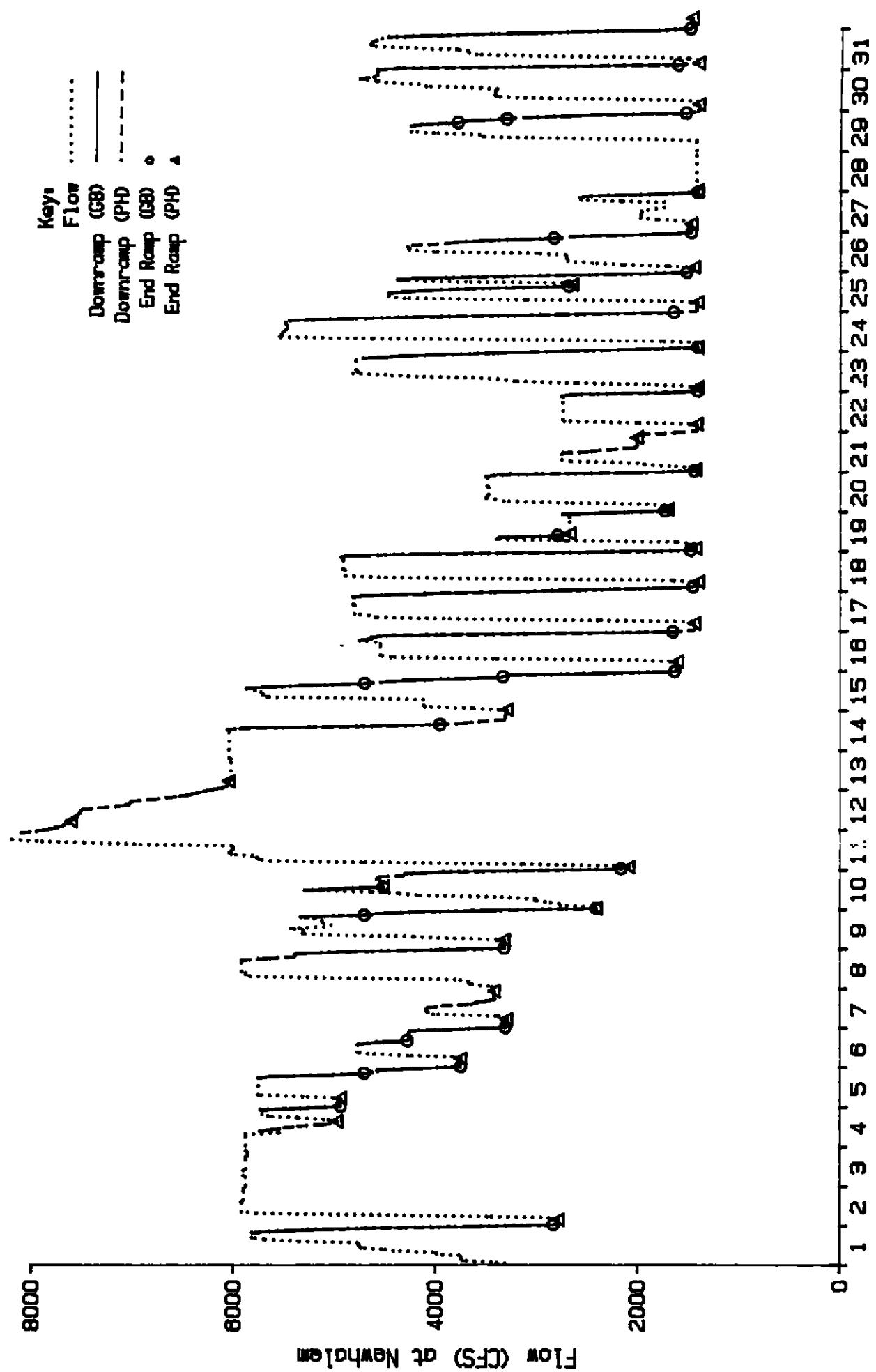
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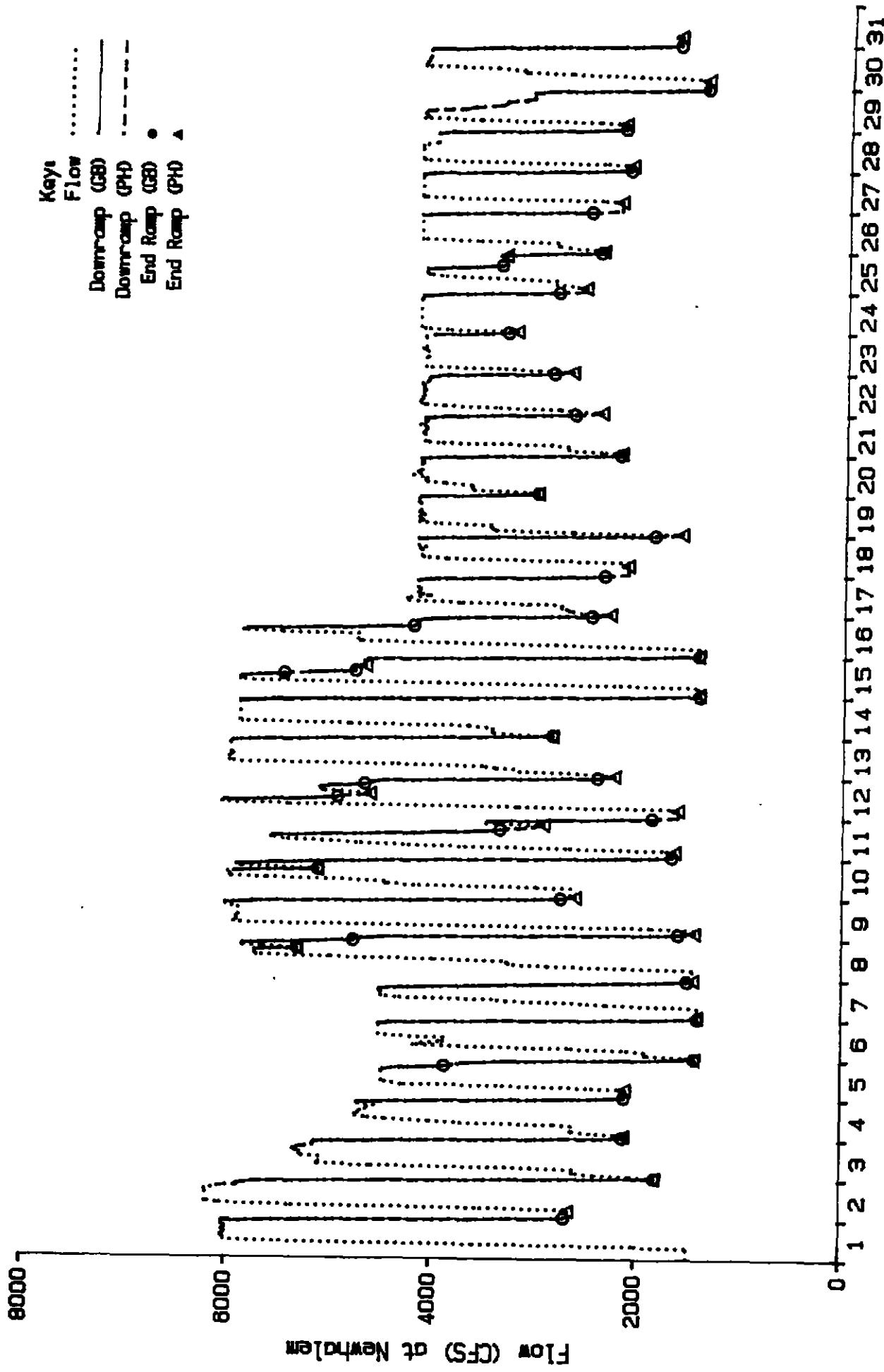
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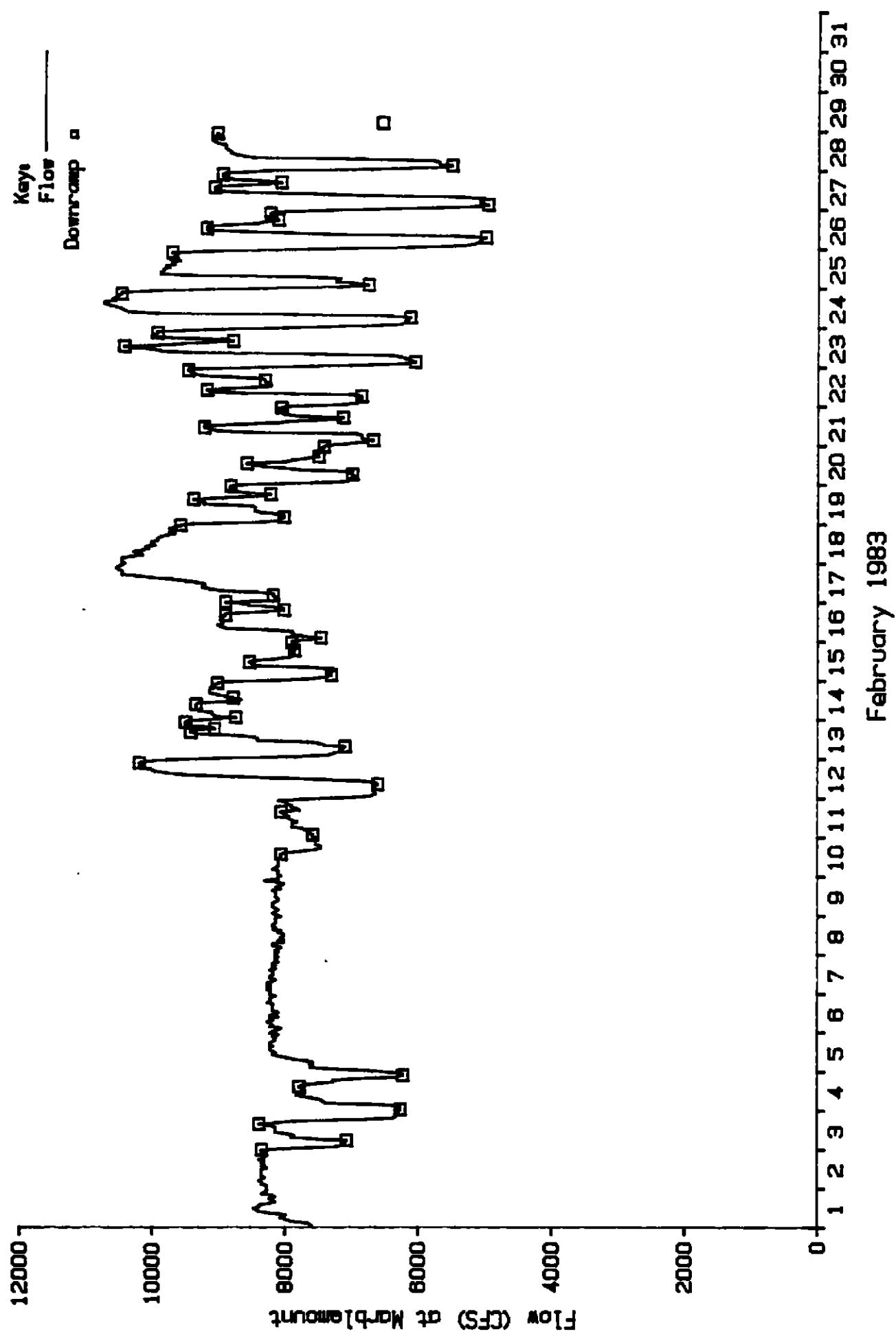


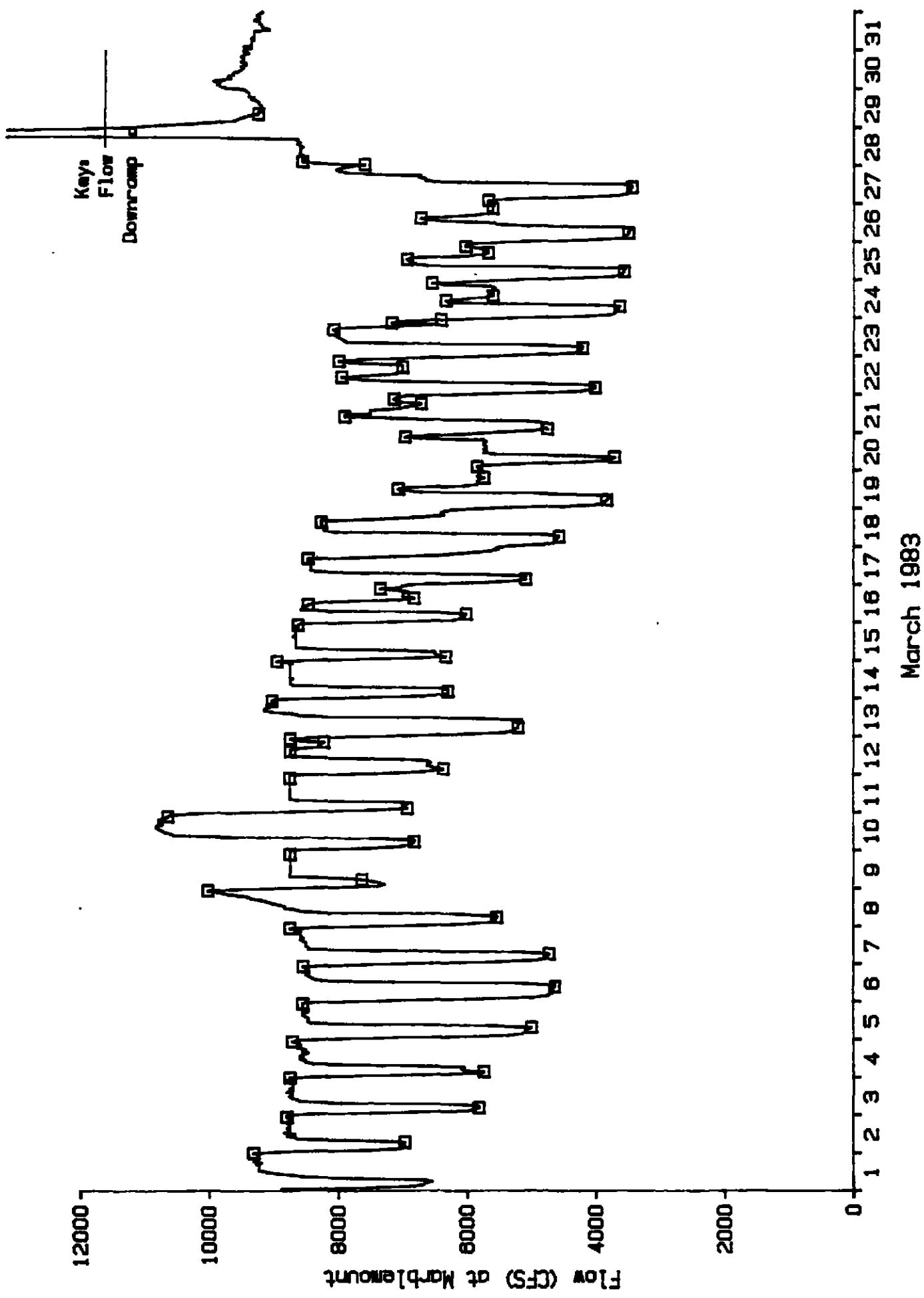
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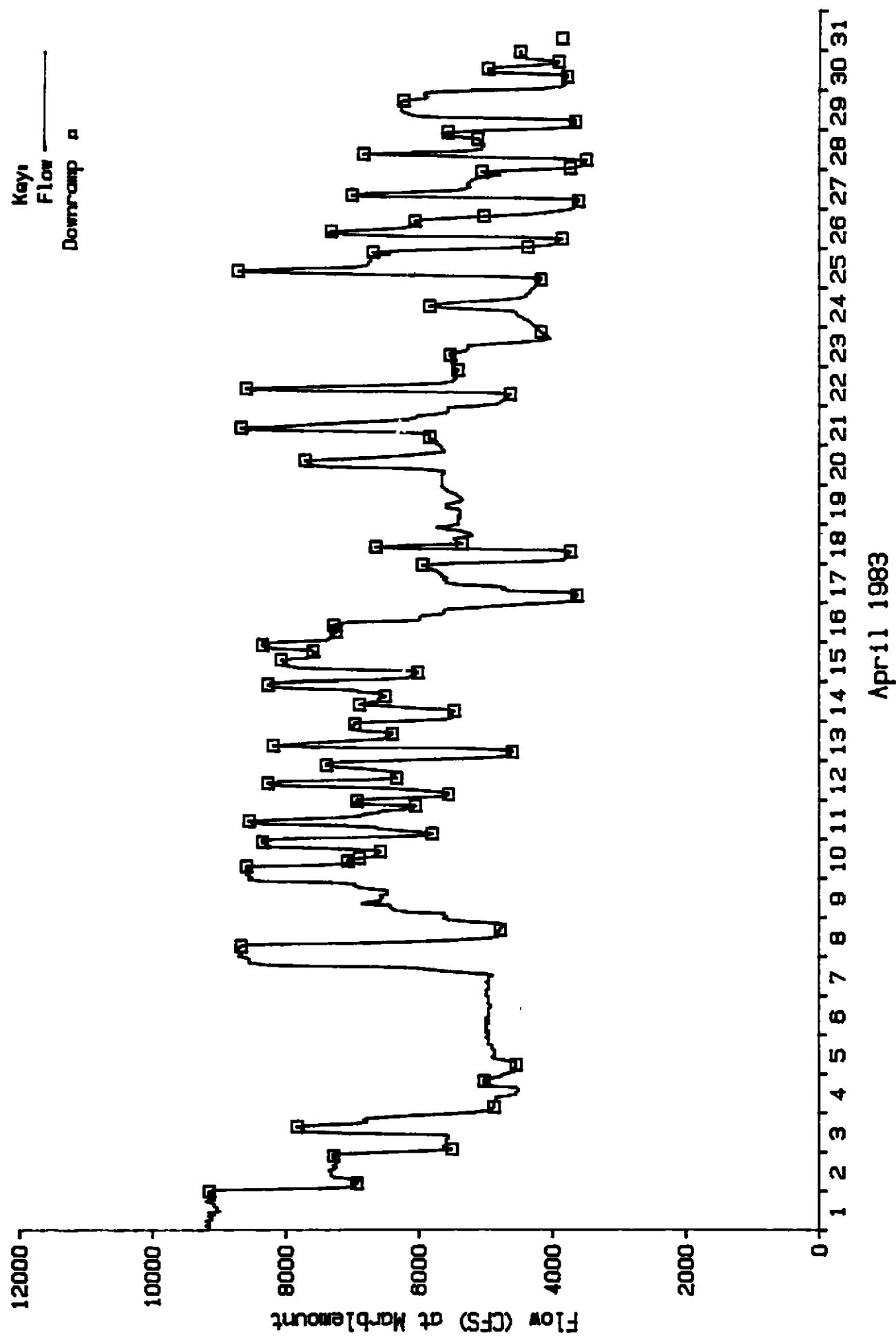


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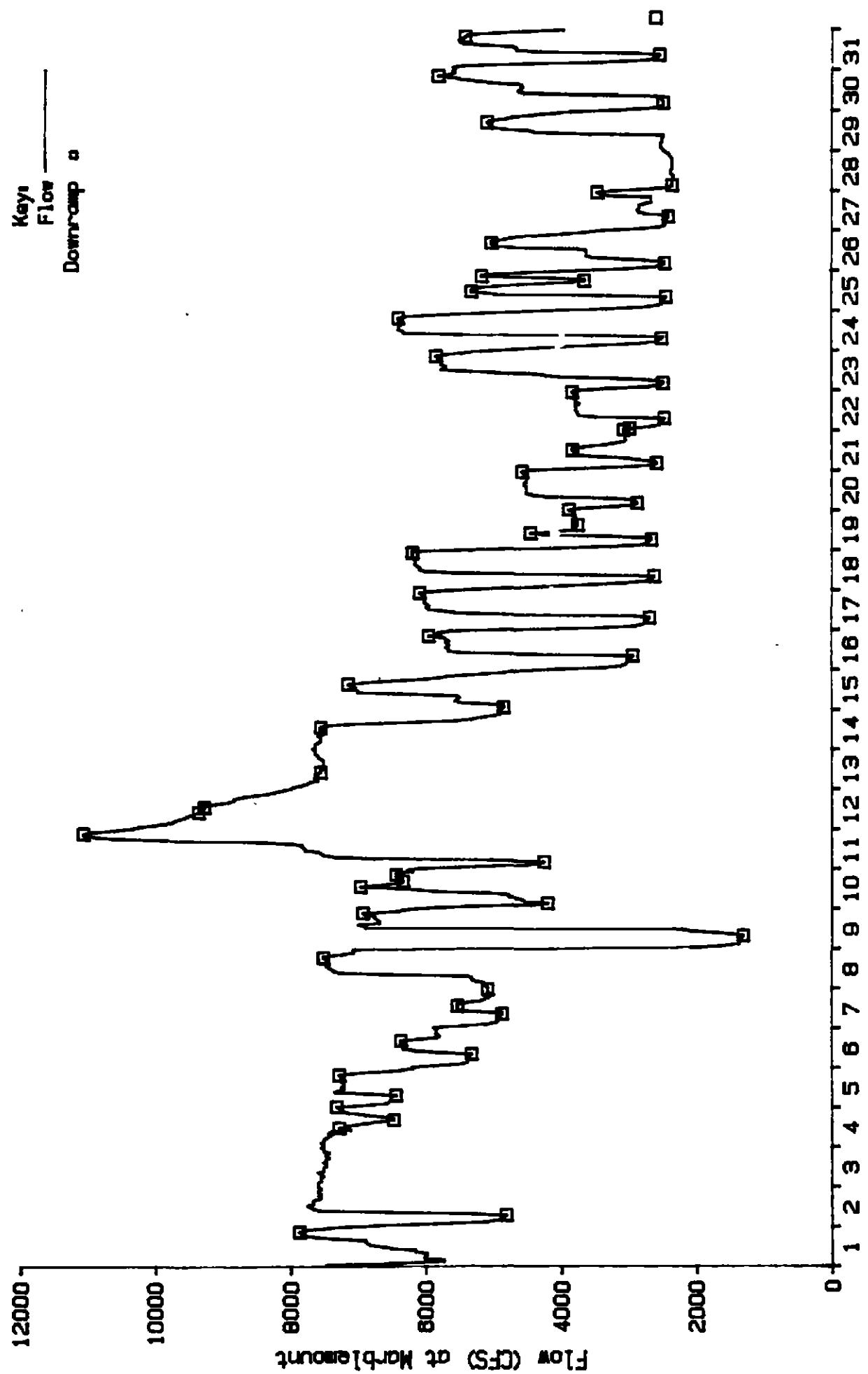




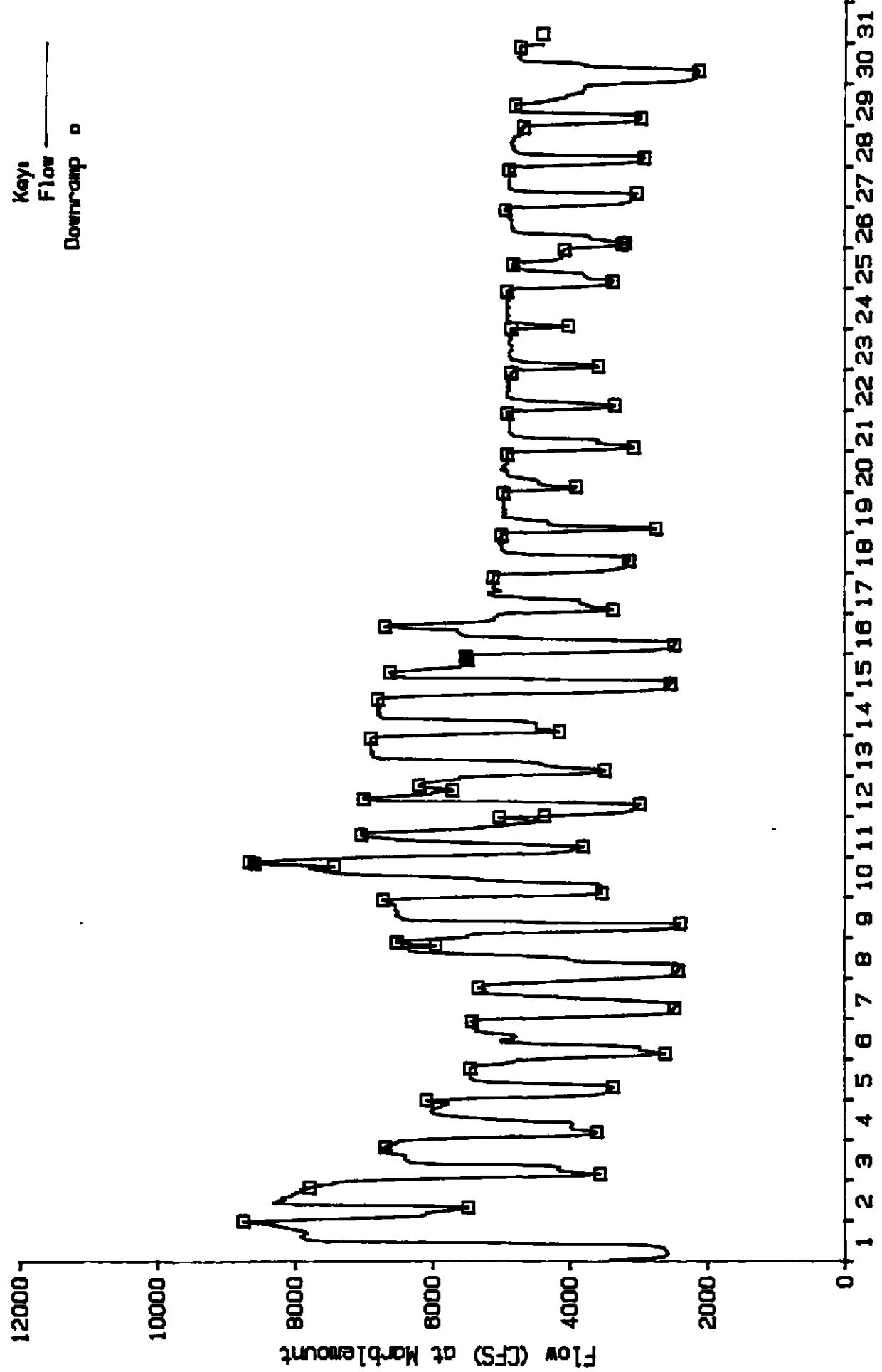


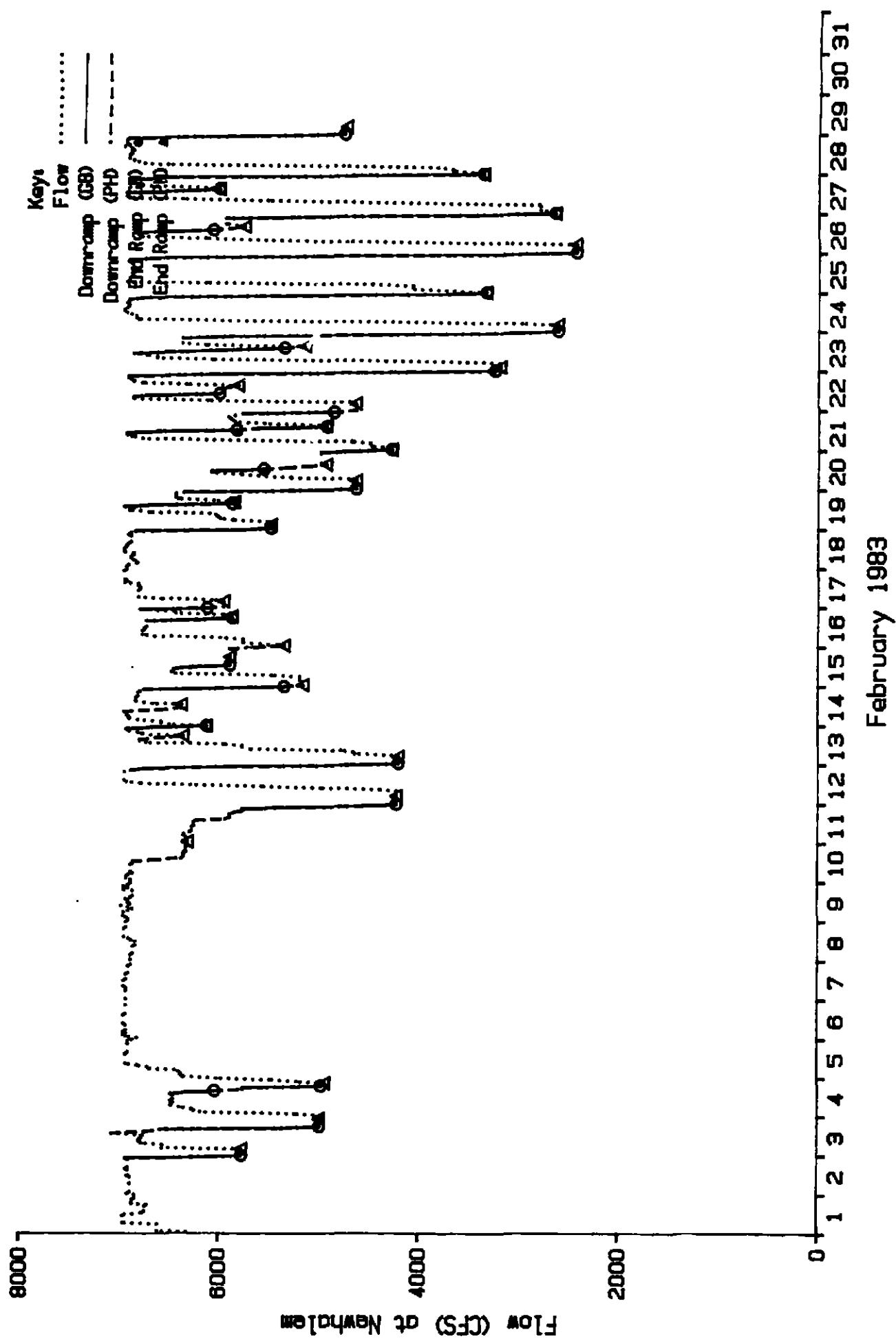


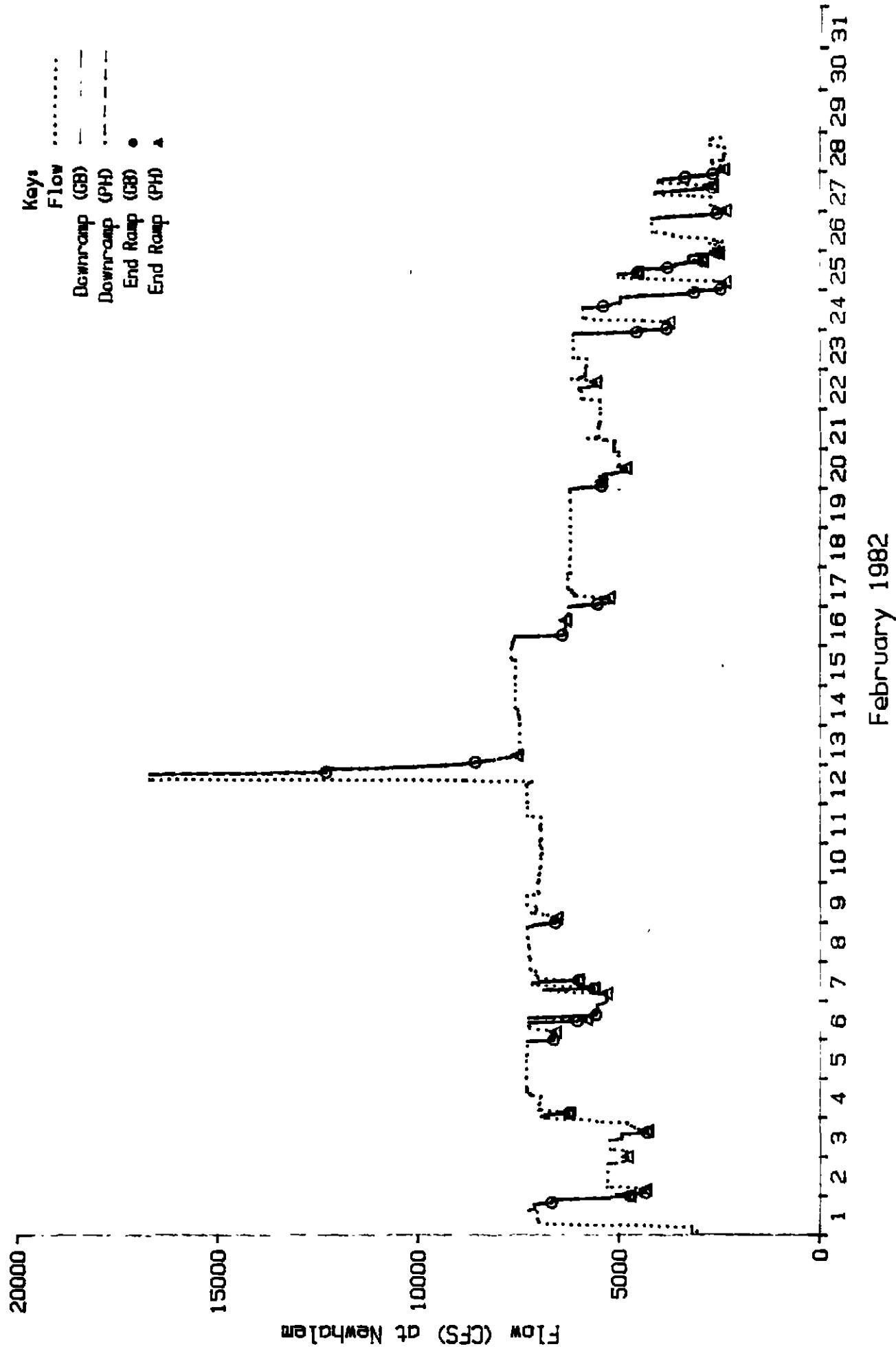
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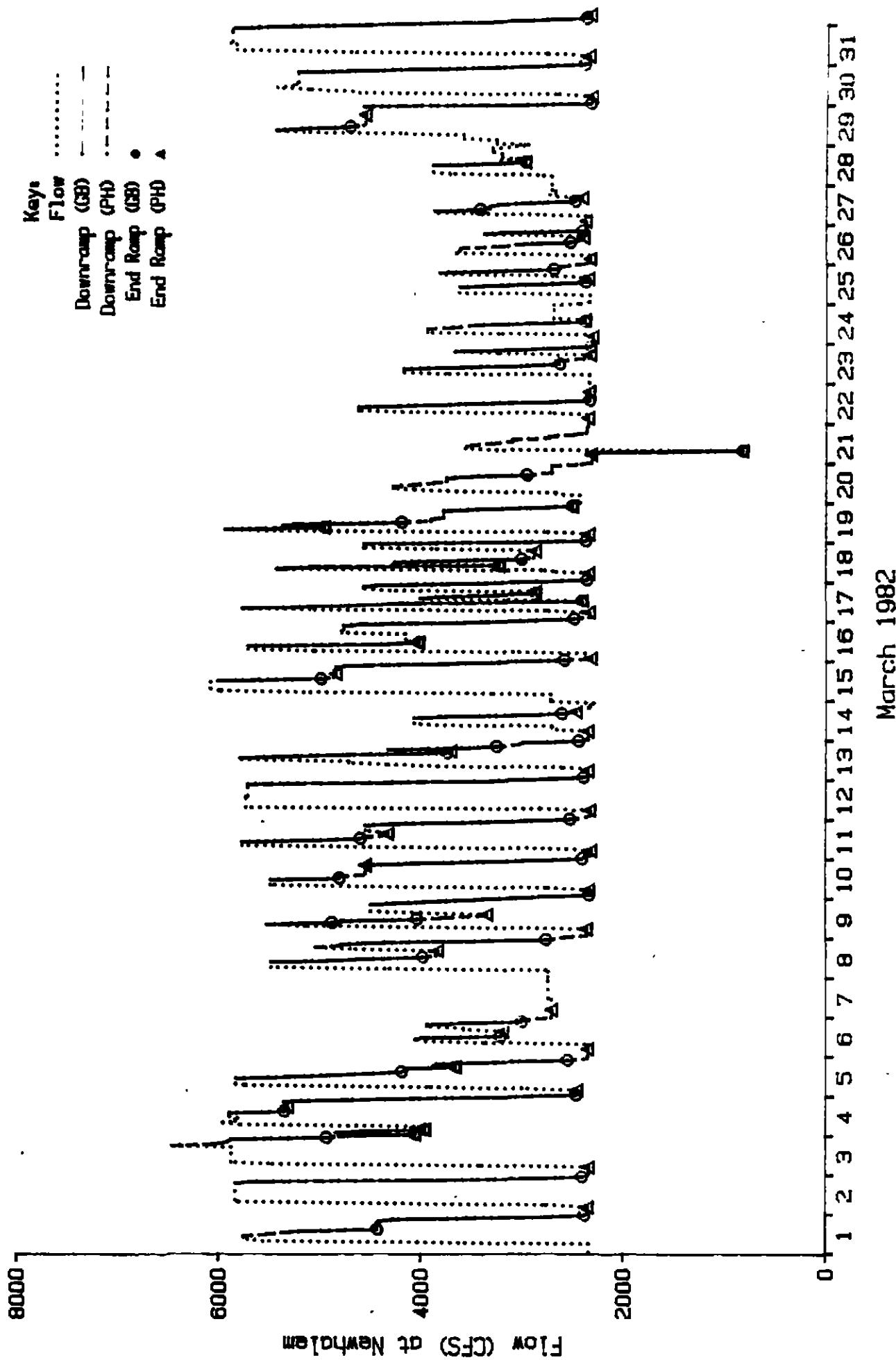


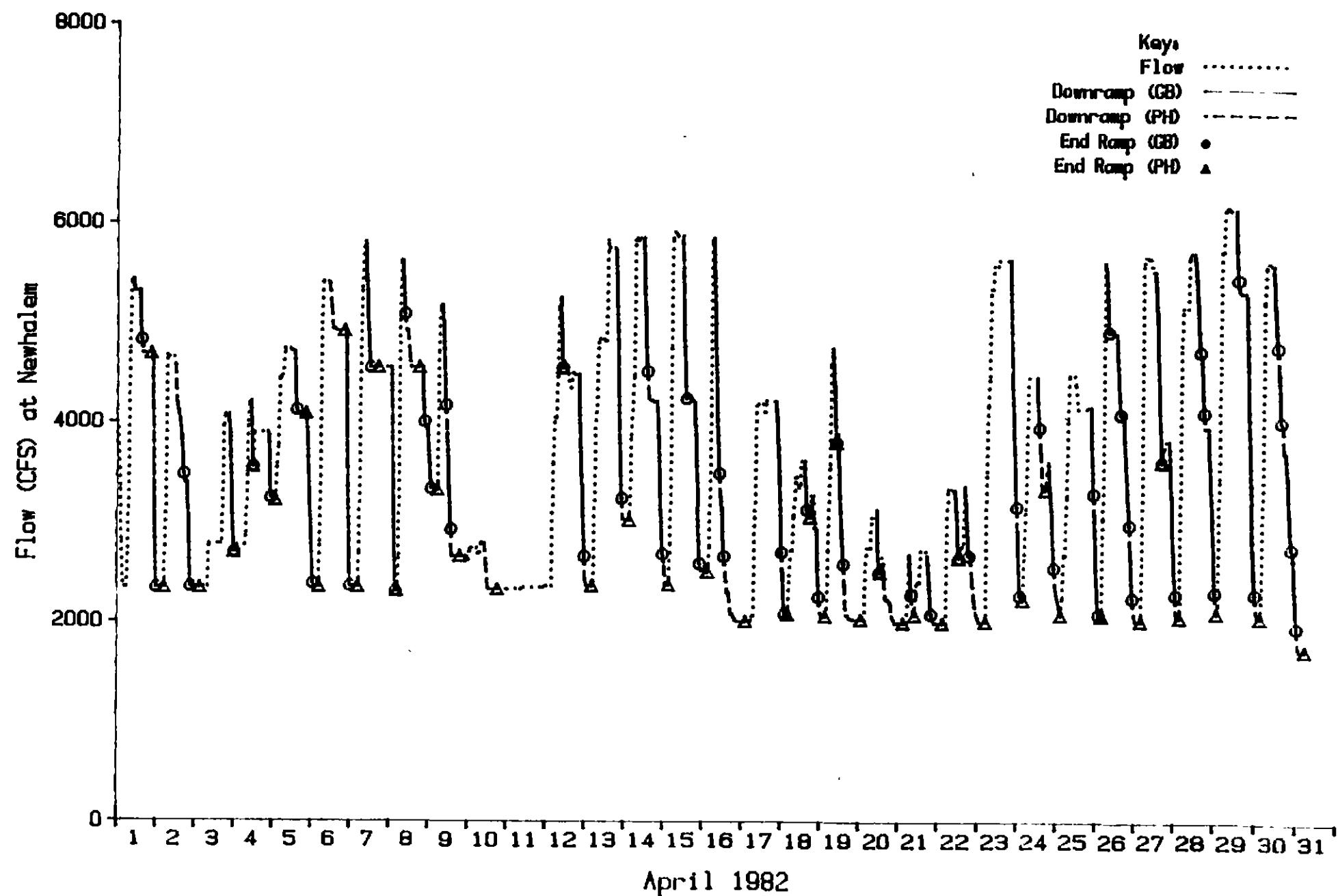
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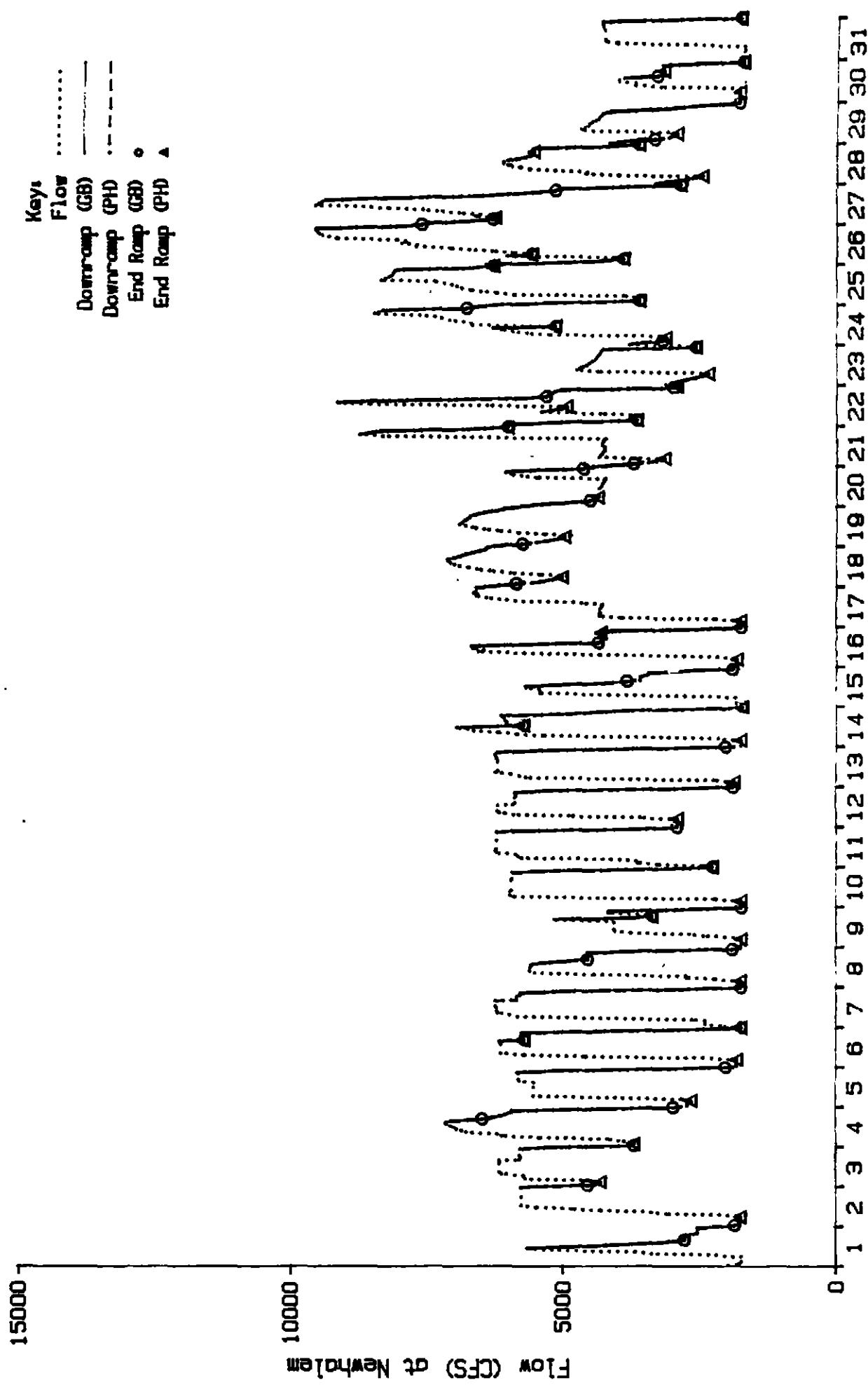


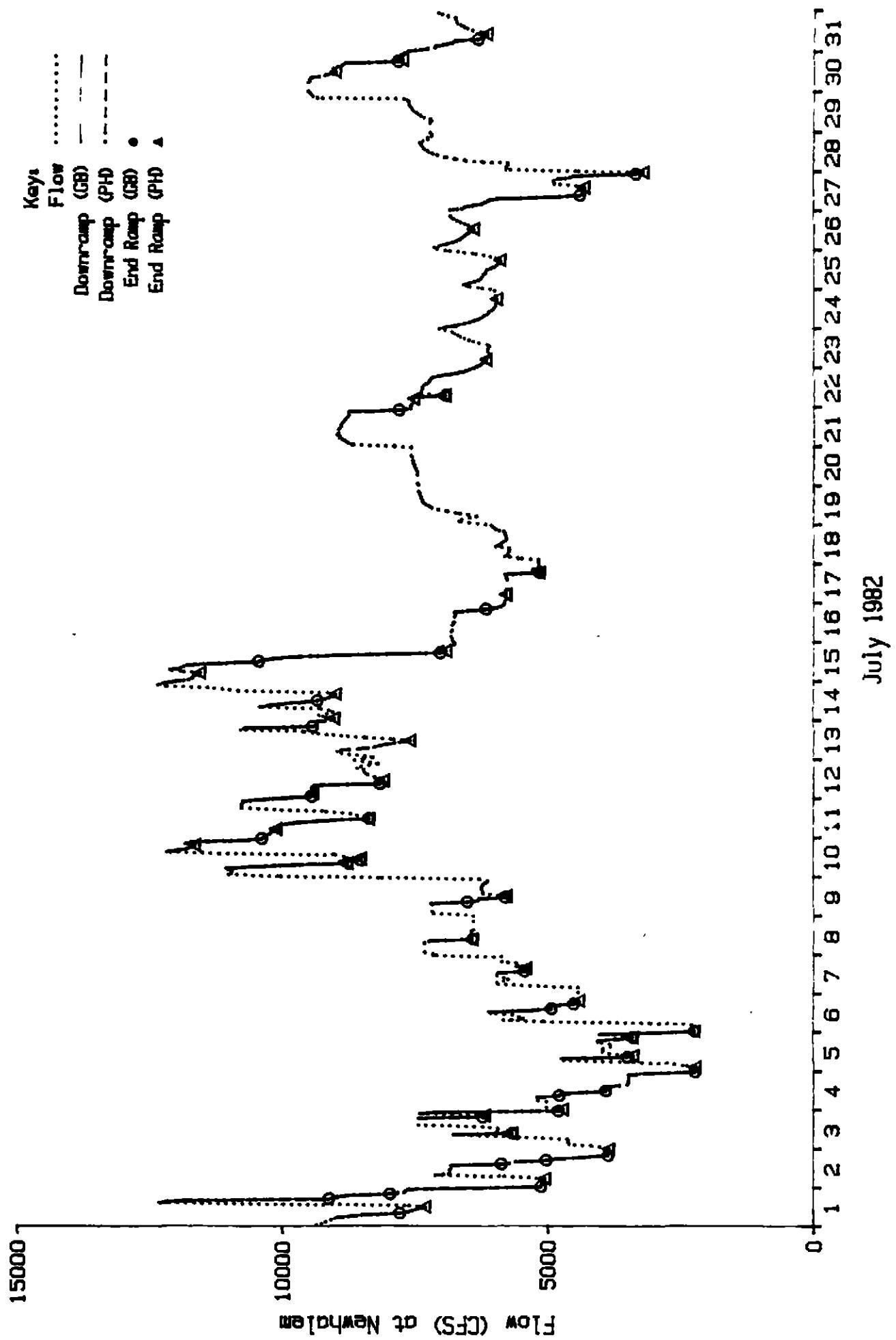


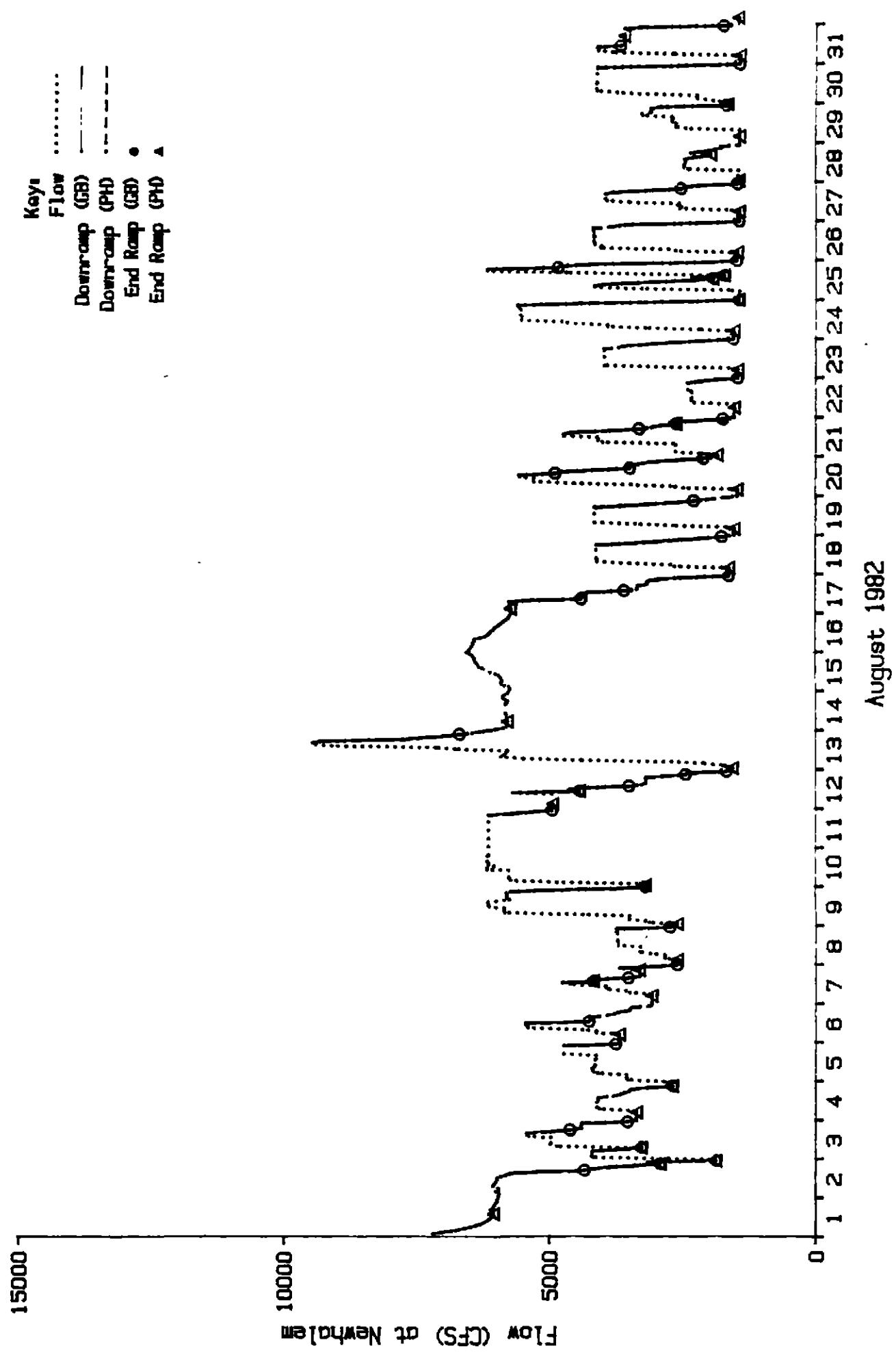


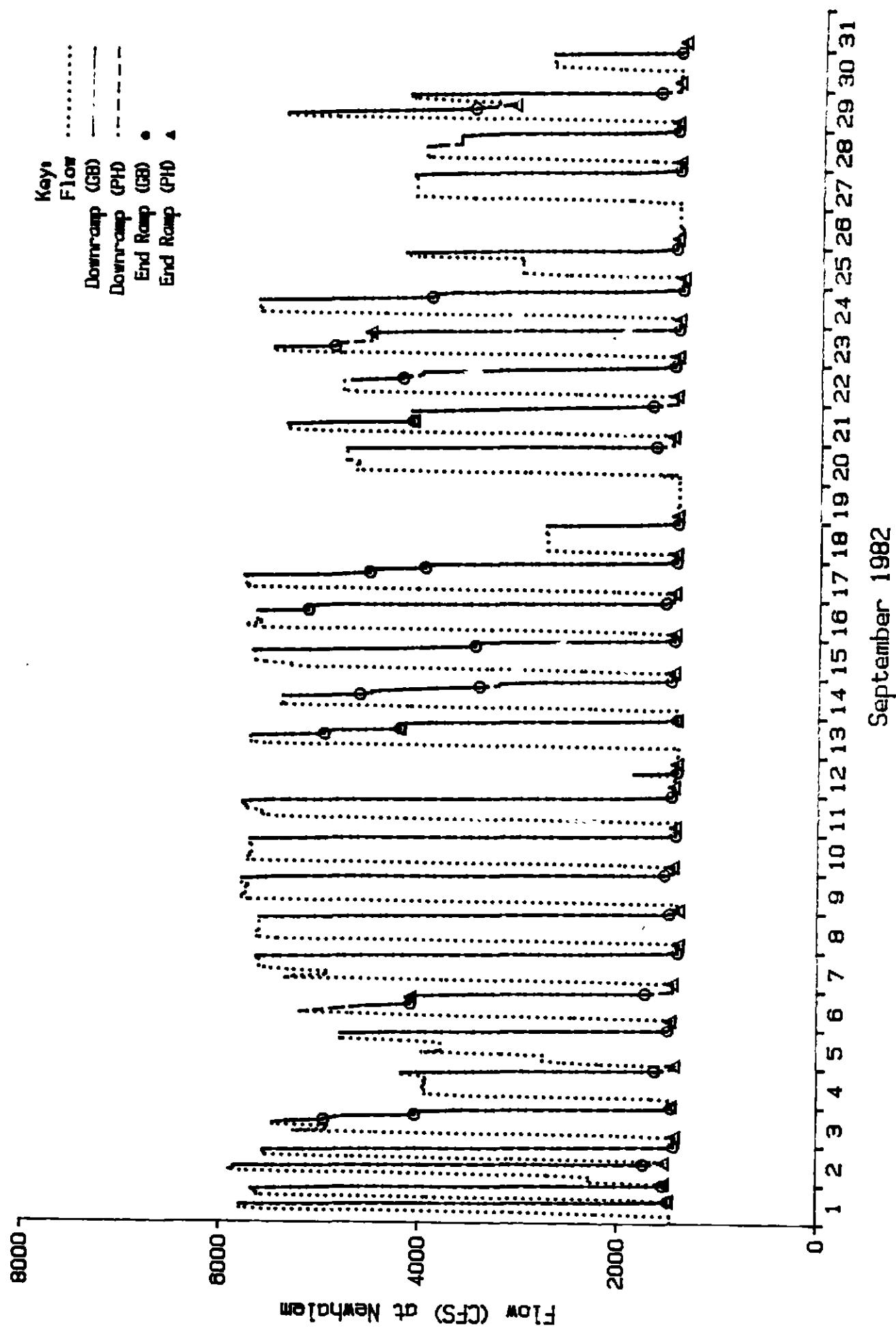


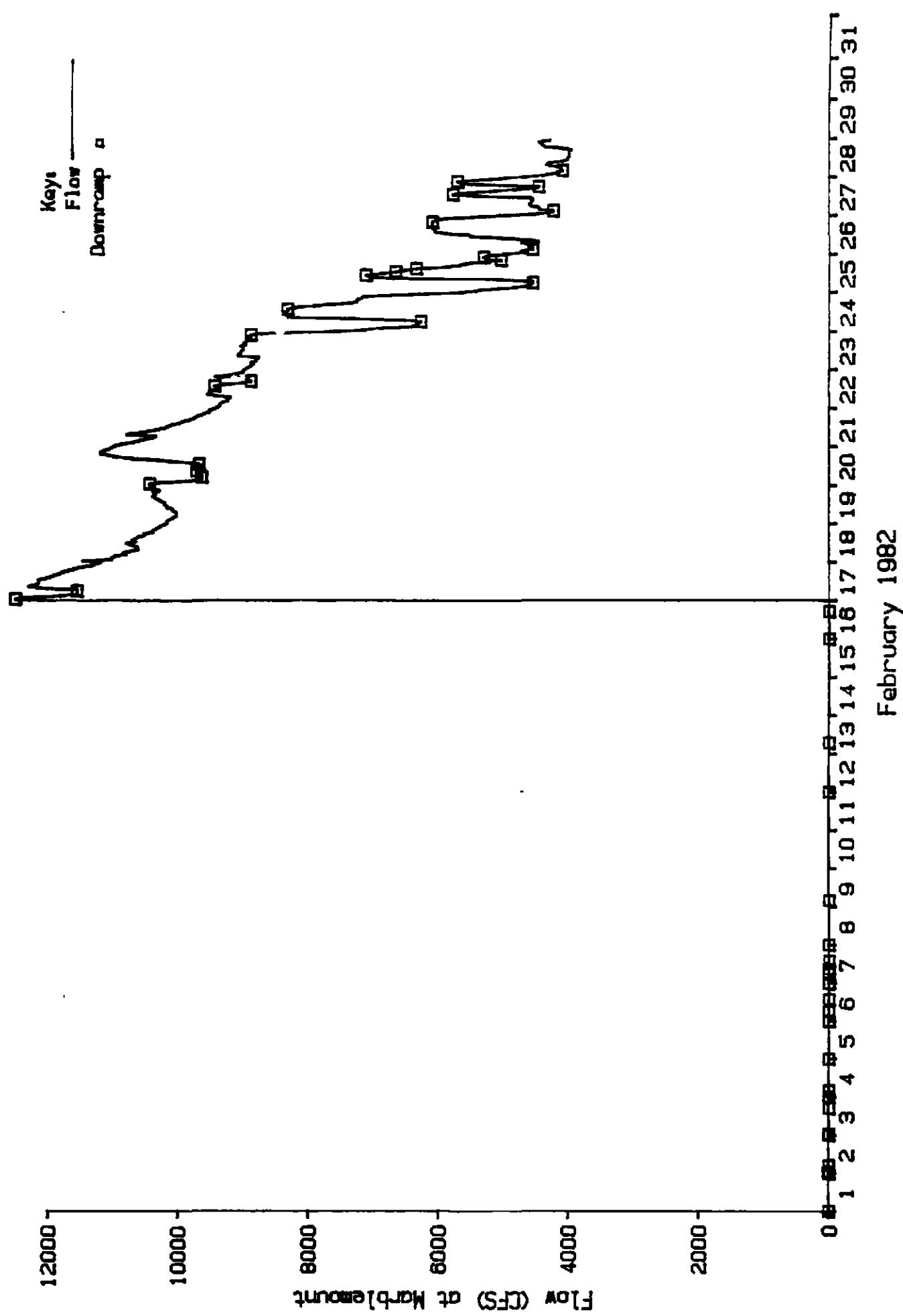
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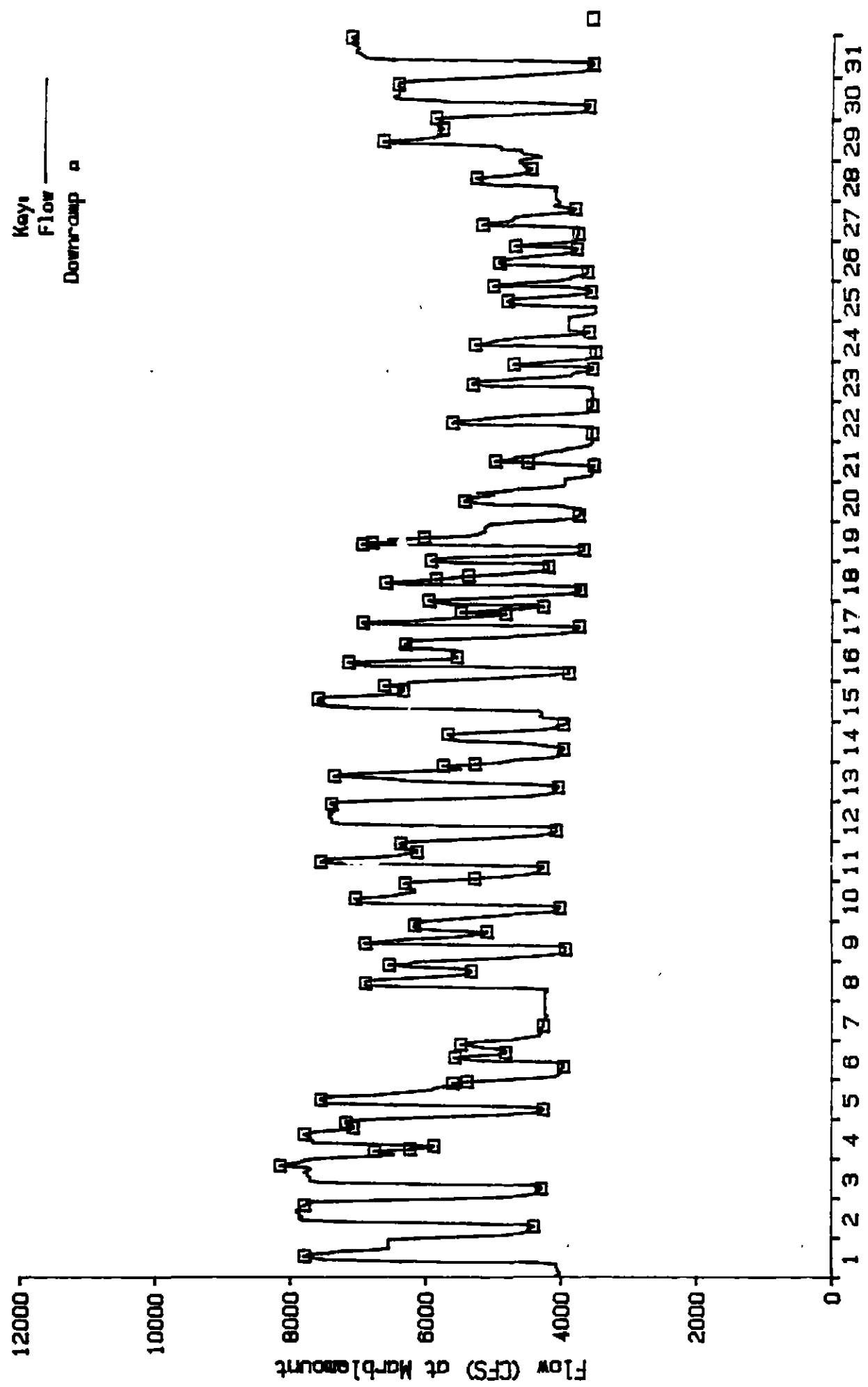


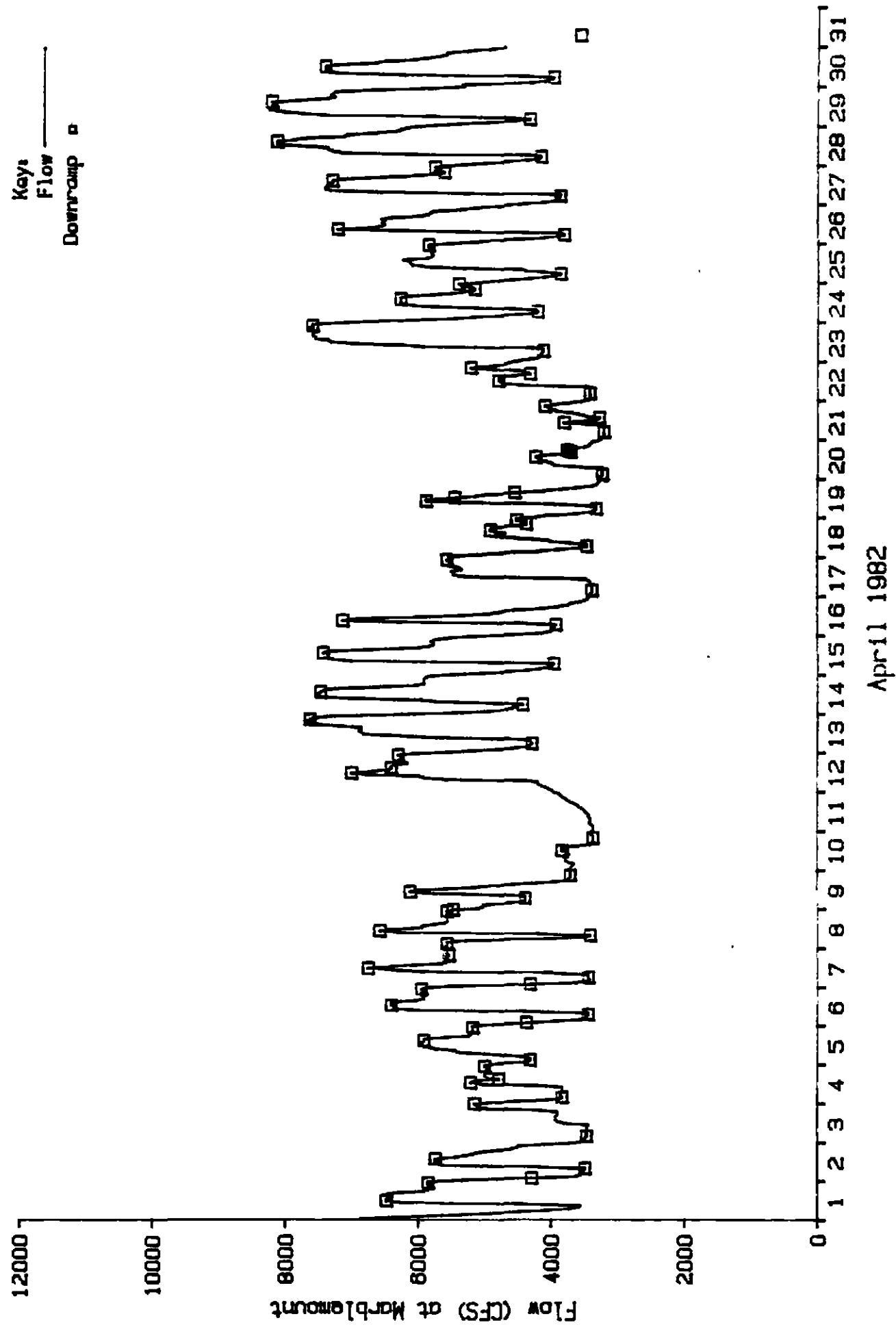


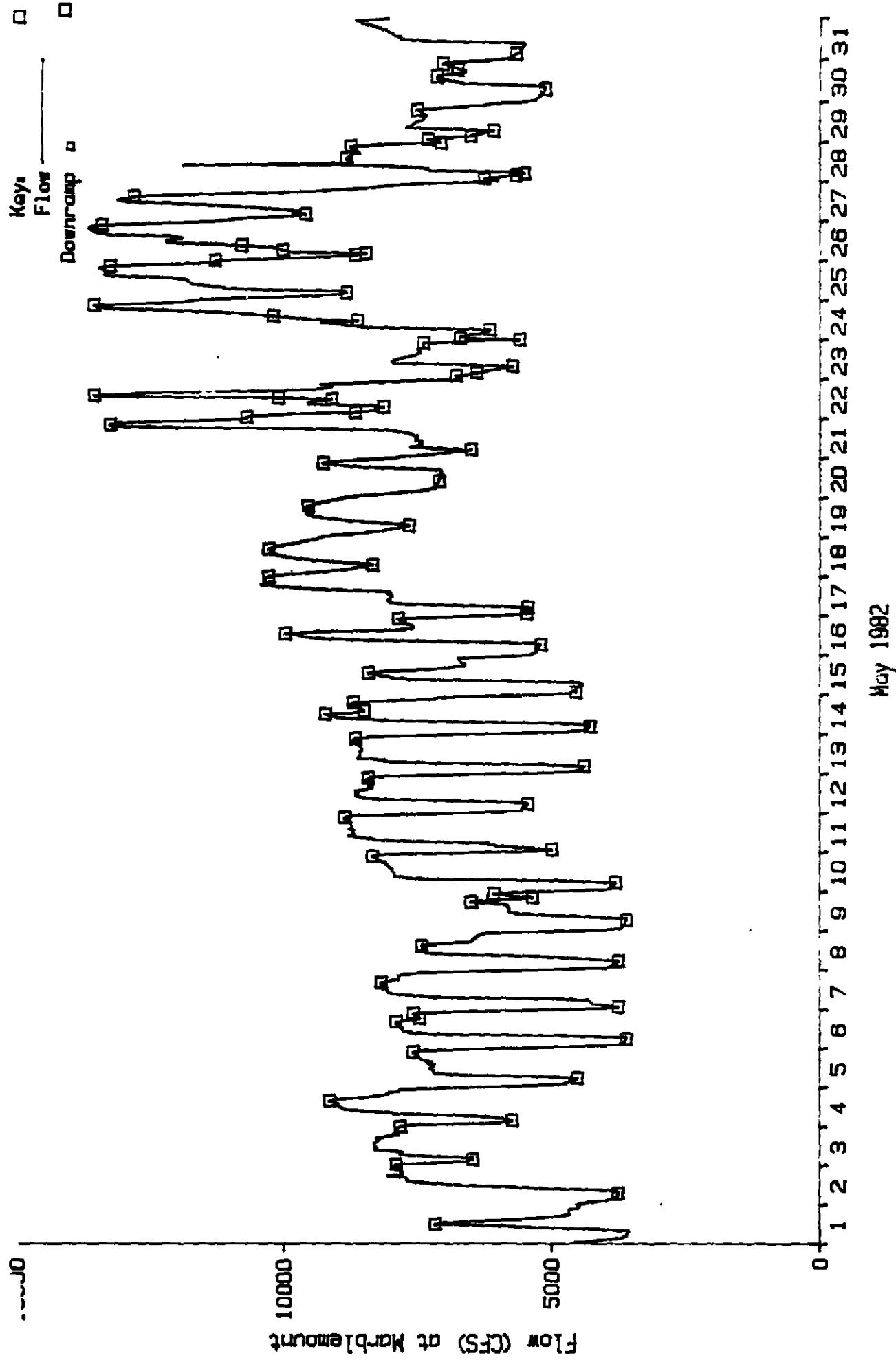


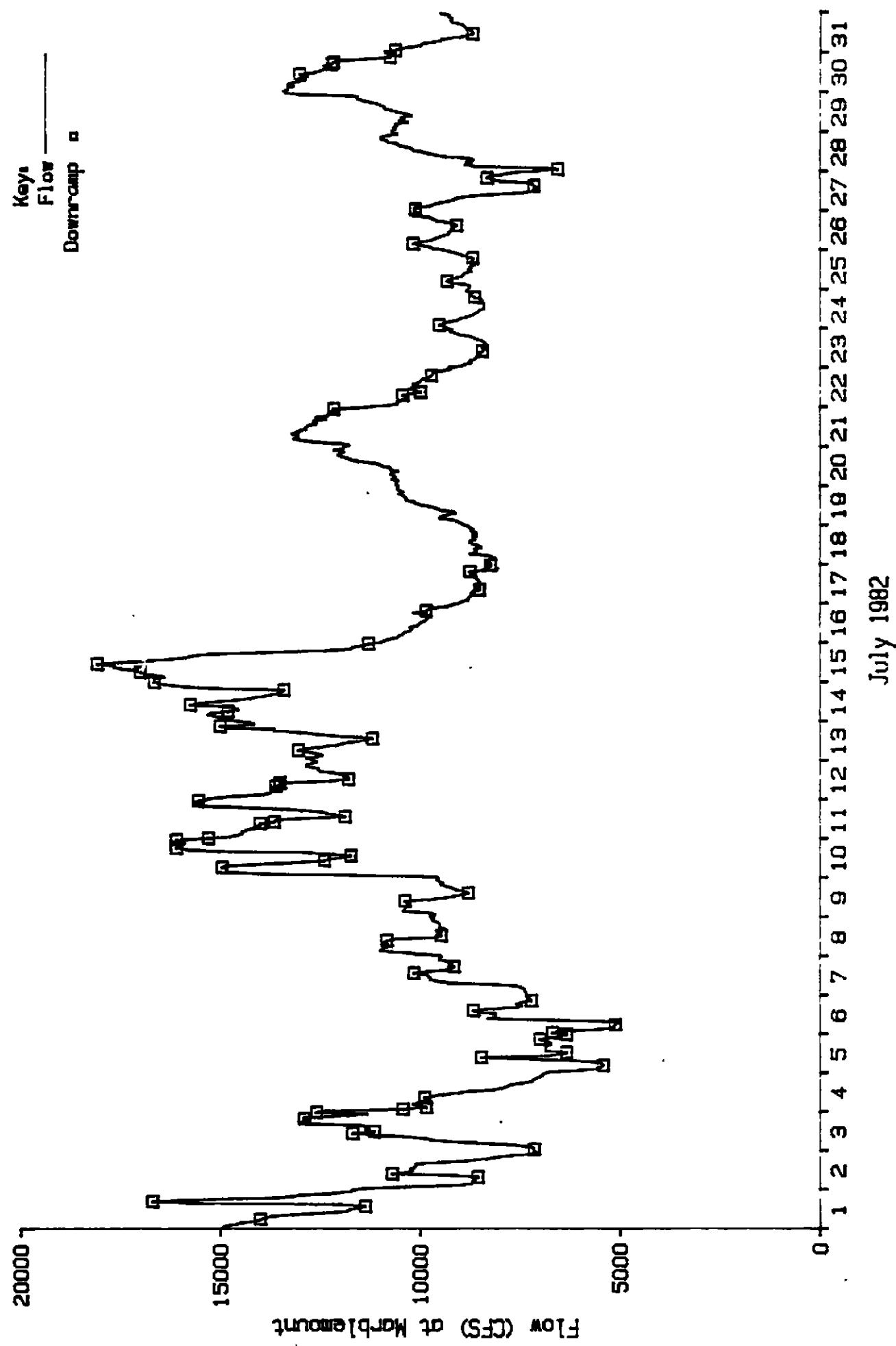


March 1982

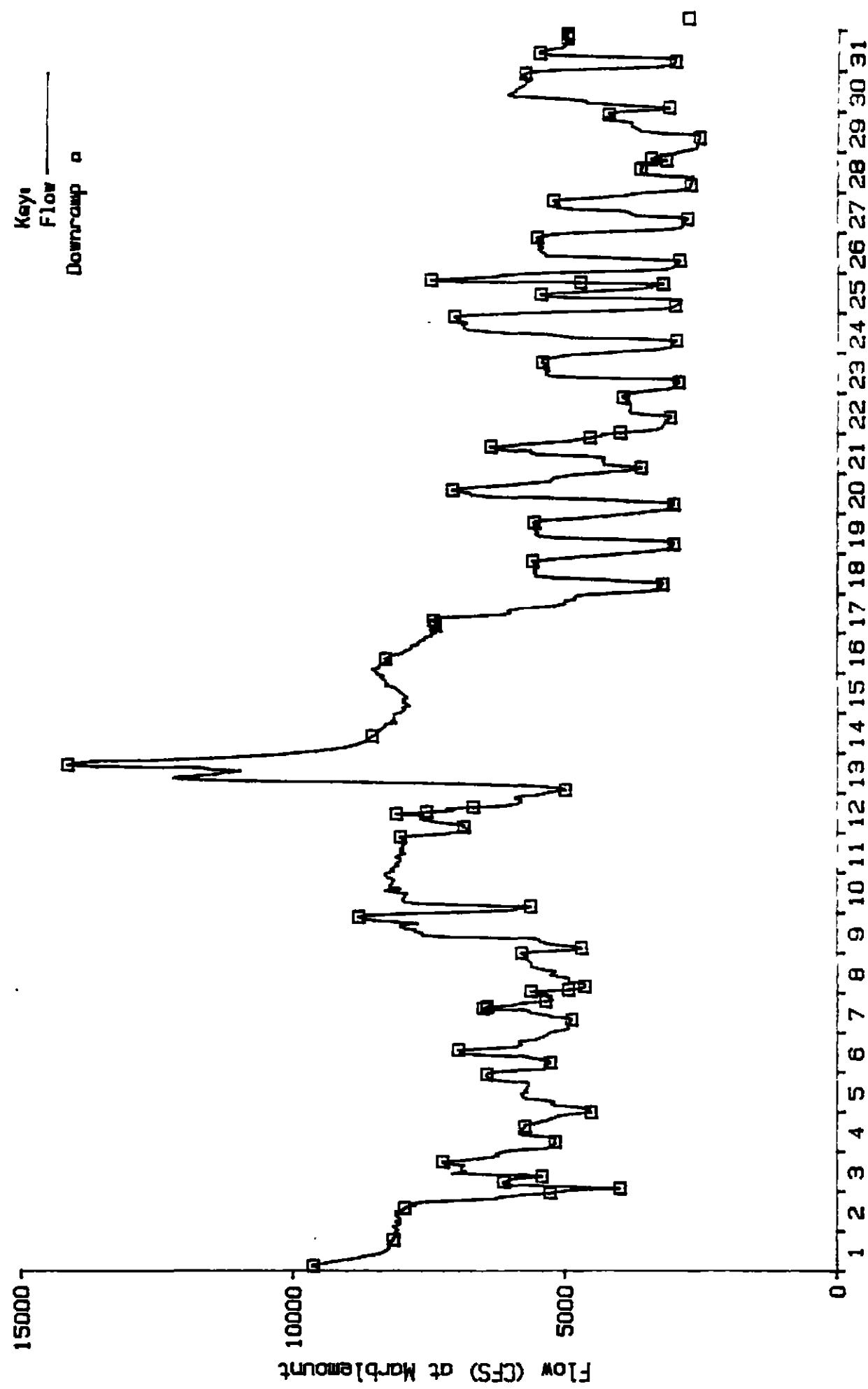




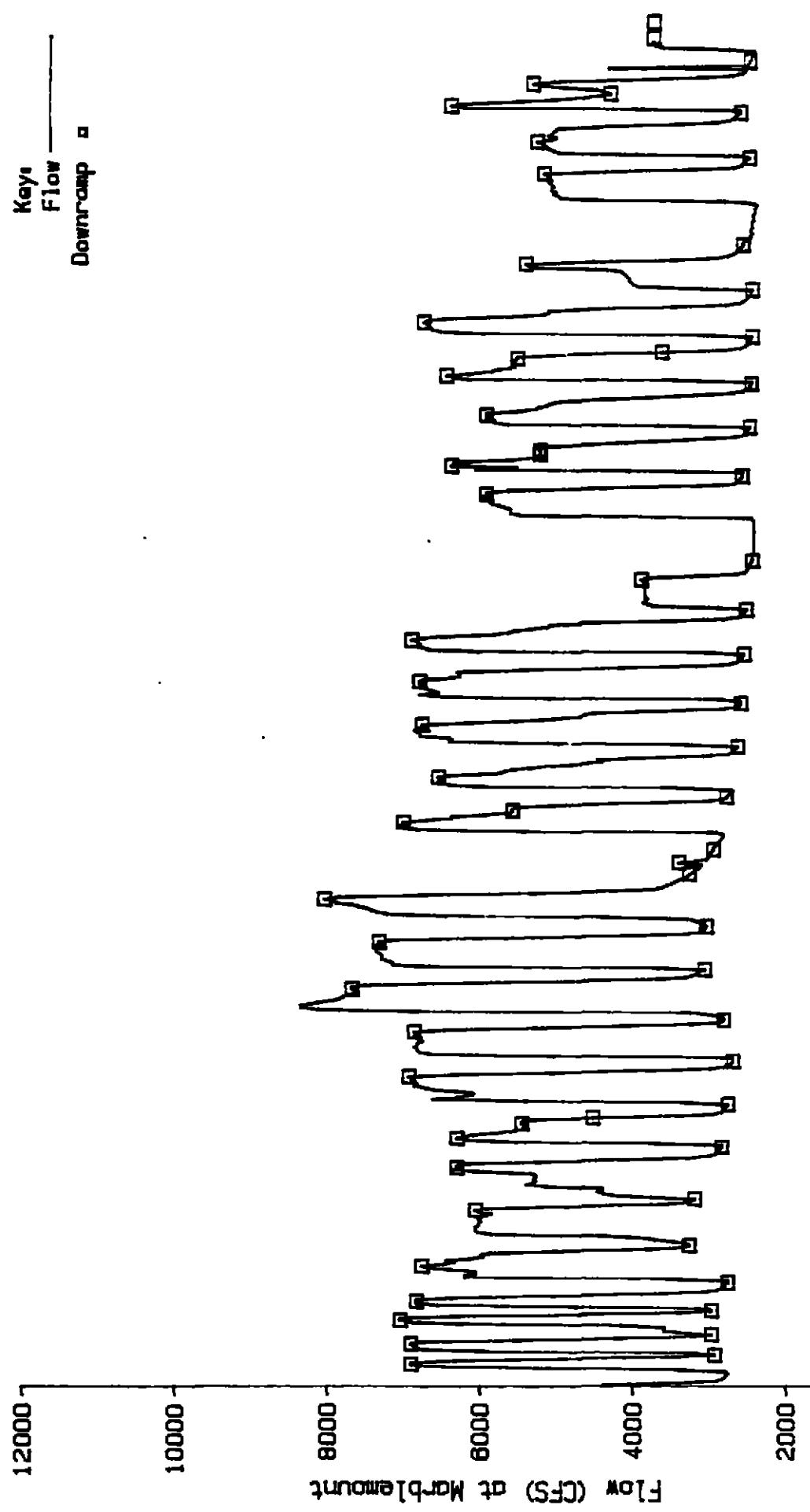


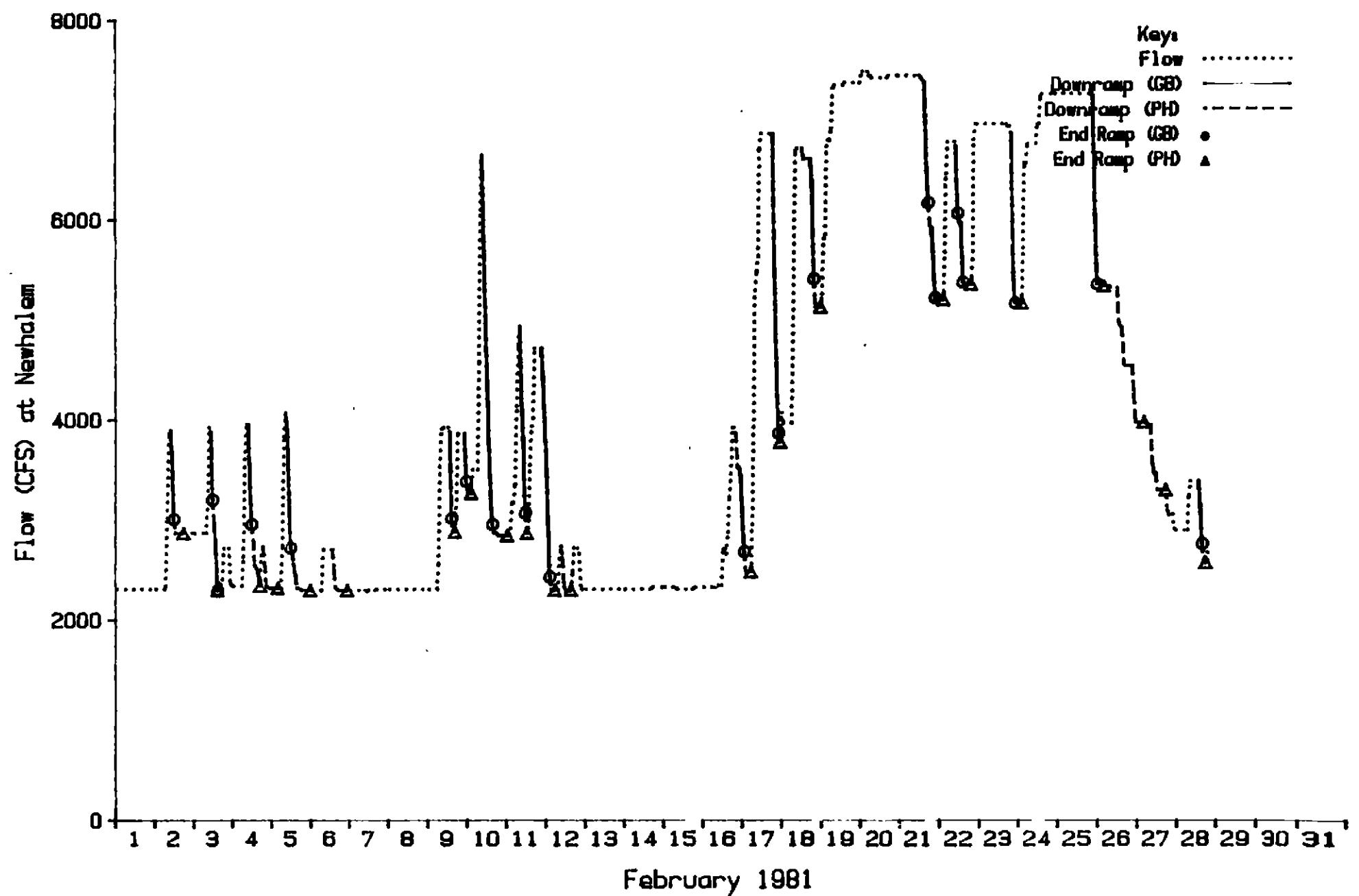


August 1982

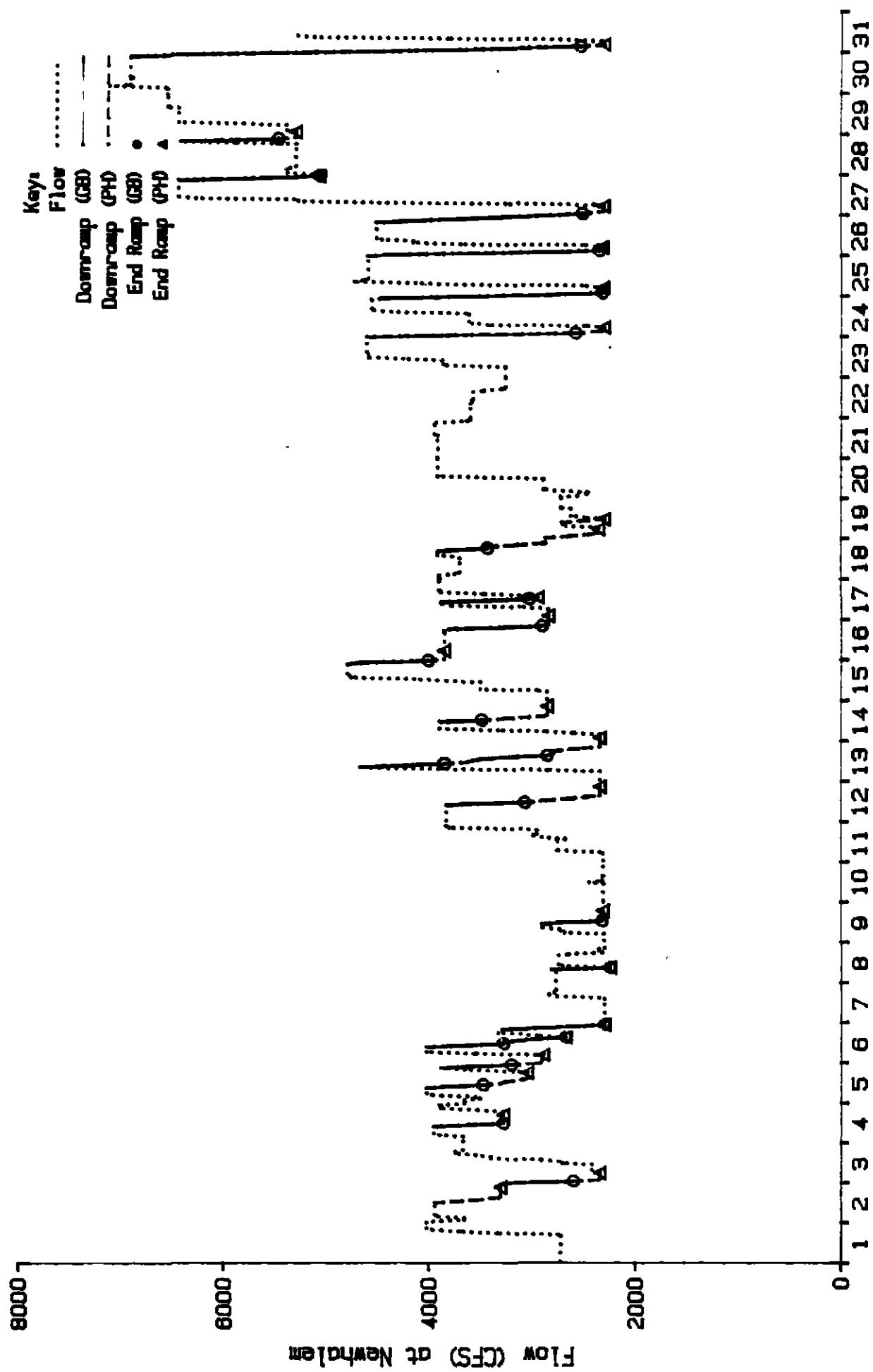


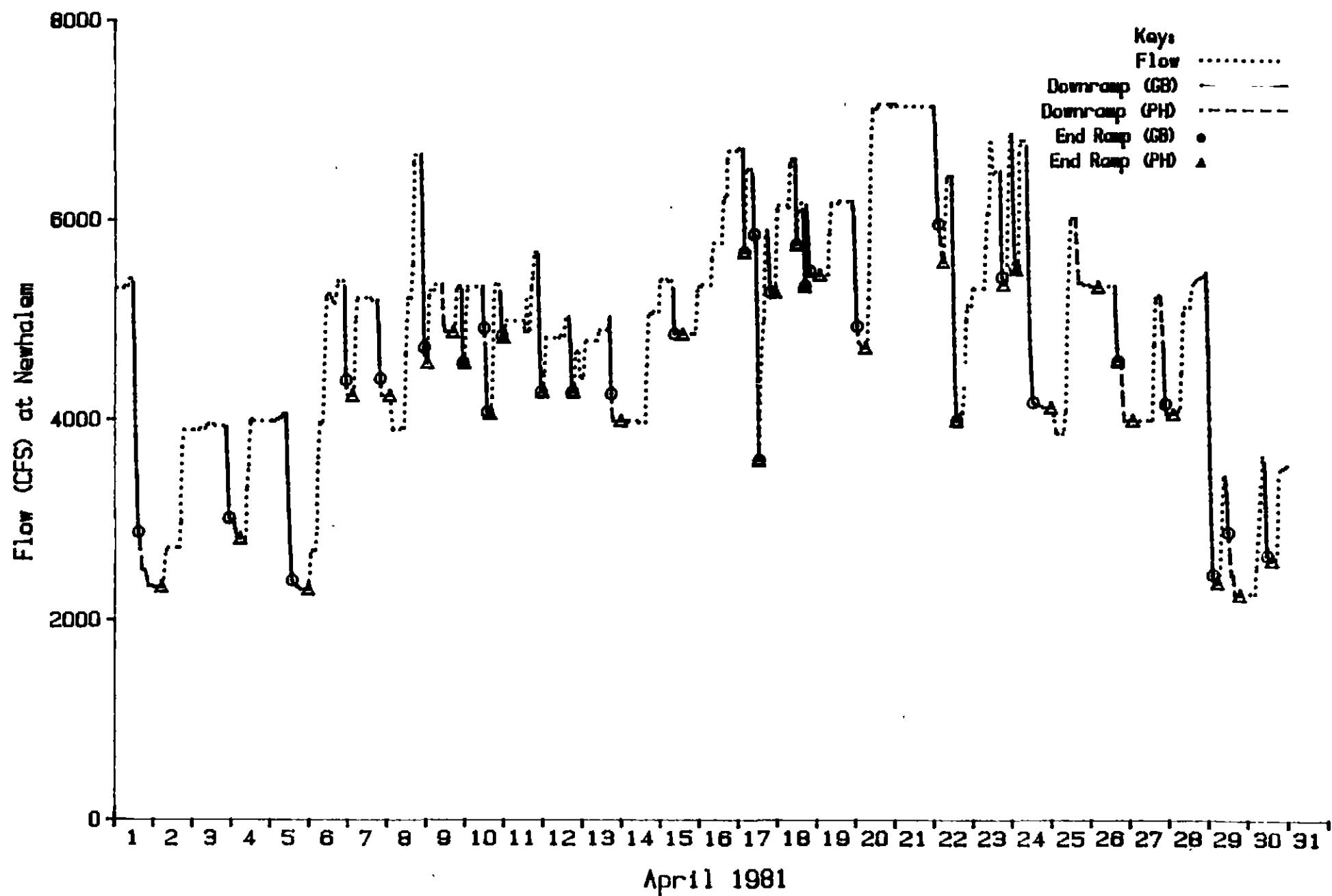
September 1982

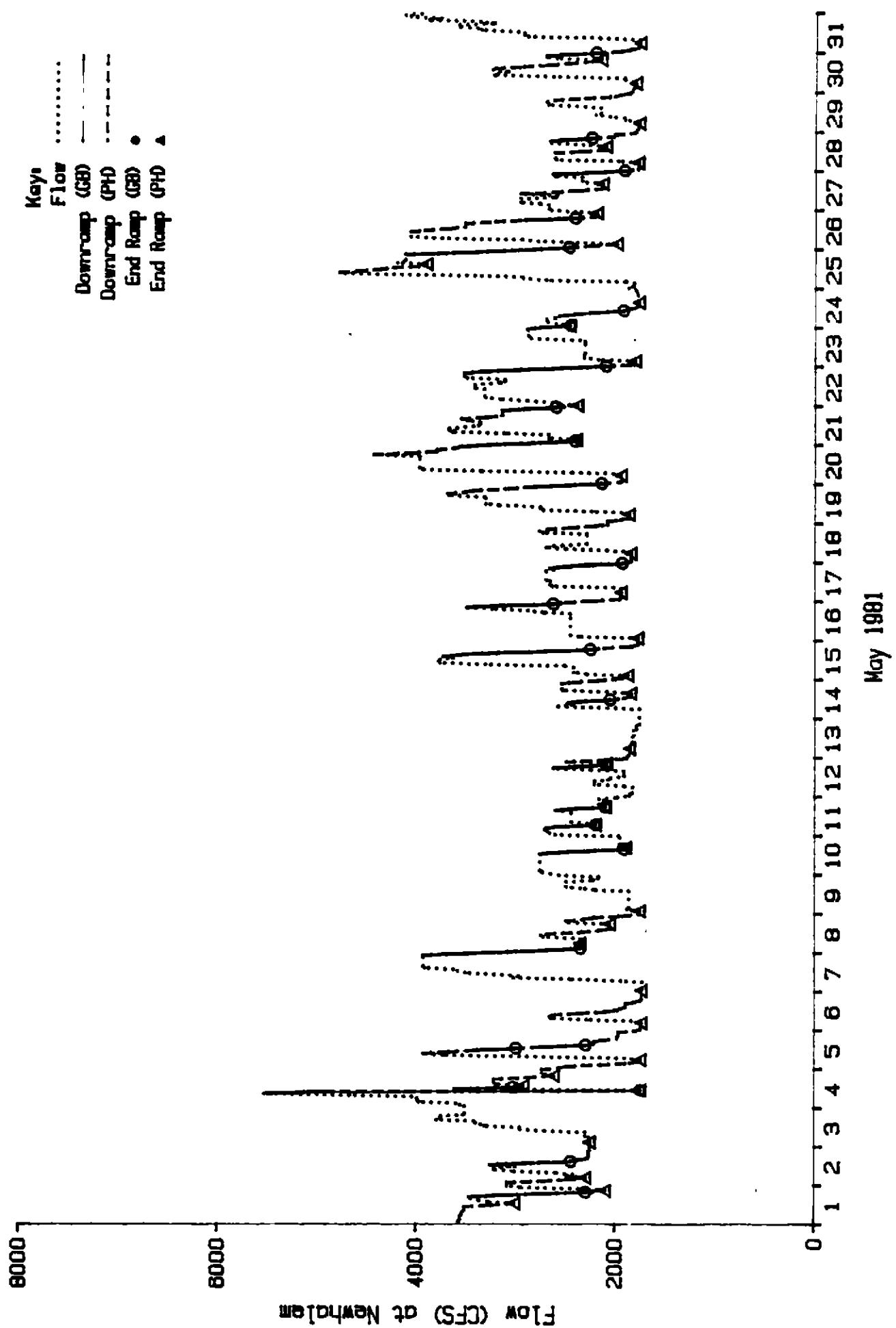




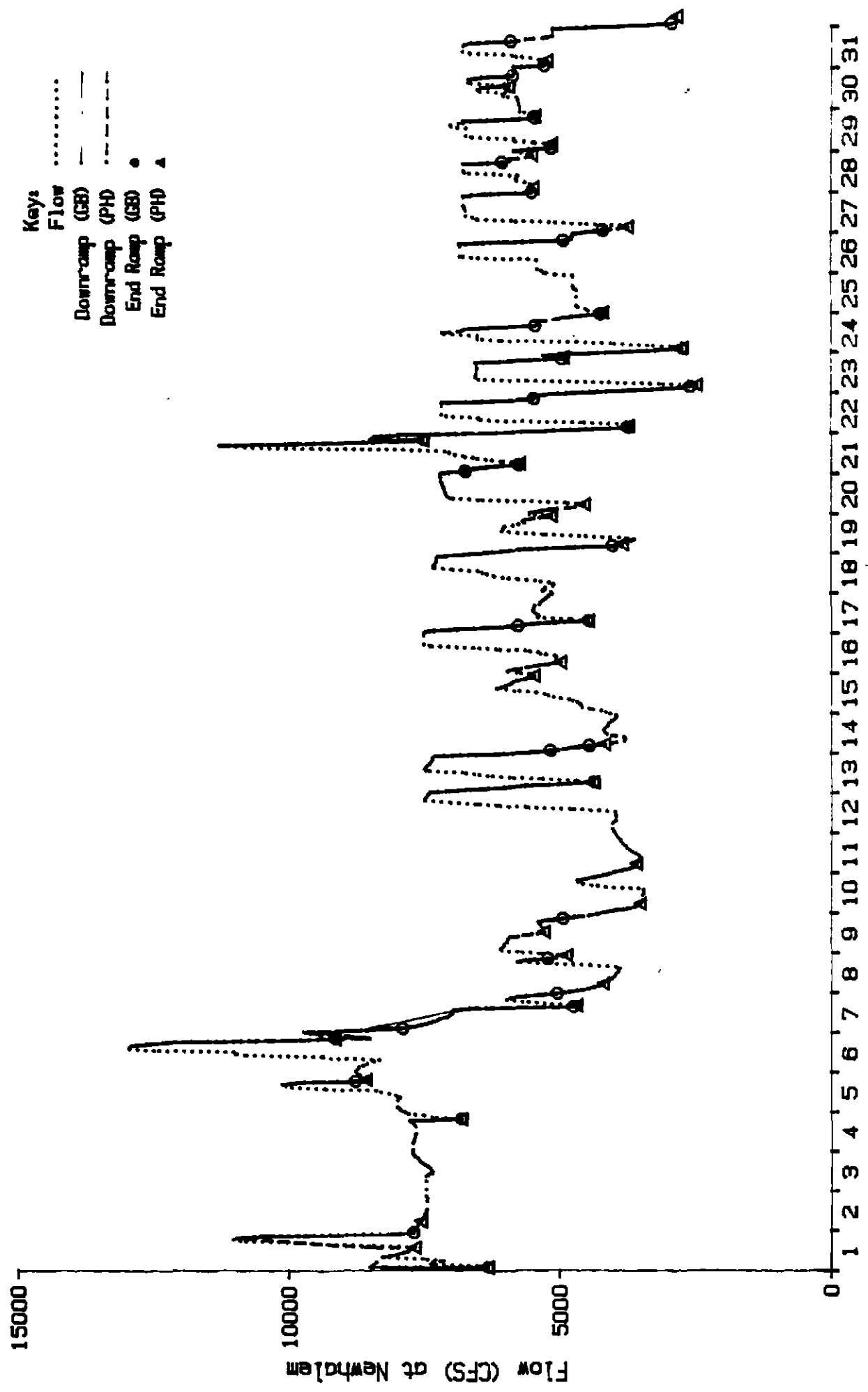
March 1981



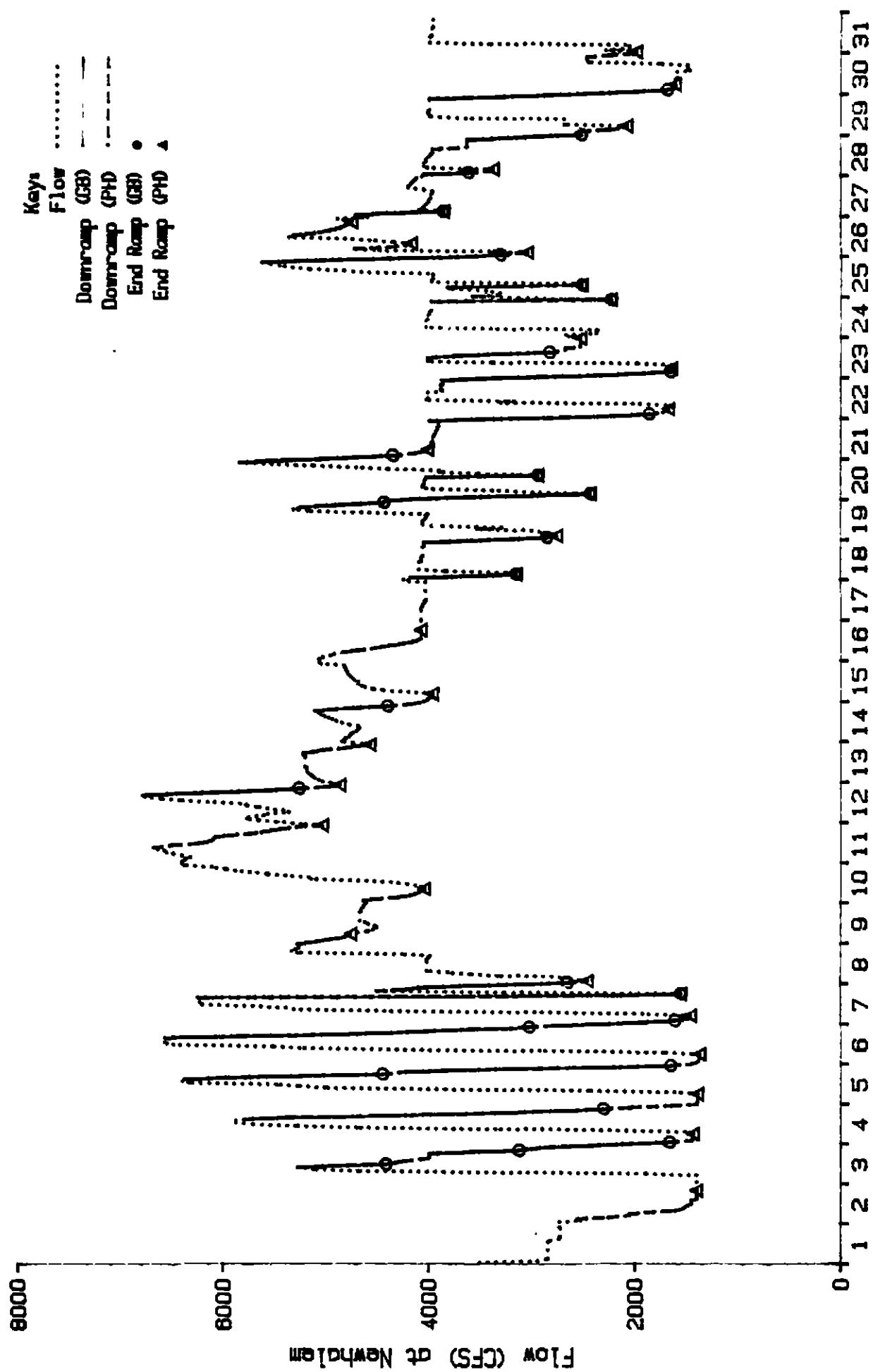


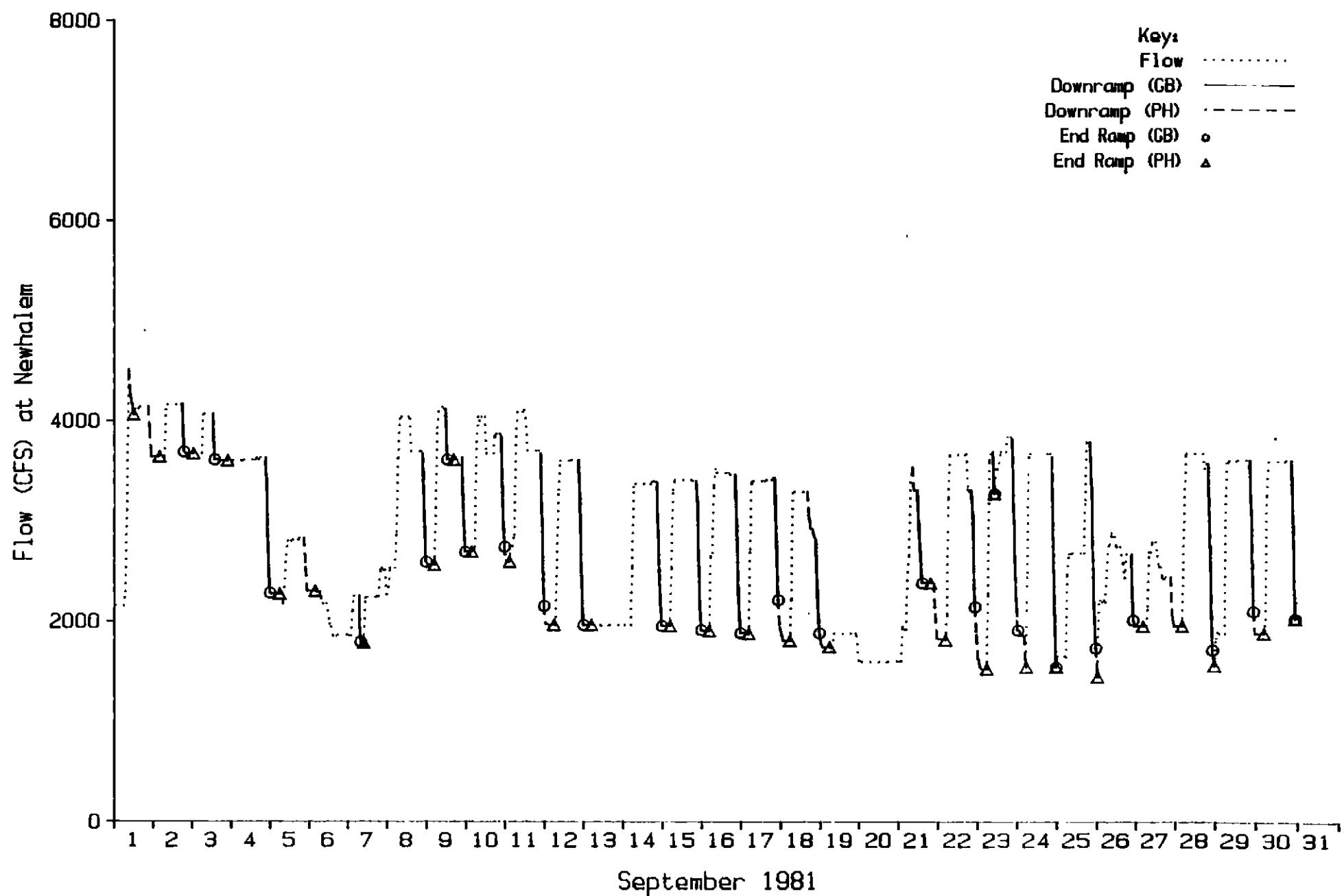


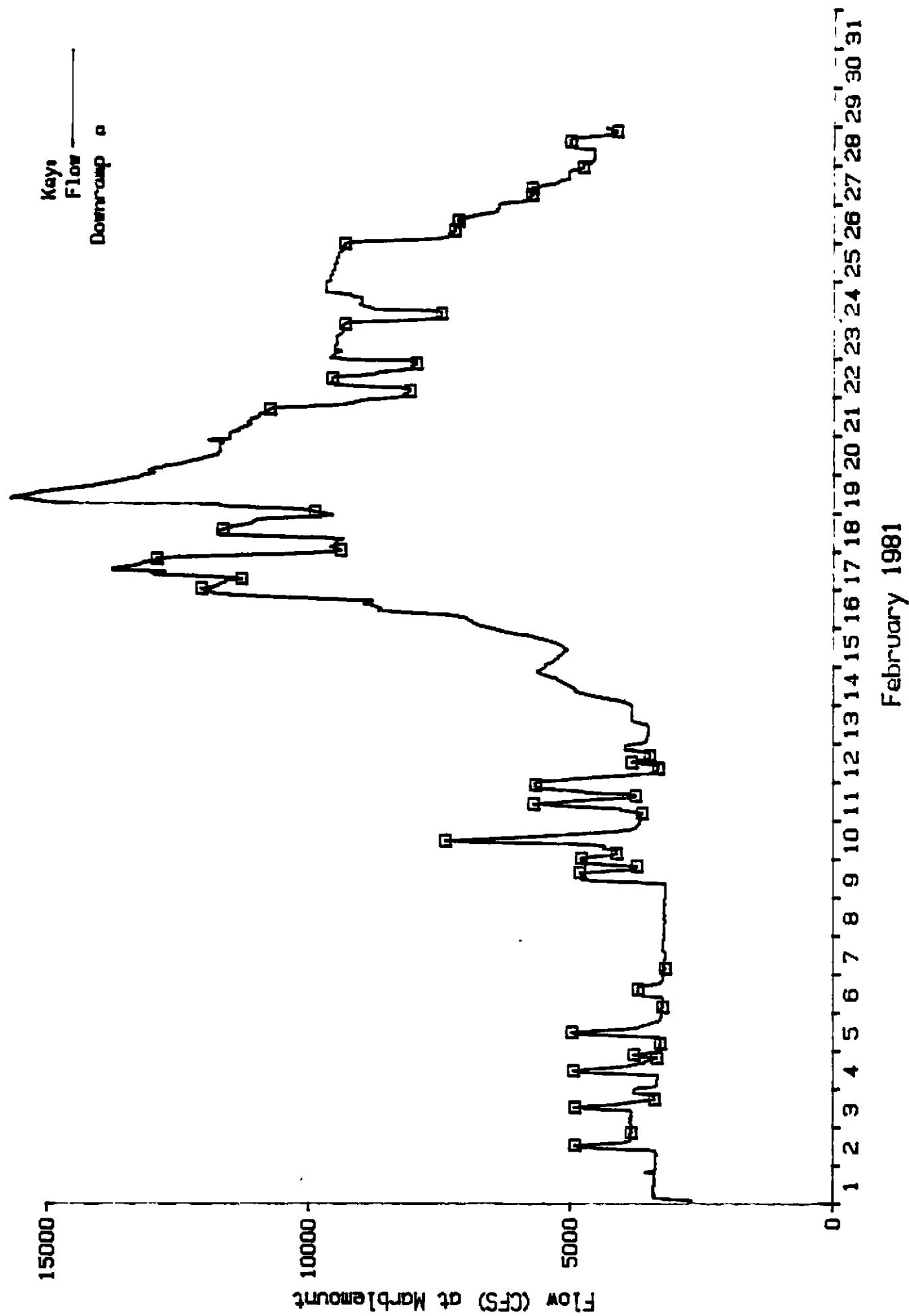
July 1981

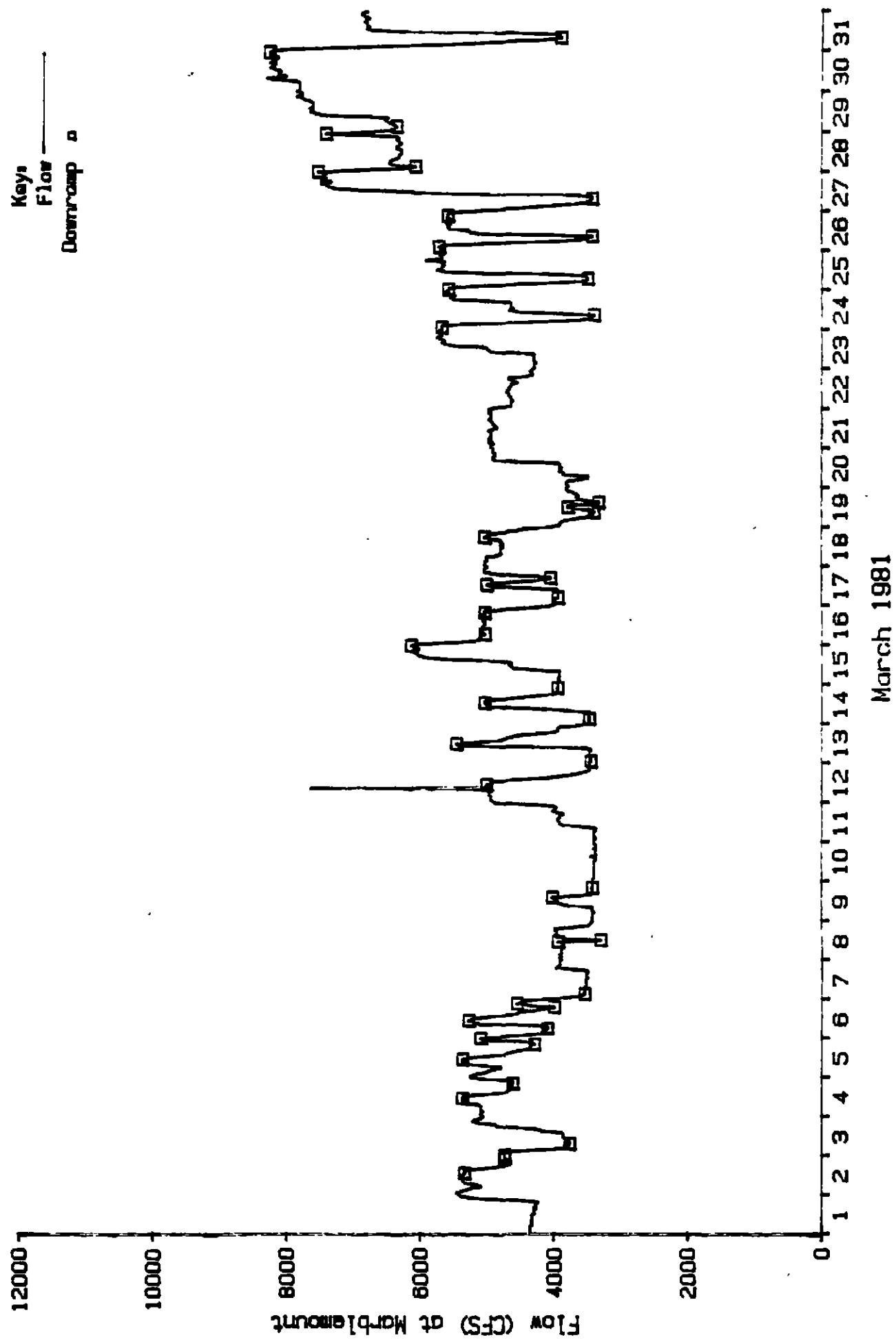


August 1981



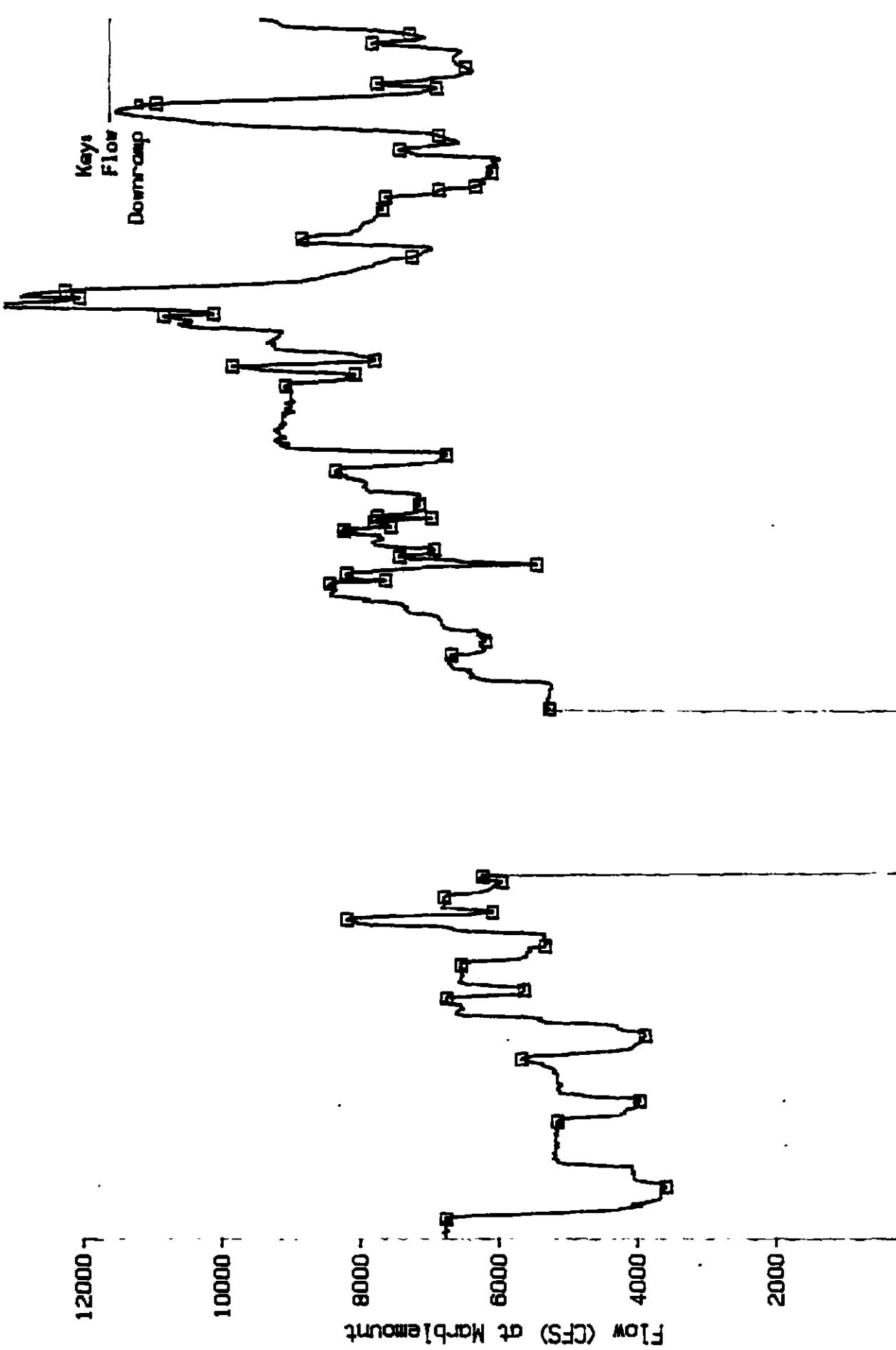


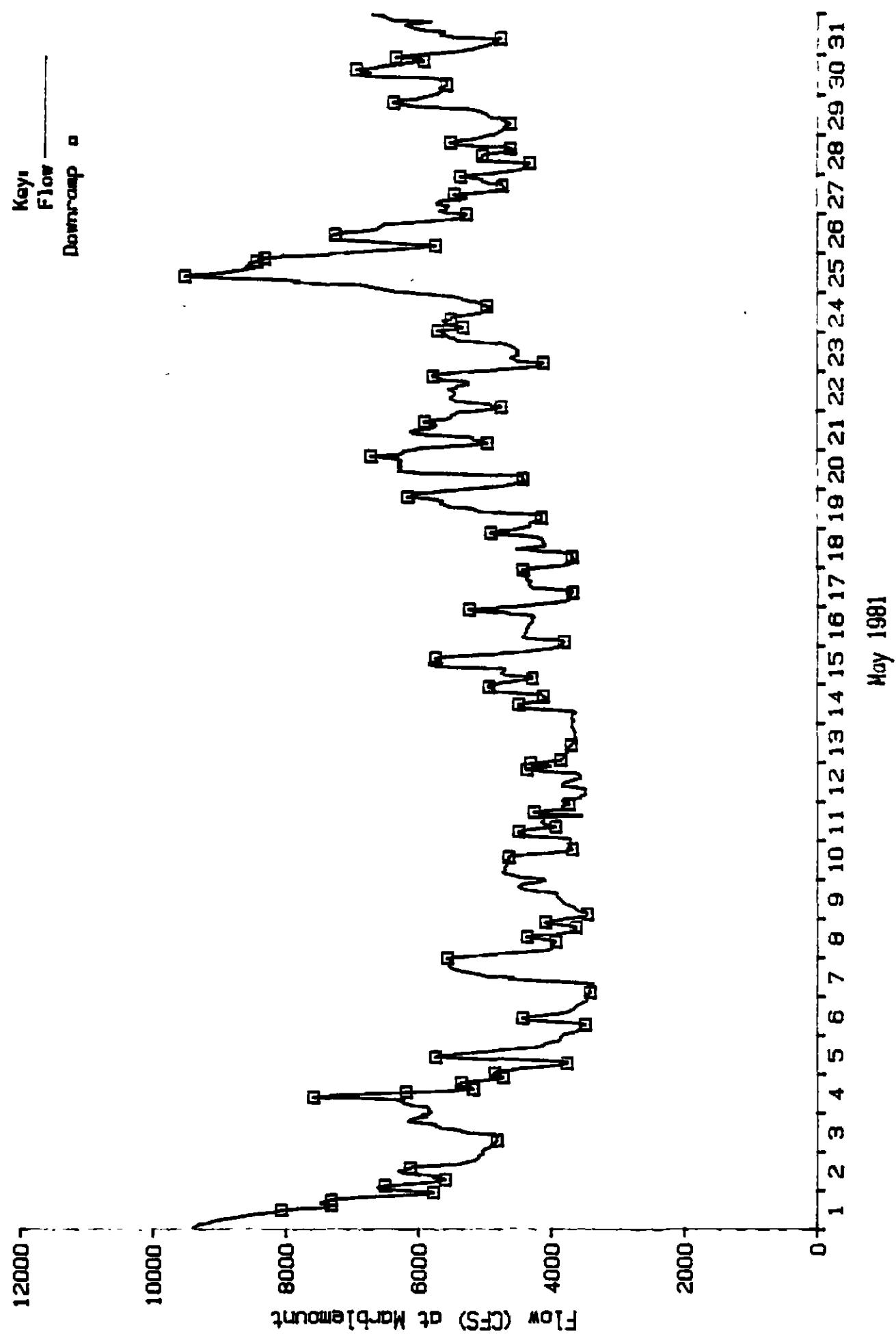


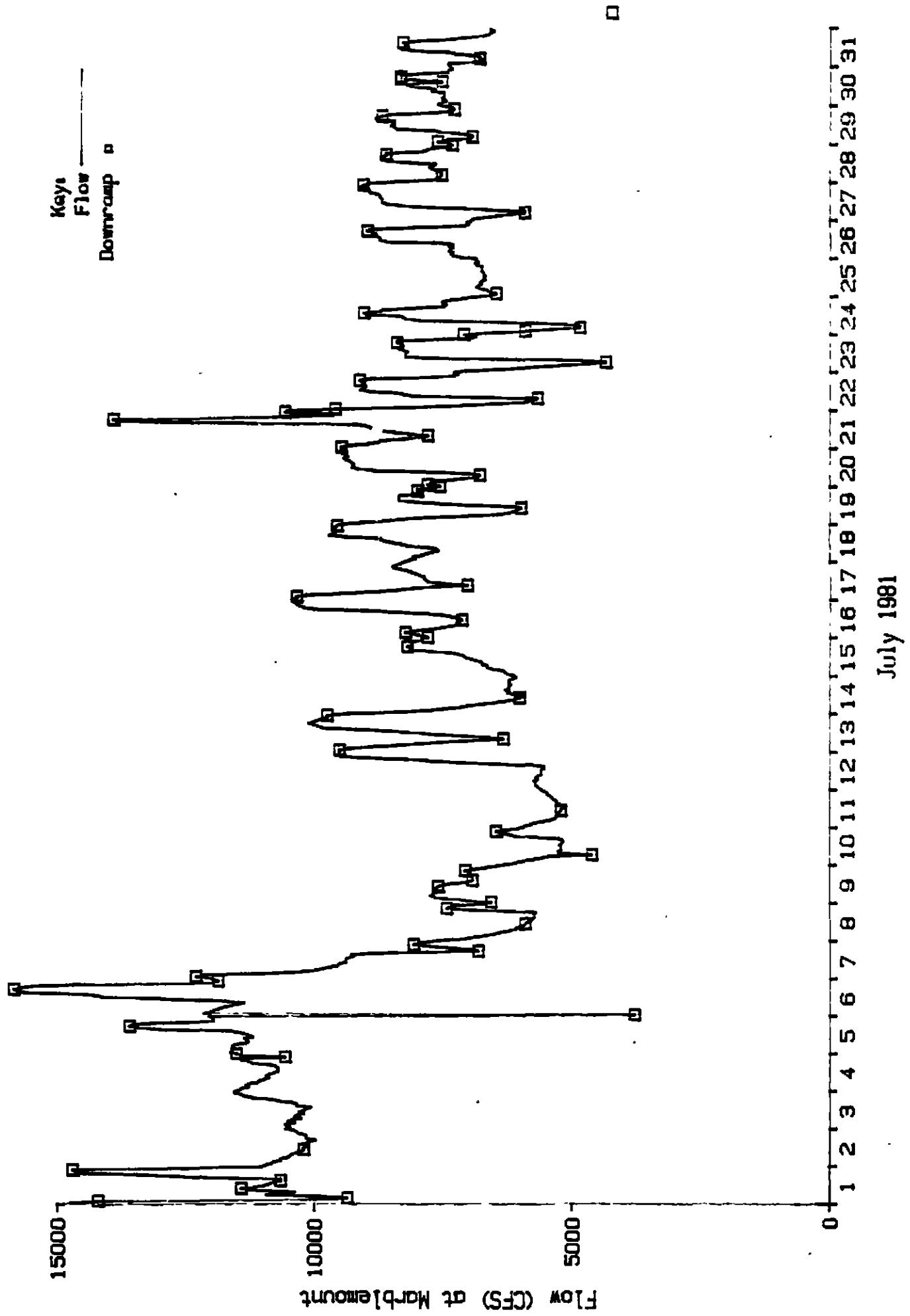


April 1981

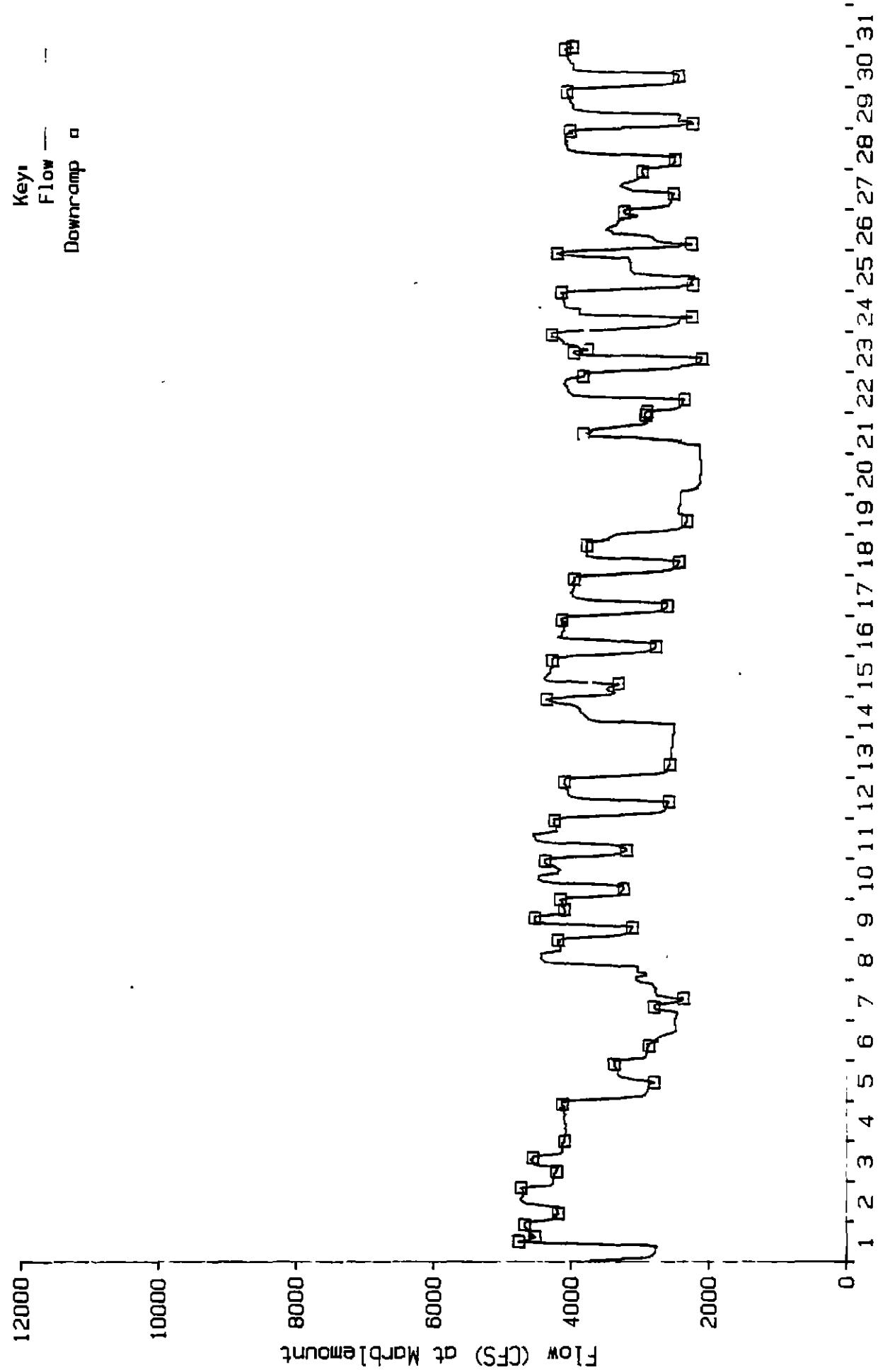
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28, 29, 30, 31



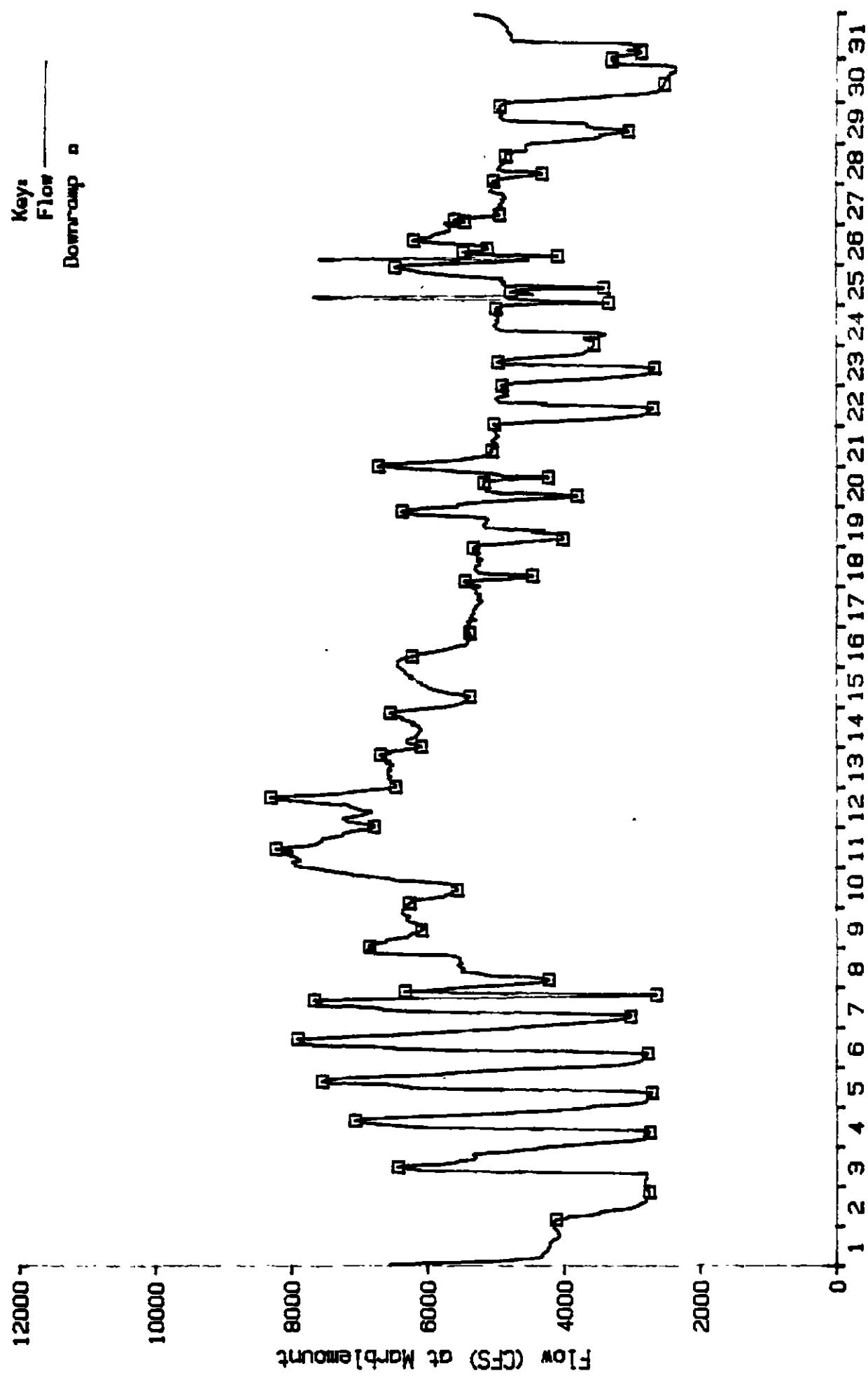




September 1981



August 1981



**APPENDIX D**

**SKAGIT RIVER FRY INDEX MODEL USERS GUIDE**

## INTRODUCTION

### 1.1 PURPOSE

The STAGMDL model is designed to integrate historical flow events during the Interim Flow Agreement period (1981-1987) with the estimated relative pothole and gravel bar fry stranding levels that were developed during the 1985-86 Skagit River Studies. STAGMDL projects numbers of fry trapped and stranded for the requested time period and for requested gravel bar types as defined by river location, slope and substrate. It does this using 1985-86 trapping and stranding data, and assumes that fry densities and species composition remained constant from 1981-87.

The input data are stored in an R:BASE System V database. The primary outputs of a given model run are two data tables in the database called GBOUTPUT and PHOUTPUT. These contain the model results for gravel bars and potholes at the finest level of detail. The user can then summarize and report the data in a number of different ways using various built-in functions.

### 1.2 VERSION

The STAGMDL model is actually composed of a number of programs. The primary program is an R:BASE System V menu-driven application written in the R:BASE programming language. This is the program that determines the parameters for a model run, extracts the necessary data from the database, sets the simulations in motion and handles the printed report options at the end of the run. Secondary programs, which perform the actual simulation and data summarization, were written and compiled with Borland's TURBO Pascal. The model is designed to run on an IBM-PC AT or compatible with a hard disk.

It is necessary to have R:BASE System V (version 1.1 or later) installed on the computer running the model, but not TURBO Pascal as the Pascal programs are all compiled.

### 1.3 AUTHOR

The STAGMDL database and model were designed, coded and tested by Katie Swanson of IS Consulting under a subcontract with R.W. Beck and Associates, Seattle, Washington.

## MODEL OPERATION

### 2.1 OPERATING ENVIRONMENT

R:BASE System V (version 1.1 or later) must be installed on the computer used to run the model.

The following files must be loaded to the hard disk of your computer before the model is run (preferably in a separate subdirectory, for organizational purposes):

|              |                                      |
|--------------|--------------------------------------|
| SHAGMDL1.RBX | These three files are the SHAGMDL    |
| SHAGMDL2.RBX | database files; ".RBX" denotes the   |
| SHAGMDL3.RBX | clean database with input data only  |
| SHAGMDL.PFC  | the R:BASE application in executable |
|              | binary form                          |

The following are all compiled TURBO Pascal programs:

|            |                                     |
|------------|-------------------------------------|
| GBSIM.COM  | performs the gravel bar simulation  |
| FHSIM.COM  | performs the pothole simulation     |
| GBADDG.COM | sums GBOUTPUT data over gravel bars |
|            | within days                         |
| GBADDM.COM | sums GBOUTPUT data by month         |
| GBADDY.COM | sums GBOUTPUT data by year          |
| PHADDM.COM | sums PHOUTPUT data by month         |
| PHADDY.COM | sums PHOUTPUT data by year          |

If this is the first time you have copied the files onto the hard disk, you should next copy the three ".RBX" files to another three files of the same name but with ".RBF" extension. ".RBF" is the standard R:BASE System V database file extension. The files with ".RBX" extension should be preserved intact, as they contain the clean, packed database with input data only, and can always be used to "start over" with a clean database by re-copying to the ".RBF" files. After a model run, the ".RBF" files will grow considerably larger due to accumulation of model output data.

### 2.2 DEFINING THE PARAMETERS OF A MODEL RUN

The program will ask you to define what subset of the database is to be used in a given model run. Basically, you must define (1) the gravel bar types to be modelled, as a function of slope, substrate and river location, (2) what subset of the historical (1981-87) flow data is to be used, and (3) which module of the model to run (gravel bars, potholes, or both).

Slope, substrate and river location are chosen from a series of menus.

The Slope Menu lets you pick from:

- (1) 0 - 5% slope
- (2) greater than 5% to 10% slope
- (3) greater than 10% slope
- (4) all slopes

If you pick a single slope category (i.e. not "all slopes"), the menu will come up again in case you want to pick another single category (for example, if you wanted categories 1 and 2 but not 3).

The Substrate Size Menu lets you pick from:

- (1) less than 3" substrate size
- (2) greater than 3" substrate size
- (3) all substrate sizes

If you don't pick "all sizes", then you obviously are limited to one or the other.

The River Location Menu lets you pick from:

- (1) Upper reach
- (2) Middle reach
- (3) Lower Reach
- (4) all reaches

If you pick a single location category (i.e. not "all locations"), the menu will come up again in case you want to pick another single category (for example, if you wanted categories 2 and 3 but not 1).

Next there is another small menu that lets you choose between using all flow data in the database, or just a subset. Remember that all flow data includes years 1981 to 1987, so this is probably not the best choice. You will usually want to limit the run to one year or a subset of a year.

If using a subset of the flow data, you specify what data to use via an R:BASE data entry screen. An example of the exact screen is given in the next section. Basically, a data entry screen lets you "fill in the blanks". In this screen you can define a time period in terms of:

YEAR        81 to 87, this field is required  
SEASON      1 or 2, if left blank you get both  
BEG.DATE     given as MONTH and DAY  
END.DATE    given as MONTH and DAY

At a minimum, you must enter the year. If you specify a season within the year but leave the beginning and ending dates blank, you get the pre-defined dates ("spring" is Feb. 1 to May 31, and "summer" is July 15 to Sept. 30). Otherwise, you can specify a logical subset of the beginning and ending dates for the season you have indicated.

You can ask for more than one subset of the data, as the data entry screen comes up repeatedly until you indicate you are done. For example, you could choose to run the model for two different years, limiting it to season 1 (spring) for both.

The final steps in defining the parameters of a model run are accomplished by making selections from two small menus. The first asks you to indicate which module of the model is to be run - gravel bars, potholes, or both. The second menu asks you to indicate if maximum or average ramp rate is to be used from the flow event data (gravel bar module only).

#### 2.3 REQUESTING THE PRINTED OUTPUT FROM A MODEL RUN

Once the simulation is complete, the results are stored in the database tables GBOUTPUT and/or PHOUTPUT (gravel bar module output and pothole module output). Each row of GBOUTPUT contains the fry trapped and stranded for one of the requested gravel bar types on one day. PHOUTPUT contains the equivalent data for potholes, only each row is for one day.

There are various options for summarizing and printing these data. For any given report, you define what you want through three menus, then a data summarization program will be run (if necessary) and the requested report will come out on the printer. You can go through these menus as many times as necessary to get all the reports that you want.

The first menu defines how the data should be ordered, or sorted; either chronologically or ranked by stranding totals. If you choose the latter, another menu will determine which variable to use for the ranking. The last menu asks if you want to report season totals, monthly totals or daily detail.

Examples of these menus are shown in the next section.

#### 2.4 ANNOTATED MODEL RUN WITH EXAMPLE SCREENS

Start R:BASE System V from the subdirectory that contains your database and program files, as follows:

```
C:\subdir> rbsystem
```

Choose the "R:BASE" option from the menu and open the SKAGMDL database. You will want to leave the PRUMPTS mode and operate at the regular R:BASE command level, denoted by the "R" prompt. Now, start the model running as follows:

```
R run model in skagmdl.prc
```

```
Bypass simulation and go to output section? (Y/N)
```

This option is provided in case you wish to print additional reports from a previous model run. The current version of

the database must contain the output data from that model run. Enter "Y" to bypass simulation, otherwise enter "N".

Next, you will see a help screen titled "Slope, Substrate and Location Choices" which gives brief directions on how to use the Slope, Substrate Size and River Location Menus that will appear next.

```
=====Pick the slope categories for this model run=====
(1) 0 - 5%
(2) 5% - 10%
(3) 10%
(4) All slopes
=====
```

Type the number of your menu pick (e.g. "4"), or use the up-and down-arrows to move the highlight to your choice and then press Enter. If you chose 1,2 or 3 then you will have the opportunity to select a second category:

Do you want to choose a second slope? (Y or N)

If you enter "Y" then the menu will come up again, otherwise the program continues to the Substrate Size Menu.

```
=====Pick the substrate sizes for this model run=====
(1) Less than 3"
(2) Greater than 3"
(3) All substrate sizes
=====
```

Type the number of your menu pick, or use the up- and down-arrows to move the highlight to your choice and then press Enter.

Lastly, you will get the River Location Menu:

```
=====Pick the river locations for this model run=====
(1) Upper reach
(2) Middle reach
(3) Lower reach
(4) All reaches
=====
```

Type the number of your menu pick (e.g. "4"), or use the up-and down-arrows to move the highlight to your choice and then press Enter. If you chose 1,2 or 3 then you will have the opportunity to select a second category:

Do you want to choose a second location? (Y or N)

If you enter "Y" then the menu will come up again, otherwise the program continues to choosing the flow data.

Next, you will see a help screen titled "Choosing flow data for the model run" which gives brief directions on how to use the menu and data entry form that will appear next.

```
====Pick the flow data to be included in the model run=====
  1) All flow data in the database
  2) A subset of flow data for particular
     time periods
=====
```

As discussed in section 2.2 above, the usual choice will be "2" to use a subset of the 1981-87 flow event data. In this case, you will next see the following R:BASE data entry screen:

```
Press [ESC] when done
YEAR: ____ (must be entered: 2-digits, e.g. 85)

SEASON: ___ (1=spring, 2=summer. If left blank you
           get both)
Beginning Date --- MONTH: ___ DAY: ___
Ending date    --- MONTH: ___ DAY: ___
=====
Notes:
"Spring" implies dates between Feb.1 and May 31
"Summer" implies dates between July 15 and Sept.30
If you leave beginning and ending dates blank, you get
these time periods.
```

When the form comes up the YEAR field will be highlighted. You must enter a value here (81 to 87). Move to other fields with the tab key (Shift-Tab to move backwards). All other fields besides YEAR are optional; see discussion in section 2.2 above. When you are done entering data, press the ESC key. It will then ask:

Another time period to enter? Y or N

Answer "Y" to bring up the data entry form again and enter another time period for flow event data. Enter "N" when you are through selecting flow event data. In this case, it will display the time periods you selected:

Here are the time periods you entered:

| YEAR  | SEASON | BEGDATE | ENDDATE |
|-------|--------|---------|---------|
| ----- | -----  | -----   | -----   |
| ...   |        |         |         |

Do you want to do any editing of these data? (Y/N)

If you enter "Y" it will put you into the standard R:BASE editing mode for the temporary table that contains the data. Refer to your R:BASE manual for a review of how to edit. When done, press the ESC key. Remember that you can delete rows but you cannot enter additional ones in the editor.

Now the program moves on to determining what modules to run. You will see the following menu:

```
=====Pick the database modules to be included=====
(1) Gravel bars and potholes
(2) Gravel bars only
(3) Potholes only
=====
```

Type the number of your choice (e.g. "1") or use the up- and down-arrow to move the highlight to your choice and then press Enter.

If you chose options 1 or 2 above (gravel bars are to be run), you will see a short help screen concerning maximum and average ramping rate, followed by this menu:

```
====Pick the ramprate measure to use for gravel bars===
(1) Maximum ramprate
(2) Average ramprate
=====
```

Make your choice.

Now the simulation begins. This can take a half hour or more for an entire year of flow event data. You will see messages on the screen as various tasks are accomplished.

```
Now retrieving gravel bar data from database...
Beginning gravel bar simulation...
    Unloading retrieved data to disk
    Running the TURBO Pascal program GBSIM
    Loading table GBOUTPUT from disk
End of gravel bar simulation
```

```
Now retrieving pothole data from database...
Beginning pothole simulation...
    Unloading retrieved data to disk
    Running the TURBO Pascal program PHSIM
    Loading table PHOUTPUT from disk
End of pothole simulation
```

Press any key to continue.

Now you are ready to specify what reports you want. Please also refer to section 2.3 above. First, there will be a help screen that reviews how to specify a report, followed by the first menu:

```
=====Specify how output tables should be ordered=====
(1) Chronologically
(2) Ranked by stranding totals
=====
```

If you choose "2" to rank by stranding totals, you will see this menu next:

```
=====Rank by: (Pick one)=====
(1) Chinook
(2) Chum
(3) Pink
(4) Coho
(5) Steelhead
(6) Total salmon
(7) Total salmon and steelhead
=====
```

The last menu tells the model how to summarize the data for this report:

```
==Specify level of detail for time in output tables==
(1) Show season totals only
(2) Show monthly totals, with year subtotals
    if chronological
(3) Show daily detail with month+year totals
    if chronological
=====
```

After you make your selection from this menu, it will issue a message concerning the printer:

WARNING...use wide printer or put printer in compressed mode...(Some output tables will be wider than 8-1/2 in. in normal type) Make sure printer is ready, then press any key.

Once you have the printer ready, and press a key, it will run the appropriate data summarization program and then print the report directly to the printer. The data summarization can take a while, so be patient!

When the report has finished printing, the program will ask if you want to do another one:

Do you want to print another table? (Y/N)

If you answer "Y" it will take you through the report definition menus again. You can do this a number of times until you have all the reports you want, in which case you will answer "N" to the above question.

When you have indicated that you are through with printing reports the program will return you to R:BASE command mode (the "R" prompt). The database currently open contains the output data tables from the last completed simulation. To leave R:BASE and return to DOS you will type:

R exit

Then choose to return to DOS from the R:BASE main menu (bottom pick).

## OTHER FILES IN YOUR WORKING SUBDIRECTORY

### 3.1 OVERVIEW

You will see some files in your working subdirectory of the hard disk other than those described in section 2.1 as necessary to the operating environment of the model. Here is a brief explanation of what they are.

### 3.2 DEVELOPMENT SYSTEM

The "development system" refers to the R:BASE application and TURBO Pascal source code files. It is not necessary for you to keep these on the hard disk in order to run the model. You should keep them on a floppy disk or other form of backup, however.

|             |                                                                                                                                                                                      |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STAGMDL.ASC | source code for R:BASE application;<br>this is a straight ASCII file and can be<br>printed directly, or edited with a<br>standard text editor.                                       |
| *.PAS       | TURBO Pascal source code files that<br>correspond directly to the *.COM files<br>described in section 2.1 above. Must be<br>edited and compiled using Borland's<br>TURBO Pascal 3.0. |

### 3.3 TEMPORARY FILES USED DURING A MODEL RUN

The R:BASE application program must unload extracted data to disk files which are used as input for the various external Pascal programs. These in turn will write other files which the R:BASE application program reads back into database tables to be used for further database manipulations or by the R:BASE Reports.

These files will be overwritten every time you run the model. If you delete them from the hard disk, they will simply be created again when you next run the model.

|         |                                                                                                    |
|---------|----------------------------------------------------------------------------------------------------|
| GBFLOWS | selected flow event (EVENTG) data for<br>gravel bars, input to program GBSIM                       |
| GBINV   | selected gravel bar inventory data,<br>input to program GBSIM                                      |
| GBBASE  | gravel bar base data, input to GBSIM                                                               |
| GBSPEC  | species composition data for gravel<br>bars and the seasons included in the<br>run, input to GBSIM |
| SUNRISE | sunrise and sunset data, input to GBSIM                                                            |
| GBOUT   | output from GBSIM, contains the results                                                            |

of gravel bar simulation to be loaded into database table GBOUTPUT

PHFLOWS selected flow event (EVENTP) data for potholes, input to program PHSIM

PHBASE pothole base data, input to PHSIM

PHSPEC species composition data for potholes

PHOUT output from PHSIM, contains the results of pothole simulation to be loaded into database table PHOUTFUT

GBOUTD output from program GBADDC, gravel bar output summed over gravel bar type within each day/event (loads database table GBOUTD used by Reports)

GBOUTM output from program GBADDM, gravel bar output summed over months (loads database table GBOUTM used by Reports)

GBOUTY output from program GBADDY, gravel bar output summed over years (loads database table GBOUTY used by Reports)

PHOUTM output from program PHADDM, pothole output summed over months (loads database table PHOUTM used by Reports)

PHOUTY output from program PHADDY, pothole output summed over years (loads database table PHOUTY used by Reports)

## APPENDIX E

### AVERAGE STRANDING AS A FUNCTION OF AMPLITUDE AND RAMP RATE

The Skagit River fry stranding studies yielded estimates of fry stranding on gravel bars at two different amplitudes, 2000 cfs and 4000 cfs. This can be seen when you look at the gravel bar stranding data for a given season (spring or summer) and gravel bar type (which is a composite of slope, substrate and river location). Choose a ramp rate, either 1,000 cfs/hr or 2,000 cfs/hr or 5,000 cfs/hr (these are called ramp rate "levels" 1 and 2 in the model). Now you will find two values for average stranding, one at downramp amplitude 2000 and one at 4000. These data are stored in the SKAGMDL database in table GBBASE, see Table 2. In the model, amplitude "level" 1 is 2000 cfs and level 2 is 4000 cfs.

The accompanying diagram illustrates this situation for a given season and gravel bar type. The X axis is amplitude and the Y axis is average stranding. For each ramp rate level (1000 cfs/hr and 5000 cfs/hr) two straight lines are drawn. The first connects zero stranding at 400 cfs with the observed average stranding at amplitude level 1 (2000 cfs). The second connects observed average stranding at amplitude level 1 (2000 cfs) and 2 (4000 cfs), and it is extended past 4000 cfs. The equations for these lines can be calculated and used to compute stranding for actual event amplitudes that fall anywhere above 400 cfs, for given ramp rate.

Now let's consider what happens when SKAGMDL processes a gravel bar downramp event. It will know the season, the amplitude, and the average ramp rate from the EVENTG table. It will run through all the gravel bar types that are being included in the model run, to see what happened during this event at each gravel bar type. For each of these gravel bar types, it will look up the entries in GBBASE which match the season, gravel bar type and ramp rate of the event. It will find two average stranding values as discussed above, one at 2000 cfs and one at 4000. The model labels these stranding values as ST1 and ST2. It can now calculate the equations for the straight lines shown in the diagram.

The model looks at the actual amplitude of the event. If it is less than 400 cfs, SKAGMDL assumes that stranding is zero. If it falls between 400 and 2000 cfs, the model interpolates along the first line. If the actual amplitude falls above 2000 cfs, the model interpolates along the second line.

## CALCULATING STRANDING AS A FUNCTION OF AMPLITUDE AND RAMP RATE

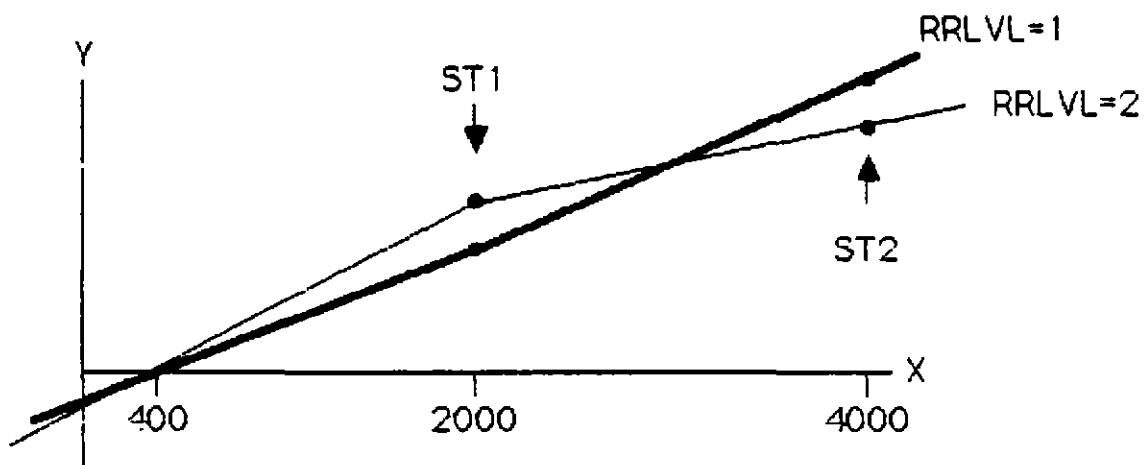
ST1 = observed average stranding at amplitude = 2000

ST2 = observed average stranding at amplitude = 4000

(assume that stranding = 0 below amplitude = 400)

The pair of values (ST1,ST2) is chosen based on whether ramp rate is LE 3000 (heavy line) or GE 3000 (lighter line)

### Illustration:



### Equations of the line:

$$\text{For } 400 < X < 2000, \quad Y = (\text{ST1}/1600)*X - (\text{ST1}/4)$$

$$\text{For } X > 2000, \quad Y = ((\text{ST2} - \text{ST1})/2000)*X + (2*\text{ST1} - \text{ST2})$$

## APPENDIX F

### SEASONAL FRY DENSITY CURVES

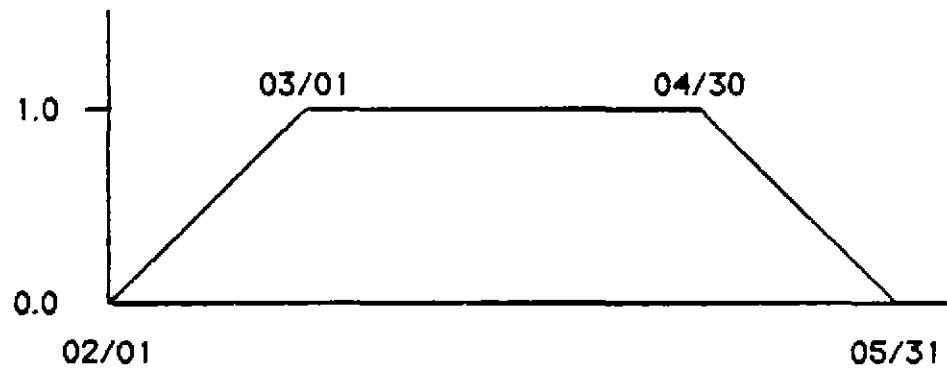
An adjustment factor is used in SKAGIT MODEL to modify the observed average trapping and stranding numbers according to estimated seasonal densities of the fish. The following figures illustrate best the method used to derive the adjustment factor. Seasonal dates differ for spring and summer but the methods used to derive the factors are the same.

In each case the season length was estimated; for spring, 2/1 to 7/31 and for summer 7/15 to 9/30. It was assumed that within each season the density of fry in the Skagit River would increase from 0 early in the season, reach a peak with a relative density of 1 for some period, and decline to 0 by the end of the season. The Skagit River fry stranding studies were also designed around the assumption that the fry density was at a peak (1.0) during certain periods; 3/1 to 4/30 in the spring and 8/1 to 8/31 in the summer.

In order to estimate the seasonal density at any point during these seasons, it draws straight lines between the beginning dates of the season and the peak density periods and between the ending dates of each. When a seasonal density factor is needed within SKAGMDL, the program automatically calculates a density from 0.0 to 1.0 using the formula of the applicable line.

## SEASONAL DENSITY CURVES

### SPRING



### SUMMER

