

66

FINAL REPORT

**A MINIMUM FLOW STUDY OF THE
BIG THOMPSON RIVER BETWEEN IDYLWILDE DAM AND
VIESTENZ-SMITH PARK**

Submitted to:

City of Loveland
Department of Light & Power

Submitted by:

W.J. Miller & Associates
1904 Seminole Dr.
Fort Collins, CO 80525
303-224-4505

February 26, 1993

**W.J. MILLER
& ASSOCIATES**



FINAL REPORT

**A MINIMUM FLOW STUDY OF THE
BIG THOMPSON RIVER BETWEEN IDYLWILDE DAM AND
VIESTENZ-SMITH PARK**

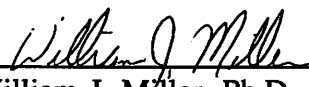
Submitted to:

City of Loveland
Department of Light & Power

Submitted by:

W.J. Miller & Associates
1904 Seminole Dr.
Fort Collins, CO 80525
303-224-4505

February 26, 1993



William J. Miller, Ph.D.
Principal Scientist

TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 Study area	1
2.0 METHODS	3
2.1 Limiting Factor Analysis	4
2.2 Habitat Suitability Curves	5
2.3 Model Selection and Calibration	5
2.4 Hydrology	6
2.5 Habitat Time Series	9
3.0 RESULTS	10
3.1 Limiting Factors	10
3.1.1 Water Quality	10
3.1.2 Fish Population	10
3.1.3 Macroinvertebrates	12
3.2 PHABSIM Data Collection	17
3.2.1 Habitat mapping	17
3.2.2 Transect placement	17
3.2.3 Field measurements	17
3.2.4 PHABSIM data decks	17
3.3 Model Calibration	17
3.4 Habitat Simulations	18
3.4.1 Weighted Usable Area versus Discharge	18
3.5 Time Series	26
3.5.1 Flow Duration	26
3.5.2 Habitat Duration	26
3.6 Minimum Flow Recommendations	27
4.0 CONCLUSIONS	28
5.0 LITERATURE CITED	46

LIST OF TABLES

Table 1. Estimated number of fish and biomass at three sites in the Big Thompson River.	13
Table 2. Macroinvertebrate densities in the bypass reach of the Big Thompson River.	16
Table 3. Percent of habitat deviation from previous life stage for brown and rainbow trout based on habitat multipliers for average daily flows.	29
Table 4. Summary of flow duration for the bypass reach by flow regime for average power conditions.	30
Table 6. Summary of habitat duration for brown trout in the bypass reach by flow regime for average power conditions.	32
Table 8. Summary of habitat duration as percent of maximum for brown trout in the bypass reach by flow regime for average power conditions.	34
Table 9. Summary of habitat duration as percent of maximum for brown trout in the bypass reach by flow regime for maximum power conditions.	35
Table 10. Summary of habitat duration for rainbow trout in the bypass reach by flow regime for average power conditions.	36
Table 11. Summary of habitat duration for rainbow trout in the bypass reach by flow regime for maximum power conditions.	37
Table 12. Summary of habitat duration as percent of maximum for rainbow trout in the bypass reach by flow regime for average power conditions.	38
Table 13. Summary of habitat duration as percent of maximum for rainbow trout in the bypass reach by flow regime for maximum power conditions.	39

LIST OF FIGURES

Figure 1. Study area for Big Thompson River IFIM minimum flow study.	2
Figure 2. Biomass estimates for the Big Thompson River at the Habitat Improvement Site and Bypass Reach.	14
Figure 3. Estimated number of fish per mile for sampling sites in the Big Thompson River.	15
Figure 4. Weighted usable area versus discharge for brown and rainbow trout adults.	20
Figure 5. Weighted usable area versus discharge for brown and rainbow trout juveniles.	21
Figure 6. Weighted usable area versus discharge for brown and rainbow trout fry.	22
Figure 7. Water surface elevations at several flows in the Pocket Water habitat type.	23
Figure 8. Water surface elevations at several flows in the P4 pool habitat type.	24
Figure 9. Water surface elevations at several flows in the high gradient riffle habitat type.	25
Figure 10. Habitat duration for brown trout adult, juveniles, and fry at average power conditions.	41
Figure 11. Habitat duration for brown trout adult, juveniles, and fry at maximum power conditions.	41
Figure 12. Habitat duration for rainbow trout adult, juveniles, and fry at average power conditions.	42
Figure 13. Habitat duration for rainbow trout adult, juveniles, and fry at maximum power conditions.	43
Figure 14. Percent of maximum habitat by exceedence level for brown trout adult, juvenile, and fry at average power conditions.	44
Figure 15. Percent of maximum habitat by exceedence level for rainbow trout adult, juvenile, and fry at average power conditions.	45

1.0 INTRODUCTION

The City of Loveland hydroelectric facility on the Big Thompson River, west of Loveland, Colorado, has a small reservoir and diversion structure associated with it. Water is diverted from the Big Thompson River into the power tunnel where it powers the turbine and is returned to the river. There is approximately 2 miles of river in the reach between the point of diversion and return. Flow in this bypass reach depends on the time of year and whether power is being generated. The Loveland facilities are subject to a US Forest Service Special Use permit.

The objective of this study is to determine the minimum flow required for the Big Thompson River in the bypass reach to sustain the trout habitat. The main time period of interest for establishing a minimum flow is during the winter base flow season.

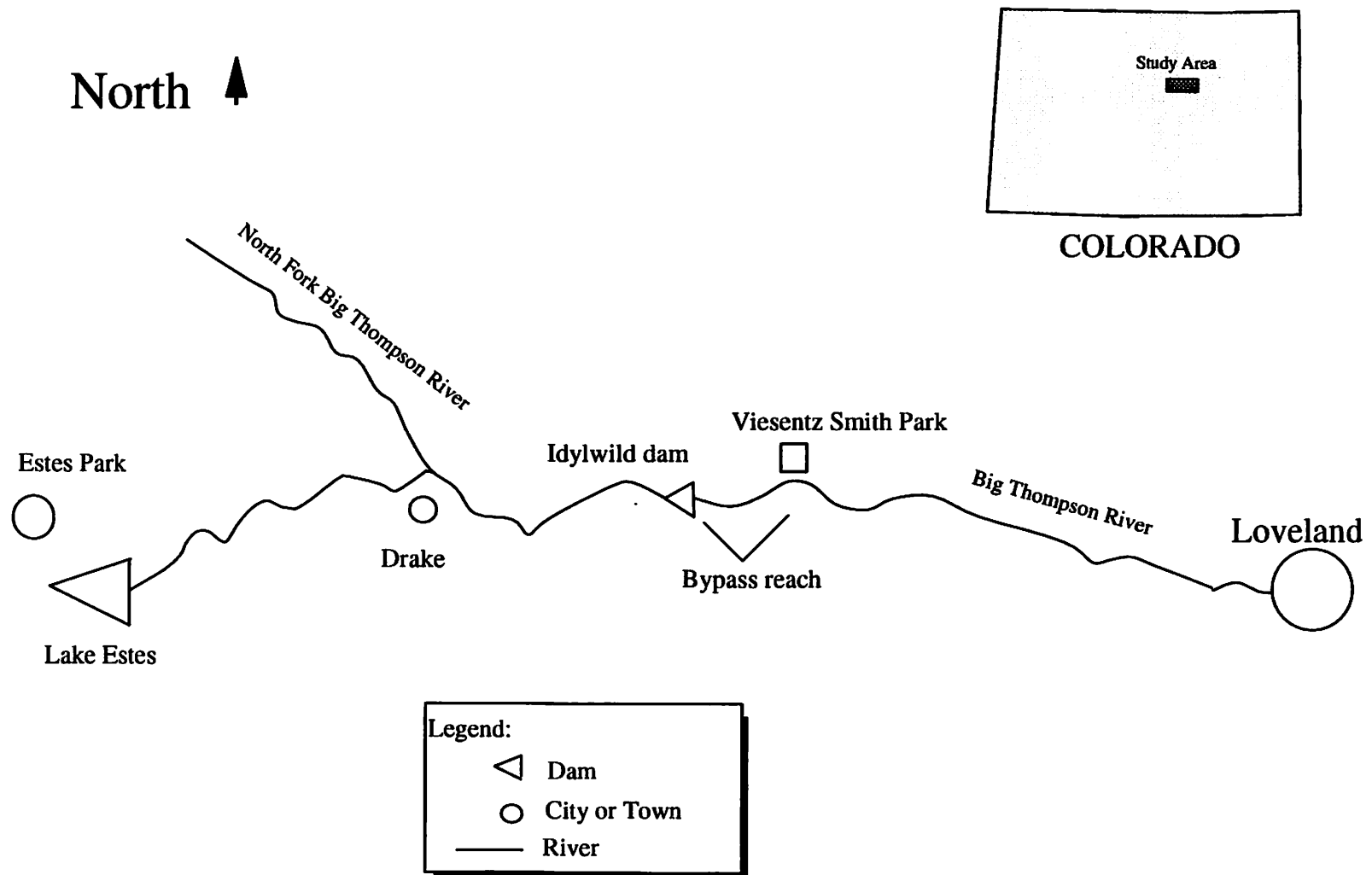
There are several instream flow methodologies available for determining minimum flow regimes. The method used in this study was the Instream Flow Incremental Methodology (IFIM) (Bovee 1982). This method can quantify the amount of suitable habitat at any specified flow regime. This habitat quantification allows a direct comparison of habitat changes as a function of flow.

1.1 Study area

The study area is the Big Thompson River between the Idylwilde Project dam and Viestenz-Smith Park (Fig. 1). The study area is approximately 2 miles long and carries the bypass flows around the City of Loveland hydroelectric project. The river in this area has a relatively steep gradient and is confined between the canyon walls and U.S. Highway 34. Much of this section of river was reconstructed as a result of the Big Thompson flood in the mid-1970s.

The river flow is controlled by upstream releases from Lake Estes and localized runoff. There are no tributary streams within the study area boundaries. High flows generally occur in June, mid-flows in August and base flows in winter.

Figure 1. Study area for Big Thompson River IFIM minimum flow study.



2.0 METHODS

The following sections provide a detailed description of the methods used for the minimum flow study. The objective of the study is to determine minimum flows in the bypass reach of the Big Thompson River to sustain trout habitat. This study used the IFIM to determine the minimum bypass flow required to sustain the trout habitat. The methods included application of the IFIM using the guidelines of Bovee (1982 and 1989). Other data used in the IFIM analysis included a review of water quality, hydrology data, and collection of fish population and benthic invertebrate data.

IFIM is a collection of computer models that simulate river hydraulics and fish habitat (Bovee 1982). The main group of those models is the Physical Habitat Simulation System (PHABSIM), which includes the hydraulic and habitat submodels. Field measurements of river depth, velocity, substrate, cover, and stage at several discharges are used to construct and calibrate the computer models. The river hydraulic characteristics are modeled for a range of flow conditions from low to high flows. These simulated river hydraulics are coupled with the fish habitat suitability criteria to calculate the habitat area for each species. The depth, velocity, and substrate or cover conditions simulated at each discharge are multiplied by the suitability index for the respective variables to produce the Weighted Usable Area (WUA) for each life stage at each discharge. The WUA values for each discharge forms the WUA-discharge relationship for the study area.

The next step in determining the habitat potential using IFIM is combining the WUA-discharge relationship with the hydrology over time. This is generally referred to as "Time Series" analysis. A habitat area is calculated for each stream flow using the WUA-discharge relationship from the PHABSIM analysis. The result is habitat area for each time period or habitat over time. In this study it produced daily habitat values for the period 1988 through 1992.

The IFIM requires hydraulic and habitat suitability data to determine the instream flow requirements for the species of interest. The preferred method of hydraulic simulations is a single velocity IFG4 model (Milhous 1984). This method requires at least one full set of hydraulic measurements (bed profile, velocity profile, water surface elevations and discharge) and preferably several stage-discharge measurements. A one-flow velocity IFG4 with additional stage-discharge measurements was used in this study.

There are several hydraulic submodels that can be used with PHABSIM, these include IFG4, WSP and MANSQ. The IFG4 and MANSQ hydraulic submodels were used in this study. The PHABSIM data collection included several steps; study site location, habitat mapping, transect placement and data collection.

The site specific procedures were as follows:

- Map habitat features for the entire study area. The linear distance of each habitat type was recorded in a bound field book and the total length of each habitat type and total length mapped recorded at the end of the segment.
- Percentage of each habitat type was calculated from the mapped data.
- Transects were placed in all habitats that represent over 5 % of the total available habitat. A random selection process was used to select the habitat location. Transects were placed in all habitat types and at hydraulic controls by professional judgement of personnel from Colorado Division of Wildlife (CDOW) and Miller.
- For each set of transects in each habitat type the following data was collected: Level loop to establish horizontal reference points, distance between transects, field notes with reference to general habitat and stream conditions in the transect areas, reference photos for the habitat and for each transect within the habitat type.
- Transect specific data included: stream bed profile, mean column velocity and bottom velocity at selected locations (verticals) along the transect line, visual estimates of dominant and subdominant substrate size and percent embeddedness, and cover type for adult and juvenile life stages. Substrates were classified as follows: Mud, silt, sand, gravel, cobble, boulder, and bedrock. Cover was classified as follows: no cover, visual isolation, velocity shelter, and combination of visual isolation and velocity shelter.

The full set of transect specific data was measured at mid flow. Stage-discharge measurements were taken at low and high flows. Water surface elevations were measured at each transect and one discharge measurement taken for the site. These stage-discharge measurements provided the data necessary for model calibration and extended the range for the hydraulic simulations.

2.1 Limiting Factor Analysis

The PHABSIM methodology assumes that flow is the limiting factor in the streams being studied (Bovee 1982). Part of the scoping process for application of PHABSIM involves determining the limiting factors that apply to the study streams. The factors evaluated include channel equilibrium (in terms of channel stability), water quality (water temperature, chemical constituents, dissolved oxygen, pH), and management factors effecting fish populations (such as harvest limits and stocking procedures). The existing records for these factors were used to complete the limiting factor analysis. In addition to habitat quantity and quality for

specific life stages, other factors such as water temperature and water quality, may be controlling populations.

One part of the PHABSIM analysis was the development of a matrix of Weighted Usable Area (WUA) time series relationships for each life stage of the species of interest. The main two components to be used in this analysis were the existing hydrology data and fish population data. The existing daily streamflow records was used to develop the hydrology time series data. The existing fish population data was used as an index of fish populations in the Big Thompson. The existing fish data included population data from sections of the river outside the bypass reach and fish population data for the bypass reach collected during the study.

2.2 Habitat Suitability Curves

Species habitat suitability criteria curves are required for PHABSIM analysis. The recommended approach to PHABSIM studies is to develop site specific criteria for each species and life stage of interest. However, time and budget constraints often prohibit the development of site specific criteria. An alternative is to use existing curves and literature to develop suitability criteria for the species of interest. The species of interest for this study are rainbow (*Onchorhynchus mykiss*) and brown (*Salmo trutta*) trout.

The curves used in this analysis were developed jointly by the Colorado Division of Wildlife (CDOW) and US Fish and Wildlife Service in the South Platte River and verified for the Cache La Poudre River. The consensus during the scoping meetings among the CDOW, US Forest Service and Miller biologists was that these would be the most appropriate habitat suitability data for use in the study.

Habitat suitability criteria that accurately reflect the habitat requirements of the species of interest are essential to developing meaningful instream flow recommendations. The curves used in this study fit that criterion.

2.3 Model Selection and Calibration

The PHABSIM system has several submodels available for hydraulic simulations. These include IFG4, WSP, HABVD, and MANSQ. Each hydraulic model requires multiple flow measurements to extend the predictive range.

The applicability of the range of flows simulated to actual flows in the stream is dependent on the flows measured. One complete data set (i.e. Elevations, velocities, discharge, substrate and cover) has a worth of data at approximately 70 % of the total that can be achieved with PHABSIM (Milhous 1985). A second and third set of water surface - discharge measurements will bring the cumulative worth of data to 80 and 87 percent, respectively.

A single velocity IFG4 with multiple stage discharge measurements was used in this study. The usual range of simulations is 0.4 times the lowest flow measured and 2.5 times the high flow. This range can be extended if the calibration parameters show the model is predicting accurately outside the recommended range (Milhous et al. 1989).

2.4 Hydrology

The Big Thompson River originates west of the foothills in Rocky Mountain National Park. The river flow originates mainly from snowmelt runoff and to a lesser extent from rainfall with additional flow during the summer from water diverted from the Colorado River Basin through the Colorado-Big Thompson Project. River flows are regulated by releases from Olympus Dam at Lake Estes, Estes Park, Colorado, which is administered by the U.S. Bureau of Reclamation (USBR). The Big Thompson hydrograph is typical of snowmelt systems with peak flows occurring in summer and base flows occurring in winter. The high flow season is extended in the Big Thompson by USBR releases from Lake Estes for downstream uses. The Big Thompson River flows through a relatively narrow canyon from Estes Park until it leaves the foothills west of Loveland, Colorado. The only major tributary to the Big Thompson is the North Fork Big Thompson River that joins the mainstem near Drake, Colorado approximately three miles upstream from the City of Loveland, Idylwilde Reservoir.

There are two major diversions on the Big Thompson downstream of Lake Estes. These are the City of Loveland hydroelectric diversion and the USBR Dille Tunnel. The City diverts water from Idylwilde Reservoir into a penstock, which delivers water to power the turbines and generate electricity. The water is then returned to the river. The total length of river affected is approximately two miles. The USBR Dille tunnel is approximately three miles downstream from the City of Loveland hydroelectric facility and diverts water during the irrigation season from April until October. The water is taken off-stream into the USBR/Colorado-Big Thompson canal system. The water can re-enter the river at the mouth of the canyon or be routed through the canal system for other uses. The river leaves the canyon and is subject to numerous diversions but all are downstream of the City of Loveland facilities.

The City of Loveland hydroelectric facility consists of a small reservoir, penstock, two power turbines and afterbay for return flows. The City has a water right of 74 cubic feet per second (cfs) but the diversion is limited by maximum turbine capacity to 50 cfs. The facility can operate in both a run of the river and peaking mode. Run of the river mode generally is used at times when flows are higher. Peaking generally occurs in winter when electric demand and power rates increase. The usual operation for peaking is as follows.

The minimum reservoir release is currently fixed at approximately six cubic feet per second (cfs). The reservoir is allowed to fill with incoming flow and when full spills water over the dam in addition to the minimum flow release. At these times the release at the dam is equal to the inflow. When power generation begins, flow is diverted from the reservoir storage (up to 50 cfs maximum) to power the turbines. The peaking power generation generally lasts for approximately four hours in late afternoon and early evening. After power production stops,

the reservoir begins to refill and, when full, spills water over the dam. The refilling generally takes from four to six hours. At all times during power generation and when refilling there is a six cfs bypass release. There are days in the winter when conditions do not permit operation of the facility due to low inflows or icing problems in extremely cold weather.

The hydrology data used in the minimum flow analysis came from the following sources:

- USGS gage data below Lake Estes, North Fork Big Thompson at Drake, and Big Thompson River at the mouth,
- US Bureau of Reclamation records of Dille Tunnel diversions, and
- City of Loveland power generation data, turbine characteristics and minimum flow release criteria.

The period of record for the gaged flows was 1982 to 1992 (flows for 1992 are preliminary values). These preliminary values are not expected to change significantly. The City of Loveland Power data were for the period January 1988 through August of 1992. The power records for this time period was incomplete due to equipment limitations or malfunctions. The turbine characteristics are 900KW produced at maximum flow of 50 cfs. The power output was assumed to decrease linearly with lower discharges. The minimums were based on information from the City of Loveland regarding project operations. The fixed opening in the dam will pass 3 cfs. In addition, there is a minimum release set at the sluiceway. The combined minimum release was measured at 6 cfs in 1991. The same minimum settings were used prior to the measurement but no measurements taken to document the minimum flow. Therefore, it was assumed that minimum flow releases in the hydrology data are 3 cfs for January 1, 1988 to September 30, 1991 and 6 cfs for October 1, 1991 to August 31, 1992.

To establish a conservative inflow hydrograph to the power house forebay, the hydrographs of the Big Thompson below Lake Estes and North Fork Big Thompson were summed and compared to the combined hydrographs of Dille tunnel diversions and Big Thompson River at the mouth. There was a high degree of correlation between the two hydrographs during the low flow months (October to March) but during the high flow months the correlation degraded due to lateral inflow between Lake Estes and the confluence of the North Fork. Because of the reasonable correlation during the low flow periods, it was assumed that a conservative inflow hydrograph to the power house forebay would be the combined hydrograph of the Dille Tunnel diversions and the Big Thompson at the mouth.

The flow scenarios for the bypass reach (river reach between the forebay and power house outlet) of the Big Thompson River were developed using the forebay inflow hydrograph and the average daily and maximum daily discharge through the turbines. The period of record for each flow scenario is water years 1988 through August 1992. This produced flows for average daily conditions and minimum daily conditions. The average daily conditions were used to determine the habitat potential. The minimum daily conditions were used to determine the minimum habitat that could occur at any time during the day. The duration for the minimum daily flow conditions is generally no longer than several hours each day. It is not a continuous minimum condition.

The first scenario is the bypass reach without power generation (No Power). This is the combined hydrograph of the Dille Tunnel and the Big Thompson at the mouth. The second flow scenario is the historic power generation (Power). This scenario assumes that the flow in the bypass reach is the highest of 1) the average daily discharge into the forebay minus the daily discharge through the turbines or 2) the minimum flow criteria as described previously (3 or 6 cfs).

There also were several alternative minimum flow regimes developed for the bypass reach. These included the R2CROSS recommended minimum flows (R2CROSS is an alternate hydraulic simulation program used by the CDOW to recommend minimum flow levels), and minimum flow recommended from the PHABSIM analysis. These flows were developed by combining the inflow to the forebay, power discharge records and the recommended minimum flows. The same rule was applied to both average daily power conditions and maximum daily power conditions. The following rule was applied to determine the minimum flow.

- If the forebay inflow was less than the specified minimum flow the bypass flow was equal to the forebay inflow.
- If the forebay inflow was greater than the specified minimum flow but less than the sum of the specified minimum flow and the power discharge, the bypass flow was set equal to the specified minimum flow.
- If the forebay inflow was greater than the minimum flow and greater than sum of the power flow and the specified minimum flow, the bypass flow was set equal to the sum of the minimum specified flow and the flow in excess of the sum of the power discharge and the specified minimum flow.

For example if the minimum specified winter flow was 6 cfs, the forebay inflow was 20 cfs and power discharge was 10 cfs, the bypass flow would be set equal to 10 cfs. This is expressed mathematically as:

$$\text{Inflow} - (\text{Power discharge} + \text{minimum flow}) = \text{excess}$$

$$\text{Minimum flow} + \text{excess} = \text{Bypass Flow}$$

If the excess flow is negative

$$\text{Bypass flow} = \text{minimum flow}$$

For the above example:

$$\begin{aligned}20 - (10 + 6) &= 4 \\6 + 4 &= 10\end{aligned}$$

The bypass flow is 10 cfs.

This rule was used to develop the flow regimes for the minimum flow regimes for R2CROSS, 8 cfs, 7.1 and 6 cfs.

2.5 Habitat Time Series

The actual habitat experienced by the fish in any river depends on the flow regime of the river. The development of habitat conditions over a period of time is an integral part of the comparison of flow regimes and developing minimum flow recommendations. Four different flow regimes were analyzed for this study. These flow regimes are: daily flows in the bypass reach without power production, daily flows with the hydroelectric plant operation, and daily flows with R2CROSS bypass flows, and daily flows with minimum flows developed from the PHABSIM study. These flow regimes represent the existing flow conditions without the City of Loveland plant, existing conditions in the bypass reach, and existing conditions with several specified minimum flow regimes.

The habitat time series was the result of combining the respective flow regimes and the WUA-discharge relationships for each life stage to produce habitat as a function of time. These habitat over time data sets were analyzed using standard duration techniques. The exceedence values were calculated for hydrology and habitat time series data. The exceedence represents the percent of time a hydrology or habitat value is equaled or exceeded. For example, flow or habitat values at the 50 percent exceedence level are equalled or exceeded 50 % of the time.

The time series data was used to compute the habitat potential in the study area. The No Power habitat time series was used as the baseline habitat condition. The habitat values produced from the No Power flows were ranked in descending order and exceedence calculated for each habitat value. Exceedence is expressed mathematically as:

$$\text{Exceedence percent} = (\text{Rank number divided} / \text{Total number of ranks}) * 100$$

Reference exceedence levels of 5, 10, 20, 30, 40, 50, 60, 70, 80, 90, 95, and 100 percent were used for the comparison between flow regimes. The habitat values that corresponded with each of these exceedence levels was tabulated for each flow regime. The No Power flow regime values represent the 100 percent habitat level. The habitat values produced by the other flow regimes were compared for each respective exceedence level and percent of the maximum habitat calculated for each exceedence level for each flow regime.

3.0 RESULTS

3.1 Limiting Factors

3.1.1 Water Quality Water quality data for the Big Thompson River was obtained from USGS records. Two gage sites, one upstream and one downstream of the study reach had historic data for analysis. The first site (Station ID 06735500) is located 600 feet downstream of Olympus Dam at Estes Park, and the second site (Station ID 06738000) is located at the mouth of the canyon. Water quality parameters were measured once at each site on May 9-10, 1972. Temperature was measured almost every month from 1978 through 1983.

The water quality parameters of pH, alkalinity, nitrogen, hardness, arsenic, cadmium, copper, iron, lead, manganese, and zinc in addition to other parameters were measured at both sites. The pH was 6.8 and the alkalinity was 20 mg/l as CaCO₃. Phosphorus, cadmium, and lead were not detected at either site, and arsenic was not detected at the downstream site. However, all of the measured parameters for which recommended limits are given fall within acceptable EPA levels for freshwater aquatic life according to Thurston et al. (1979).

The temperature for both sites varied from approximately 0° C to a high of 18° C occurring in August or September. Stream rainbow trout select temperatures between 12 and 19° C (Raleigh et al. 1984a). Good growth and survival for brown trout also occurs between 12 and 19° C (Raleigh et al. 1984b). Zero degrees C is the lowest tolerable temperature for both species. Therefore, the temperature range for the Big Thompson River is nearly optimal for both rainbow and brown trout.

A more recent water quality data was available at the next downstream site which is one mile above Buckhorn Creek near Loveland (Station ID 06739210). This site is outside of the canyon, it receives agricultural runoff, and it is probably in a less optimum state for trout habitat. A review of the 1991 record indicates that the pH is higher here (8.1 to 9.0) but still acceptable. The dissolved oxygen concentration is good except at higher temperatures in July and August when it drops to 7.4 mg/l. Raleigh et al. (1984a,b) recommend at least 7 mg/l up to 15° C and 9 mg/l above 15° C. The phosphorus level exceeds the recommended limit, but this is probably due to agricultural runoff. Most of the remaining parameters fall within recommended levels.

In summary, the limited data that was available for the water quality parameters of the Big Thompson River through the study site fall within acceptable levels, and the temperature range is near optimal for rainbow and brown trout. Fish populations should not be limited by water quality in the bypass reach.

3.1.2 Fish Population Fish population sampling data was obtained from the Colorado Division of Wildlife, Ft. Collins. Data was available for several sites. The main site of interest outside of the study area is the catch and release section located upstream of the study section. Because this site has limited harvest regulations, it provides the best indication of

population potential of the monitored sites. Data was collected by electrofishing a 300-500 ft. segment during the fall of 1991 and 1992.

Fish populations can vary considerably from year to year and site to site due to a variety of factors (Platts and Nelson 1988). As such, population data from a single sample are most useful as an index of population condition not as an absolute population census. The comparison of the 1992 data with other river sections is based on the population levels at the one-time sampling and professional judgement from experience with salmonid systems.

The data compared for this study came from several sites upstream of Idylwilde Reservoir and several sites downstream of the reservoir. The upstream sites, as designated by CDOW collection data, were: Habitat improvement, Grandpa's (public and private), Twin Pines and Chuck's Place. All sites upstream except for Chuck's Place were subject to catch and release regulations. Chuck's Place is subject to the standard eight fish per day limit. The downstream sites include: Below Idylwilde Dam, Above Big Thompson Indian Village (both within the bypass reach), and Cedar Cove. All downstream sites are subject to standard regulations of eight fish per day limits. The Cedar Cove site is on private land and not accessible to the public. This limits the fishing pressure and harvest at that site.

At the Habitat Improvement site the number per hectare (no./ha) and kilogram per hectare (kg/ha) of rainbow trout increased more than 10 fold from 1987 to 1989 and continued to increase in 1991 to 999 fish/ha and 117.7 kg/ha (105 lbs/ac). The average length and weight both increased through 1991. The no./ha and kg/ha for brown trout were four to seven times higher than rainbow trout in 1987, but they did not increase as significantly and reached a high of only 725 fish/ha and 76.8 kg/ha (68 lbs/ac) in 1991 (Table 1, Fig.2). The average length and weight, however, decreased over this period. This site consists of all wild trout and is not stocked. The increase in numbers and biomass is probably due to habitat improvements which took place from 1986 to 1989 and special regulations that went into effect. Longnose suckers and longnose dace were also present in small numbers.

A review of stocking records for the Big Thompson River from Estes Park to the Dam Store from 1986 to 1991 indicates that 6"+ catchable rainbow trout comprise at least 82% of the fish stocked from May through August. A small percentage of brown trout have also been stocked in past years.

The presence of young fish (smaller than 150 mm) also was noted in the fish population data. At the Habitat Improvement site from 1987 to 1991 young rainbow trout comprised 23% to 44% of the no./ha or total catch. Young brown trout in 1989 comprised 23% of the no./ha but were not found in 1987 or 1991. From this data, rainbow trout and brown trout appear to be reproducing successfully.

Fish population data were collected at two locations in the bypass reach in October, 1992. The results for these two sites show that brown trout populations were equal or higher than rainbow trout populations in the Habitat Improvement section (Table 1, Figure 3). The bypass reach is subject to the standard limit fishing regulations and is not a limited harvest area. The number of fish per miles varies considerably by location. The total trout per mile in the Big

Thompson is lowest at the Habitat Improvement site, and the two sites within the bypass reach (Figure 3). This limited data indicates that there are good fish populations at all sampling locations. The highest numbers of fish occur in the areas upstream of the dam and at Cedar Cove downstream.

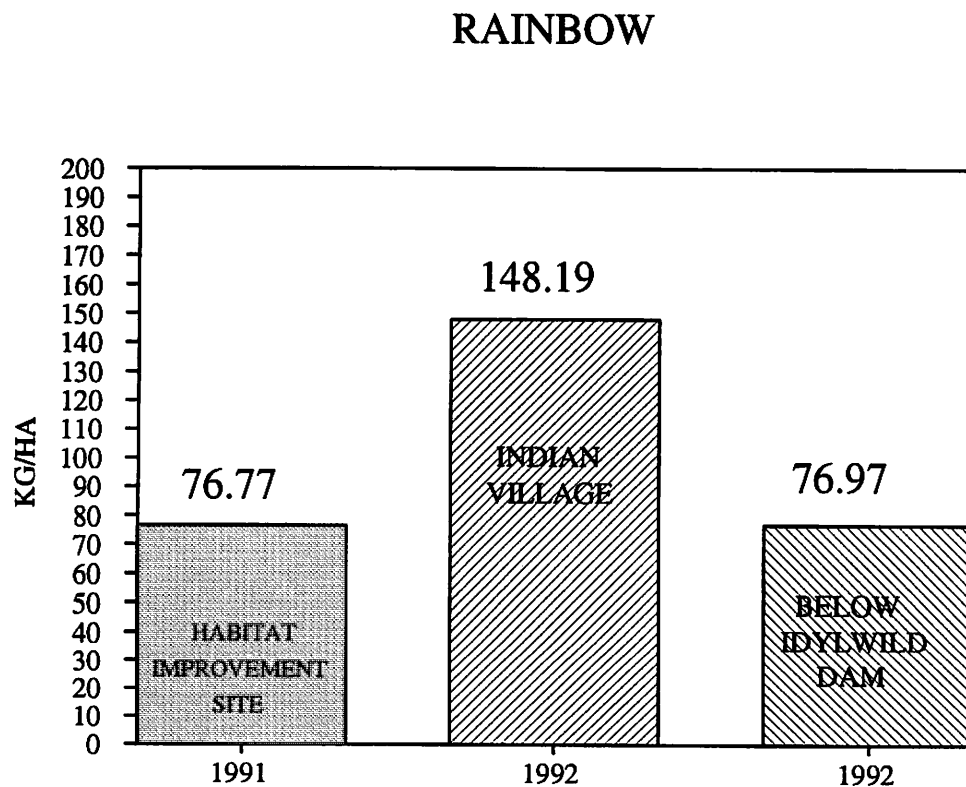
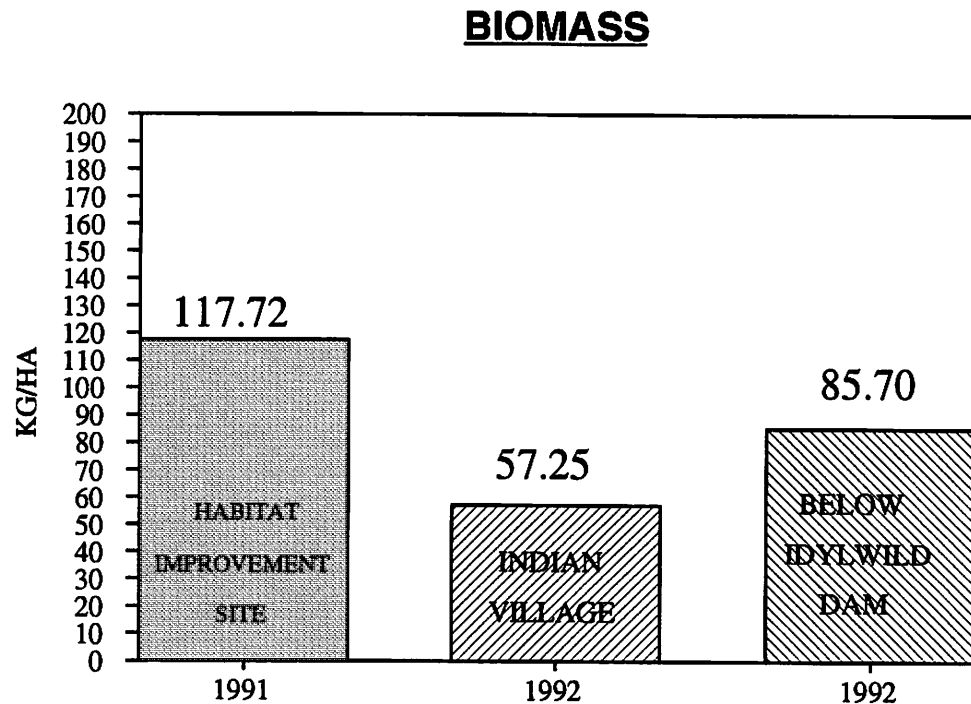
3.1.3 Macroinvertebrates Macroinvertebrates were collected in October of 1992 to assess population and species abundance in the bypass reach. Over 31 species were collected in three samples in the bypass reach (Table 2). The Shannon-Weaver diversity index was 2.43. This value is within the range for moderately polluted streams (Platts et al. 1983). This is not unexpected since there are numerous summer cabins and several year-round homes in the canyon with septic systems. The non-point pollution from these sources probably contribute to the moderate pollution in the river. The invertebrate densities in the stream (Table 2) indicate that there is an excellent food source for the trout in the bypass reach.

The results of the limiting factor analysis indicate that the water quality, water temperature, and macroinvertebrates are not limiting the fish populations within the reach. The fish population data indicate that the populations are relatively high when compared to the limited harvest section of the river. The limiting factors regarding habitat for specific life stages is discussed under habitat modeling.

Table 1. Estimated number of fish and biomass at three sites in the Big Thompson River.

YEAR	SAMPLING SITE	SPECIES	N/ha	kg/ha
1991	Habitat Improvement	Brown Trout	725	76.77
		Long Nose Sucker	109	19.6
		Rainbow Trout	999	117.72
1992	Above Indian Village	Brown Trout	1712	148.19
		Long Nose Dace	1201	14.41
		Long Nose Sucker	952	176.91
		Rainbow Trout	333	57.25
1992	Below Idylwilde Dam	Brown Trout	751	76.97
		Long Nose Dace	28	0.39
		Long Nose Sucker	888	176.09
		Rainbow Trout	480	85.70

Figure 2. Biomass estimates for the Big Thompson River at the Habitat Improvement Site and Bypass Reach.



BROWN TROUT

Figure 3. Estimated number of fish per mile for sampling sites in the Big Thompson River.

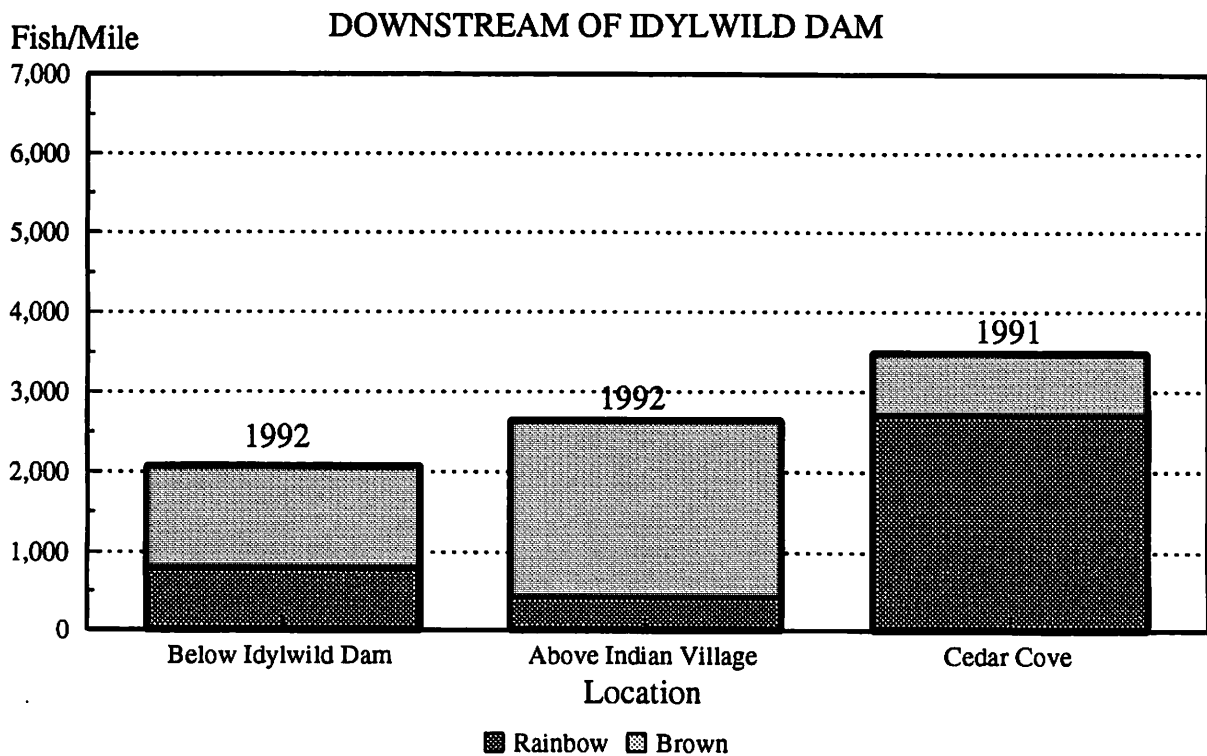
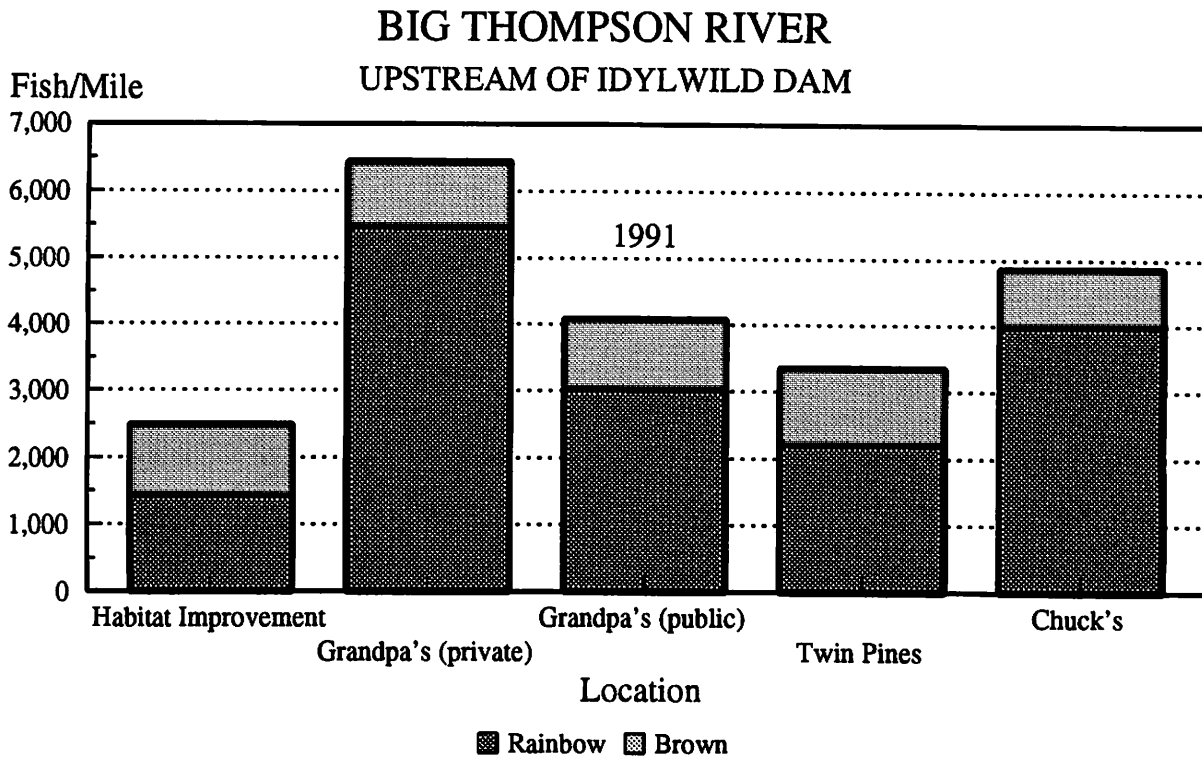


Table 2. Macroinvertebrate densities in the bypass reach of the Big Thompson River.

INVERTEBRATES	SAMPLE (mean)	METER ² (total)
Turbellaria		
Planariidae <i>Dugesia sp.</i>	18.66	215.80
Hydracarina		
Lebertiidae <i>Lebertia sp.</i>	2.33	26.97
Sperchonidae <i>Sperchon sp.</i>	7.66	88.63
Plecoptera		
Perlidae <i>Claassenia sabulosa</i>	1.33	15.41
Perlodidae <i>Skwala parallela</i>	0.66	7.71
<i>Isoperla sp.</i>	4.00	46.24
Chloroperlidae <i>Plumiperla sp.</i>	2.33	26.97
Ephemeroptera		
Baetidae <i>Baetis sp.</i>	116.00	1341.04
<i>Baetodes sp.</i>	1.33	15.41
Ephemerellidae <i>Drunella grandis</i>	2.66	30.83
<i>Ephemerella infrequens</i>	37.66	435.45
Leptophlebiidae <i>Paraleptophlebia sp.</i>	10.66	123.31
Heptageniidae <i>Epeorus sp.</i>	3.66	42.39
Trichoptera		
Hydropsychidae <i>Hydropsyche oslari</i>	137.00	1583.81
<i>Hydropsyche occidentalis</i>	1.00	11.56
Glossosomatidae <i>Protoptilia sp.</i>	62.00	716.76
Brachycentridae <i>Brachycentrus americanus</i>	1.00	11.56
Rhyacophilidae <i>Rhyacophila sp.</i>	12.00	138.73
Lepidostomatidae <i>Lepistomata sp.</i>	44.33	512.52
Hydroptilidae <i>Leucotrichia sp.</i>	0.33	3.85
Coleoptera		
Elmidae <i>Optiservus sp.</i>	36.33	420.04
<i>Heterlimnius corpulentus</i>	3.33	38.53
Diptera		
Athericidae <i>Atherix pachypus</i>	2.00	23.12
Tipulidae <i>Antocha sp.</i>	7.66	88.63
<i>Hexatoma sp.</i>	0.33	3.85
Empididae <i>Clinocera sp.</i>	7.00	80.92
Psychodidae <i>Pericoma sp.</i>	0.33	3.85
Chironomidae Orthocladiinae	203.33	2350.67
<i>Orthocladius/Cricotopus</i> group	139.00	1606.94
<i>Eukiefferiella</i> group	36.66	423.89
Diamesinae	10.33	119.46
Tanypodinae	2.33	26.97
TOTALS	915.33	10,581.88
SHANNON DIVERSITY	2.4300	

3.2 PHABSIM Data Collection

The PHABSIM data collection included habitat mapping, high flow stage-discharge measurements, mid-flow measurements, and low flow stage-discharge measurements. Habitat mapping and high flow stage measurements were collected on July 8 and 9, 1992 at a average discharge of 165 cubic feet per second (cfs). The full mid flow measurements were collected on September 11, 1992 at an average discharge of 77 cfs. The low flow was measured on October 19, 1992 at an average discharge of 39 cfs.

3.2.1 Habitat mapping The following habitats (as percent of total) were present at the study area; Pocket water (24.1%), P4 -pool type, pools less than 3 feet deep at low flow (36.1%), High gradient riffle (31.4 %), Low gradient riffle (7.4 %), and P2 pool type, pools 3-6 feet deep at low flow (3.6 %). These habitat definitions follow the convention in Bovee (1989).

3.2.2 Transect placement Transects were placed in all habitat types except the P2 habitat, which represented less than 5 % of the total area. A total of 17 transects were placed to describe the hydraulics and microhabitat features for the reach. These were placed as follows; 6 transects in the pocket water, 3 transects in the P4 pool, 5 transects in the low gradient riffle, and 3 transects in the high gradient riffle.

3.2.3 Field measurements The field measurements taken at each transect were high flow water surface elevations, low flow water surface elevations, and full measurements at mid flow. The full measurement set included water surface elevation, total water depth at each vertical, mean column water velocity, cover characterization for adult and juvenile rainbow and brown trout, and substrate. These field data were used to construct the PHABSIM input decks.

3.2.4 PHABSIM data decks Separate PHABSIM decks were constructed for each habitat type as well as an input deck with all habitat types included. The hydraulic simulation decks were modified for adult, juvenile and fry to incorporate the cover and substrate (as described in the methods) requirements of the various life stages. This resulted in 15 individual input data sets from the single hydraulic data set. These data sets were then used to simulate the Weighted Usable Area (WUA) versus discharge relationships for each habitat type by species and life stage as well as the total habitat in the reach.

3.3 Model Calibration

The calibration sequence followed the guidelines of Milhous (1985) and Milhous et al. (1989). Hydraulics of each habitat type were first simulated using the submodel MANSQ. This model simulated water surface elevations using the Manning's equation with no backwater effect. The predicted water surface elevations for each transect were compared to the measured water surface elevations for the high, mid and low flows. The model's Beta

coefficient value was changed until the predicted water surface elevation was within 0.1 foot of the measured water surface elevations. Complex channel hydraulics made calibration difficult at the high flow. In the few cases where erratic model predictions caused problems with calibration, the low and mid flows were calibrated to within the recommended limits and the high flow was uncalibrated. This occurred at 4 of the 17 transects.

These calibrated hydraulic decks were used to simulate water surface elevations for a range of flows from 3 to 400 cfs. The low flow falls outside the guideline simulation range of 0.4 to 2.5 times the measured flow but the velocity adjustment factors and predicted velocity were reasonable for these low flows. These calibrated decks with the full range of water surface elevations were converted into the three data decks required to simulate hydraulics, cover and substrate for adults, juveniles and fry for rainbow and brown trout (Appendix A).

3.4 Habitat Simulations

Habitat simulations require the combination of the hydraulic simulation for the range of flows with habitat suitability criteria for each life stage and species of interest (Bovee 1982, Milhous et al. 1989). In this study the species of interest were rainbow and brown trout, all life stages of each species. Both the habitat mapping and the transect specific data showed very limited spawning areas. The areas that were identified both during the mapping and in the fall at low flow were usually isolated pockets of gravels which could not be accurately simulated with PHABSIM. Therefore spawning habitat was not simulated for the reach.

The habitat simulations that were conducted included adult, juvenile and fry habitat for rainbow and brown trout. The habitat suitability criteria, as discussed earlier, came from CDOW studies in Colorado (Appendix B). These criteria are the best available data sets for the habitat simulations. Other data available include published information in Raleigh et al. (1984, 1986). These habitat suitability criteria were coupled with the hydraulic simulation data sets using the submodel HABTAT.

3.4.1 Weighted Usable Area versus Discharge The weighted usable area (WUA) versus discharge relationships for the study area show that the P4 pool habitat represents the most abundant habitat type for adults of both rainbow and brown trout (Fig. 4 and Appendix C). The most abundant habitat for juveniles occurs in the pocket water habitat type (Fig. 5 and Appendix C). Fry habitat is highest in the P4 pool habitat for brown trout and pocket water for rainbow trout (Fig. 6 and Appendix C).

The optimum habitat values for the total habitat types occurs at approximately 50-100 cfs for adults and juveniles and approximately 25-50 cfs for fry (Figs. 4-6). The WUA versus discharge relationships display the amount of habitat that would be available if the respective flows were in the river. The total habitat available is dependent on the timing and duration of the flows, either natural or controlled. The habitat time series is the display of the duration of the actual habitat values.

The water surface elevations for the low flow simulations show that there is over 1.5 feet of water depth in the P4 pool at the lowest flow simulated (3 and 6 cfs)(Fig. 7.) The pocket water habitat has less residual depth than the P4 pools (Fig.8). The high gradient riffles has approximately 0.5 feet of depth at 6 cfs (Fig. 9). The abundance of P4 pools (36 percent of all habitat) and the depth at low flows probably accounts for the high habitat values for this habitat type. The velocity becomes limiting for all habitats at the higher flows.

Figure 4. Weighted usable area versus discharge for brown and rainbow trout adults.

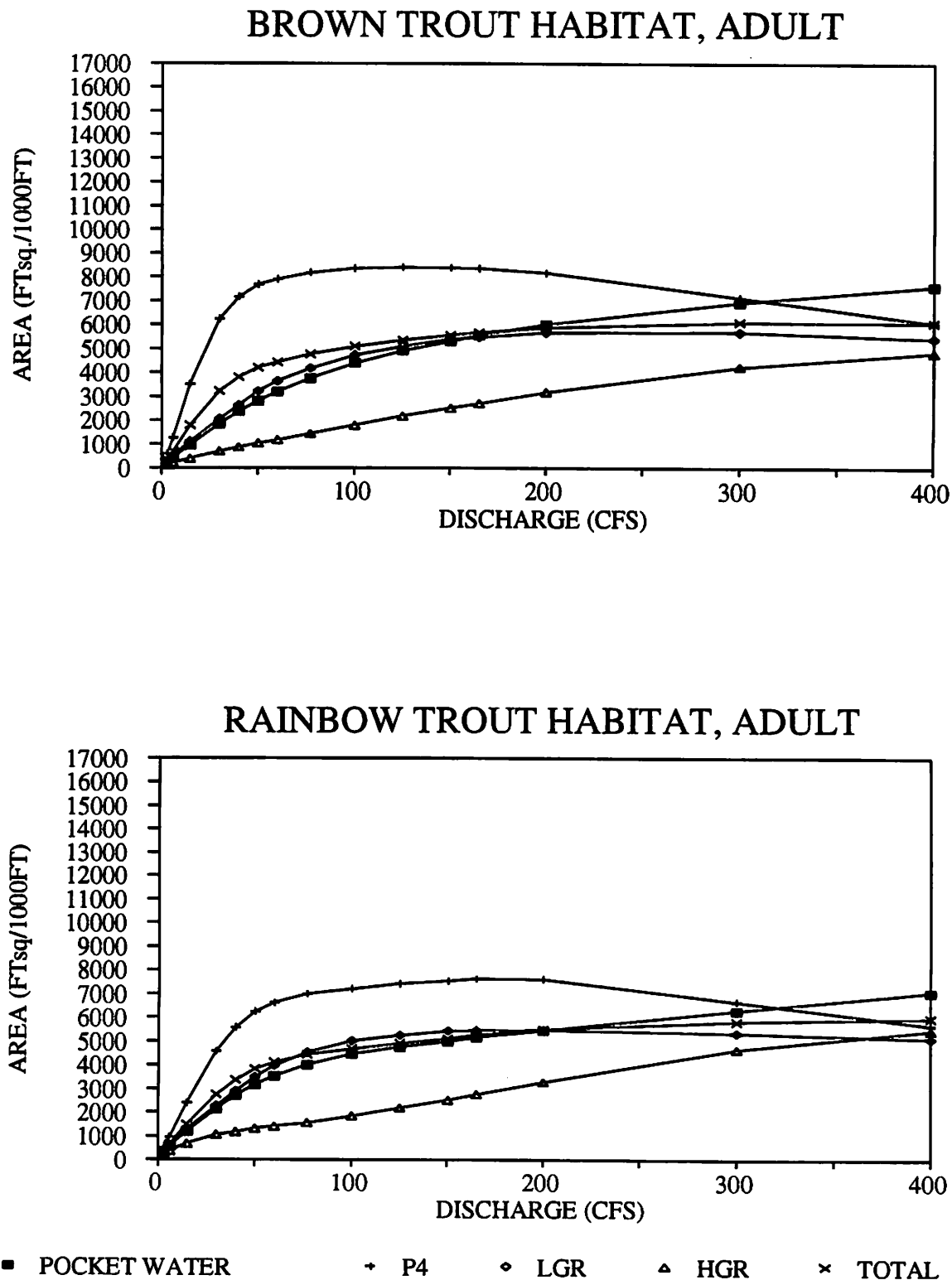


Figure 5. Weighted usable area versus discharge for brown and rainbow trout juveniles.

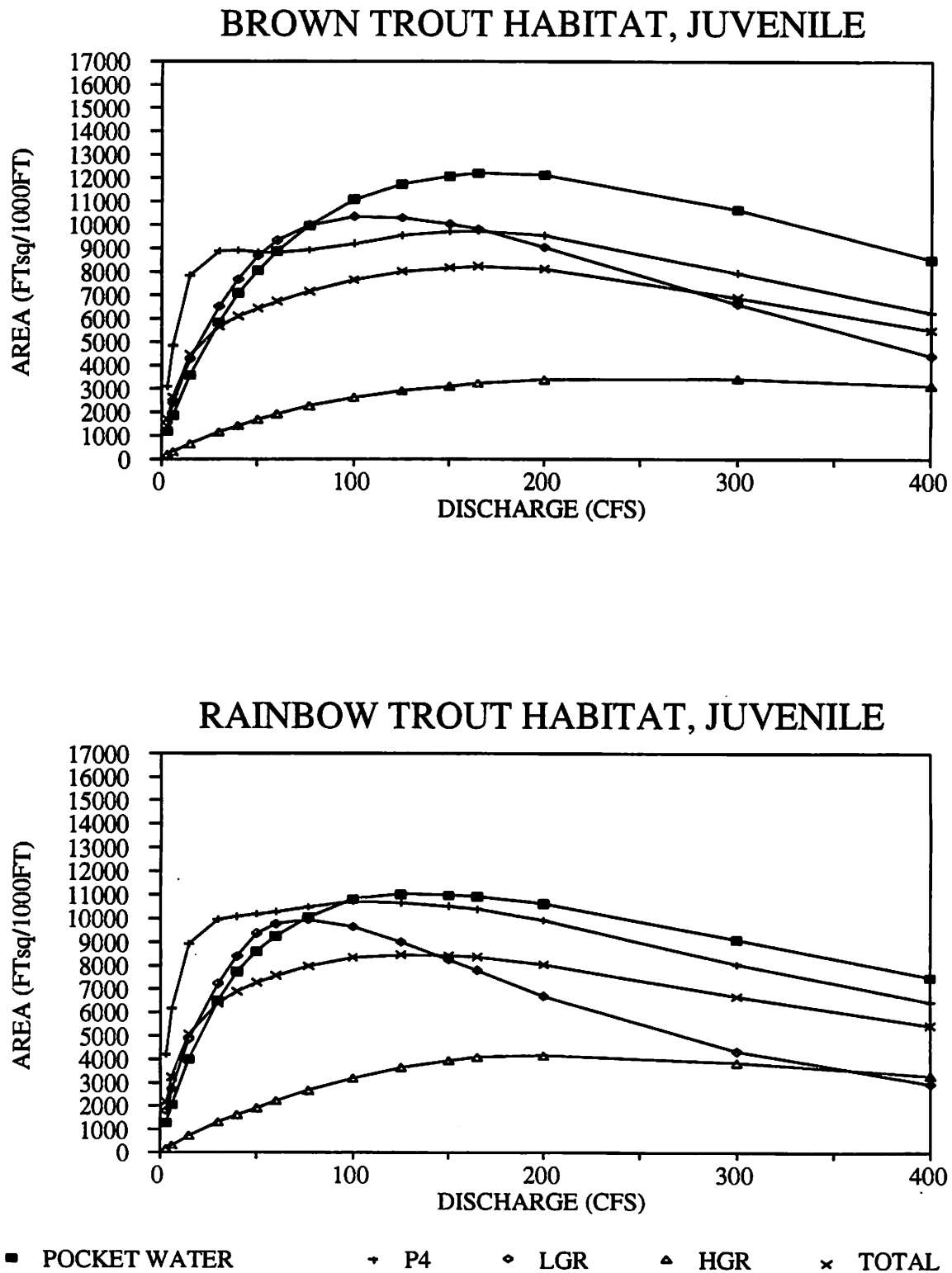


Figure 6. Weighted usable area versus discharge for brown and rainbow trout fry.

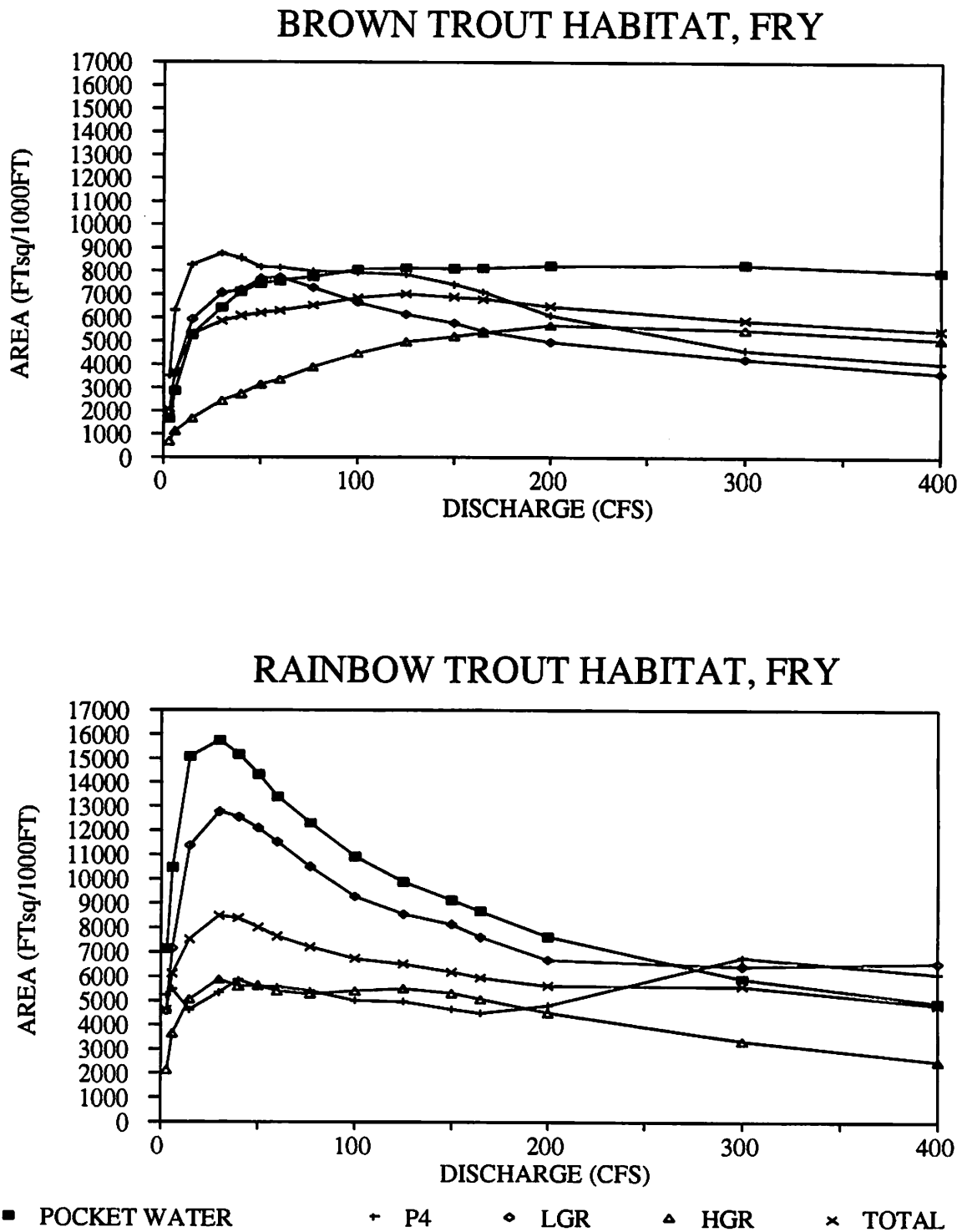


Figure 7. Water surface elevations at several flows in the Pocket Water habitat type.

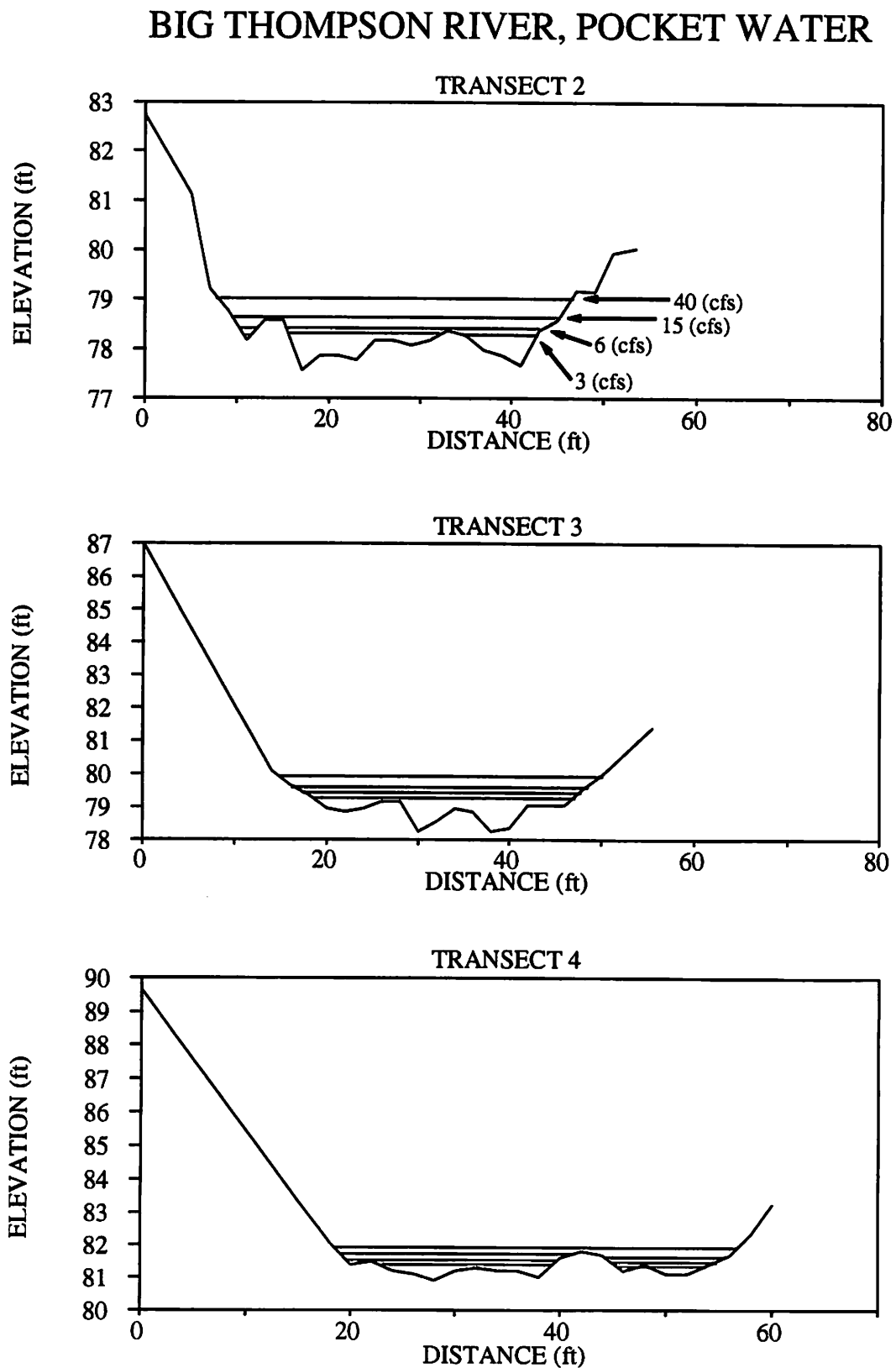


Figure 8. Water surface elevations at several flows in the P4 pool habitat type.

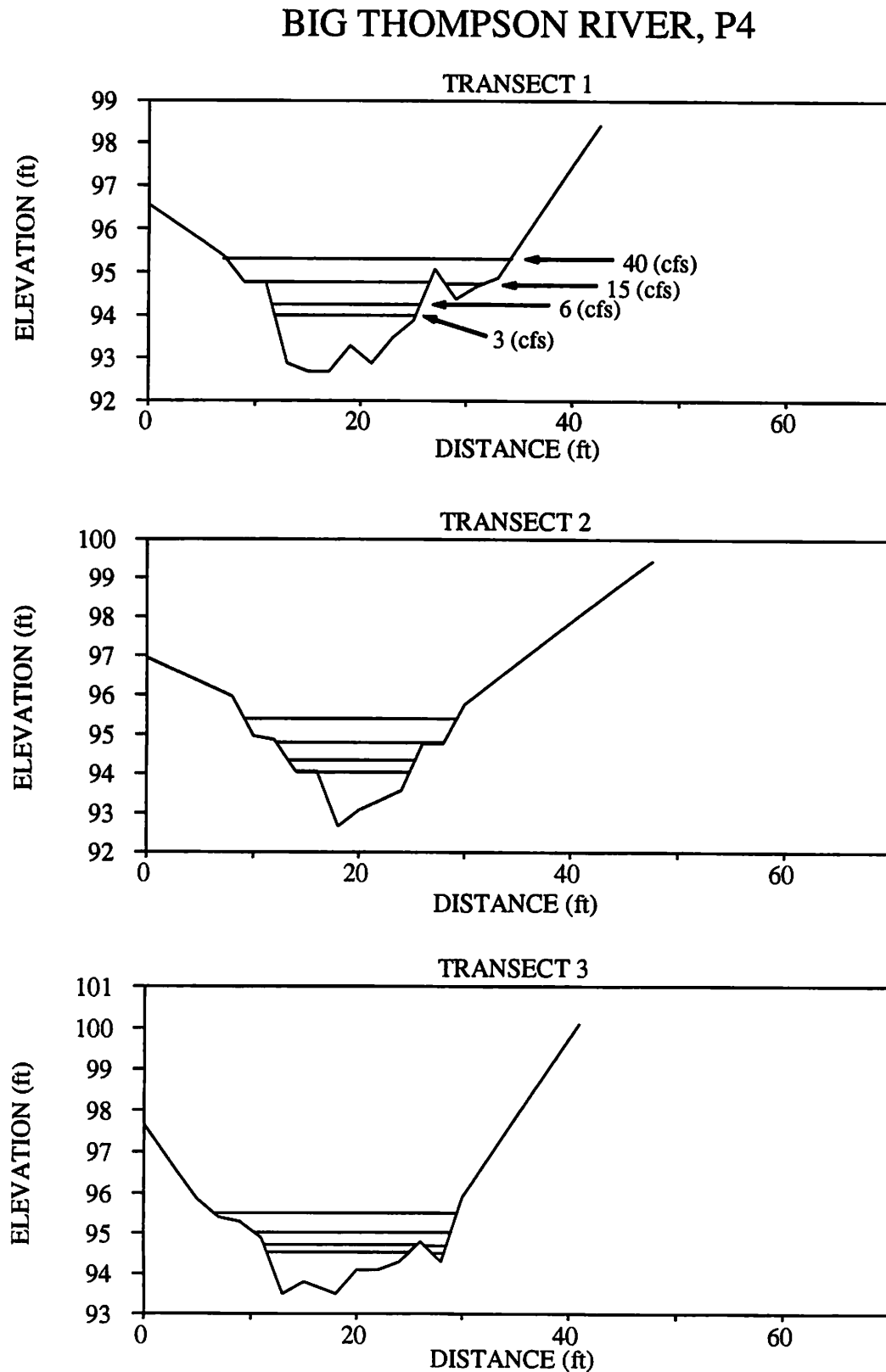
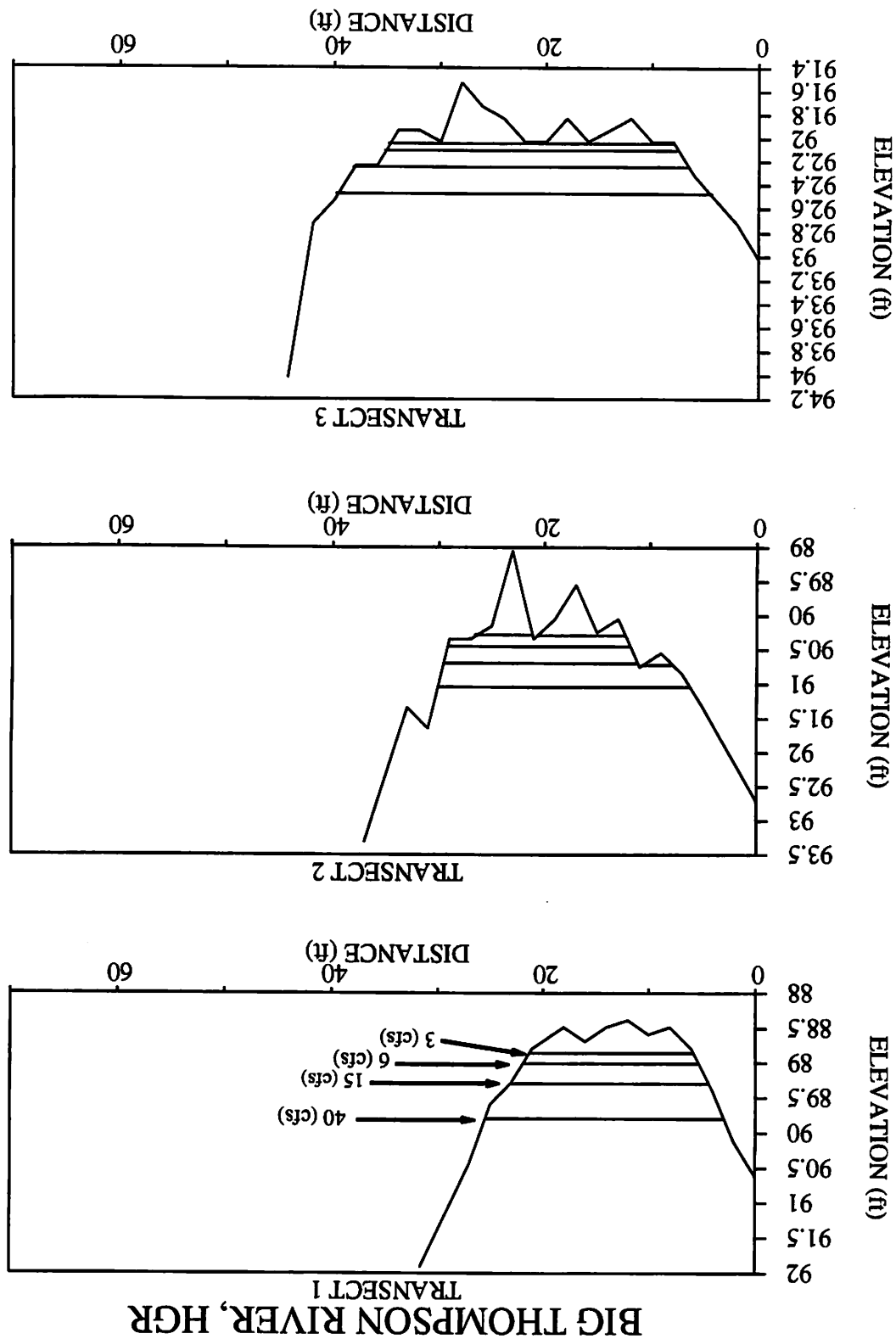


Figure 9. Water surface elevations at several flows in the high gradient riffle habitat type.



3.5 Time Series

The time series analysis included the development of daily flow regimes for several scenarios. These were daily flow without the power plant in operation (No Power), daily flow with the historic power plant operations (Power), the R2CROSS minimum flows (20 cfs from November 1 through April 30, and 50 cfs from May 1 through October 31), and alternative minimum flows (6 cfs, 7.1 and 8 cfs November 1 through April 30 and 35 cfs May 1 to October 31). These flow regimes were combined with the WUA versus discharge relationships for the total habitat types to produce daily habitat time series. Duration statistics were calculated from the time series data.

The results of the habitat duration analysis were used to determine the limiting life stage in the study area. Habitat multipliers from Waddle (1992) were used to determine the habitat requirements for each successive life stage. These multipliers were 1.27 for fry to juvenile, and 0.70 for juvenile to adult. The comparison of habitat values with multipliers applied showed that the juvenile and adult life stages are limiting for all flow conditions, including the no power alternative (Table 3). This means that even if the power facility were not in the study reach the populations would be limited by the juvenile and adult habitat.

3.5.1 Flow Duration The flow duration analysis shows the difference in flow regimes. In the comparison of the flow scenarios, the historic power operation which included the 3 cfs minimum flow reached that minimum 10 percent of the time for average conditions (Table 4). The alternative minimum flow regimes show that both the 6 and 8 cfs regimes also reach those respective flows 10 percent of the time. The R2CROSS minimum flow regime is identical to the No Power flow regime when the duration analyses are compared for the low flow conditions (90 percent exceedence levels). The comparison of the maximum power conditions show that for some periods during the day flows drop to the minimum flow condition (i.e. 6 or 8 cfs) at the 80 percent exceedence level (Table 5).

3.5.2 Habitat Duration The results of the time series and duration analyses are displayed in Tables 6 through 13 and Figures 10 through 15. The habitat duration analysis for brown trout shows that fry and juvenile habitat is over 50 percent of the maximum (No Power) under all flow regimes except the historic power flows. There is generally less than a 10 percent difference in the habitat for all life stages between the 8, 7.1 and 6 cfs minimum flow regimes. (Tables 6 through 13).

The minimum flow currently released during the winter is 6 cfs (Bob Micek, City of Loveland, personal communication) This minimum flow was measured in 1991 to document the release. Prior to that time flow was released through both the fixed opening and the sluiceway at approximately the same volume but was unmeasured. Therefore the assumed minimum release was 3 cfs. The duration analysis shows that there is an increase in habitat with the 6 cfs minimum over the historic operation (Tables 6 through 13, Figs. 9 & 10). The 8, 7.1 and 6 cfs minimum flow regimes have habitat levels that are 86 % or more of the maximum habitat that can be achieved for more than 60% of the time (Tables 8 & 12). The

7.1 cfs flow maintains 40 % of the maximum habitat for 100 percent of the time (Tables 8 & 12, Figures 14 & 15).

3.6 Minimum Flow Recommendations

The flow regimes evaluated used the average and maximum daily power production flows diverted to determine the bypass flows. By using these power values, the flow duration and habitat analysis are for the average daily and minimum daily flows in the bypass reach. This produced a flow and habitat scenario that would be the average possible and the lowest possible. This approach was used to provide habitat values directly comparable to the average daily flow conditions from the USGS records and a conservative (underestimate) of the flows and habitat experienced in the bypass reach at maximum power for portions of the day.

The duration analysis of flow regimes and habitat for brown and rainbow trout show that the most limiting habitat is for adults of both species. The flow duration analysis show an increase in base flow discharge for all minimum flows when compared to the historic flow regime with power generation. Further, the habitat during the base flow period increased for all minimum flow regimes when compared to the historic power operation flows.

The current fish populations in the bypass reach for brown trout are equal to or higher than those found in the limited harvest area of the Big Thompson. The limited harvest area is subject to minimum flows of near 8 cfs for the period 1988 through 1992. The rainbow trout populations in the bypass reach are somewhat lower than those found in the limited harvest section of the river.

The fish population data, macroinvertebrate data and limited water quality data show that conditions in the bypass reach under historic power operations have sustained trout populations in the bypass reach. The number of trout per mile is almost equal to some sections of the limited harvest area of the Big Thompson under the current flow regime.

The current minimum winter flow in the bypass reach producing these population levels is the existing power operation with a 6 cfs minimum release. Based on the results of the habitat duration, flow duration, and fish population data, a winter minimum flow regime of 6 cfs should maintain the current fish populations in the bypass reach. A minimum flow regime of 6 cfs produces habitat values that are in excess of 40 % of the maximum attainable 85% of the time. The U.S. Forest Plan standard requires flows that maintain at least 40% of the habitat potential 100% of the time. The current 6 cfs does not meet this standard for habitat.

A 7.1 cfs minimum flow release would maintain the trout habitat at 40 % of the potential for the reach 100 % of the time. This would meet the requirements of the Forest Plan Standard and maintain the current populations. Minimum flows higher than 7.1 cfs are not required to meet the 40% Standard.

The R2CROSS minimum flow regime would provide even further increases in the trout habitat in the bypass reach but are not required to meet the Forest Standard. Since there is a substantial increase in trout habitat with a 7.1 cfs minimum flow over the historic power operation flows, the R2CROSS flows are not needed to sustain the trout habitat at the 40 % level in the bypass reach. The present trout biomass and invertebrate populations also show that the flows at the R2CROSS levels are not required to sustain the trout populations. The lower flow regime of 7.1 cfs should provide trout habitat that meets the Forest Plan Standards, allows power production and sustains trout populations.

4.0 CONCLUSIONS

The current fish populations in the river are not limited by water quality or food production. The minimum flow release since 1991 has been set at 6 cfs during the winter months. Prior to 1991 the minimum winter release was assumed to be 3 cfs. The current trout populations in the bypass reach are in good condition with the current 6 cfs minimum flow regime based on a limited sampling of those populations.

Based on the duration analysis and biological data presented above, a minimum flow of 6 cfs should maintain the trout populations at the current levels but would not maintain the habitat level required to meet U.S. Forest Plan Standards. A 7.1 cfs minimum flow regime is needed to meet the Forest Plan Standard of 40% habitat potential 100 % of the time.

The flow regimes evaluated used the average daily flows as well as minimum daily flows to determine the actual response of fish habitat to changes in flow. The resulting fish populations could be different than those expected based on the habitat duration tables due to other factors that effect populations. The minimum daily flows usually occur for less than 8 hours on days when hydro-power peaking occurs. The relative abundance of pool habitat in the bypass reach seems to be maintaining the trout populations during the winter low flow period.

Table 3. Percent of habitat deviation from previous life stage for brown and rainbow trout based on habitat multipliers for average daily flows.

ADULT BROWN TROUT						
NO POWER	POWER	R2CROSS	8 CFS	6 CFS	EXCEED	7.1 CFS
3	3	3	3	3	5.0	3
3	1	1	1	1	10.0	1
1	-1	-1	-1	-1	20.0	-1
0	-2	-2	-2	-2	30.0	-2
-2	-4	-4	-4	-4	40.0	-4
-4	-10	-6	-10	-10	50.0	-10
-10	-27	-9	-9	-9	60.0	-9
-13	-39	-34	-38	-38	70.0	-38
-29	-49	-34	-53	-49	80.0	-50
-37	-71	-37	-57	-63	90.0	-59
-38	-71	-39	-57	-63	95.0	-59

JUVENILE BROWN TROUT						
NO POWER	POWER	R2CROSS	8 CFS	6 CFS	EXCEED	7.1 CFS
-7	-7	-7	-7	-7	5.0	-7
-7	-7	-7	-7	-7	10.0	-7
-5	-8	-8	-8	-8	20.0	-8
-7	-11	-11	-11	-11	30.0	-11
-12	-15	-15	-15	-15	40.0	-15
-16	-21	-18	-21	-21	50.0	-21
-20	-29	-25	-25	-25	60.0	-25
-22	-34	-30	-33	-33	70.0	-33
-30	-42	-30	-40	-42	80.0	-42
-32	-35	-32	-40	-43	90.0	-42
-33	-35	-32	-40	-43	95.0	-42

ADULT RAINBOW TROUT						
NO POWER	POWER	R2CROSS	8 CFS	6 CFS	EXCEED	7.1 CFS
-4	-6	-6	-6	-6	5.0	-6
-6	-8	-8	-8	-8	10.0	-8
-8	-13	-13	-13	-13	20.0	-13
-11	-16	-16	-16	-16	30.0	-16
-16	-19	-19	-19	-19	40.0	-19
-18	-29	-23	-29	-29	50.0	-29
-28	-45	-29	-29	-29	60.0	-29
-32	-56	-51	-54	-54	70.0	-54
-47	-62	-51	-65	-62	80.0	-63
-54	-75	-54	-67	-71	90.0	-69
-54	-75	-55	-67	-71	95.0	-69

JUVENILE RAINBOW TROUT						
NO POWER	POWER	R2CROSS	8 CFS	6 CFS	EXCEED	7.1 CFS
-21	-21	-21	-21	-21	5.0	-21
-21	-20	-18	-21	-21	10.0	-21
-21	-17	-17	-17	-17	20.0	-17
-20	-17	-20	-17	-17	30.0	-17
-21	-18	-25	-18	-18	40.0	-18
-25	-21	-27	-21	-21	50.0	-21
-23	-31	-36	-26	-26	60.0	-26
-19	-34	-36	-37	-34	70.0	-35
-25	-53	-31	-55	-56	80.0	-57
-25	-63	-27	-50	-56	90.0	-53
-28	-63	-26	-49	-55	95.0	-52

Table 4. Summary of flow duration for the bypass reach by flow regime for average power conditions.

Discharge (cfs) by exceedence level.

NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS
257.0	226.0	226.0	226.0	226.0	90.0	5.0	226.0
206.0	186.0	186.0	186.0	186.0	179.0	10.0	186.0
175.0	140.7	140.7	140.7	140.7	359.0	20.0	140.7
136.0	99.8	100.0	100.0	100.0	539.0	30.0	100.0
87.0	67.0	67.0	67.0	67.0	718.0	40.0	67.0
61.0	40.0	50.0	40.0	40.0	898.0	50.0	40.0
42.0	23.0	34.0	34.0	34.0	1078.0	60.0	34.0
36.0	16.0	20.0	17.0	17.0	1258.0	70.0	17.0
22.0	8.5	20.0	8.7	8.7	1437.0	80.0	8.7
18.0	3.0	18.0	8.0	6.0	1617.0	90.0	7.1
17.0	3.0	17.0	8.0	6.0	1707.0	95.0	7.1
8.0	3.0	8.0	8.0	6.0	1797.0	100.0	7.1

Percent of maximum flow by exceedence level.

NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS
100.0	87.9	87.9	87.9	87.9		5.0	87.9
100.0	90.3	90.3	90.3	90.3		10.0	90.3
100.0	80.4	80.4	80.4	80.4		20.0	80.4
100.0	73.4	73.5	73.5	73.5		30.0	73.5
100.0	77.0	77.0	77.0	77.0		40.0	77.0
100.0	65.6	82.0	65.6	65.6		50.0	65.6
100.0	54.8	81.0	81.0	81.0		60.0	81.0
100.0	44.4	55.6	47.2	47.2		70.0	47.2
100.0	38.6	90.9	39.5	39.5		80.0	39.5
100.0	16.7	100.0	44.4	33.3		90.0	39.4
100.0	17.6	100.0	47.1	35.3		95.0	41.8
100.0	37.5	100.0	100.0	75.0		100.0	88.8

Table 5. Summary of flow duration for the bypass reach by flow regime for maximum power conditions.

Discharge in cfs by flow regime by exceedence level.

NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED
257	225	225	225	225	90	5.0
206	186	186	186	186	179	10.0
175	139	139	139	139	359	20.0
136	99	99	99	99	539	30.0
87	66	66	66	66	718	40.0
61	40	50	40	40	898	50.0
42	22	34	34	34	1078	60.0
36	12	20	16	16	1258	70.0
22	3	20	8	6	1437	80.0
18	3	18	8	6	1617	90.0
17	3	17	8	6	1707	95.0
8	3	8	8	6	1797	100

Percent of the maximum attainable discharge
by exceedence level.

NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED
100	88	88	88	88		5.0
100	90	90	90	90		10.0
100	79	79	79	79		20.0
100	73	73	73	73		30.0
100	76	76	76	76		40.0
100	66	82	66	66		50.0
100	52	81	81	81		60.0
100	33	56	44	44		70.0
100	14	91	36	27		80.0
100	17	100	44	33		90.0
100	18	100	47	35		95.0
100	38	100	100	75		100

Table 6. Summary of habitat duration for brown trout in the bypass reach by flow regime for average power conditions.

Habitat area by flow regime by exceedence level.

BROWN ADULT								
NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS	
5956	5942	5942	5942	5942	90	5.0	5942	
5899	5804	5804	5804	5804	179	10.0	5804	
5741	5485	5485	5485	5485	359	20.0	5485	
5448	5090	5093	5093	5093	539	30.0	5093	
4910	4574	4574	4574	4574	718	40.0	4574	
4456	3810	4201	3810	3810	898	50.0	3810	
3888	2555	3461	3461	3461	1078	60.0	3461	
3577	1882	2267	1978	1978	1258	70.0	1978	
2459	993	2267	1017	1017	1437	80.0	1017	
2074	352	2074	932	688	1617	90.0	822	
1978	352	1978	932	688	1707	95.0	822	
932	352	932	932	688	1797	100	822	

BROWN JUVENILE								
NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS	
8195	8184	8184	8184	8184	90	5.0	8184	
8168	8144	8144	8144	8144	179	10.0	8144	
8065	7905	7905	7905	7905	359	20.0	7905	
7721	7361	7361	7361	7361	539	30.0	7361	
7107	6780	6780	6780	6780	718	40.0	6780	
6595	6030	6387	6030	6030	898	50.0	6030	
6152	4962	5407	5407	5407	1078	60.0	5407	
5852	4420	4865	4541	4541	1258	70.0	4541	
4946	2766	4865	3048	2826	1437	80.0	2866	
4703	1699	4703	3048	2645	1617	90.0	2866	
4541	1699	4622	3048	2645	1707	95.0	2866	
0	0	0	0	0	1797	100	0	

BROWN FRY								
NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS	
6950	6957	6956	6956	6956	90	5.0	6956	
6890	6904	6904	6904	6904	179	10.0	6904	
6705	6731	6730	6730	6730	359	20.0	6730	
6546	6504	6504	6504	6504	539	30.0	6504	
6381	6250	6250	6250	6250	718	40.0	6250	
6176	6010	6139	6010	6010	898	50.0	6010	
6054	5529	5683	5683	5683	1078	60.0	5683	
5902	5273	5493	5346	5346	1258	70.0	5346	
5529	3777	5493	4032	3832	1437	80.0	3868	
5419	2049	5419	4032	3668	1617	90.0	3868	
5346	2049	5383	4032	3668	1707	95.0	3868	
2738	2049	2738	2738	2738	1797	100	2738	

Table 7. Summary of habitat duration for brown trout in the bypass reach by flow regime for maximum power conditions.

Habitat area by flow regime by exceedence level.

ADULT

NO	POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED
	5956	5940	5940	5940	5940	90	5.0
	5899	5804	5804	5804	5804	179	10.0
	5741	5471	5471	5471	5471	359	20.0
	5448	5078	5078	5078	5078	539	30.0
	4910	4554	4554	4554	4554	718	40.0
	4456	3810	4201	3810	3810	898	50.0
	3888	2459	3461	3461	3461	1078	60.0
	3577	1420	2267	1882	1882	1258	70.0
	2459	352	2267	932	688	1437	80.0
	2074	352	2074	932	688	1617	90.0
	1978	352	1978	932	688	1707	95.0
	932	352	932	932	688	1797	100

JUVENILE

NO	POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED
	8195	8184	8184	8184	8184	90	5.0
	8168	8139	8139	8139	8139	179	10.0
	8065	7905	7905	7905	7905	359	20.0
	7721	7357	7357	7357	7357	539	30.0
	7107	6762	6762	6762	6762	718	40.0
	6595	6030	6387	6119	6119	898	50.0
	6152	4865	5188	5188	5188	1078	60.0
	5852	3250	4865	3653	3653	1258	70.0
	4946	1699	4865	3048	2645	1437	80.0
	4703	1699	4703	3048	2645	1617	90.0
	4541	1699	4622	3048	2645	1707	95.0
	0	0	0	0	0	1797	100

FRY

NO	POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED
	6950	6956	6956	6956	6956	90	5.0
	6890	6904	6904	6904	6904	179	10.0
	6705	6731	6731	6731	6731	359	20.0
	6546	6492	6492	6492	6492	539	30.0
	6381	6240	6240	6240	6240	718	40.0
	6176	5989	6126	6076	6076	898	50.0
	6054	5493	5602	5602	5602	1078	60.0
	5902	4215	5493	4580	4580	1258	70.0
	5529	2049	5493	4032	3668	1437	80.0
	5419	2049	5419	4032	3668	1617	90.0
	5346	2049	5383	4032	3668	1707	95.0
	2738	2049	2738	2738	2738	1797	100

Table 8. Summary of habitat duration as percent of maximum for brown trout in the bypass reach by flow regime for average power conditions.

Percent of maximum habitat by flow regime by exceedence level.

BROWN ADULT		R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS
NO POWER	POWER						
100	100	100	100	100		5.0	100
100	98	98	98	98		10.0	98
100	96	96	96	96		20.0	96
100	93	93	93	93		30.0	93
100	93	93	93	93		40.0	93
100	86	94	86	86		50.0	86
100	66	89	89	89		60.0	89
100	53	63	55	55		70.0	55
100	40	92	41	41		80.0	41
100	17	100	45	33		90.0	40
100	18	100	47	35		95.0	42
100	38	100	100	74		100	88

BROWN JUVENILE		R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS
NO POWER	POWER						
100	100	100	100	100		5.0	100
100	100	100	100	100		10.0	100
100	98	98	98	98		20.0	98
100	95	95	95	95		30.0	95
100	95	95	95	95		40.0	95
100	91	97	91	91		50.0	91
100	81	88	88	88		60.0	88
100	76	83	78	78		70.0	78
100	56	98	62	57		80.0	58
100	36	100	65	56		90.0	61
100	37	102	67	58		95.0	63
0	0	0	0	0		100	100

BROWN FRY		R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS
NO POWER	POWER						
100	100	100	100	100		5.0	100
100	100	100	100	100		10.0	100
100	100	100	100	100		20.0	100
100	99	99	99	99		30.0	99
100	98	98	98	98		40.0	98
100	97	99	97	97		50.0	97
100	91	94	94	94		60.0	94
100	89	93	91	91		70.0	91
100	68	99	73	69		80.0	70
100	38	100	74	68		90.0	71
100	38	101	75	69		95.0	72
100	75	100	100	100		100	100

Table 9. Summary of habitat duration as percent of maximum for brown trout in the bypass reach by flow regime for maximum power conditions.

Percent of maximum habitat by flow regime by exceedence level.

ADULT						
NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED
100	100	100	100	100		5.0
100	98	98	98	98		10.0
100	95	95	95	95		20.0
100	93	93	93	93		30.0
100	93	93	93	93		40.0
100	86	94	86	86		50.0
100	63	89	89	89		60.0
100	40	63	53	53		70.0
100	14	92	38	28		80.0
100	17	100	45	33		90.0
100	18	100	47	35		95.0
100	38	100	100	74		100

JUVENILE						
NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED
100	100	100	100	100		5.0
100	100	100	100	100		10.0
100	98	98	98	98		20.0
100	95	95	95	95		30.0
100	95	95	95	95		40.0
100	91	97	93	93		50.0
100	79	84	84	84		60.0
100	56	83	62	62		70.0
100	34	98	62	53		80.0
100	36	100	65	56		90.0
100	37	102	67	58		95.0

FRY						
NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED
100	100	100	100	100		5.0
100	100	100	100	100		10.0
100	100	100	100	100		20.0
100	99	99	99	99		30.0
100	98	98	98	98		40.0
100	97	99	98	98		50.0
100	91	93	93	93		60.0
100	71	93	78	78		70.0
100	37	99	73	66		80.0
100	38	100	74	68		90.0
100	38	101	75	69		95.0
100	75	100	100	100		100

Table 10. Summary of habitat duration for rainbow trout in the bypass reach by flow regime for average power conditions.

Habitat area by flow regime by exceedence level.

RAINBOW ADULT		R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS
NO POWER	POWER						
5698	5600	5600	5600	5600	90	5.0	5600
5536	5422	5422	5422	5422	179	10.0	5422
5347	5050	5050	5050	5050	359	20.0	5050
5012	4702	4705	4705	4705	539	30.0	4705
4564	4264	4264	4264	4264	718	40.0	4264
4149	3373	3845	3373	3373	898	50.0	3373
3467	2162	2999	2999	2999	1078	60.0	2999
3124	1573	1909	1657	1657	1258	70.0	1657
2077	885	1909	903	903	1437	80.0	903
1741	379	1741	838	653	1617	90.0	755
1657	379	1657	838	653	1707	95.0	755
838	379	838	838	653	1797	100	755

RAINBOW JUVENILE		R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS
NO POWER	POWER						
8440	8444	8444	8444	8444	90	5.0	8444
8407	8417	8417	8417	8417	179	10.0	8417
8246	8246	8242	8242	8242	359	20.0	8242
8054	7974	7974	7974	7974	539	30.0	7974
7730	7454	7454	7454	7454	718	40.0	7454
7236	6736	7081	6736	6736	898	50.0	6736
6853	5595	6033	6033	6033	1078	60.0	6033
6534	5029	5508	5157	5157	1258	70.0	5157
5595	3355	5508	3641	3416	1437	80.0	3457
5332	2174	5332	3641	3233	1617	90.0	3457
5157	2174	5245	3641	3233	1707	95.0	3457
0	0	0	0	0	1797	100	0

RAINBOW FRY		R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS
NO POWER	POWER						
8432	8416	8400	8442	8442	90	5.0	8442
8402	8283	8109	8402	8402	179	10.0	8402
8211	7801	7853	7853	7853	359	20.0	7853
7917	7553	7853	7597	7597	539	30.0	7597
7725	7116	7853	7124	7124	718	40.0	7124
7573	6697	7661	6699	6699	898	50.0	6699
7034	6368	7472	6431	6377	1078	60.0	6377
6373	6001	6745	6431	6117	1258	70.0	6290
5855	5618	6317	6317	6117	1437	80.0	6290
5623	4619	5753	5753	5753	1617	90.0	5753
5610	4619	5618	5618	5618	1707	95.0	5618
188	188	188	188	188	1797	100	188

Table 11. Summary of habitat duration for rainbow trout in the bypass reach by flow regime for maximum power conditions.

Habitat area by flow regime by exceedence level.

ADULT

NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED
5698	5597	5597	5597	5597	90	5.0
5536	5422	5422	5422	5422	179	10.0
5347	5037	5037	5037	5037	359	20.0
5012	4694	4694	4694	4694	539	30.0
4564	4245	4245	4245	4245	718	40.0
4149	3373	3845	3373	3373	898	50.0
3467	2077	2999	2999	2999	1078	60.0
3124	1210	1909	1573	1573	1258	70.0
2077	379	1909	838	653	1437	80.0
1741	379	1741	838	653	1617	90.0
1657	379	1657	838	653	1707	95.0
838	379	838	838	653	1797	100

JUVENILE

NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED
8440	8443	8443	8443	8443	90	5.0
8407	8421	8421	8421	8421	179	10.0
8246	8246	8246	8246	8246	359	20.0
8054	7974	7974	7974	7974	539	30.0
7730	7424	7424	7424	7424	718	40.0
7236	6730	7081	6887	6887	898	50.0
6853	5508	5770	5770	5770	1078	60.0
6534	3845	5508	4253	4253	1258	70.0
5595	2174	5508	3641	3233	1437	80.0
5332	2174	5332	3641	3233	1617	90.0
5157	2174	5245	3641	3233	1707	95.0
0	0	0	0	0	1797	100

FRY

NO POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK	EXCEED
8432	8412	8392	8392	8392	90	5.0
8402	8237	8066	8392	8392	179	10.0
8211	7725	7853	7853	7853	359	20.0
7917	7447	7853	7534	7534	539	30.0
7725	6827	7853	6904	6904	718	40.0
7573	6452	7725	6479	6479	898	50.0
7034	6117	7497	6431	6117	1078	60.0
6373	5680	6765	6431	6117	1258	70.0
5855	4619	6333	6333	6117	1437	80.0
5623	4619	5763	5763	5763	1617	90.0
5610	4619	5618	5618	5618	1707	95.0
188	188	188	188	188	1797	100

Table 12. Summary of habitat duration as percent of maximum for rainbow trout in the bypass reach by flow regime for average power conditions.

Percent of maximum habitat by flow regime by exceedence level.

RAINBOW ADULT		R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS
NO POWER	POWER						
100	98	98	98	98		5.0	98
100	98	98	98	98		10.0	98
100	94	94	94	94		20.0	94
100	94	94	94	94		30.0	94
100	93	93	93	93		40.0	93
100	81	93	81	81		50.0	81
100	62	87	87	87		60.0	87
100	50	61	53	53		70.0	53
100	43	92	43	43		80.0	43
100	22	100	48	38		90.0	43
100	23	100	51	39		95.0	46
100	45	100	100	78		100	90

RAINBOW JUVENILE		R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS
NO POWER	POWER						
100	100	100	100	100		5.0	100
100	100	100	100	100		10.0	100
100	100	100	100	100		20.0	100
100	99	99	99	99		30.0	99
100	96	96	96	96		40.0	96
100	93	98	93	93		50.0	93
100	82	88	88	88		60.0	88
100	77	84	79	79		70.0	79
100	60	98	65	61		80.0	62
100	41	100	68	61		90.0	65
100	42	102	71	63		95.0	67
0	0	0	0	0		100	100

RAINBOW FRY		R2CROSS	8 CFS	6 CFS	RANK	EXCEED	7.1 CFS
NO POWER	POWER						
100	100	100	100	100		5.0	100
100	99	97	100	100		10.0	100
100	95	96	96	96		20.0	96
100	95	99	96	96		30.0	96
100	92	102	92	92		40.0	92
100	88	101	88	88		50.0	88
100	91	106	91	91		60.0	91
100	94	106	101	96		70.0	99
100	96	108	108	104		80.0	107
100	82	102	102	102		90.0	102
100	82	100	100	100		95.0	100
100	100	100	100	100		100	100

Table 13. Summary of habitat duration as percent of maximum for rainbow trout in the bypass reach by flow regime for maximum power conditions.

Percent of maximum habitat by flow regime by exceedence level.

ADULT						
NO	POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK EXCEED
100		98	98	98	98	5.0
100		98	98	98	98	10.0
100		94	94	94	94	20.0
100		94	94	94	94	30.0
100		93	93	93	93	40.0
100		81	93	81	81	50.0
100		60	87	87	87	60.0
100		39	61	50	50	70.0
100		18	92	40	31	80.0
100		22	100	48	38	90.0
100		23	100	51	39	95.0
100		45	100	100	78	100

JUVENILE						
NO	POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK EXCEED
100		100	100	100	100	5.0
100		100	100	100	100	10.0
100		100	100	100	100	20.0
100		99	99	99	99	30.0
100		96	96	96	96	40.0
100		93	98	95	95	50.0
100		80	84	84	84	60.0
100		59	84	65	65	70.0
100		39	98	65	58	80.0
100		41	100	68	61	90.0
100		42	102	71	63	95.0

FRY						
NO	POWER	POWER	R2CROSS	8 CFS	6 CFS	RANK EXCEED
100		100	100	100	100	5.0
100		98	96	100	100	10.0
100		94	96	96	96	20.0
100		94	99	95	95	30.0
100		88	102	89	89	40.0
100		85	102	86	86	50.0
100		87	107	91	87	60.0
100		89	106	101	96	70.0
100		79	108	108	104	80.0
100		82	102	102	102	90.0
100		82	100	100	100	95.0
100		100	100	100	100	100

Figure 10. Habitat duration for brown trout adult, juveniles, and fry at average power conditions.

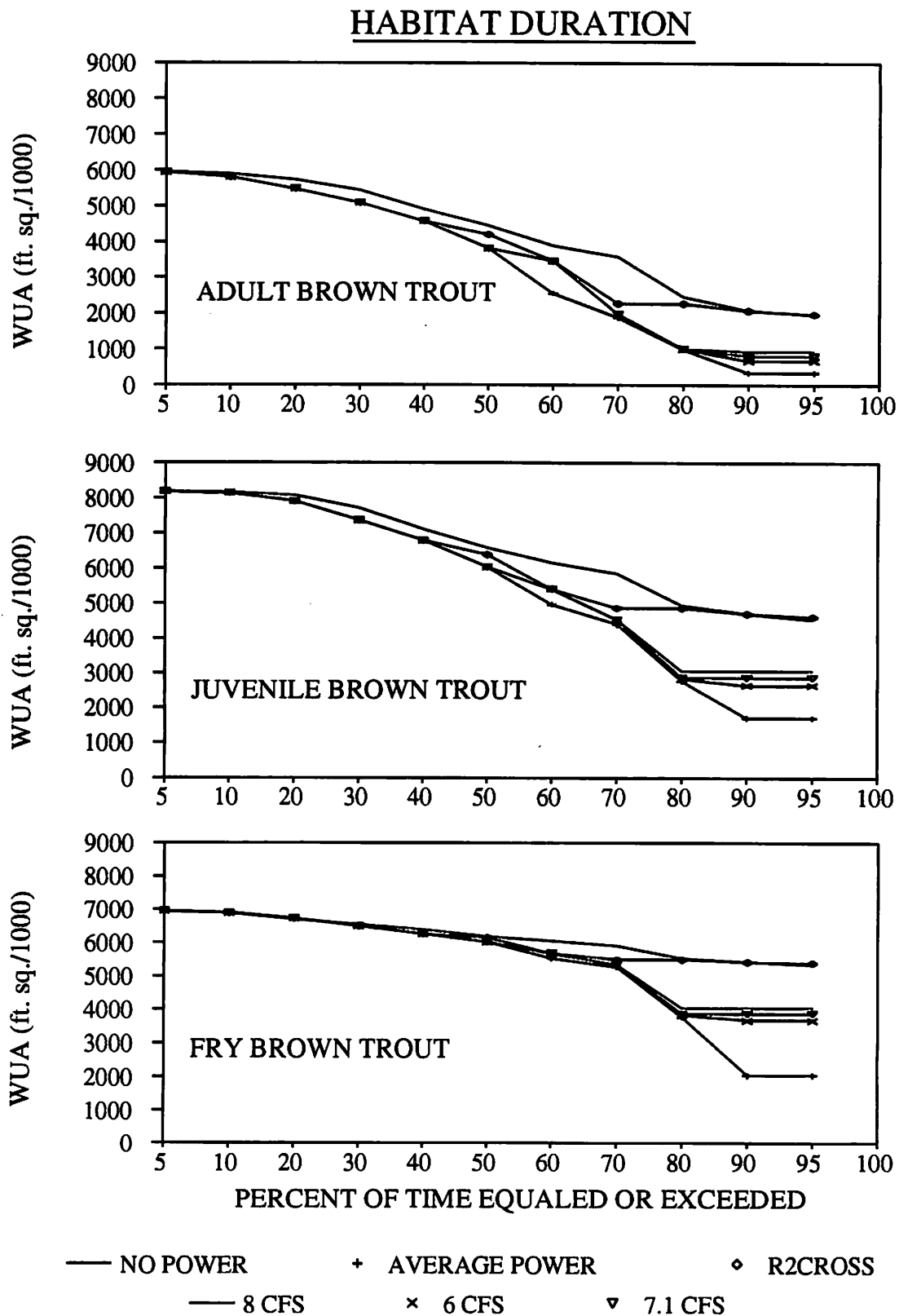


Figure 11. Habitat duration for brown trout adult, juveniles, and fry at maximum power conditions.

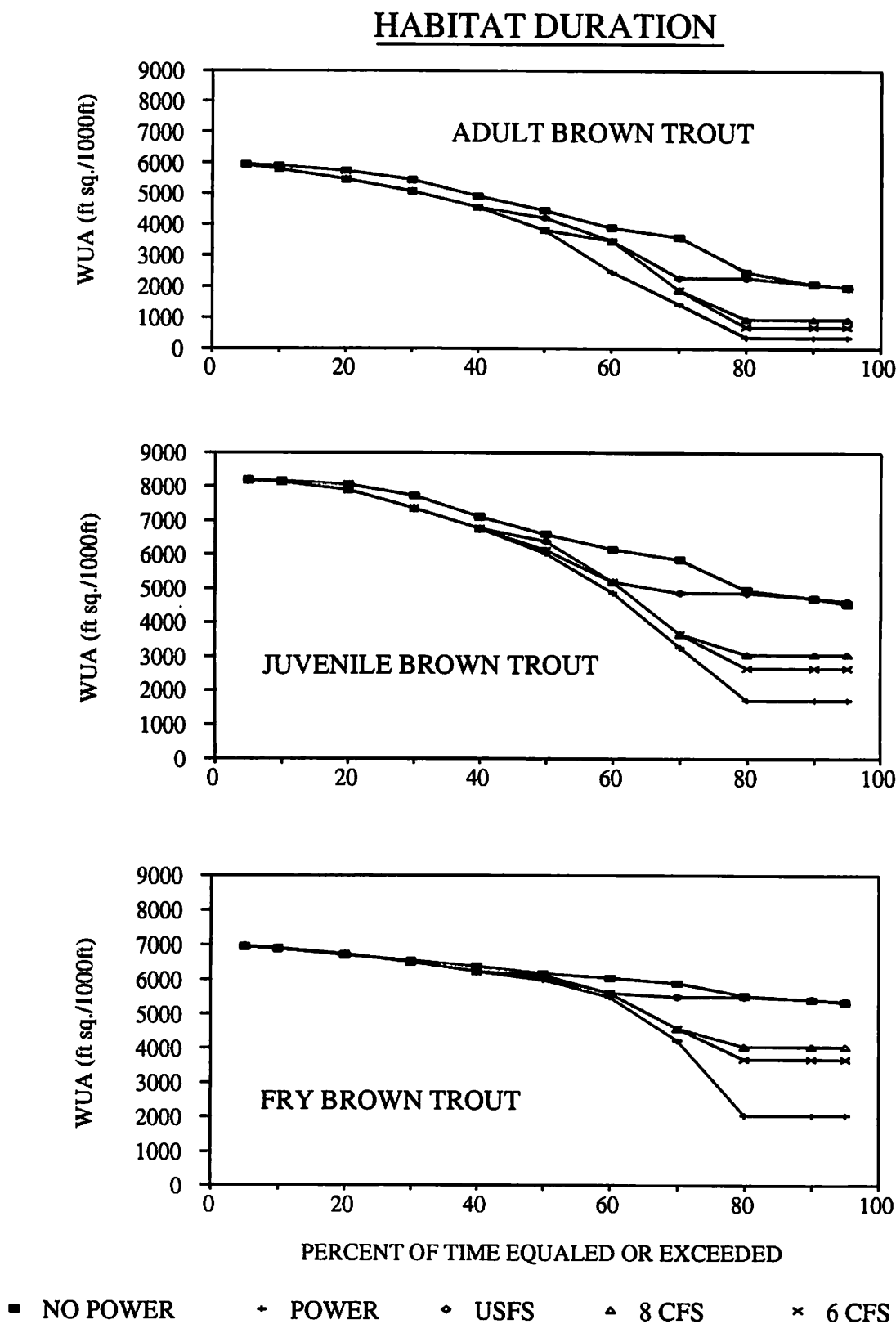


Figure 12. Habitat duration for rainbow trout adult, juveniles, and fry at average power conditions.

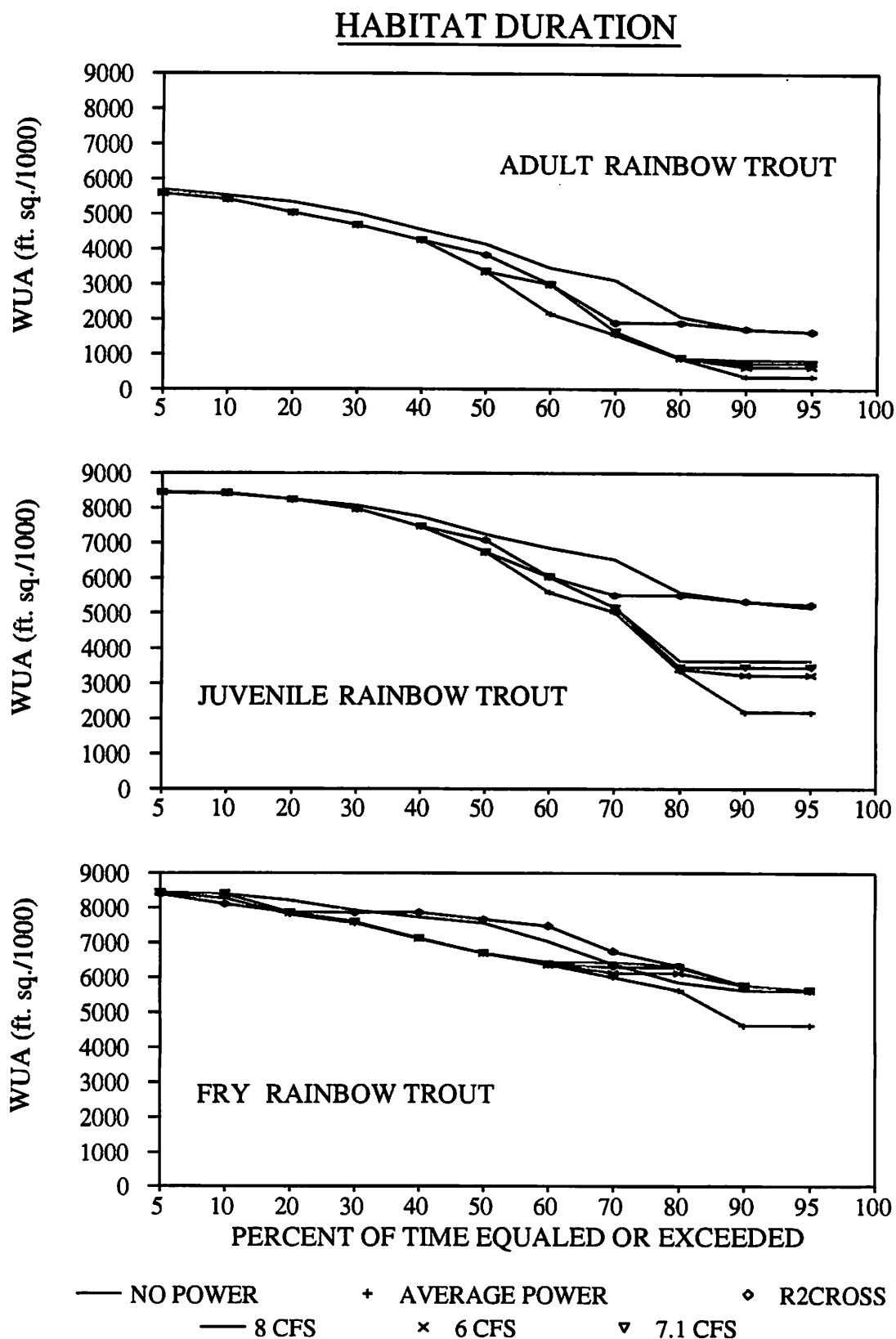


Figure 13. Habitat duration for rainbow trout adult, juveniles, and fry at maximum power conditions.

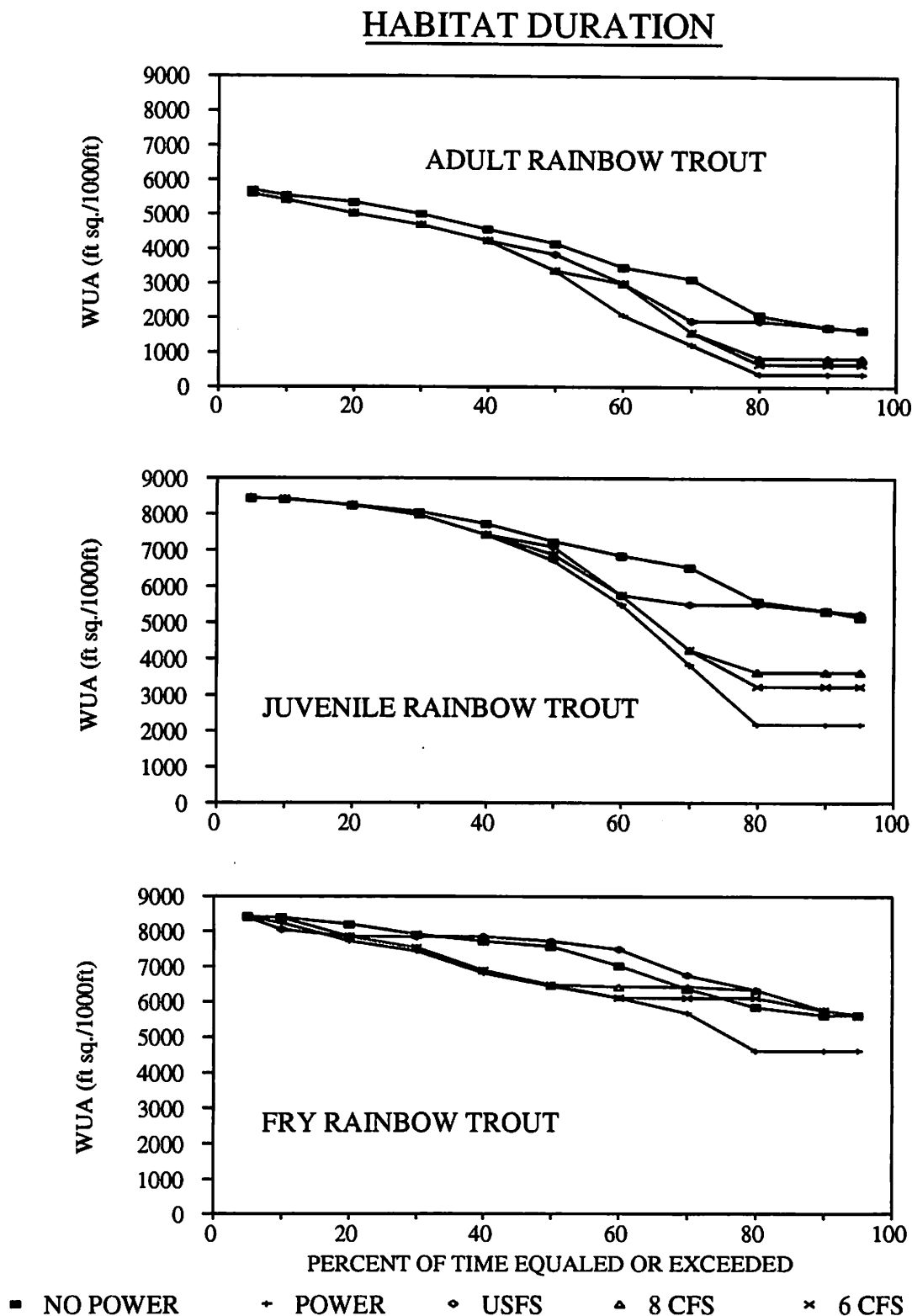


Figure 14. Percent of maximum habitat by exceedence level for brown trout adult, juvenile, and fry at average power conditions.

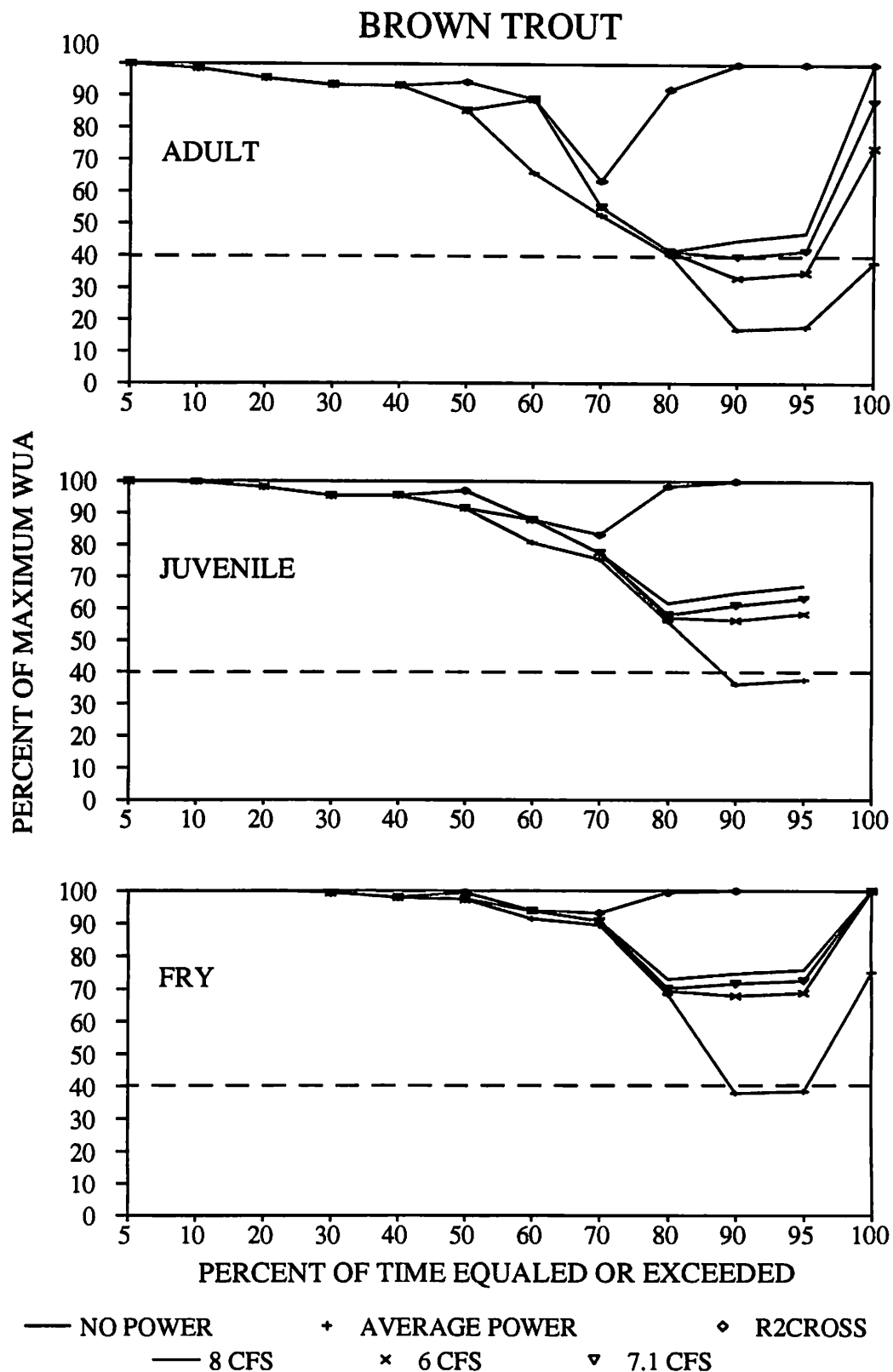
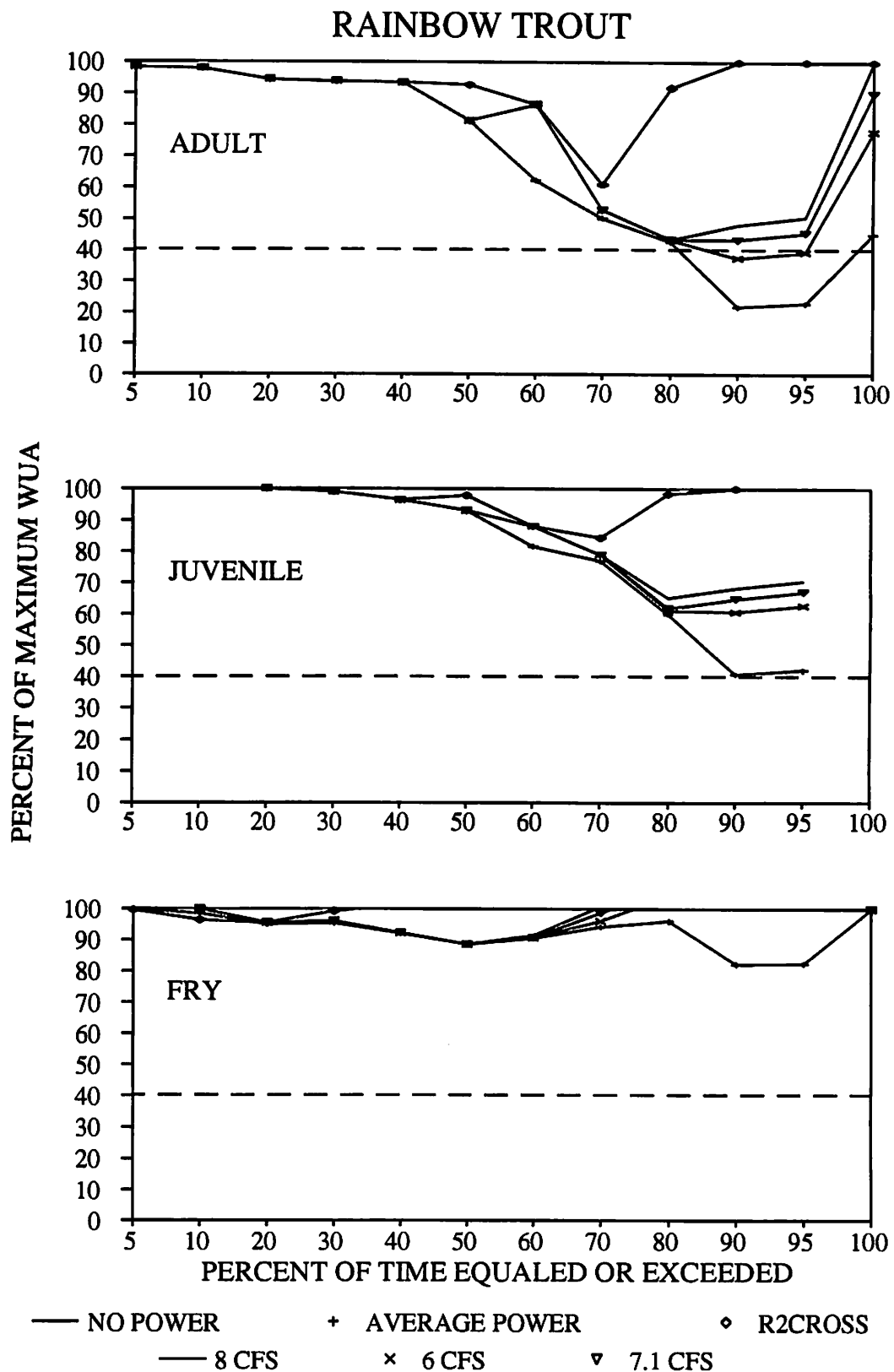


Figure 15. Percent of maximum habitat by exceedence level for rainbow trout adult, juvenile, and fry at average power conditions.



5.0 LITERATURE CITED

- Bovee, K.D. 1982. A guide to stream habitat analysis using the instream flow incremental methodology. Instream Flow Information Paper No. 12. U.S.D.I. Fish and Wildlife Service, Office of Biological Services. FWS/OBS-82/26.
- Bovee, K.D. 1989. Determination of Reach Lengths and Weighting Factors using "Habitat Mapping" data. PHABSIM Technical Note 48. Unpublished. U.S. Fish and Wildlife Service, Fort Collins, CO.
- Milhous, R.T. 1984. The use of one velocity calibration data set with IFG4. PHABSIM Technical note 4. U.S. Fish and Wildlife Service. Fort Collins, CO. November, 1984.
- Milhous, R.T. 1985. Worth of Data. Seminar on Hydraulics in PHABSIM. presented at Fort Collins, CO, April 11 and 12, 1985.
- Milhous, R.T., M.A. Updike, and D.M. Schneider. 1989. Physical Habitat Simulation System Reference Manual - Version II. Instream Flow Information Paper No. 26. U.S. Fish and Wildlife Service Biological Report 89(16).
- Platts, W.S., W.F. Megahan, G.W. Minshall. 1983. Methods for evaluating stream, riparian, and biotic conditions. USDA Forest Service, Intermountain Forest and Range Experiment Station. Ogden, UT. General Technical Publication INT-138.
- Platts, W.S. and R.L. Nelson. 1988. Fluctuations in trout populations and their implications for land-use evaluations. North American Journal of Fisheries Management. 8(3):333-345.
- Raleigh, R.F., T. Hickman, R.C. Solomon, and P.C. Nelson. 1984a. Habitat suitability information: Rainbow trout. U.S. Fish and Wildlife Service FWS/OBS-82/10.60. 64 p.
- Raleigh, R.F., L.D. Zuckerman, and P.C. Nelson. 1984b. Habitat suitability index models and instream flow suitability curves: Brown trout. U.S. Fish and Wildlife Service. FWS/OBS-82/10.71. 71 pp.
- Thurston, R.V., R.C. Russo, C.M. Fetterolf, Jr., T.A. Edsall, and Y.M. Barber, Jr. (Eds.). 1979. A review of the EPA RedBook: Quality criteria for water. Water Quality Section, American Fisheries Society, Bethesda, Maryland. 313 pp.
- Trihey, E.W. and D.L. Wegner. 1981. Field data collection procedures for use with the Physical Habitat Simulation System of the Instream Flow Group. Cooperative Instream Flow Service Group, Fort Collins, CO.

Waddle, T. J. 1992. A method for instream flow water management. Doctoral Dissertation,
Department of Civil Engineering, Colorado State University.

APPENDIX A - HYDRAULIC INPUT DECKS

Big Thompson River Total habitat, Adult
Data collected 1992

IOC 10001001000010000 00 0

QARD 400.0
QARD 300.0
QARD 200.0
QARD 165.0
QARD 150.0
QARD 125.0
QARD 100.0
QARD 77.0
QARD 60.0
QARD 50.0
QARD 40.0
QARD 30.0
QARD 15.0
QARD 6.0
QARD 3.0

XSEC 1.0 0.01.00 77.65 .00250
1.0 0.083.07 4.079.47 7.078.95 9.078.35 11.077.95 13.077.95
1.0 15.077.95 17.078.05 19.078.05 21.077.65 23.077.85 25.077.65
1.0 27.077.65 29.078.05 31.077.95 33.078.05 35.077.95 37.078.05
1.0 39.078.65 41.078.65 43.078.75 45.078.45 49.079.35 50.080.76
1.0 53.080.17

NS 1.0 1.00 1.00 3.00 3.00 3.00 3.00
NS 1.0 3.00 3.00 4.00 1.00 1.00 1.00
NS 1.0 1.00 1.00 3.00 3.00 1.00 1.00
NS 1.0 1.00 1.00 1.00 3.00 1.00 1.00
NS 1.0 1.00

WSL 1.0 80.59 80.23 79.83 79.67 79.59 79.46
WSL 1.0 79.31 79.15 79.01 78.93 78.83 78.71
WSL 1.0 78.44 78.24 78.13

CAL1 1.0 79.15 77.00
VEL1 1.0 0.00 .19 .64 1.27 3.03 3.13 .40 2.44 2.67 1.16
VEL1 1.0 3.26 3.14 2.52 .61 1.67 2.66 .65 1.74 2.56 1.37 0.00
VEL1 1.0

XSEC 2.0 15.51.00 77.57 .00250
2.0 0.082.73 5.081.13 7.079.22 9.078.77 11.078.17 13.078.57
2.0 15.078.57 17.077.57 19.077.87 21.077.87 23.077.77 25.078.17
2.0 27.078.17 29.078.07 31.078.17 33.078.37 35.078.27 37.077.97
2.0 39.077.87 41.077.67 43.078.37 45.078.57 47.079.17 49.079.51
2.0 51.079.93 53.580.03

NS 2.0 1.00 1.00 1.00 1.00 1.00 3.00
NS 2.0 1.00 1.00 1.00 1.00 1.00 1.00
NS 2.0 1.00 1.00 3.00 3.00 1.00 1.00
NS 2.0 1.00 1.00 1.00 3.00 1.00 1.00
NS 2.0 1.00 1.00

WSL 2.0 80.93 80.57 80.16 79.97 79.87 79.72
WSL 2.0 79.55 79.37 79.22 79.12 79.01 78.88
WSL 2.0 78.64 78.40 78.26

CAL1 2.0 79.37 77.00
VEL1 2.0 0.00 .71 1.37 .27 1.91 3.09 2.46 2.23 3.42 1.96
VEL1 2.0 2.16 1.74 1.50 .06 .40 .20 .66 .50 .30 0.00 0.00 0.00
VEL1 2.0

XSEC 3.0 30.31.00 78.25 .00250
3.0 0.0 87.0 14.080.09 16.079.65 18.079.35 20.078.95 22.078.85
3.0 24.078.95 26.079.15 28.079.15 30.078.25 32.078.55 34.078.95
3.0 36.078.85 38.078.25 40.078.35 42.079.05 44.079.05 46.079.05
3.0 48.079.55 50.079.95 51.0 80.2 55.5 81.4

NS 3.0 1.00 3.00 1.00 3.00 1.00 1.00
NS 3.0 3.00 3.00 1.00 3.00 3.00 1.00
NS 3.0 1.00 1.00 3.00 1.00 1.00 1.00
NS 3.0 1.00 1.00 1.00 1.00

WSL 3.0 81.01 80.83 80.60 80.50 80.45 80.36
WSL 3.0 80.26 80.15 80.05 79.98 79.91 79.81
WSL 3.0 79.61 79.40 79.28

CAL1 3.0 80.15 77.00
VEL1 3.0 0.00 .40 .50 .90 1.60 .81 2.36 3.79 2.46 .82 3.66
VEL1 3.0 1.37 3.36 .92 1.05 2.72 .08 .34 0.00 0.00

XSEC 4.0 85.51.00 80.90 .00250
4.0 0.089.65 18.082.05 20.0 81.4 22.0 81.5 24.0 81.2 26.0 81.1
4.0 28.0 80.9 30.0 81.2 32.0 81.3 34.0 81.2 36.0 81.2 38.0 81.0
4.0 40.0 81.6 42.0 81.8 44.0 81.7 46.0 81.2 48.0 81.4 50.0 81.1
4.0 52.0 81.1 54.0 81.4 56.0 81.7 58.082.34 60.583.25

NS 4.0 1.00 1.00 3.00 3.00 3.00 1.00
NS 4.0 1.00 1.00 3.00 1.00 1.00 3.00
NS 4.0 3.00 1.00 1.00 1.00 1.00 3.00
NS 4.0 1.00 1.00 1.00 1.00 1.00

WSL 4.0 83.54 83.22 82.83 82.68 82.61 82.48
WSL 4.0 82.34 82.20 82.08 82.01 81.92 81.83
WSL 4.0 81.63 81.45 81.35

CAL1	4.0	82.20	77.00								
VEL1	4.0	0.00	3.30	4.45	.13	3.63	3.97	.52	1.44	3.65	4.23
VEL1	4.0	.50	1.47	.32	1.30	1.60	.99	2.62	.15	.46	
XSEC	5.0	39.61.00	83.77				.00250				
	5.0	0.090.96	12.084.78	14.084.87	16.083.77	18.083.77	20.084.27				
	5.0	22.084.27	24.084.47	26.084.27	28.084.27	30.084.37	32.084.27				
	5.0	34.084.07	36.083.97	38.083.97	40.084.27	42.084.77	44.084.27				
	5.0	46.084.07	48.084.27	50.083.97	52.083.77	54.084.07	56.084.57				
	5.0	58.084.27	59.085.07	64.085.07	66.084.67	68.085.35					
NS	5.0	1.00	1.00	3.00	3.00	1.00	1.00				
NS	5.0	1.00	1.00	1.00	1.00	1.00	1.00				
NS	5.0	1.00	1.00	1.00	1.00	1.00	1.00				
NS	5.0	1.00	1.00	1.00	1.00	1.00	3.00				
NS	5.0	1.00	1.00	1.00	1.00	1.00	1.00				
WSL	5.0	86.36	86.04	85.68	85.54	85.47	85.36				
WSL	5.0	85.23	85.07	84.95	84.88	84.78	84.68				
WSL	5.0	84.50	84.32	84.19							
CAL1	5.0	85.07	77.00								
VEL1	5.0	0.00	.23	.56	2.76	1.92	1.00	3.66	2.32	1.86	1.26
VEL1	5.0	2.44	1.12	.62	1.16	2.24	2.71	1.36	2.40	2.11	3.40
VEL1	5.0	.29	0.00	0.00	.13	0.00				.33	.86
XSEC	6.0	40.41.00	84.19				.00250				
	6.0	0.090.26	10.085.55	12.085.19	16.084.99	18.084.79	20.085.09				
	6.0	22.084.79	24.084.79	26.084.79	28.084.59	30.084.59	32.084.59				
	6.0	34.084.29	36.084.59	38.085.09	40.084.79	42.084.19	44.084.29				
	6.0	46.084.19	48.084.19	50.084.79	52.084.69	54.084.89	56.084.99				
	6.0	58.084.99	60.084.99	62.085.19	64.085.63	65.088.38	69.088.86				
NS	6.0	1.00	1.00	1.00	1.00	1.00	1.00				
NS	6.0	1.00	1.00	1.00	1.00	1.00	1.00				
NS	6.0	3.00	1.00	3.00	1.00	1.00	1.00				
NS	6.0	1.00	1.00	1.00	3.00	3.00	1.00				
NS	6.0	1.00	1.00	1.00	1.00	1.00	1.00				
WSL	6.0	86.78	86.49	86.15	86.01	85.95	85.84				
WSL	6.0	85.72	85.59	85.48	85.41	85.33	85.24				
WSL	6.0	85.06	84.84	84.68							
CAL1	6.0	85.59	77.00								
VEL1	6.0	0.00	1.15	.13	1.45	.25	1.83	2.14	1.58	.34	2.28
VEL1	6.0	2.75	1.91	3.74	2.13	3.32	3.76	2.94	1.97	2.31	.83
VEL1	6.0	1.77	1.12	.27	0.00					.09	.42
XSEC	7.0	0.01.00	92.68				.00250				
	7.0	0.096.55	5.095.72	7.095.38	9.094.78	11.094.78	13.092.88				
	7.0	15.092.68	17.092.68	19.093.28	21.092.88	23.093.48	25.093.88				
	7.0	27.095.08	29.094.38	31.094.68	33.094.88	35.095.64	42.698.43				
NS	7.0	1.00	1.00	1.00	1.00	3.00	3.00				
NS	7.0	3.00	3.00	3.00	3.00	3.00	3.00				
NS	7.0	1.00	1.00	3.00	4.00	1.00	1.00				
WSL	7.0	96.91	96.68	96.37	96.22	96.14	96.01				
WSL	7.0	95.85	95.68	95.52	95.42	95.30	95.15				
WSL	7.0	94.74	94.24	93.99							
CAL1	7.0	95.68	77.00								
VEL1	7.0	0.00	0.00	.03	.44	1.22	1.16	1.58	3.00	2.40	1.82
VEL1	7.0	.56	1.12	.10	.71	0.00					.14
XSEC	8.0	223.51.00	92.66				.00250				
	8.0	0.096.95	8.095.97	10.094.96	12.094.86	14.094.06	16.094.06				
	8.0	18.092.66	20.093.06	24.093.56	26.094.76	28.094.76	30.095.75				
	8.0	47.799.45									
NS	8.0	1.00	1.00	1.00	1.00	3.00	3.00				
NS	8.0	3.00	3.00	1.00	1.00	1.00	1.00				
NS	8.0	1.00									
WSL	8.0	97.53	97.23	96.85	96.64	96.54	96.35				
WSL	8.0	96.12	95.86	95.66	95.54	95.39	95.22				
WSL	8.0	94.78	94.34	94.04							
CAL1	8.0	95.86	77.00								
VEL1	8.0	0.00	.11	.83	.22	2.57	1.32	.15	4.12	1.44	1.78
VEL1	8.0										0.00
XSEC	9.0	56.41.00	93.49				.00250				
	9.0	0.097.65	5.095.86	7.095.39	9.095.29	11.094.89	13.093.49				
	9.0	15.093.79	18.093.49	20.094.09	22.094.09	24.094.29	26.094.79				
	9.0	28.094.29	30.095.91	41.0100.1							
NS	9.0	1.00	1.00	1.00	3.00	3.00	3.00				
NS	9.0	3.00	1.00	1.00	1.00	1.00	1.00				
NS	9.0	3.00	1.00	1.00							
WSL	9.0	97.29	96.99	96.61	96.45	96.37	96.23				
WSL	9.0	96.07	95.89	95.74	95.63	95.51	95.36				
WSL	9.0	95.02	94.70	94.50							
CAL1	9.0	95.89	77.00								
VEL1	9.0	0.00	.39	.27	2.49	.66	6.66	.40	1.57	1.39	.46
VEL1	9.0	.10	0.00								1.41
XSEC	10.0	0.01.00	92.95				.00250				
	10.0	0.095.42	8.094.64	10.094.25	13.093.75	16.093.75	19.093.75				
	10.0	22.093.45	25.093.95	28.093.45	31.093.45	34.093.45	37.093.45				

	10.0	40.092.95	43.093.65	46.093.75	49.093.95	52.093.95	55.093.85
	10.0	58.093.55	61.094.05	64.094.25	67.094.25	72.096.42	
NS	10.0	1.00	1.00	1.00	1.00	1.00	1.00
NS	10.0	1.00	1.00	1.00	1.00	1.00	1.00
NS	10.0	1.00	1.00	1.00	1.00	1.00	1.00
NS	10.0	1.00	1.00	1.00	1.00	1.00	1.00
WSL	10.0	95.62	95.35	95.01	94.87	94.81	94.69
WSL	10.0	94.57	94.45	94.35	94.28	94.20	94.11
WSL	10.0	93.94	93.74	93.62			
CAL1	10.0	94.45	77.00				
VEL1	10.0	0.00	.71 .04	1.09 1.68	1.82 1.97	2.93 3.25	2.79 2.35
VEL1	10.0	4.02 1.96	4.10 .33	3.47 2.36	1.65 1.77	.62 0.00	
XSEC	11.0	14.41.00	93.06	.00250			
	11.0	0.096.52	4.094.95	7.094.56	10.094.46	13.093.96	16.093.96
	11.0	19.093.86	22.094.16	25.093.86	28.093.76	31.093.46	34.093.06
	11.0	37.093.56	40.093.96	43.094.06	46.094.56	49.094.46	52.094.46
	11.0	55.094.36	58.094.66	60.094.97	66.796.82		
NS	11.0	1.00	1.00	1.00	1.00	3.00	3.00
NS	11.0	1.00	1.00	3.00	1.00	3.00	3.00
NS	11.0	1.00	1.00	1.00	1.00	1.00	1.00
NS	11.0	1.00	1.00	1.00	1.00		
WSL	11.0	96.12	95.85	95.52	95.38	95.32	95.21
WSL	11.0	95.09	94.96	94.85	94.77	94.69	94.59
WSL	11.0	94.31	94.10	93.94			
CAL1	11.0	94.96	77.00				
VEL1	11.0	0.00	.54 .75	2.21 1.01	.39 3.61	.70 3.54	.24 1.65
VEL1	11.0	1.17 1.96	2.61 2.58	.12 2.62	1.85 .10	0.00	
XSEC	12.0	16.01.00	93.99	.00250			
	12.0	0.096.52	6.0 96.0	8.095.79	11.095.69	14.095.19	17.094.99
	12.0	20.094.99	23.094.49	26.093.99	29.093.99	32.094.69	35.094.89
	12.0	38.095.19	41.094.89	44.095.29	47.095.69	50.095.79	53.095.79
	12.0	56.095.98	62.097.72				
NS	12.0	1.00	1.00	1.00	1.00	1.00	1.00
NS	12.0	1.00	3.00	3.00	3.00	1.00	1.00
NS	12.0	1.00	1.00	1.00	1.00	1.00	1.00
NS	12.0	1.00	1.00				
WSL	12.0	96.65	96.52	96.34	96.27	96.23	96.16
WSL	12.0	96.08	95.99	95.91	95.85	95.73	95.62
WSL	12.0	95.44	95.24	95.11			
CAL1	12.0	95.99	77.00				
VEL1	12.0	0.00	0.00 .44	1.91 .96	2.79 1.25	.64 2.98	2.12 3.32
VEL1	12.0	.63 1.63	.86 1.08	.48 .04	0.00		
XSEC	13.0	15.41.00	94.51	.00250			
	13.0	0.097.42	9.096.36	12.096.01	15.095.51	18.095.61	21.095.31
	13.0	24.095.31	27.095.11	30.095.31	33.094.81	36.094.51	39.094.51
	13.0	42.095.11	45.095.81	48.095.81	51.096.25	62.098.02	
NS	13.0	1.00	1.00	1.00	1.00	1.00	1.00
NS	13.0	3.00	1.00	3.00	3.00	3.00	3.00
NS	13.0	1.00	1.00	1.00	1.00	1.00	
WSL	13.0	96.98	96.84	96.67	96.59	96.55	96.48
WSL	13.0	96.40	96.31	96.23	96.17	96.11	96.03
WSL	13.0	95.87	95.66	95.53			
CAL1	13.0	96.31	77.00				
VEL1	13.0	0.00	.81 3.39	3.43 1.63	.08 .82	1.26 1.04	1.29 1.20
VEL1	13.0	.20 2.46	2.42 0.00				
XSEC	14.0	7.41.00	96.20	.00250			
	14.0	0.098.38	4.097.76	7.0 96.7	10.0 96.5	13.0 96.7	16.0 96.5
	14.0	19.0 96.7	22.0 96.7	25.0 96.3	28.0 96.2	31.0 97.1	34.0 96.7
	14.0	37.0 96.7	40.0 97.1	43.0 97.1	46.0 97.3	49.097.43	59.099.68
NS	14.0	1.00	1.00	1.00	1.00	1.00	3.00
NS	14.0	1.00	1.00	3.00	1.00	3.00	1.00
NS	14.0	1.00	1.00	1.00	1.00	1.00	1.00
WSL	14.0	98.44	98.26	98.02	97.92	97.88	97.79
WSL	14.0	97.70	97.60	97.52	97.46	97.39	97.30
WSL	14.0	97.14	96.95	96.85			
CAL1	14.0	97.60	77.00				
VEL1	14.0	0.00	1.44 3.39	3.63 1.12	2.18 2.74	.63 2.37	.23 3.07
VEL1	14.0	1.39 2.66	.66 0.00	0.00			
XSEC	15.0	0.01.00	88.39	.00250			
	15.0	0.090.62	2.090.13	4.089.39	6.088.79	8.088.49	10.088.59
	15.0	12.088.39	14.088.49	16.088.69	18.088.49	21.088.79	23.089.29
	15.0	25.089.59	27.090.45	31.691.92			
NS	15.0	1.00	1.00	1.00	1.00	1.00	1.00
NS	15.0	1.00	1.00	1.00	1.00	1.00	1.00
NS	15.0	1.00	1.00	1.00	1.00		
WSL	15.0	92.35	91.89	91.31	91.07	90.96	90.76
WSL	15.0	90.54	90.29	90.08	89.95	89.80	89.64
WSL	15.0	89.30	89.01	88.86			
CAL1	15.0	90.29	77.00				
VEL1	15.0	0.00	.22 .38	.46 .05	.11 .40	6.50 6.27	3.77 1.17
VEL1	15.0	.13 0.00					

[illegible]

Big Thompson River Total habitat, Juvenile
Data collected 1992

IOC 100010010000010000 00 0

QARD 400.0
QARD 300.0
QARD 200.0
QARD 165.0
QARD 150.0
QARD 125.0
QARD 100.0
QARD 77.0
QARD 60.0
QARD 50.0
QARD 40.0
QARD 30.0
QARD 15.0
QARD 6.0
QARD 3.0

XSEC 1.0 0.01.00 77.65 .00250
1.0 0.083.07 4.079.47 7.078.95 9.078.35 11.077.95 13.077.95
1.0 15.077.95 17.078.05 19.078.05 21.077.65 23.077.85 25.077.65
1.0 27.077.65 29.078.05 31.077.95 33.078.05 35.077.95 37.078.05
1.0 39.078.65 41.078.65 43.078.75 45.078.45 49.079.35 50.080.76
1.0 53.080.17

NS 1.0 1.00 1.00 4.00 4.00 3.00 3.00
NS 1.0 3.00 3.00 4.00 3.00 3.00
NS 1.0 1.00 1.00 3.00 4.00 3.00 1.00
NS 1.0 3.00 3.00 3.00 3.00 1.00 1.00
NS 1.0 1.00

WSL 1.0 80.77 80.36 79.89 79.71 79.63 79.49
WSL 1.0 79.33 79.15 79.01 78.91 78.81 78.68
WSL 1.0 78.41 78.20 78.10
CAL1 1.0 79.15 77.00

VEL1 1.0 0.00 .19 .64 1.27 3.03 3.13 .40 2.44 2.67 1.16
VEL1 1.0 3.26 3.14 2.52 .61 1.67 2.66 .65 1.74 2.56 1.37 0.00
VEL1 1.0

XSEC 2.0 15.51.00 77.57 .00250
2.0 0.082.73 5.081.13 7.079.22 9.078.77 11.078.17 13.078.57
2.0 15.078.57 17.077.57 19.077.87 21.077.87 23.077.77 25.078.17
2.0 27.078.17 29.078.07 31.078.17 33.078.37 35.078.27 37.077.97
2.0 39.077.87 41.077.67 43.078.37 45.078.57 47.079.17 49.079.51
2.0 51.079.93 53.580.03

NS 2.0 1.00 1.00 4.00 1.00 1.00 3.00
NS 2.0 3.00 3.00 3.00 1.00 1.00 3.00
NS 2.0 1.00 3.00 3.00 3.00 1.00 1.00
NS 2.0 1.00 3.00 3.00 3.00 1.00 1.00
NS 2.0 1.00 1.00

WSL 2.0 80.93 80.57 80.16 79.97 79.87 79.72
WSL 2.0 79.55 79.37 79.22 79.12 79.01 78.88
WSL 2.0 78.64 78.40 78.26
CAL1 2.0 79.37 77.00

VEL1 2.0 0.00 .71 1.37 .27 1.91 3.09 2.46 2.23 3.42 1.96
VEL1 2.0 2.16 1.74 1.50 .06 .40 .20 .66 .50 .30 0.00 0.00 0.00
VEL1 2.0

XSEC 3.0 30.31.00 78.25 .00250
3.0 0.0 87.0 14.080.09 16.079.65 18.079.35 20.078.95 22.078.85
3.0 24.078.95 26.079.15 28.079.15 30.078.25 32.078.55 34.078.95
3.0 36.078.85 38.078.25 40.078.35 42.079.05 44.079.05 46.079.05
3.0 48.079.55 50.079.95 51.0 80.2 55.5 81.4

NS 3.0 1.00 3.00 3.00 3.00 3.00 1.00
NS 3.0 3.00 3.00 3.00 3.00 3.00 1.00
NS 3.0 1.00 1.00 3.00 3.00 1.00 1.00
NS 3.0 1.00 1.00 1.00 1.00 1.00

WSL 3.0 81.01 80.83 80.60 80.50 80.45 80.36
WSL 3.0 80.26 80.15 80.05 79.98 79.91 79.81
WSL 3.0 79.61 79.40 79.28
CAL1 3.0 80.15 77.00

VEL1 3.0 0.00 .40 .50 .90 1.60 .81 2.36 3.79 2.46 .82 3.66
VEL1 3.0 1.37 3.36 .92 1.05 2.72 .08 .34 0.00 0.00
XSEC 4.0 85.51.00 80.90 .00250

4.0 0.089.65 18.082.05 20.0 81.4 22.0 81.5 24.0 81.2 26.0 81.1
4.0 28.0 80.9 30.0 81.2 32.0 81.3 34.0 81.2 36.0 81.2 38.0 81.0
4.0 40.0 81.6 42.0 81.8 44.0 81.7 46.0 81.2 48.0 81.4 50.0 81.1
4.0 52.0 81.1 54.0 81.4 56.0 81.7 58.082.34 60.583.25

NS 4.0 1.00 1.00 3.00 3.00 3.00 1.00
NS 4.0 1.00 3.00 3.00 1.00 1.00 3.00
NS 4.0 3.00 3.00 3.00 1.00 1.00 3.00
NS 4.0 1.00 3.00 1.00 1.00 1.00

WSL 4.0 83.54 83.22 82.83 82.68 82.61 82.48
WSL 4.0 82.34 82.20 82.08 82.01 81.92 81.83
WSL 4.0 81.63 81.45 81.35

CAL1	4.0	82.20	77.00								
VEL1	4.0	0.00	3.30	4.45	.13	3.63	3.97	.52	1.44	3.65	4.23
VEL1	4.0	.50	1.47	.32	1.30	1.60	.99	2.62	.15	.46	
XSEC	5.0	39.61	0.00	83.77		.00250					
	5.0	0.090.96	12.084.78	14.084.87	16.083.77	18.083.77	20.084.27				
	5.0	22.084.27	24.084.47	26.084.27	28.084.27	30.084.37	32.084.27				
	5.0	34.084.07	36.083.97	38.083.97	40.084.27	42.084.77	44.084.27				
	5.0	46.084.07	48.084.27	50.083.97	52.083.77	54.084.07	56.084.57				
	5.0	58.084.27	59.085.07	64.085.07	66.084.67	68.085.35					
NS	5.0	1.00	1.00	3.00	3.00	1.00	1.00				
NS	5.0	3.00	1.00	1.00	1.00	3.00	3.00				
NS	5.0	1.00	1.00	1.00	1.00	1.00	1.00				
NS	5.0	1.00	3.00	1.00	1.00	3.00	3.00				
NS	5.0	3.00	1.00	1.00	3.00	1.00	1.00				
WSL	5.0	86.36	86.04	85.68	85.54	85.47	85.36				
WSL	5.0	85.23	85.07	84.95	84.88	84.78	84.68				
WSL	5.0	84.50	84.32	84.19							
CAL1	5.0	85.07	77.00								
VEL1	5.0	0.00	.23	.56	2.76	1.92	1.00	3.66	2.32	1.86	1.26
VEL1	5.0	2.44	1.12	.62	1.16	2.24	2.71	1.36	2.40	2.11	3.40
VEL1	5.0	.29	0.00	0.00	.13	0.00				.33	.86
XSEC	6.0	40.41	0.00	84.19		.00250					
	6.0	0.090.26	10.085.55	12.085.19	16.084.99	18.084.79	20.085.09				
	6.0	22.084.79	24.084.79	26.084.79	28.084.59	30.084.59	32.084.59				
	6.0	34.084.29	36.084.59	38.085.09	40.084.79	42.084.19	44.084.29				
	6.0	46.084.19	48.084.19	50.084.79	52.084.69	54.084.89	56.084.99				
	6.0	58.084.99	60.084.99	62.085.19	64.085.63	65.088.38	69.088.86				
NS	6.0	1.00	1.00	1.00	3.00	1.00	3.00				
NS	6.0	3.00	1.00	1.00	3.00	3.00	3.00				
NS	6.0	3.00	3.00	3.00	3.00	1.00	1.00				
NS	6.0	1.00	3.00	1.00	3.00	3.00	1.00				
NS	6.0	3.00	1.00	3.00	1.00	1.00	1.00				
WSL	6.0	86.78	86.49	86.15	86.01	85.95	85.84				
WSL	6.0	85.72	85.59	85.48	85.41	85.33	85.24				
WSL	6.0	85.06	84.84	84.68							
CAL1	6.0	85.59	77.00								
VEL1	6.0	0.00	1.15	.13	1.45	.25	1.83	2.14	1.58	.34	2.28
VEL1	6.0	2.75	1.91	3.74	2.13	3.32	3.76	2.94	1.97	2.31	.83
VEL1	6.0	1.77	1.12	.27	0.00					.09	.42
XSEC	7.0	0.01	0.00	92.68		.00250					
	7.0	0.096.55	5.095.72	7.095.38	9.094.78	11.094.78	13.092.88				
	7.0	15.092.68	17.092.68	19.093.28	21.092.88	23.093.48	25.093.88				
	7.0	27.095.08	29.094.38	31.094.68	33.094.88	35.095.64	42.698.43				
NS	7.0	1.00	1.00	3.00	3.00	3.00	3.00				
NS	7.0	3.00	3.00	3.00	3.00	3.00	3.00				
NS	7.0	3.00	3.00	3.00	4.00	1.00	1.00				
WSL	7.0	96.91	96.68	96.37	96.22	96.14	96.01				
WSL	7.0	95.85	95.68	95.52	95.42	95.30	95.15				
WSL	7.0	94.74	94.24	93.99							
CAL1	7.0	95.68	77.00								
VEL1	7.0	0.00	0.00	.03	.44	1.22	1.16	1.58	3.00	2.40	1.82
VEL1	7.0	.56	1.12	.10	.71	0.00					.14
XSEC	8.0	223.51	0.00	92.66		.00250					
	8.0	0.096.95	8.095.97	10.094.96	12.094.86	14.094.06	16.094.06				
	8.0	18.092.66	20.093.06	24.093.56	26.094.76	28.094.76	30.095.75				
	8.0	47.799.45									
NS	8.0	1.00	1.00	3.00	3.00	3.00	3.00				
NS	8.0	3.00	3.00	1.00	3.00	3.00	1.00				
NS	8.0	1.00									
WSL	8.0	97.53	97.23	96.85	96.64	96.54	96.35				
WSL	8.0	96.12	95.86	95.66	95.54	95.39	95.22				
WSL	8.0	94.78	94.34	94.04							
CAL1	8.0	95.86	77.00								
VEL1	8.0	0.00	.11	.83	.22	2.57	1.32	.15	4.12	1.44	1.78
VEL1	8.0										0.00
XSEC	9.0	56.41	0.00	93.49		.00250					
	9.0	0.097.65	5.095.86	7.095.39	9.095.29	11.094.89	13.093.49				
	9.0	15.093.79	18.093.49	20.094.09	22.094.09	24.094.29	26.094.79				
	9.0	28.094.29	30.095.91	41.0100.1							
NS	9.0	1.00	1.00	3.00	3.00	3.00	3.00				
NS	9.0	3.00	1.00	1.00	1.00	1.00	1.00				
NS	9.0	3.00	1.00	1.00							
WSL	9.0	97.29	96.99	96.61	96.45	96.37	96.23				
WSL	9.0	96.07	95.89	95.74	95.63	95.51	95.36				
WSL	9.0	95.02	94.70	94.50							
CAL1	9.0	95.89	77.00								
VEL1	9.0	0.00	.39	.27	2.49	.66	6.66	.40	1.57	1.39	.46
VEL1	9.0	.10	0.00								1.41
XSEC	10.0	0.01	0.00	92.95		.00250					
	10.0	0.095.42	8.094.64	10.094.25	13.093.75	16.093.75	19.093.75				
	10.0	22.093.45	25.093.95	28.093.45	31.093.45	34.093.45	37.093.45				

	10.0	40.092.95	43.093.65	46.093.75	49.093.95	52.093.95	55.093.85
	10.0	58.093.55	61.094.05	64.094.25	67.094.25	72.096.42	
NS	10.0	1.00	1.00	1.00	1.00	3.00	1.00
NS	10.0	1.00	3.00	1.00	1.00	1.00	3.00
NS	10.0	1.00	3.00	1.00	1.00	1.00	1.00
NS	10.0	3.00	1.00	1.00	1.00	1.00	
WSL	10.0	95.62	95.35	95.01	94.87	94.81	94.69
WSL	10.0	94.57	94.45	94.35	94.28	94.20	94.11
WSL	10.0	93.94	93.74	93.62			
CAL1	10.0	94.45	77.00				
VEL1	10.0	0.00	.71 .04	1.09 1.68	1.82 1.97	2.93 3.25	2.79 2.35
VEL1	10.0	4.02 1.96	4.10 .33	3.47 2.36	1.65 1.77	.62 0.00	
XSEC	11.0	14.41.00	93.06	.00250			
	11.0	0.096.52	4.094.95	7.094.56	10.094.46	13.093.96	16.093.96
	11.0	19.093.86	22.094.16	25.093.86	28.093.76	31.093.46	34.093.06
	11.0	37.093.56	40.093.96	43.094.06	46.094.56	49.094.46	52.094.46
	11.0	55.094.36	58.094.66	60.094.97	66.796.82		
NS	11.0	1.00	1.00	1.00	1.00	3.00	3.00
NS	11.0	1.00	1.00	3.00	1.00	3.00	3.00
NS	11.0	1.00	1.00	1.00	1.00	1.00	1.00
NS	11.0	1.00	1.00	1.00	1.00		
WSL	11.0	96.12	95.85	95.52	95.38	95.32	95.21
WSL	11.0	95.09	94.96	94.85	94.77	94.69	94.59
WSL	11.0	94.31	94.10	93.94			
CAL1	11.0	94.96	77.00				
VEL1	11.0	0.00	.54 .75	2.21 1.01	.39 3.61	.70 3.54	.24 1.65
VEL1	11.0	1.17 1.96	2.61 2.58	.12 2.62	1.85 .10	0.00	
XSEC	12.0	16.01.00	93.99	.00250			
	12.0	0.096.52	6.0 96.0	8.095.79	11.095.69	14.095.19	17.094.99
	12.0	20.094.99	23.094.49	26.093.99	29.093.99	32.094.69	35.094.89
	12.0	38.095.19	41.094.89	44.095.29	47.095.69	50.095.79	53.095.79
	12.0	56.095.98	62.097.72				
NS	12.0	1.00	1.00	1.00	1.00	1.00	3.00
NS	12.0	1.00	3.00	3.00	3.00	3.00	3.00
NS	12.0	1.00	3.00	3.00	1.00	1.00	1.00
NS	12.0	1.00	1.00				
WSL	12.0	96.65	96.52	96.34	96.27	96.23	96.16
WSL	12.0	96.08	95.99	95.91	95.85	95.73	95.62
WSL	12.0	95.44	95.24	95.11			
CAL1	12.0	95.99	77.00				
VEL1	12.0	0.00	0.00 .44	1.91 .96	2.79 1.25	.64 2.98	2.12 3.32
VEL1	12.0	.63 1.63	.86 1.08	.48 .04	0.00		
XSEC	13.0	15.41.00	94.51	.00250			
	13.0	0.097.42	9.096.36	12.096.01	15.095.51	18.095.61	21.095.31
	13.0	24.095.31	27.095.11	30.095.31	33.094.81	36.094.51	39.094.51
	13.0	42.095.11	45.095.81	48.095.81	51.096.25	62.098.02	
NS	13.0	1.00	1.00	1.00	1.00	1.00	3.00
NS	13.0	3.00	1.00	3.00	3.00	3.00	3.00
NS	13.0	3.00	1.00	1.00	1.00	1.00	
WSL	13.0	96.98	96.84	96.67	96.59	96.55	96.48
WSL	13.0	96.40	96.31	96.23	96.17	96.11	96.03
WSL	13.0	95.87	95.66	95.53			
CAL1	13.0	96.31	77.00				
VEL1	13.0	0.00	.81 3.39	3.43 1.63	.08 .82	1.26 1.04	1.29 1.20
VEL1	13.0	.20 2.46	2.42 0.00				
XSEC	14.0	7.41.00	96.20	.00250			
	14.0	0.098.38	4.097.76	7.0 96.7	10.0 96.5	13.0 96.7	16.0 96.5
	14.0	19.0 96.7	22.0 96.7	25.0 96.3	28.0 96.2	31.0 97.1	34.0 96.7
	14.0	37.0 96.7	40.0 97.1	43.0 97.1	46.0 97.3	49.097.43	59.099.68
NS	14.0	1.00	1.00	3.00	1.00	1.00	3.00
NS	14.0	1.00	1.00	3.00	1.00	3.00	3.00
NS	14.0	3.00	1.00	1.00	1.00	1.00	1.00
WSL	14.0	98.36	98.20	97.99	97.90	97.85	97.78
WSL	14.0	97.69	97.60	97.52	97.47	97.40	97.32
WSL	14.0	97.17	96.98	96.88			
CAL1	14.0	97.60	77.00				
VEL1	14.0	0.00	1.44 3.39	3.63 1.12	2.18 2.74	.63 2.37	.23 3.07
VEL1	14.0	1.39 2.66	.66 0.00	0.00			
XSEC	15.0	0.01.00	88.39	.00250			
	15.0	0.090.62	2.090.13	4.089.39	6.088.79	8.088.49	10.088.59
	15.0	12.088.39	14.088.49	16.088.69	18.088.49	21.088.79	23.089.29
	15.0	25.089.59	27.090.45	31.691.92			
NS	15.0	1.00	1.00	3.00	3.00	1.00	1.00
NS	15.0	1.00	3.00	1.00	1.00	1.00	1.00
NS	15.0	1.00	1.00	1.00			
WSL	15.0	92.35	91.89	91.31	91.07	90.96	90.76
WSL	15.0	90.54	90.29	90.08	89.95	89.80	89.64
WSL	15.0	89.30	89.01	88.86			
CAL1	15.0	90.29	77.00				
VEL1	15.0	0.00	.22 .38	.46 .05	.11 .40	6.50 6.27	3.77 1.17
VEL1	15.0	.13 0.00					

XSEC	16.0		115.21.00		89.05		.00250												
	16.0	0.092.72	5.091.35		7.090.85		9.090.55		11.090.75		13.090.05								
	16.0	15.090.25	17.089.55		19.090.05		21.090.35		23.089.05		25.090.15								
	16.0	27.090.35	29.090.35		31.091.65		33.091.34		37.093.32										
NS	16.0	1.00	1.00		1.00		1.00		1.00		1.00								
NS	16.0	1.00	1.00		1.00		1.00		1.00		1.00								
NS	16.0	1.00	1.00		1.00		1.00		1.00		1.00								
WSL	16.0	92.57	92.31		91.98		91.85		91.78		91.67								
WSL	16.0	91.52	91.35		91.22		91.14		91.04		90.93								
WSL	16.0	90.70	90.45		90.29														
CAL1	16.0	91.35	77.00																
VEL1	16.0	0.00	.75 1.09		2.68 1.74		3.67 1.80		4.66 .50		2.18 3.41								
VEL1	16.0	2.29 1.65	.12 0.00																
XSEC	17.0		62.71.00		91.53		.00250												
	17.0	0.093.02	2.092.73		4.092.53		6.092.33		8.092.03		10.092.03								
	17.0	12.091.83	14.091.93		16.092.03		18.091.83		20.092.03		22.092.03								
	17.0	24.091.83	26.091.73		28.091.53		30.092.03		32.091.93		34.091.93								
	17.0	36.092.23	38.092.23		40.092.53		42.092.72		44.394.02										
NS	17.0	1.00	1.00		1.00		1.00		1.00		3.00								3.00
NS	17.0	3.00	1.00		1.00		1.00		1.00		1.00								1.00
NS	17.0	1.00	1.00		1.00		1.00		1.00		1.00								1.00
NS	17.0	1.00	1.00		1.00		1.00		1.00		1.00								1.00
WSL	17.0	93.73	93.49		93.21		93.10		93.04		92.95								
WSL	17.0	92.84	92.73		92.63		92.56		92.49		92.41								
WSL	17.0	92.26	92.11		92.04														
CAL1	17.0	92.73	77.00																
VEL1	17.0	0.00	.43 1.11		.13 .34		1.21 1.18		4.71 .83		5.43 2.63								
VEL1	17.0	1.61 .37	6.45 1.29		2.00 2.44		4.40 .61		.63 0.00										
XSEC	18.0		136.01.00		91.53		.00250												
	18.0	0.093.02	2.092.73		4.092.53		6.092.33		8.092.03		10.092.03								
	18.0	12.091.83	14.091.93		16.092.03		18.091.83		20.092.03		22.092.03								
	18.0	24.091.83	26.091.73		28.091.53		30.092.03		32.091.93		34.091.93								

Big Thompson River Total habitat, Fry
Data collected 1992

IOC 10001001000010000 00 0

QARD 400.0
QARD 300.0
QARD 200.0
QARD 165.0
QARD 150.0
QARD 125.0
QARD 100.0
QARD 77.0
QARD 60.0
QARD 50.0
QARD 40.0
QARD 30.0
QARD 15.0
QARD 6.0
QARD 3.0

XSEC 1.0 0.01.00 77.65 .00250
1.0 0.083.07 4.079.47 7.078.95 9.078.35 11.077.95 13.077.95
1.0 15.077.95 17.078.05 19.078.05 21.077.65 23.077.85 25.077.65
1.0 27.077.65 29.078.05 31.077.95 33.078.05 35.077.95 37.078.05
1.0 39.078.65 41.078.65 43.078.75 45.078.45 49.079.35 50.080.76
1.0 53.080.17

NS 1.0 6.50 6.50 6.50 7.00 7.00 6.00
NS 1.0 6.00 6.00 6.50 6.00 6.50 6.50
NS 1.0 6.00 6.00 6.50 6.50 6.00 6.00
NS 1.0 7.00 7.00 7.00 7.00 6.50 7.00
NS 1.0 7.00

WSL 1.0 80.59 80.23 79.83 79.67 79.59 79.46
WSL 1.0 79.31 79.15 79.01 78.93 78.83 78.71
WSL 1.0 78.44 78.24 78.13

CAL1 1.0 79.15 77.00
VEL1 1.0 0.00 .19 .64 1.27 3.03 3.13 .40 2.44 2.67 1.16
VEL1 1.0 3.26 3.14 2.52 .61 1.67 2.66 .65 1.74 2.56 1.37 0.00
VEL1 1.0

XSEC 2.0 15.51.00 77.57 .00250
2.0 0.082.73 5.081.13 7.079.22 9.078.77 11.078.17 13.078.57
2.0 15.078.57 17.077.57 19.077.87 21.077.87 23.077.77 25.078.17
2.0 27.078.17 29.078.07 31.078.17 33.078.37 35.078.27 37.077.97
2.0 39.077.87 41.077.67 43.078.37 45.078.57 47.079.17 49.079.51
2.0 51.079.93 53.580.03

NS 2.0 7.00 7.00 7.00 4.00 6.00 7.00
NS 2.0 7.00 6.00 6.00 6.00 6.00 6.00
NS 2.0 6.00 6.00 6.50 4.00 4.00 4.00
NS 2.0 6.00 6.00 6.50 4.00 4.00 4.00
NS 2.0 4.00 4.00

WSL 2.0 80.93 80.57 80.16 79.97 79.87 79.72
WSL 2.0 79.55 79.37 79.22 79.12 79.01 78.88
WSL 2.0 78.64 78.40 78.26

CAL1 2.0 79.37 77.00
VEL1 2.0 0.00 .71 1.37 .27 1.91 3.09 2.46 2.23 3.42 1.96
VEL1 2.0 2.16 1.74 1.50 .06 .40 .20 .66 .50 .30 0.00 0.00 0.00
VEL1 2.0

XSEC 3.0 30.31.00 78.25 .00250
3.0 0.0 87.0 14.080.09 16.079.65 18.079.35 20.078.95 22.078.85
3.0 24.078.95 26.079.15 28.079.15 30.078.25 32.078.55 34.078.95
3.0 36.078.85 38.078.25 40.078.35 42.079.05 44.079.05 46.079.05
3.0 48.079.55 50.079.95 51.0 80.2 55.5 81.4

NS 3.0 6.50 6.50 7.00 6.50 6.50 6.00
NS 3.0 6.50 6.50 6.50 6.50 6.50 6.00
NS 3.0 6.00 6.50 7.00 6.50 6.00 4.00
NS 3.0 4.00 4.00 4.00 4.00 4.00

WSL 3.0 81.01 80.83 80.60 80.50 80.45 80.36
WSL 3.0 80.26 80.15 80.05 79.98 79.91 79.81
WSL 3.0 79.61 79.40 79.28

CAL1 3.0 80.15 77.00
VEL1 3.0 0.00 .40 .50 .90 1.60 .81 2.36 3.79 2.46 .82 3.66
VEL1 3.0 1.37 3.36 .92 1.05 2.72 .08 .34 0.00 0.00

XSEC 4.0 85.51.00 80.90 .00250
4.0 0.089.65 18.082.05 20.0 81.4 22.0 81.5 24.0 81.2 26.0 81.1
4.0 28.0 80.9 30.0 81.2 32.0 81.3 34.0 81.2 36.0 81.2 38.0 81.0
4.0 40.0 81.6 42.0 81.8 44.0 81.7 46.0 81.2 48.0 81.4 50.0 81.1
4.0 52.0 81.1 54.0 81.4 56.0 81.7 58.082.34 60.583.25

NS 4.0 6.50 6.50 6.50 6.50 6.50 6.00
NS 4.0 6.50 7.00 6.50 6.50 6.50 6.50
NS 4.0 6.50 6.50 6.00 6.50 6.00 6.00
NS 4.0 6.00 6.50 5.50 5.50 5.50

WSL 4.0 83.54 83.22 82.83 82.68 82.61 82.48
WSL 4.0 82.34 82.20 82.08 82.01 81.92 81.83
WSL 4.0 81.63 81.45 81.35

CAL1	4.0	82.20	77.00								
VEL1	4.0	0.00	3.30	4.45	.13	3.63	3.97	.52	1.44	3.65	4.23 4.30
VEL1	4.0	.50	1.47	.32	1.30	.99	2.62	.15	.46		
XSEC	5.0	39.61.00	83.77	.00250							
	5.0	0.090.96	12.084.78	14.084.87	16.083.77	18.083.77	20.084.27				
	5.0	22.084.27	24.084.47	26.084.27	28.084.27	30.084.37	32.084.27				
	5.0	34.084.07	36.083.97	38.083.97	40.084.27	42.084.77	44.084.27				
	5.0	46.084.07	48.084.27	50.083.97	52.083.77	54.084.07	56.084.57				
	5.0	58.084.27	59.085.07	64.085.07	66.084.67	68.085.35					
NS	5.0	7.00	7.00	7.00	6.50	6.00	6.00				
NS	5.0	6.00	6.00	6.00	6.50	6.00	6.50				
NS	5.0	6.00	6.00	6.00	7.00	7.00	7.00				
NS	5.0	6.50	7.00	6.00	6.50	7.00	7.00				
NS	5.0	7.00	7.00	7.00	7.00	7.00	7.00				
WSL	5.0	86.36	86.04	85.68	85.54	85.47	85.36				
WSL	5.0	85.23	85.07	84.95	84.88	84.78	84.68				
WSL	5.0	84.50	84.32	84.19							
CAL1	5.0	85.07	77.00								
VEL1	5.0	0.00	.23	.56	2.76	1.92	1.00	3.66	2.32	1.86	1.26 1.06
VEL1	5.0	2.44	1.12	.62	1.16	2.24	2.71	1.36	2.40	2.11	3.40 .33 .86
VEL1	5.0	.29	0.00	0.00	.13	0.00					
XSEC	6.0	40.41.00	84.19	.00250							
	6.0	0.090.26	10.085.55	12.085.19	16.084.99	18.084.79	20.085.09				
	6.0	22.084.79	24.084.79	26.084.79	28.084.59	30.084.59	32.084.59				
	6.0	34.084.29	36.084.59	38.085.09	40.084.79	42.084.19	44.084.29				
	6.0	46.084.19	48.084.19	50.084.79	52.084.69	54.084.89	56.084.99				
	6.0	58.084.99	60.084.99	62.085.19	64.085.63	65.088.38	69.088.86				
NS	6.0	6.00	6.00	6.00	5.50	6.00	5.50				
NS	6.0	6.00	6.00	6.00	6.50	6.00	6.50				
NS	6.0	6.50	6.50	7.00	7.00	6.50	6.00				
NS	6.0	6.00	6.50	7.00	7.00	6.50	6.00				
NS	6.0	6.00	6.50	6.00	6.00	6.00	6.00				
WSL	6.0	86.78	86.49	86.15	86.01	85.95	85.84				
WSL	6.0	85.72	85.59	85.48	85.41	85.33	85.24				
WSL	6.0	85.06	84.84	84.68							
CAL1	6.0	85.59	77.00								
VEL1	6.0	0.00	1.15	.13	1.45	.25	1.83	2.14	1.58	.34	2.28 .97
VEL1	6.0	2.75	1.91	3.74	2.13	3.32	3.76	2.94	1.97	2.31	.83 .09 .42
VEL1	6.0	1.77	1.12	.27	0.00						
XSEC	7.0	0.01.00	92.68	.00250							
	7.0	0.096.55	5.095.72	7.095.38	9.094.78	11.094.78	13.092.88				
	7.0	15.092.68	17.092.68	19.093.28	21.092.88	23.093.48	25.093.88				
	7.0	27.095.08	29.094.38	31.094.68	33.094.88	35.095.64	42.698.43				
NS	7.0	4.00	4.00	4.00	7.00	7.00	7.00				
NS	7.0	7.00	7.00	7.00	7.00	7.00	7.00				
NS	7.0	7.00	7.00	7.00	7.00	7.00	7.00				
WSL	7.0	96.91	96.68	96.37	96.22	96.14	96.01				
WSL	7.0	95.85	95.68	95.52	95.42	95.30	95.15				
WSL	7.0	94.74	94.24	93.99							
CAL1	7.0	95.68	77.00								
VEL1	7.0	0.00	0.00	.03	.44	1.22	1.16	1.58	3.00	2.40	1.82 .14
VEL1	7.0	.56	1.12	.10	.71	0.00					
XSEC	8.0	223.51.00	92.66	.00250							
	8.0	0.096.95	8.095.97	10.094.96	12.094.86	14.094.06	16.094.06				
	8.0	18.092.66	20.093.06	24.093.56	26.094.76	28.094.76	30.095.75				
	8.0	47.799.45									
NS	8.0	7.00	7.00	7.00	7.00	6.50	6.50				
NS	8.0	6.50	6.50	7.00	7.00	7.00	7.00				
NS	8.0	7.00									
WSL	8.0	97.53	97.23	96.85	96.64	96.54	96.35				
WSL	8.0	96.12	95.86	95.66	95.54	95.39	95.22				
WSL	8.0	94.78	94.34	94.04							
CAL1	8.0	95.86	77.00								
VEL1	8.0	0.00	.11	.83	.22	2.57	1.32	.15	4.12	1.44	1.78 0.00
VEL1	8.0										
XSEC	9.0	56.41.00	93.49	.00250							
	9.0	0.097.65	5.095.86	7.095.39	9.095.29	11.094.89	13.093.49				
	9.0	15.093.79	18.093.49	20.094.09	22.094.09	24.094.29	26.094.79				
	9.0	28.094.29	30.095.91	41.0100.1							
NS	9.0	7.00	7.00	7.00	7.00	7.00	7.00				
NS	9.0	7.00	7.00	7.00	7.00	5.00	7.00				
NS	9.0	7.00	7.00	7.00							
WSL	9.0	97.29	96.99	96.61	96.45	96.37	96.23				
WSL	9.0	96.07	95.89	95.74	95.63	95.51	95.36				
WSL	9.0	95.02	94.70	94.50							
CAL1	9.0	95.89	77.00								
VEL1	9.0	0.00	.39	.27	2.49	.66	6.66	.40	1.57	1.39	.46 1.41
VEL1	9.0	.10	0.00								
XSEC	10.0	0.01.00	92.95	.00250							
	10.0	0.095.42	8.094.64	10.094.25	13.093.75	16.093.75	19.093.75				
	10.0	22.093.45	25.093.95	28.093.45	31.093.45	34.093.45	37.093.45				

	10.0	40.092.95	43.093.65	46.093.75	49.093.95	52.093.95	55.093.85
	10.0	58.093.55	61.094.05	64.094.25	67.094.25	72.096.42	
NS	10.0	6.00	6.00	6.00	6.00	6.00	6.00
NS	10.0	6.00	6.50	7.00	6.50	7.00	6.50
NS	10.0	6.50	6.50	6.50	6.50	6.50	6.50
NS	10.0	6.50	6.50	7.00	7.00	7.00	
WSL	10.0	95.62	95.35	95.01	94.87	94.81	94.69
WSL	10.0	94.57	94.45	94.35	94.28	94.20	94.11
WSL	10.0	93.94	93.74	93.62			
CAL1	10.0	94.45	77.00				
VEL1	10.0	0.00	.71 .04	1.09 1.68	1.82 1.97	2.93 3.25	2.79 2.35
VEL1	10.0	4.02 1.96	4.10 .33	3.47 2.36	1.65 1.77	.62 0.00	
XSEC	11.0	14.41.00	93.06	.00250			
	11.0	0.096.52	4.094.95	7.094.56	10.094.46	13.093.96	16.093.96
	11.0	19.093.86	22.094.16	25.093.86	28.093.76	31.093.46	34.093.06
	11.0	37.093.56	40.093.96	43.094.06	46.094.56	49.094.46	52.094.46
	11.0	55.094.36	58.094.66	60.094.97	66.796.82		
NS	11.0	6.00	6.00	6.00	6.50	6.50	6.50
NS	11.0	7.00	6.50	7.00	7.00	6.50	7.00
NS	11.0	7.00	6.00	6.00	6.00	6.00	6.00
NS	11.0	5.50	5.50	6.00	6.00		
WSL	11.0	96.12	95.85	95.52	95.38	95.32	95.21
WSL	11.0	95.09	94.96	94.85	94.77	94.69	94.59
WSL	11.0	94.31	94.10	93.94			
CAL1	11.0	94.96	77.00				
VEL1	11.0	0.00	.54 .75	2.21 1.01	.39 3.61	.70 3.54	.24 1.65
VEL1	11.0	1.17 1.96	2.61 2.58	.12 2.62	1.85 .10	0.00	
XSEC	12.0	16.01.00	93.99	.00250			
	12.0	0.096.52	6.0 96.0	8.095.79	11.095.69	14.095.19	17.094.99
	12.0	20.094.99	23.094.49	26.093.99	29.093.99	32.094.69	35.094.89
	12.0	38.095.19	41.094.89	44.095.29	47.095.69	50.095.79	53.095.79
	12.0	56.095.98	62.097.72				
NS	12.0	6.00	6.00	6.00	6.00	6.50	6.50
NS	12.0	7.00	7.00	7.00	7.00	7.00	6.50
NS	12.0	7.00	6.50	6.50	6.50	5.50	4.00
NS	12.0	4.00	4.00				
WSL	12.0	96.65	96.52	96.34	96.27	96.23	96.16
WSL	12.0	96.08	95.99	95.91	95.85	95.73	95.62
WSL	12.0	95.44	95.24	95.11			
CAL1	12.0	95.99	77.00				
VEL1	12.0	0.00	0.00 .44	1.91 .96	2.79 1.25	.64 2.98	2.12 3.32
VEL1	12.0	.63 1.63	.86 1.08	.48 .04	0.00		
XSEC	13.0	15.41.00	94.51	.00250			
	13.0	0.097.42	9.096.36	12.096.01	15.095.51	18.095.61	21.095.31
	13.0	24.095.31	27.095.11	30.095.31	33.094.81	36.094.51	39.094.51
	13.0	42.095.11	45.095.81	48.095.81	51.096.25	62.098.02	
NS	13.0	6.50	6.50	6.50	6.50	6.50	7.00
NS	13.0	7.00	7.00	7.00	7.00	7.00	7.00
NS	13.0	6.50	6.50	6.50	6.50	6.50	
WSL	13.0	96.98	96.84	96.67	96.59	96.55	96.48
WSL	13.0	96.40	96.31	96.23	96.17	96.11	96.03
WSL	13.0	95.87	95.66	95.53			
CAL1	13.0	96.31	77.00				
VEL1	13.0	0.00	.81 3.39	3.43 1.63	.08 .82	1.26 1.04	1.29 1.20
VEL1	13.0	.20 2.46	2.42 0.00				
XSEC	14.0	7.41.00	96.20	.00250			
	14.0	0.098.38	4.097.76	7.0 96.7	10.0 96.5	13.0 96.7	16.0 96.5
	14.0	19.0 96.7	22.0 96.7	25.0 96.3	28.0 96.2	31.0 97.1	34.0 96.7
	14.0	37.0 96.7	40.0 97.1	43.0 97.1	46.0 97.3	49.097.43	59.099.68
NS	14.0	6.50	6.50	6.50	6.00	6.50	7.00
NS	14.0	6.00	6.50	7.00	7.00	7.00	6.50
NS	14.0	6.50	6.00	6.50	4.00	4.00	4.00
WSL	14.0	98.44	98.26	98.02	97.92	97.88	97.79
WSL	14.0	97.70	97.60	97.52	97.46	97.39	97.30
WSL	14.0	97.14	96.95	96.85			
CAL1	14.0	97.60	77.00				
VEL1	14.0	0.00	1.44 3.39	3.63 1.12	2.18 2.74	.63 2.37	.23 3.07
VEL1	14.0	1.39 2.66	.66 0.00	0.00			
XSEC	15.0	0.01.00	88.39	.00250			
	15.0	0.090.62	2.090.13	4.089.39	6.088.79	8.088.49	10.088.59
	15.0	12.088.39	14.088.49	16.088.69	18.088.49	21.088.79	23.089.29
	15.0	25.089.59	27.090.45	31.691.92			
NS	15.0	6.50	6.50	6.50	6.50	6.00	6.00
NS	15.0	4.00	7.00	7.00	7.00	7.00	7.00
NS	15.0	7.00	7.00	7.00			
WSL	15.0	92.35	91.89	91.31	91.07	90.96	90.76
WSL	15.0	90.54	90.29	90.08	89.95	89.80	89.64
WSL	15.0	89.30	89.01	88.86			
CAL1	15.0	90.29	77.00				
VEL1	15.0	0.00	.22 .38	.46 .05	.11 .40	6.50 6.27	3.77 1.17
VEL1	15.0	.13 0.00					

XSEC	16.0	115.21.00		89.05		.00250					
	16.0	0.092.72	5.091.35	7.090.85	9.090.55	11.090.75	13.090.05				
	16.0	15.090.25	17.089.55	19.090.05	21.090.35	23.089.05	25.090.15				
	16.0	27.090.35	29.090.35	31.091.65	33.091.34	37.093.32					
	NS	16.0	6.50	6.50	6.50	6.00	7.00	7.00			
NS	16.0	7.00	7.00	7.00	7.00	7.00	7.00				
NS	16.0	7.00	7.00	6.00	6.00	6.00	6.00				
WSL	16.0	92.57	92.31	91.98	91.85	91.78	91.67				
WSL	16.0	91.52	91.35	91.22	91.14	91.04	90.93				
WSL	16.0	90.70	90.45	90.29							
CAL1	16.0	91.35	77.00								
VEL1	16.0	0.00	.75 1.09	2.68 1.74	3.67 1.80	4.66 .50	2.18 3.41				
VEL1	16.0	2.29 1.65	.12 0.00								
XSEC	17.0	62.71.00		91.53		.00250					
	17.0	0.093.02	2.092.73	4.092.53	6.092.33	8.092.03	10.092.03				
	17.0	12.091.83	14.091.93	16.092.03	18.091.83	20.092.03	22.092.03				
	17.0	24.091.83	26.091.73	28.091.53	30.092.03	32.091.93	34.091.93				
	17.0	36.092.23	38.092.23	40.092.53	42.092.72	44.394.02					
NS	17.0	6.50	6.50	6.50	6.50	6.50	6.50				
NS	17.0	6.50	7.00	7.00	7.00	7.00	7.00				
NS	17.0	7.00	7.00	7.00	7.00	7.00	6.00				
NS	17.0	6.00	6.00	6.00	6.00	6.00	6.00				
WSL	17.0	93.72	93.48	93.20	93.09	93.04	92.95				
WSL	17.0	92.84	92.73	92.63	92.57	92.49	92.41				
WSL	17.0	92.26	92.11	92.05							
CAL1	17.0	92.73	77.00								
VEL1	17.0	0.00	.43 1.11	.13 .34	1.21 1.18	4.71 .83	5.43 2.63				
VEL1	17.0	1.61 .37	6.45 1.29	2.00 2.44	4.40 .61	.63 0.00					
XSEC	18.0	136.01.00		91.53		.00250					
	18.0	0.093.02	2.092.73	4.092.53	6.092.33	8.092.03	10.092.03				
	18.0	12.091.83	14.091.93	16.092.03	18.091.83	20.092.03	22.092.03				
	18.0	24.091.83	26.091.73	28.091.53	30.092.03	32.091.93	34.091.93				
	18.0	36.092.23	38.092.23	40.092.53	42.092.72	44.394.02					
NS	18.0	6.50	6.50	6.50	6.50	6.50	6.50				
NS	18.0	6.50	7.00	7.00	7.00	7.00	7.00				
NS	18.0	7.00	7.00	7.00	7.00	7.00	6.00				
NS	18.0	6.00	6.00	6.00	6.00	6.00	6.00				
WSL	18.0	93.80	93.54	93.23	93.11	93.06	92.96				
WSL	18.0	92.85	92.73	92.63	92.56	92.48	92.40				
WSL	18.0	92.24	92.10	92.02							
CAL1	18.0	92.73	77.00								
VEL1	18.0	0.00	.43 1.11	.13 .34	1.21 1.18	4.71 .83	5.43 2.63				
VEL1	18.0	1.61 .37	6.45 1.29	2.00 2.44	4.40 .61	.63 0.00					
ENDJ											

Big Thompson River Total habitat, Adult
Data collected 1992

1.00	400.0	1.201
1.00	300.0	1.179
1.00	200.0	1.123
1.00	165.0	1.094
1.00	150.0	1.087
1.00	125.0	1.058
1.00	100.0	1.031
1.00	77.0	1.001
1.00	60.0	0.980
1.00	50.0	0.942
1.00	40.0	0.916
1.00	30.0	0.886
1.00	15.0	0.887
1.00	6.0	0.761
1.00	3.0	0.700
2.00	400.0	1.580
2.00	300.0	1.493
2.00	200.0	1.353
2.00	165.0	1.313
2.00	150.0	1.309
2.00	125.0	1.263
2.00	100.0	1.214
2.00	77.0	1.161
2.00	60.0	1.110
2.00	50.0	1.073
2.00	40.0	1.027
2.00	30.0	0.977
2.00	15.0	0.840
2.00	6.0	0.694
2.00	3.0	0.611
3.00	400.0	2.359
3.00	300.0	2.054
3.00	200.0	1.692
3.00	165.0	1.543
3.00	150.0	1.478
3.00	125.0	1.359
3.00	100.0	1.221
3.00	77.0	1.079
3.00	60.0	0.961
3.00	50.0	0.885
3.00	40.0	0.788
3.00	30.0	0.695
3.00	15.0	0.507
3.00	6.0	0.334
3.00	3.0	0.239
4.00	400.0	1.173
4.00	300.0	1.148
4.00	200.0	1.126
4.00	165.0	1.106
4.00	150.0	1.097
4.00	125.0	1.089
4.00	100.0	1.074
4.00	77.0	1.048
4.00	60.0	1.029
4.00	50.0	0.996
4.00	40.0	0.981
4.00	30.0	0.929
4.00	15.0	0.886
4.00	6.0	0.809
4.00	3.0	0.748
5.00	400.0	1.261
5.00	300.0	1.247
5.00	200.0	1.210
5.00	165.0	1.185
5.00	150.0	1.182
5.00	125.0	1.152
5.00	100.0	1.131
5.00	77.0	1.163
5.00	60.0	1.165
5.00	50.0	1.146
5.00	40.0	1.195
5.00	30.0	1.201
5.00	15.0	1.160
5.00	6.0	1.120
5.00	3.0	1.194
6.00	400.0	1.230
6.00	300.0	1.187
6.00	200.0	1.125
6.00	165.0	1.098

6.00	150.0	1.078
6.00	125.0	1.045
6.00	100.0	1.001
6.00	77.0	0.959
6.00	60.0	0.918
6.00	50.0	0.883
6.00	40.0	0.844
6.00	30.0	0.791
6.00	15.0	0.666
6.00	6.0	0.568
6.00	3.0	0.556
7.00	400.0	2.895
7.00	300.0	2.453
7.00	200.0	1.953
7.00	165.0	1.767
7.00	150.0	1.690
7.00	125.0	1.534
7.00	100.0	1.370
7.00	77.0	1.195
7.00	60.0	1.054
7.00	50.0	0.952
7.00	40.0	0.843
7.00	30.0	0.723
7.00	15.0	0.540
7.00	6.0	0.392
7.00	3.0	0.290
8.00	400.0	2.216
8.00	300.0	1.967
8.00	200.0	1.654
8.00	165.0	1.567
8.00	150.0	1.526
8.00	125.0	1.458
8.00	100.0	1.393
8.00	77.0	1.336
8.00	60.0	1.252
8.00	50.0	1.173
8.00	40.0	1.097
8.00	30.0	0.997
8.00	15.0	0.902
8.00	6.0	0.751
8.00	3.0	0.782
9.00	400.0	2.278
9.00	300.0	2.027
9.00	200.0	1.722
9.00	165.0	1.590
9.00	150.0	1.533
9.00	125.0	1.423
9.00	100.0	1.299
9.00	77.0	1.174
9.00	60.0	1.056
9.00	50.0	0.986
9.00	40.0	0.899
9.00	30.0	0.805
9.00	15.0	0.645
9.00	6.0	0.447
9.00	3.0	0.337
10.00	400.0	0.889
10.00	300.0	0.867
10.00	200.0	0.853
10.00	165.0	0.849
10.00	150.0	0.842
10.00	125.0	0.846
10.00	100.0	0.833
10.00	77.0	0.811
10.00	60.0	0.788
10.00	50.0	0.779
10.00	40.0	0.771
10.00	30.0	0.757
10.00	15.0	0.705
10.00	6.0	0.681
10.00	3.0	0.665
11.00	400.0	1.273
11.00	300.0	1.217
11.00	200.0	1.153
11.00	165.0	1.131
11.00	150.0	1.114
11.00	125.0	1.085
11.00	100.0	1.047
11.00	77.0	1.011
11.00	60.0	0.977
11.00	50.0	0.967

11.00	40.0	0.934
11.00	30.0	0.907
11.00	15.0	1.017
11.00	6.0	0.901
11.00	3.0	0.879
12.00	400.0	2.469
12.00	300.0	2.124
12.00	200.0	1.737
12.00	165.0	1.562
12.00	150.0	1.493
12.00	125.0	1.364
12.00	100.0	1.218
12.00	77.0	1.070
12.00	60.0	0.943
12.00	50.0	0.865
12.00	40.0	0.849
12.00	30.0	0.778
12.00	15.0	0.562
12.00	6.0	0.369
12.00	3.0	0.266
13.00	400.0	2.683
13.00	300.0	2.402
13.00	200.0	2.030
13.00	165.0	1.891
13.00	150.0	1.832
13.00	125.0	1.714
13.00	100.0	1.578
13.00	77.0	1.439
13.00	60.0	1.318
13.00	50.0	1.246
13.00	40.0	1.138
13.00	30.0	1.033
13.00	15.0	0.788
13.00	6.0	0.574
13.00	3.0	0.413
14.00	400.0	1.835
14.00	300.0	1.666
14.00	200.0	1.485
14.00	165.0	1.404
14.00	150.0	1.352
14.00	125.0	1.293
14.00	100.0	1.198
14.00	77.0	1.102
14.00	60.0	1.004
14.00	50.0	0.949
14.00	40.0	0.890
14.00	30.0	0.836
14.00	15.0	0.675
14.00	6.0	0.566
14.00	3.0	0.483
15.00	400.0	1.409
15.00	300.0	1.328
15.00	200.0	1.243
15.00	165.0	1.207
15.00	150.0	1.189
15.00	125.0	1.158
15.00	100.0	1.120
15.00	77.0	1.100
15.00	60.0	1.085
15.00	50.0	1.064
15.00	40.0	1.051
15.00	30.0	1.018
15.00	15.0	1.038
15.00	6.0	1.070
15.00	3.0	1.208
16.00	400.0	1.810
16.00	300.0	1.668
16.00	200.0	1.500
16.00	165.0	1.413
16.00	150.0	1.385
16.00	125.0	1.308
16.00	100.0	1.253
16.00	77.0	1.210
16.00	60.0	1.142
16.00	50.0	1.082
16.00	40.0	1.031
16.00	30.0	0.957
16.00	15.0	0.813
16.00	6.0	0.683
16.00	3.0	0.665
17.00	400.0	1.646

17.00	300.0	1.594
17.00	200.0	1.516
17.00	165.0	1.471
17.00	150.0	1.447
17.00	125.0	1.402
17.00	100.0	1.374
17.00	77.0	1.330
17.00	60.0	1.309
17.00	50.0	1.275
17.00	40.0	1.283
17.00	30.0	1.249
17.00	15.0	1.148
17.00	6.0	1.054
17.00	3.0	0.825
18.00	400.0	1.523
18.00	300.0	1.490
18.00	200.0	1.454
18.00	165.0	1.427
18.00	150.0	1.401
18.00	125.0	1.378
18.00	100.0	1.348
18.00	77.0	1.330
18.00	60.0	1.309
18.00	50.0	1.310
18.00	40.0	1.323
18.00	30.0	1.293
18.00	15.0	1.265
18.00	6.0	1.129
18.00	3.0	1.057

Big Thompson River Total habitat, Juvenile
Data collected 1992

1.00	400.0	1.064
1.00	300.0	1.064
1.00	200.0	1.059
1.00	165.0	1.048
1.00	150.0	1.039
1.00	125.0	1.020
1.00	100.0	1.004
1.00	77.0	1.001
1.00	60.0	0.980
1.00	50.0	0.978
1.00	40.0	0.954
1.00	30.0	0.947
1.00	15.0	0.976
1.00	6.0	0.929
1.00	3.0	0.860
2.00	400.0	1.580
2.00	300.0	1.493
2.00	200.0	1.353
2.00	165.0	1.313
2.00	150.0	1.309
2.00	125.0	1.263
2.00	100.0	1.214
2.00	77.0	1.161
2.00	60.0	1.110
2.00	50.0	1.073
2.00	40.0	1.027
2.00	30.0	0.977
2.00	15.0	0.840
2.00	6.0	0.694
2.00	3.0	0.611
3.00	400.0	2.359
3.00	300.0	2.054
3.00	200.0	1.692
3.00	165.0	1.543
3.00	150.0	1.478
3.00	125.0	1.359
3.00	100.0	1.221
3.00	77.0	1.079
3.00	60.0	0.961
3.00	50.0	0.885
3.00	40.0	0.788
3.00	30.0	0.695
3.00	15.0	0.507
3.00	6.0	0.334
3.00	3.0	0.239
4.00	400.0	1.173
4.00	300.0	1.148
4.00	200.0	1.126
4.00	165.0	1.106
4.00	150.0	1.097
4.00	125.0	1.089
4.00	100.0	1.074
4.00	77.0	1.048
4.00	60.0	1.029
4.00	50.0	0.996
4.00	40.0	0.981
4.00	30.0	0.929
4.00	15.0	0.886
4.00	6.0	0.809
4.00	3.0	0.748
5.00	400.0	1.261
5.00	300.0	1.247
5.00	200.0	1.210
5.00	165.0	1.185
5.00	150.0	1.182
5.00	125.0	1.152
5.00	100.0	1.131
5.00	77.0	1.163
5.00	60.0	1.165
5.00	50.0	1.146
5.00	40.0	1.195
5.00	30.0	1.201
5.00	15.0	1.160
5.00	6.0	1.120
5.00	3.0	1.194
6.00	400.0	1.230
6.00	300.0	1.187
6.00	200.0	1.125
6.00	165.0	1.098

6.00	150.0	1.078
6.00	125.0	1.045
6.00	100.0	1.001
6.00	77.0	0.959
6.00	60.0	0.918
6.00	50.0	0.883
6.00	40.0	0.844
6.00	30.0	0.791
6.00	15.0	0.666
6.00	6.0	0.568
6.00	3.0	0.556
7.00	400.0	2.895
7.00	300.0	2.453
7.00	200.0	1.953
7.00	165.0	1.767
7.00	150.0	1.690
7.00	125.0	1.534
7.00	100.0	1.370
7.00	77.0	1.195
7.00	60.0	1.054
7.00	50.0	0.952
7.00	40.0	0.843
7.00	30.0	0.723
7.00	15.0	0.540
7.00	6.0	0.392
7.00	3.0	0.290
8.00	400.0	2.216
8.00	300.0	1.967
8.00	200.0	1.654
8.00	165.0	1.567
8.00	150.0	1.526
8.00	125.0	1.458
8.00	100.0	1.393
8.00	77.0	1.336
8.00	60.0	1.252
8.00	50.0	1.173
8.00	40.0	1.097
8.00	30.0	0.997
8.00	15.0	0.902
8.00	6.0	0.751
8.00	3.0	0.782
9.00	400.0	2.278
9.00	300.0	2.027
9.00	200.0	1.722
9.00	165.0	1.590
9.00	150.0	1.533
9.00	125.0	1.423
9.00	100.0	1.299
9.00	77.0	1.174
9.00	60.0	1.056
9.00	50.0	0.986
9.00	40.0	0.899
9.00	30.0	0.805
9.00	15.0	0.645
9.00	6.0	0.447
9.00	3.0	0.337
10.00	400.0	0.889
10.00	300.0	0.867
10.00	200.0	0.853
10.00	165.0	0.849
10.00	150.0	0.842
10.00	125.0	0.846
10.00	100.0	0.833
10.00	77.0	0.811
10.00	60.0	0.788
10.00	50.0	0.779
10.00	40.0	0.771
10.00	30.0	0.757
10.00	15.0	0.705
10.00	6.0	0.681
10.00	3.0	0.665
11.00	400.0	1.273
11.00	300.0	1.217
11.00	200.0	1.153
11.00	165.0	1.131
11.00	150.0	1.114
11.00	125.0	1.085
11.00	100.0	1.047
11.00	77.0	1.011
11.00	60.0	0.977
11.00	50.0	0.967

11.00	40.0	0.934
11.00	30.0	0.907
11.00	15.0	1.017
11.00	6.0	0.901
11.00	3.0	0.879
12.00	400.0	2.469
12.00	300.0	2.124
12.00	200.0	1.737
12.00	165.0	1.562
12.00	150.0	1.493
12.00	125.0	1.364
12.00	100.0	1.218
12.00	77.0	1.070
12.00	60.0	0.943
12.00	50.0	0.865
12.00	40.0	0.849
12.00	30.0	0.778
12.00	15.0	0.562
12.00	6.0	0.369
12.00	3.0	0.266
13.00	400.0	2.683
13.00	300.0	2.402
13.00	200.0	2.030
13.00	165.0	1.891
13.00	150.0	1.832
13.00	125.0	1.714
13.00	100.0	1.578
13.00	77.0	1.439
13.00	60.0	1.318
13.00	50.0	1.246
13.00	40.0	1.138
13.00	30.0	1.033
13.00	15.0	0.788
13.00	6.0	0.574
13.00	3.0	0.413
14.00	400.0	1.994
14.00	300.0	1.784
14.00	200.0	1.546
14.00	165.0	1.445
14.00	150.0	1.414
14.00	125.0	1.313
14.00	100.0	1.219
14.00	77.0	1.102
14.00	60.0	1.004
14.00	50.0	0.929
14.00	40.0	0.869
14.00	30.0	0.793
14.00	15.0	0.611
14.00	6.0	0.495
14.00	3.0	0.405
15.00	400.0	1.409
15.00	300.0	1.328
15.00	200.0	1.243
15.00	165.0	1.207
15.00	150.0	1.189
15.00	125.0	1.158
15.00	100.0	1.120
15.00	77.0	1.100
15.00	60.0	1.085
15.00	50.0	1.064
15.00	40.0	1.051
15.00	30.0	1.018
15.00	15.0	1.038
15.00	6.0	1.070
15.00	3.0	1.208
16.00	400.0	1.810
16.00	300.0	1.668
16.00	200.0	1.500
16.00	165.0	1.413
16.00	150.0	1.385
16.00	125.0	1.308
16.00	100.0	1.253
16.00	77.0	1.210
16.00	60.0	1.142
16.00	50.0	1.082
16.00	40.0	1.031
16.00	30.0	0.957
16.00	15.0	0.813
16.00	6.0	0.683
16.00	3.0	0.665
17.00	400.0	1.629

17.00	300.0	1.576
17.00	200.0	1.495
17.00	165.0	1.448
17.00	150.0	1.447
17.00	125.0	1.402
17.00	100.0	1.374
17.00	77.0	1.330
17.00	60.0	1.309
17.00	50.0	1.310
17.00	40.0	1.283
17.00	30.0	1.249
17.00	15.0	1.148
17.00	6.0	1.054
17.00	3.0	0.899
18.00	400.0	1.629
18.00	300.0	1.576
18.00	200.0	1.495
18.00	165.0	1.448
18.00	150.0	1.447
18.00	125.0	1.402
18.00	100.0	1.374
18.00	77.0	1.330
18.00	60.0	1.309
18.00	50.0	1.310
18.00	40.0	1.283
18.00	30.0	1.249
18.00	15.0	1.148
18.00	6.0	1.054
18.00	3.0	0.899

Big Thompson River Total habitat, Fry
Data collected 1992

1.00	400.0	1.201
1.00	300.0	1.179
1.00	200.0	1.123
1.00	165.0	1.094
1.00	150.0	1.087
1.00	125.0	1.058
1.00	100.0	1.031
1.00	77.0	1.001
1.00	60.0	0.980
1.00	50.0	0.942
1.00	40.0	0.916
1.00	30.0	0.886
1.00	15.0	0.887
1.00	6.0	0.761
1.00	3.0	0.700
2.00	400.0	1.580
2.00	300.0	1.493
2.00	200.0	1.353
2.00	165.0	1.313
2.00	150.0	1.309
2.00	125.0	1.263
2.00	100.0	1.214
2.00	77.0	1.161
2.00	60.0	1.110
2.00	50.0	1.073
2.00	40.0	1.027
2.00	30.0	0.977
2.00	15.0	0.840
2.00	6.0	0.694
2.00	3.0	0.611
3.00	400.0	2.359
3.00	300.0	2.054
3.00	200.0	1.692
3.00	165.0	1.543
3.00	150.0	1.478
3.00	125.0	1.359
3.00	100.0	1.221
3.00	77.0	1.079
3.00	60.0	0.961
3.00	50.0	0.885
3.00	40.0	0.788
3.00	30.0	0.695
3.00	15.0	0.507
3.00	6.0	0.334
3.00	3.0	0.239
4.00	400.0	1.173
4.00	300.0	1.148
4.00	200.0	1.126
4.00	165.0	1.106
4.00	150.0	1.097
4.00	125.0	1.089
4.00	100.0	1.074
4.00	77.0	1.048
4.00	60.0	1.029
4.00	50.0	0.996
4.00	40.0	0.981
4.00	30.0	0.929
4.00	15.0	0.886
4.00	6.0	0.809
4.00	3.0	0.748
5.00	400.0	1.261
5.00	300.0	1.247
5.00	200.0	1.210
5.00	165.0	1.185
5.00	150.0	1.182
5.00	125.0	1.152
5.00	100.0	1.131
5.00	77.0	1.163
5.00	60.0	1.165
5.00	50.0	1.146
5.00	40.0	1.195
5.00	30.0	1.201
5.00	15.0	1.160
5.00	6.0	1.120
5.00	3.0	1.194
6.00	400.0	1.230
6.00	300.0	1.187
6.00	200.0	1.125
6.00	165.0	1.098

6.00	150.0	1.078
6.00	125.0	1.045
6.00	100.0	1.001
6.00	77.0	0.959
6.00	60.0	0.918
6.00	50.0	0.883
6.00	40.0	0.844
6.00	30.0	0.791
6.00	15.0	0.666
6.00	6.0	0.568
6.00	3.0	0.556
7.00	400.0	2.895
7.00	300.0	2.453
7.00	200.0	1.953
7.00	165.0	1.767
7.00	150.0	1.690
7.00	125.0	1.534
7.00	100.0	1.370
7.00	77.0	1.195
7.00	60.0	1.054
7.00	50.0	0.952
7.00	40.0	0.843
7.00	30.0	0.723
7.00	15.0	0.540
7.00	6.0	0.392
7.00	3.0	0.290
8.00	400.0	2.216
8.00	300.0	1.967
8.00	200.0	1.654
8.00	165.0	1.567
8.00	150.0	1.526
8.00	125.0	1.458
8.00	100.0	1.393
8.00	77.0	1.336
8.00	60.0	1.252
8.00	50.0	1.173
8.00	40.0	1.097
8.00	30.0	0.997
8.00	15.0	0.902
8.00	6.0	0.751
8.00	3.0	0.782
9.00	400.0	2.278
9.00	300.0	2.027
9.00	200.0	1.722
9.00	165.0	1.590
9.00	150.0	1.533
9.00	125.0	1.423
9.00	100.0	1.299
9.00	77.0	1.174
9.00	60.0	1.056
9.00	50.0	0.986
9.00	40.0	0.899
9.00	30.0	0.805
9.00	15.0	0.645
9.00	6.0	0.447
9.00	3.0	0.337
10.00	400.0	0.889
10.00	300.0	0.867
10.00	200.0	0.853
10.00	165.0	0.849
10.00	150.0	0.842
10.00	125.0	0.846
10.00	100.0	0.833
10.00	77.0	0.811
10.00	60.0	0.788
10.00	50.0	0.779
10.00	40.0	0.771
10.00	30.0	0.757
10.00	15.0	0.705
10.00	6.0	0.681
10.00	3.0	0.665
11.00	400.0	1.273
11.00	300.0	1.217
11.00	200.0	1.153
11.00	165.0	1.131
11.00	150.0	1.114
11.00	125.0	1.085
11.00	100.0	1.047
11.00	77.0	1.011
11.00	60.0	0.977
11.00	50.0	0.967

11.00	40.0	0.934
11.00	30.0	0.907
11.00	15.0	1.017
11.00	6.0	0.901
11.00	3.0	0.879
12.00	400.0	2.469
12.00	300.0	2.124
12.00	200.0	1.737
12.00	165.0	1.562
12.00	150.0	1.493
12.00	125.0	1.364
12.00	100.0	1.218
12.00	77.0	1.070
12.00	60.0	0.943
12.00	50.0	0.865
12.00	40.0	0.849
12.00	30.0	0.778
12.00	15.0	0.562
12.00	6.0	0.369
12.00	3.0	0.266
13.00	400.0	2.683
13.00	300.0	2.402
13.00	200.0	2.030
13.00	165.0	1.891
13.00	150.0	1.832
13.00	125.0	1.714
13.00	100.0	1.578
13.00	77.0	1.439
13.00	60.0	1.318
13.00	50.0	1.246
13.00	40.0	1.138
13.00	30.0	1.033
13.00	15.0	0.788
13.00	6.0	0.574
13.00	3.0	0.413
14.00	400.0	1.835
14.00	300.0	1.666
14.00	200.0	1.485
14.00	165.0	1.404
14.00	150.0	1.352
14.00	125.0	1.293
14.00	100.0	1.198
14.00	77.0	1.102
14.00	60.0	1.004
14.00	50.0	0.949
14.00	40.0	0.890
14.00	30.0	0.836
14.00	15.0	0.675
14.00	6.0	0.566
14.00	3.0	0.483
15.00	400.0	1.409
15.00	300.0	1.328
15.00	200.0	1.243
15.00	165.0	1.207
15.00	150.0	1.189
15.00	125.0	1.158
15.00	100.0	1.120
15.00	77.0	1.100
15.00	60.0	1.085
15.00	50.0	1.064
15.00	40.0	1.051
15.00	30.0	1.018
15.00	15.0	1.038
15.00	6.0	1.070
15.00	3.0	1.208
16.00	400.0	1.810
16.00	300.0	1.668
16.00	200.0	1.500
16.00	165.0	1.413
16.00	150.0	1.385
16.00	125.0	1.308
16.00	100.0	1.253
16.00	77.0	1.210
16.00	60.0	1.142
16.00	50.0	1.082
16.00	40.0	1.031
16.00	30.0	0.957
16.00	15.0	0.813
16.00	6.0	0.683
16.00	3.0	0.665
17.00	400.0	1.646

17.00	300.0	1.594
17.00	200.0	1.516
17.00	165.0	1.471
17.00	150.0	1.447
17.00	125.0	1.402
17.00	100.0	1.374
17.00	77.0	1.330
17.00	60.0	1.309
17.00	50.0	1.275
17.00	40.0	1.283
17.00	30.0	1.249
17.00	15.0	1.148
17.00	6.0	1.054
17.00	3.0	0.825
18.00	400.0	1.523
18.00	300.0	1.490
18.00	200.0	1.454
18.00	165.0	1.427
18.00	150.0	1.401
18.00	125.0	1.378
18.00	100.0	1.348
18.00	77.0	1.330
18.00	60.0	1.309
18.00	50.0	1.310
18.00	40.0	1.323
18.00	30.0	1.293
18.00	15.0	1.265
18.00	6.0	1.129
18.00	3.0	1.057

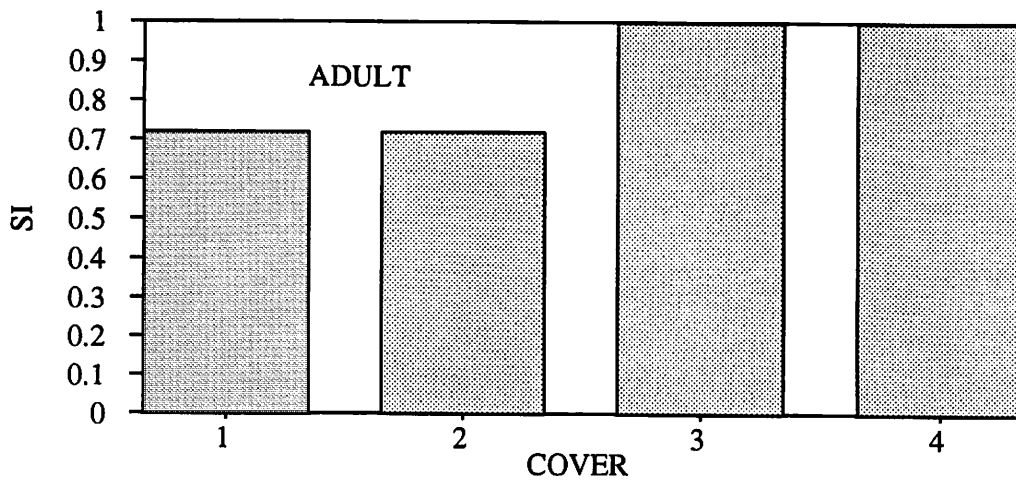
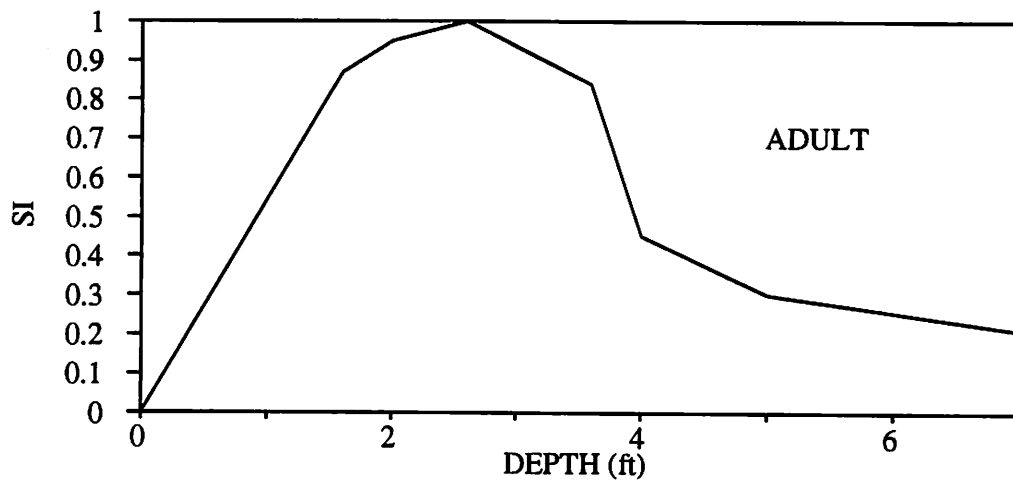
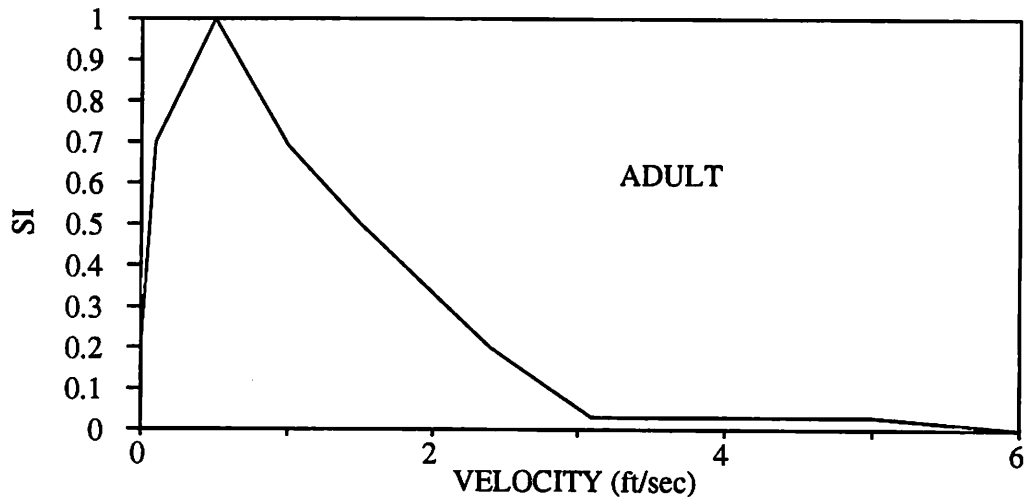
APPENDIX B - HABITAT SUITABILITY CRITERIA

BIG THOMPSON FISH CURVES RAINBOW AND BROWN TROUT

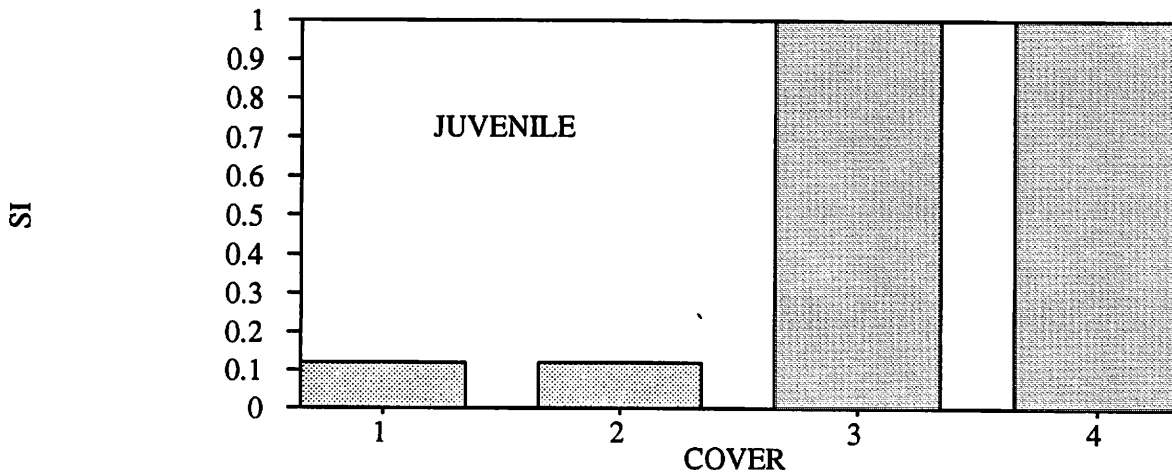
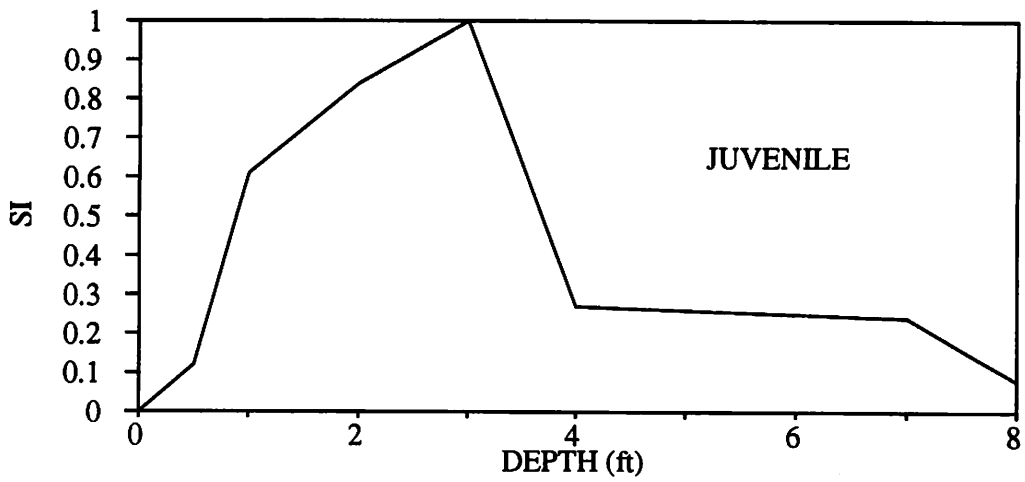
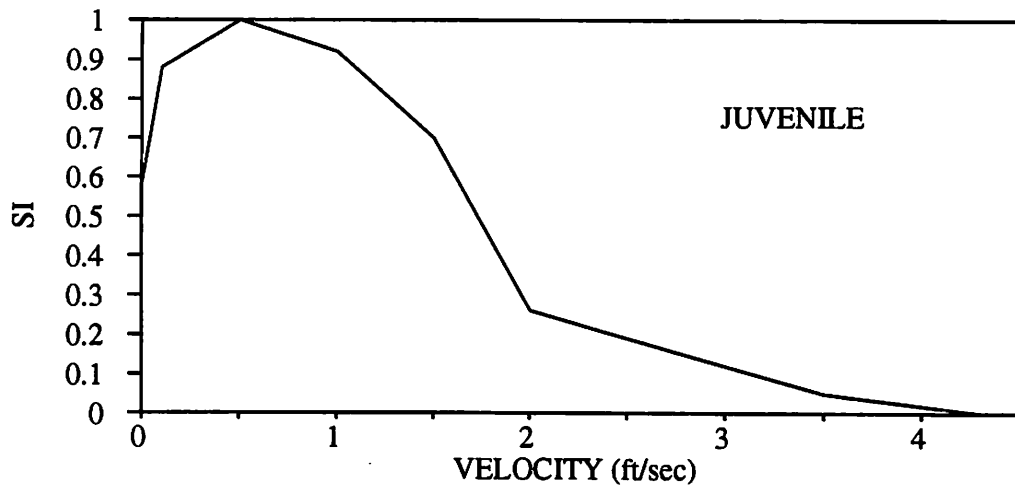
H	11113	7	7	10	0	Brown trout					Fingerling			
V	11113	0.00	0.00	0.10	0.38	0.60	1.00	0.90	0.94	1.20	0.47	2.90	0.00	
D	11113	100.00	0.00											
V	11113	0.00	0.00	0.66	0.19	1.31	1.00	1.61	1.00	2.30	0.82	4.60	0.00	
D	11113	100.00	0.00											
S	11113	1.00	1.00	2.00	1.00	3.00	1.00	4.00	1.00	5.00	1.00	6.00	1.00	
S	11113	7.00	1.00	8.00	0.05	9.00	0.05	100.00	0.00					
H	11114	12	17	4	0	Brown trout					Juvenile			
V	11114	0.00	0.60	0.50	0.82	0.79	0.92	1.13	1.00	1.57	1.00	1.97	0.91	
V	11114	2.31	0.80	3.29	0.42	3.73	0.28	4.31	0.15	5.06	0.00	100.00	0.00	
D	11114	0.00	0.00	0.40	0.11	0.57	0.18	0.75	0.29	1.05	0.55	1.31	0.80	
D	11114	1.48	0.92	1.66	1.00	1.83	1.00	2.05	0.89	2.35	0.62	2.65	0.35	
D	11114	2.87	0.20	3.13	0.09	3.22	0.06	3.82	0.00	100.00	0.00			
S	11114	1.00	0.12	2.00	0.12	3.00	1.00	4.00	1.00					
H	11115	14	15	4	0	Brown trout					Adult			
V	11115	0.00	0.33	0.82	0.81	1.07	0.92	1.32	1.00	1.63	1.00	1.94	0.92	
V	11115	3.00	0.44	3.49	0.26	3.74	0.19	4.18	0.11	4.68	0.06	5.55	0.02	
V	11115	5.80	0.00	100.00	0.00									
D	11115	0.00	0.00	0.66	0.04	0.95	0.10	1.17	0.19	2.25	0.80	2.68	0.94	
D	11115	2.97	1.00	3.40	1.00	3.77	0.92	4.63	0.58	5.21	0.34	5.57	0.22	
D	11115	6.00	0.12	6.90	0.00	100.00	0.00							
S	11115	1.00	0.72	2.00	0.72	3.00	1.00	4.00	1.00					
H	21113	7	10	10	0	Rainbow trout					Fingerling			
V	21113	0.00	1.00	0.60	1.00	1.00	0.70	1.50	0.50	2.00	0.20	2.50	0.00	
V	21113	100.00	0.00											
D	21113	0.00	0.00	0.20	0.10	0.30	0.20	0.50	1.00	1.00	1.00	1.80	0.20	
D	21113	3.00	0.05	6.00	0.05	7.00	0.00	100.00	0.00					
S	21113	1.00	1.00	2.00	1.00	3.00	1.00	4.00	1.00	5.00	1.00	6.00	1.00	
S	21113	7.00	0.50	8.00	0.05	9.00	0.01	100.00	0.01					
H	21114	13	16	4	0	Rainbow trout					Juvenile			
V	21114	0.00	0.72	0.52	0.93	0.80	1.00	1.18	1.00	1.50	0.92	2.02	0.71	
V	21114	2.67	0.39	3.04	0.24	3.42	0.14	3.74	0.08	4.12	0.04	4.28	0.00	
V	21114	100.00	0.0											
D	21114	0.00	0.00	0.36	0.05	0.53	0.14	0.65	0.25	1.11	0.77	1.34	0.90	
D	21114	1.63	1.00	1.86	1.00	2.09	0.93	2.55	0.66	3.01	0.36	3.36	0.19	
D	21114	3.65	0.10	4.00	0.04	4.63	0.00	100.00	0.00					
S	21114	1.00	0.15	2.00	0.15	3.00	1.00	4.00	1.00					
H	21115	14	16	4	0	Rainbow trout					Adult			
V	21115	0.00	0.31	0.56	0.55	1.17	0.86	1.42	0.95	1.60	1.00	1.90	1.00	
V	21115	2.15	0.94	2.45	0.81	3.19	0.37	3.49	0.22	3.92	0.09	4.29	0.03	
V	21115	4.90	0.00	100.00	0.00									
D	21115	0.00	0.00	0.78	0.07	1.29	0.19	1.93	0.44	2.69	0.81	3.33	1.00	
D	21115	3.72	1.00	4.10	0.93	5.12	0.59	5.76	0.38	6.40	0.23	7.29	0.11	
D	21115	8.32	0.05	9.34	0.03	10.00	0.00	100.00	0.00					
S	21115	1.00	1.00	2.00	1.00	3.00	1.00	4.00	1.00					

(Note: H = Header, V = Velocity, D = Depth, S = Cover for Adult and Juvenile life stages, and S = Substrate for Fingerlings.)

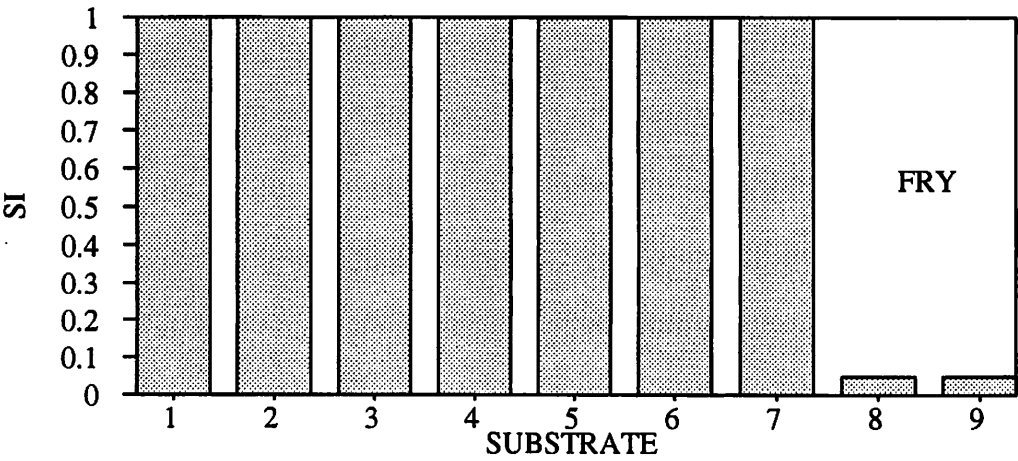
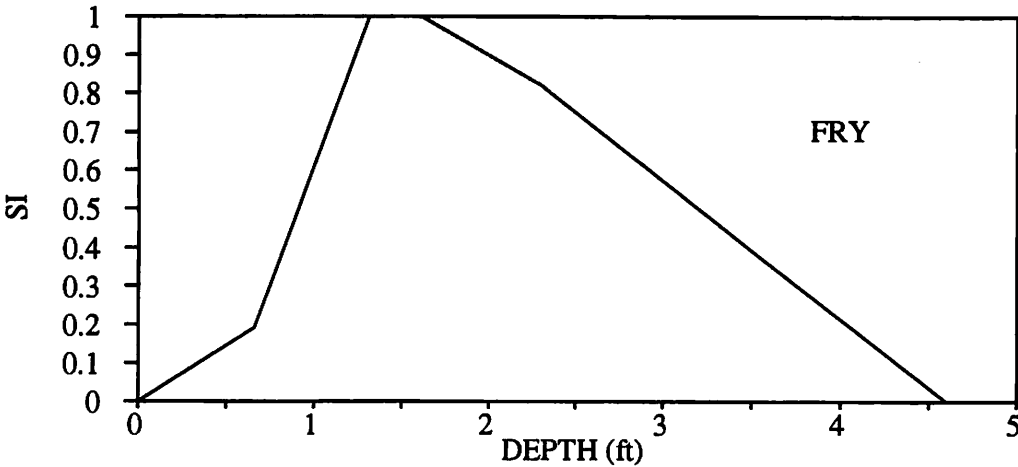
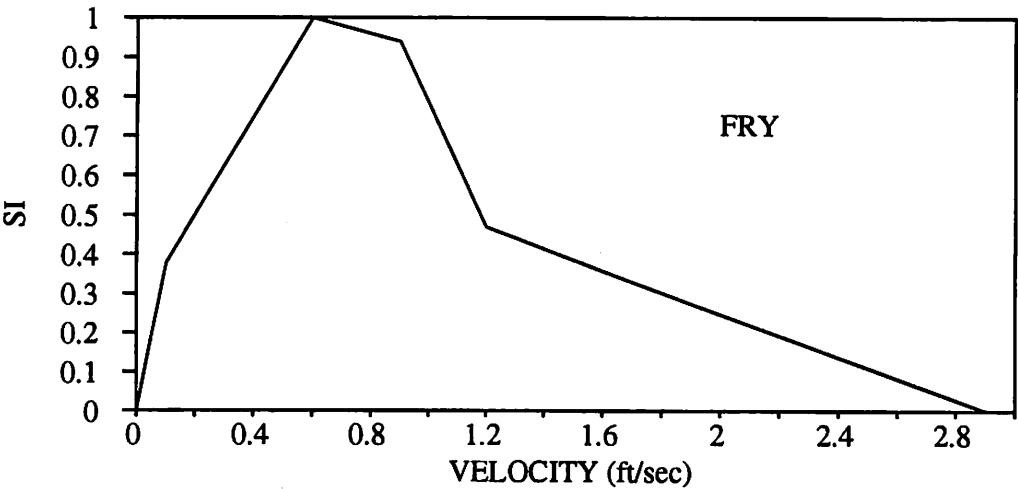
BROWN TROUT SUITABILITY INDEX



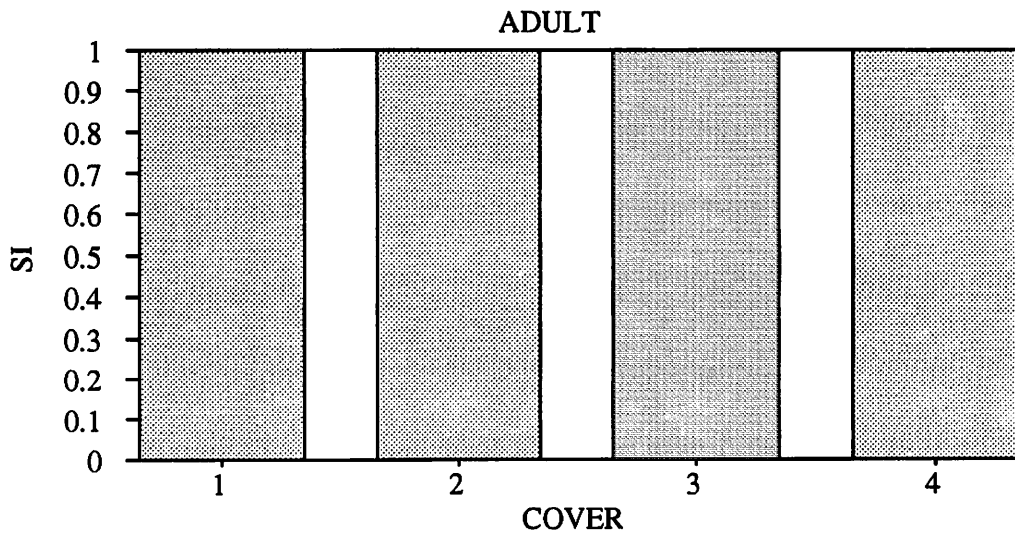
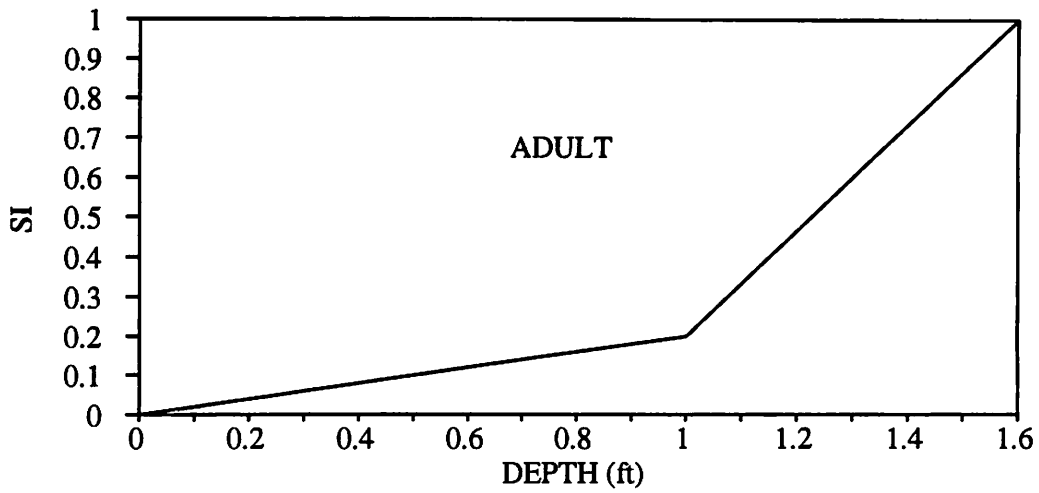
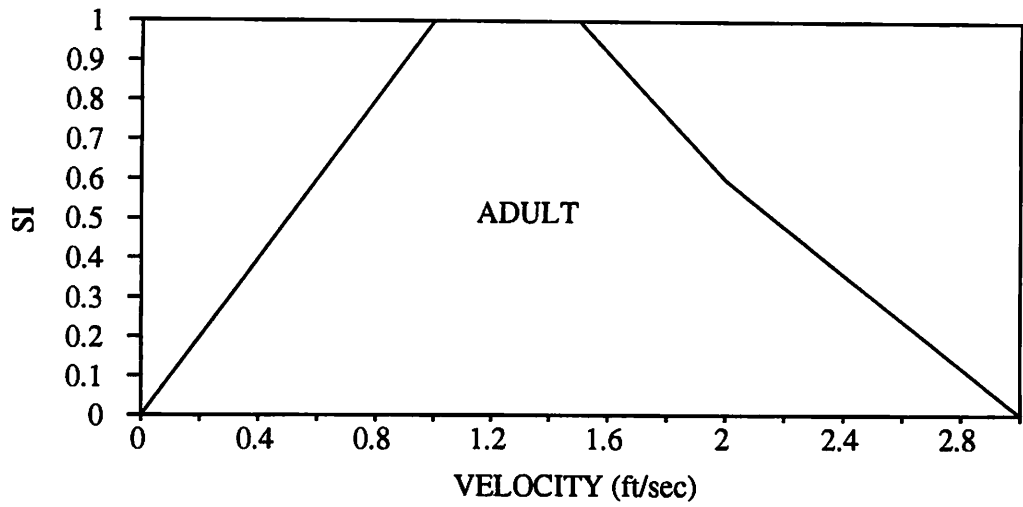
BROWN TROUT SUITABILITY INDEX



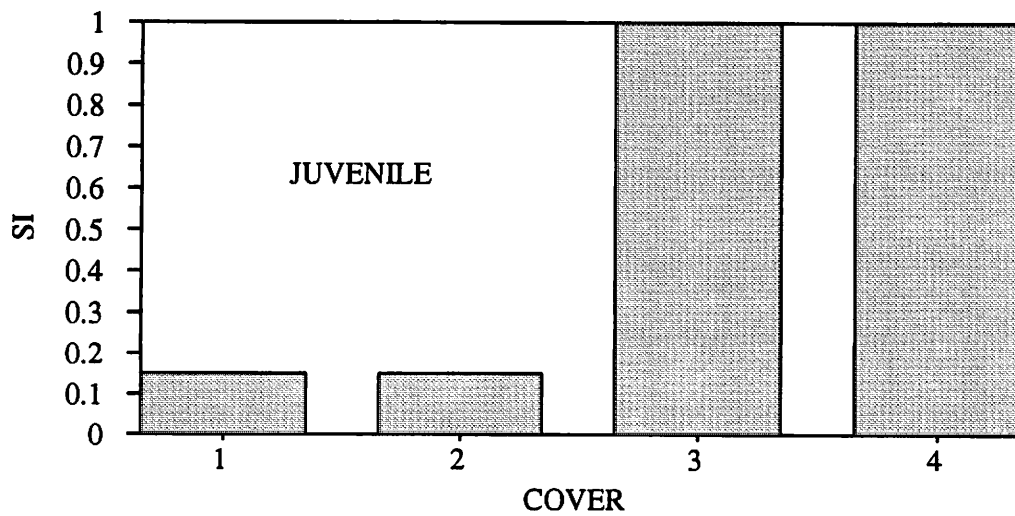
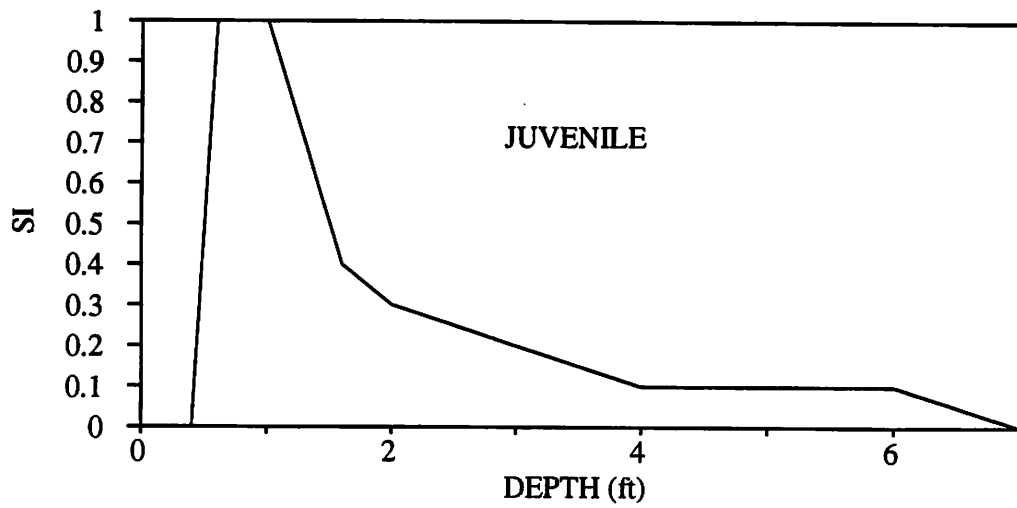
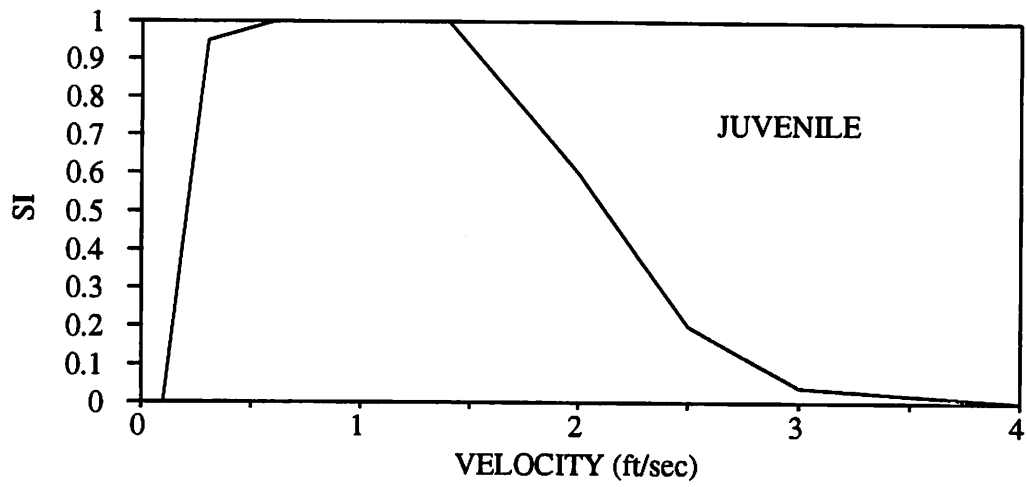
BROWN TROUT SUITABILITY INDEX



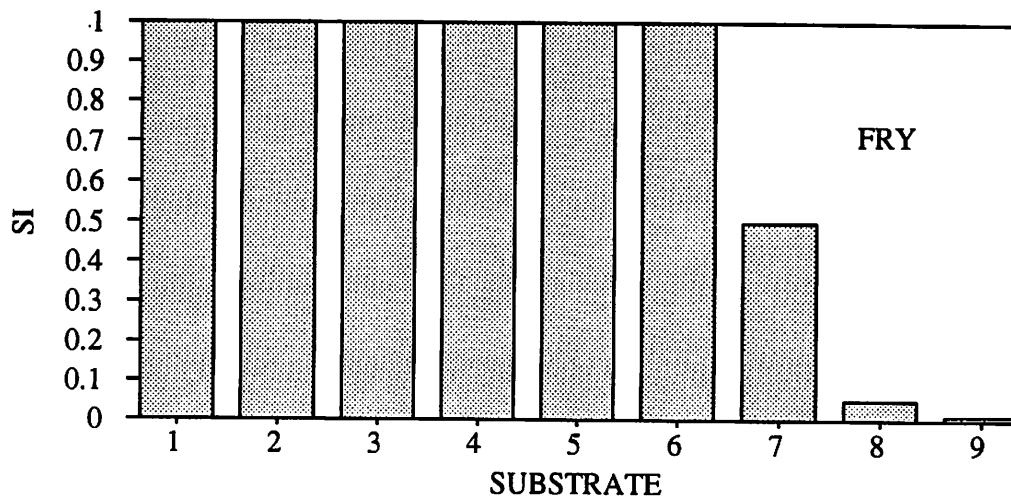
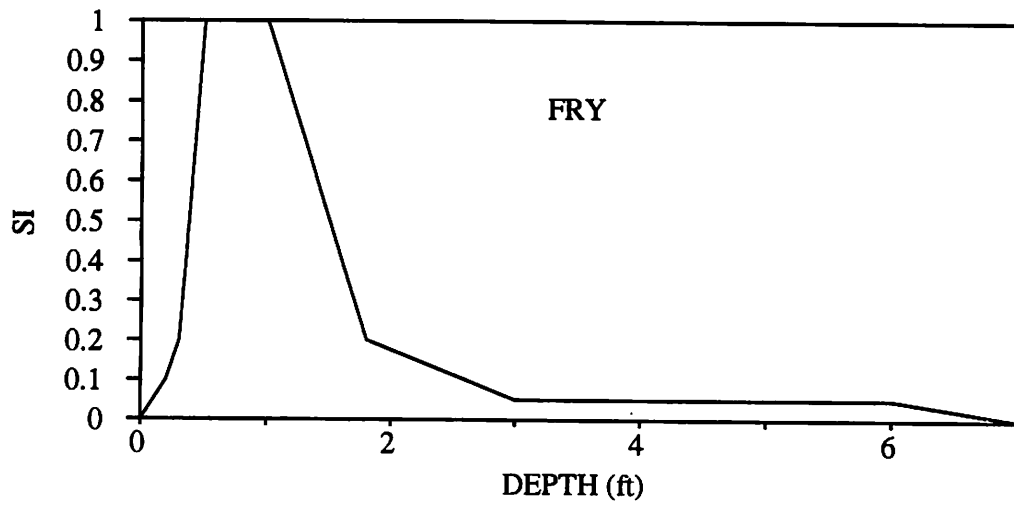
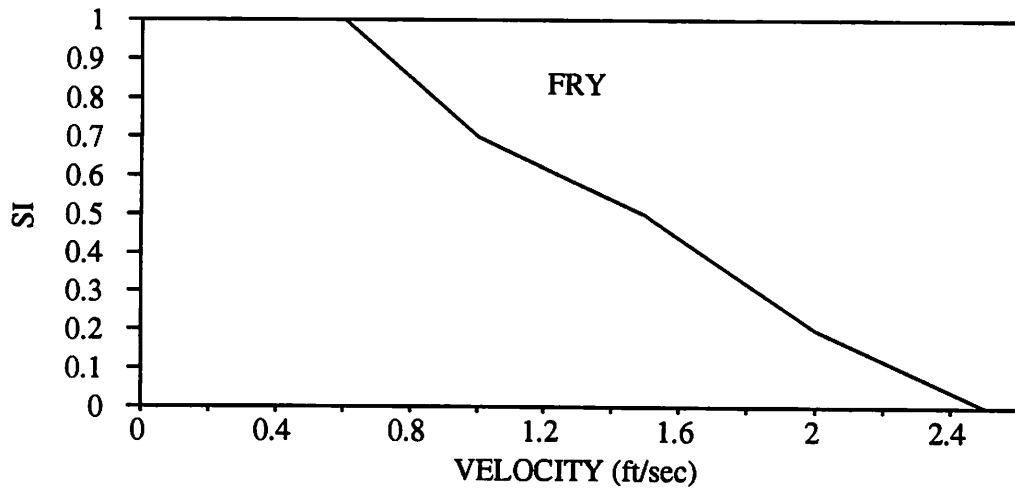
RAINBOW TROUT SUITABILITY INDEX



RAINBOW TROUT SUITABILITY INDEX



RAINBOW TROUT SUITABILITY INDEX



APPENDIX C - HABITAT VERSUS DISCHARGE RELATIONSHIPS

Big Thompson River Total habitat, Adult
Data collected 1992

TOTAL AREA

	DISCHARGE	AREA
* 1	400.00	41793.96
* 2	300.00	41039.82
* 3	200.00	39435.04
* 4	165.00	38483.64
* 5	150.00	37988.34
* 6	125.00	37105.24
* 7	100.00	35880.89
* 8	77.00	34262.77
* 9	60.00	32982.84
*10	50.00	32188.16
*11	40.00	31024.14
*12	30.00	29971.00
*13	15.00	25732.96
*14	6.00	21436.21
*15	3.00	18975.51

Brown trout

	DISCHARGE	Adult
* 1	400.00	6082.25
* 2	300.00	6102.84
* 3	200.00	5885.74
* 4	165.00	5683.11
* 5	150.00	5557.72
* 6	125.00	5362.04
* 7	100.00	5093.20
* 8	77.00	4770.27
* 9	60.00	4436.70
*10	50.00	4201.07
*11	40.00	3809.76
*12	30.00	3229.20
*13	15.00	1786.27
*14	6.00	687.77
*15	3.00	351.71

Rainbow trout

	DISCHARGE	Adult
* 1	400.00	5982.34
* 2	300.00	5833.93
* 3	200.00	5517.52
* 4	165.00	5279.03
* 5	150.00	5126.45
* 6	125.00	4924.38
* 7	100.00	4705.22
* 8	77.00	4455.59
* 9	60.00	4130.28
*10	50.00	3845.28
*11	40.00	3373.41
*12	30.00	2751.20
*13	15.00	1489.29
*14	6.00	653.29
*15	3.00	378.76

Big Thompson River Total habitat, Juvenile
Data collected 1992
TOTAL AREA

	DISCHARGE	AREA
* 1	400.00	41818.16
* 2	300.00	41058.83
* 3	200.00	39439.81
* 4	165.00	38487.76
* 5	150.00	37989.66
* 6	125.00	37107.07
* 7	100.00	35884.57
* 8	77.00	34262.77
* 9	60.00	32982.84
*10	50.00	32152.82
*11	40.00	31021.33
*12	30.00	29952.34
*13	15.00	25729.35
*14	6.00	21430.19
*15	3.00	18949.86

Brown trout

	DISCHARGE	Juvenile
* 1	400.00	5503.07
* 2	300.00	6902.29
* 3	200.00	8111.20
* 4	165.00	8229.68
* 5	150.00	8172.81
* 6	125.00	8004.98
* 7	100.00	7650.24
* 8	77.00	7169.48
* 9	60.00	6737.33
*10	50.00	6454.05
*11	40.00	6118.89
*12	30.00	5673.90
*13	15.00	4460.93
*14	6.00	2644.67
*15	3.00	1698.76

Rainbow trout

	DISCHARGE	Juvenile
* 1	400.00	5437.98
* 2	300.00	6676.43
* 3	200.00	8045.25
* 4	165.00	8364.94
* 5	150.00	8434.87
* 6	125.00	8458.54
* 7	100.00	8354.76
* 8	77.00	7973.72
* 9	60.00	7573.77
*10	50.00	7275.43
*11	40.00	6887.36
*12	30.00	6384.13
*13	15.00	5069.60
*14	6.00	3233.31
*15	3.00	2173.76

Big Thompson River Total habitat, Fry
Data collected 1992
TOTAL AREA

	DISCHARGE	AREA
* 1	400.00	41793.96
* 2	300.00	41039.82
* 3	200.00	39435.04
* 4	165.00	38483.64
* 5	150.00	37988.34
* 6	125.00	37105.24
* 7	100.00	35880.89
* 8	77.00	34262.77
* 9	60.00	32982.84
*10	50.00	32188.16
*11	40.00	31024.14
*12	30.00	29971.00
*13	15.00	25732.96
*14	6.00	21436.21
*15	3.00	18975.51

Brown trout

	DISCHARGE	Fingerli
* 1	400.00	5444.23
* 2	300.00	5894.99
* 3	200.00	6499.11
* 4	165.00	6799.50
* 5	150.00	6890.02
* 6	125.00	7009.44
* 7	100.00	6862.47
* 8	77.00	6532.05
* 9	60.00	6298.87
*10	50.00	6201.88
*11	40.00	6075.55
*12	30.00	5858.87
*13	15.00	5310.02
*14	6.00	3667.51
*15	3.00	2048.67

Rainbow trout

	DISCHARGE	Fingerli
* 1	400.00	4825.53
* 2	300.00	5598.51
* 3	200.00	5624.66
* 4	165.00	5946.98
* 5	150.00	6188.17
* 6	125.00	6518.80
* 7	100.00	6744.72
* 8	77.00	7220.12
* 9	60.00	7648.62
*10	50.00	8030.25
*11	40.00	8391.58
*12	30.00	8492.79
*13	15.00	7534.45
*14	6.00	6117.21
*15	3.00	4618.58

APPENDIX D - INPUT HYDROLOGY DATA

AVERAGE DAILY FLOWS

BIG THOMPSON RIVER FLOWS (CFS) **NO POWER**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1988	1	43	68	35	15	16	19	31	100	359	336	136	64
1988	2	43	71	42	15	16	17	36	124	255	287	136	65
1988	3	42	68	43	16	16	17	41	127	203	265	170	63
1988	4	43	63	37	16	16	18	42	129	265	257	195	62
1988	5	43	63	34	15	16	18	43	122	485	249	199	61
1988	6	43	62	31	15	16	19	49	118	629	257	184	59
1988	7	43	61	29	16	16	19	57	124	643	250	179	58
1988	8	43	60	28	16	16	19	68	124	650	214	181	53
1988	9	41	58	26	16	17	21	66	109	629	186	137	50
1988	10	40	56	24	16	17	23	62	120	629	166	112	49
1988	11	40	58	24	17	17	23	64	115	622	166	100	52
1988	12	40	56	23	19	18	21	67	111	622	167	91	57
1988	13	40	57	23	22	18	21	70	120	589	164	85	77
1988	14	68	56	21	22	18	21	77	140	484	163	83	131
1988	15	82	59	20	22	19	24	86	254	392	160	80	159
1988	16	80	56	20	22	20	25	89	345	411	158	79	149
1988	17	78	59	21	22	20	26	98	302	538	157	79	149
1988	18	76	53	22	22	20	26	100	358	664	155	80	147
1988	19	66	54	23	21	20	24	104	459	708	158	80	142
1988	20	52	46	23	21	19	26	96	498	726	155	76	147
1988	21	46	34	23	21	19	28	96	289	719	152	73	147
1988	22	47	34	22	21	19	25	102	176	711	150	71	124
1988	23	49	33	21	20	20	25	96	165	741	147	70	116
1988	24	48	32	20	21	19	28	92	165	583	143	69	127
1988	25	49	33	18	20	19	25	91	187	557	130	67	131
1988	26	49	38	16	20	19	26	87	244	537	126	69	130
1988	27	61	32	16	19	19	26	84	300	532	128	69	143
1988	28	68	28	15	17	19	28	83	135	450	130	72	145
1988	29	68	30	15	17	19	21	83	146	403	132	73	150
1988	30	69	34	15	17	999999	29	81	219	388	135	69	40
1988	31	69	999999	14	17	999999	25	999999	375	999999	137	66	999999
1989	1	106	79	20	18	16	18	38	78	194	236	296	103
1989	2	108	53	20	18	15	18	37	80	179	204	326	99
1989	3	107	35	20	18	14	18	36	77	298	187	329	97
1989	4	76	34	21	19	14	17	32	75	292	179	304	93
1989	5	48	32	22	20	15	16	35	72	216	179	263	97
1989	6	46	32	21	20	15	16	36	70	194	195	246	88
1989	7	47	34	20	19	16	19	36	70	189	325	234	88
1989	8	47	35	20	18	16	23	37	83	191	305	219	98
1989	9	46	34	21	18	17	25	41	125	196	287	201	97
1989	10	42	35	21	18	17	34	36	138	238	283	186	92
1989	11	43	36	21	18	17	43	42	136	207	276	183	92
1989	12	47	32	22	18	17	44	41	140	308	265	189	94
1989	13	44	36	21	18	17	44	39	139	335	256	199	96
1989	14	42	36	20	18	17	41	42	158	231	249	208	99
1989	15	43	38	18	19	17	39	40	148	181	245	218	115
1989	16	42	29	18	20	17	39	40	193	198	234	222	142
1989	17	42	30	19	20	17	38	44	184	195	223	224	151
1989	18	41	35	20	20	17	36	48	174	185	236	213	145
1989	19	40	28	20	18	18	36	55	180	185	223	199	143
1989	20	41	28	20	17	18	37	64	177	260	212	187	139
1989	21	42	33	20	17	18	31	72	178	183	193	176	133
1989	22	41	34	20	16	18	37	83	175	181	182	169	128
1989	23	39	38	20	16	18	37	136	177	180	171	165	127
1989	24	40	37	19	16	18	37	170	188	178	178	158	116
1989	25	60	30	18	17	18	37	187	190	176	176	151	111
1989	26	86	27	18	16	18	39	190	225	175	180	144	111
1989	27	85	23	17	16	17	39	194	199	171	182	139	112
1989	28	84	23	17	16	17	39	115	184	219	172	129	111
1989	29	83	22	17	17	999999	41	77	187	209	209	122	114
1989	30	82	21	18	17	999999	38	75	225	163	248	115	101
1989	31	81	999999	18	17	999999	35	999999	215	999999	273	110	999999

(Note: 999999 = no data)

**BIG THOMPSON RIVER FLOWS (CFS)
NO POWER**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1990	1	93	54	21	19	29	26	71	166	270	183	168	95
1990	2	85	40	17	20	30	26	80	172	262	184	169	105
1990	3	84	42	21	20	30	27	96	147	228	188	161	103
1990	4	77	42	22	19	30	27	103	131	229	194	164	96
1990	5	78	39	23	20	30	27	120	128	267	192	164	94
1990	6	74	40	22	21	24	34	106	129	292	185	161	98
1990	7	66	38	23	21	20	29	111	131	453	175	156	94
1990	8	60	37	21	21	19	33	115	158	440	183	145	89
1990	9	61	38	20	21	20	36	116	170	412	229	134	89
1990	10	61	39	21	21	20	37	112	164	433	209	127	96
1990	11	43	37	20	21	20	46	103	172	475	207	127	91
1990	12	35	37	20	21	20	49	108	172	548	195	150	85
1990	13	57	37	20	21	19	57	120	168	556	180	155	80
1990	14	62	37	20	21	19	47	121	166	360	175	160	80
1990	15	48	34	19	21	17	50	137	183	326	174	159	80
1990	16	61	23	18	21	16	50	170	185	302	178	149	77
1990	17	64	42	18	20	17	50	185	183	235	176	149	75
1990	18	63	41	18	20	18	41	166	170	206	158	150	77
1990	19	58	44	19	21	20	41	172	171	245	184	145	85
1990	20	64	41	18	20	21	50	186	180	221	195	139	78
1990	21	61	46	17	21	21	59	190	180	203	222	138	78
1990	22	61	42	17	20	27	70	204	180	213	213	134	77
1990	23	63	40	19	20	25	73	235	186	209	214	132	75
1990	24	64	41	19	20	26	56	242	191	212	192	128	75
1990	25	62	37	19	22	26	55	251	195	214	187	125	70
1990	26	61	33	21	28	26	58	196	190	215	182	111	64
1990	27	59	21	21	28	26	59	154	195	225	179	101	66
1990	28	58	12	21	28	26	64	148	195	198	177	97	72
1990	29	54	8	20	29	999999	64	143	283	194	180	96	70
1990	30	54	13	20	29	999999	63	136	273	194	181	87	72
1990	31	57	999999	20	28	999999	61	999999	271	999999	175	89	999999
1991	1	72	47	32	20	17	18	23	38	299	194	178	130
1991	2	72	44	22	20	17	18	22	49	833	188	182	132
1991	3	70	47	17	20	17	18	22	50	596	185	205	130
1991	4	64	46	21	20	16	19	21	49	383	180	219	127
1991	5	61	46	40	20	17	19	22	57	325	171	204	125
1991	6	62	49	35	20	17	20	22	55	321	170	193	126
1991	7	68	38	27	20	17	18	22	44	348	166	190	125
1991	8	77	46	25	20	18	14	20	45	351	161	187	123
1991	9	79	45	31	20	18	17	29	56	320	166	186	121
1991	10	77	47	32	19	18	24	34	61	322	160	185	119
1991	11	75	42	37	17	18	23	35	94	303	150	182	117
1991	12	74	40	33	17	18	21	35	115	293	162	180	115
1991	13	71	40	40	16	18	18	35	115	293	153	189	116
1991	14	67	34	30	16	18	20	35	114	280	148	193	114
1991	15	67	33	22	16	17	19	36	120	278	146	183	105
1991	16	68	40	22	16	17	18	35	153	271	144	162	95
1991	17	70	39	23	16	17	21	38	159	245	153	152	89
1991	18	66	39	23	16	17	21	42	156	230	162	144	88
1991	19	58	40	23	17	16	27	44	160	227	172	157	87
1991	20	63	43	21	17	16	24	44	173	221	180	154	80
1991	21	70	36	18	17	17	22	41	175	226	207	158	78
1991	22	66	23	16	17	17	23	42	189	243	187	154	83
1991	23	61	27	18	17	17	19	37	218	234	205	154	85
1991	24	63	31	19	17	17	24	42	182	223	198	152	85
1991	25	65	39	19	17	17	22	31	181	215	210	149	89
1991	26	67	37	22	17	17	22	45	189	207	208	151	78
1991	27	64	31	22	17	18	24	45	192	204	197	153	77
1991	28	65	22	22	17	18	21	45	185	202	190	162	76
1991	29	56	14	23	17	999999	23	46	175	204	186	156	70
1991	30	53	29	23	17	999999	20	36	172	201	182	147	75
1991	31	52	999999	23	17	999999	23	999999	173	999999	176	137	999999

(Note: 999999 = no data)

**BIG THOMPSON RIVER FLOWS (CFS)
NO POWER**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1992	1	75	36	22	41	33	38	49	142	199	189	148	999999
1992	2	72	34	23	41	33	38	50	163	202	181	152	999999
1992	3	67	40	29	41	33	38	50	156	196	179	146	999999
1992	4	62	55	53	40	34	45	52	155	193	175	141	999999
1992	5	62	59	60	40	34	43	52	155	194	173	141	999999
1992	6	63	49	59	40	34	39	58	156	191	175	139	999999
1992	7	60	41	45	39	34	36	51	127	189	171	136	999999
1992	8	67	43	47	39	35	38	55	145	190	181	130	999999
1992	9	72	42	44	39	35	38	56	156	192	179	126	999999
1992	10	67	43	44	38	35	36	58	153	196	174	126	999999
1992	11	63	42	44	38	36	37	64	143	202	180	133	999999
1992	12	65	39	45	38	36	44	64	148	211	183	139	999999
1992	13	77	39	45	38	36	45	67	149	205	177	137	999999
1992	14	81	39	45	37	37	45	67	156	200	168	133	999999
1992	15	79	39	46	37	37	44	73	157	217	166	116	999999
1992	16	78	38	47	36	37	44	103	211	197	166	105	999999
1992	17	77	37	47	36	38	43	124	198	193	165	109	999999
1992	18	68	39	47	35	38	47	129	186	190	161	111	999999
1992	19	61	39	47	35	38	44	126	188	189	160	116	999999
1992	20	70	34	46	35	39	42	120	188	196	165	107	999999
1992	21	63	41	46	34	39	42	114	206	215	158	108	999999
1992	22	60	32	45	34	39	41	112	219	206	155	102	999999
1992	23	60	20	45	33	39	42	111	212	199	156	111	999999
1992	24	62	30	44	33	39	41	105	217	199	156	127	999999
1992	25	63	46	44	33	39	38	104	228	207	160	145	999999
1992	26	64	48	44	32	38	39	97	219	225	159	147	999999
1992	27	65	41	43	32	38	39	96	223	236	153	135	999999
1992	28	57	38	43	32	38	50	102	212	218	152	125	999999
1992	29	42	33	42	31	38	51	104	187	216	145	104	999999
1992	30	36	26	42	32	999999	50	107	199	201	142	89	999999
1992	31	29	999999	42	32	999999	51	999999	202	999999	147	83	999999

(Note: 999999 = no data)

BIG THOMPSON AVERAGE RIVER FLOWS (CFS) **POWER**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1988	1	43.00	68.00	35.00	3.00	3.00	4.10	12.50	56.30	309.10	286.70	85.70	16.70
1988	2	43.00	71.00	42.00	3.00	3.00	3.00	15.60	124.00	205.20	237.80	85.70	65.00
1988	3	42.00	68.00	43.00	3.00	3.00	3.00	14.10	83.30	154.10	215.80	119.50	15.50
1988	4	43.00	63.00	37.00	3.00	3.00	3.00	14.70	86.20	265.00	207.80	144.60	14.50
1988	5	43.00	63.00	34.00	3.00	4.90	3.00	17.20	78.70	435.50	199.80	148.70	13.90
1988	6	43.00	62.00	31.00	3.00	16.00	4.50	49.00	74.10	580.40	211.20	133.70	12.20
1988	7	43.00	61.00	29.00	3.00	16.00	3.00	57.00	78.20	597.00	202.90	128.80	12.30
1988	8	43.00	60.00	28.00	3.00	3.00	3.00	68.00	78.60	601.70	164.20	130.80	12.50
1988	9	41.00	58.00	26.00	3.00	3.00	3.00	66.00	63.90	581.00	136.10	86.90	16.40
1988	10	40.00	56.00	24.00	3.00	3.00	3.00	62.00	76.20	581.40	116.20	62.00	14.10
1988	11	40.00	58.00	24.00	3.00	3.00	3.00	64.00	70.20	575.00	131.50	100.00	14.30
1988	12	40.00	56.00	23.00	4.90	3.00	4.90	67.00	67.60	576.50	123.80	41.20	54.80
1988	13	40.00	57.00	23.00	12.30	3.70	3.00	70.00	76.20	544.90	114.20	35.30	77.00
1988	14	68.00	56.00	21.00	13.40	5.90	3.00	77.00	96.20	440.30	113.30	33.40	81.20
1988	15	82.00	59.00	20.00	10.30	8.30	3.00	86.00	209.70	347.50	110.10	30.30	108.60
1988	16	80.00	56.00	20.00	9.30	3.00	7.10	89.00	299.80	411.00	108.30	29.50	98.40
1988	17	78.00	59.00	21.00	13.30	8.70	9.30	98.00	256.50	508.20	107.30	29.50	98.50
1988	18	76.00	53.00	22.00	13.50	6.00	11.00	100.00	324.60	634.70	105.30	30.50	96.50
1988	19	66.00	54.00	23.00	10.60	20.00	5.80	104.00	450.70	678.10	108.30	30.50	91.50
1988	20	52.00	46.00	23.00	12.10	6.20	12.40	96.00	493.40	693.00	105.30	26.70	97.80
1988	21	46.00	34.00	23.00	11.60	5.00	11.20	96.00	289.00	680.40	102.30	24.40	96.70
1988	22	47.00	34.00	22.00	10.50	6.70	8.30	102.00	176.00	664.00	101.70	22.40	73.70
1988	23	49.00	33.00	21.00	9.70	9.80	9.40	46.90	165.00	692.50	96.60	21.50	65.70
1988	24	48.00	32.00	20.00	12.00	3.00	7.10	42.90	165.00	534.30	92.50	20.30	76.70
1988	25	49.00	33.00	18.00	10.60	5.30	6.90	43.90	187.00	508.30	79.50	18.50	80.70
1988	26	49.00	38.00	16.00	13.80	4.80	10.30	39.90	244.00	488.20	75.50	20.40	79.70
1988	27	61.00	32.00	16.00	3.00	4.30	8.40	36.70	300.00	483.10	77.40	20.70	92.50
1988	28	68.00	28.00	15.00	3.00	3.20	6.80	37.00	85.30	401.00	79.50	23.60	94.70
1988	29	68.00	30.00	15.00	3.00	3.00	3.00	39.90	96.20	353.80	81.50	24.60	99.80
1988	30	69.00	34.00	15.00	3.00	999999.00	14.60	39.00	169.10	338.60	84.50	21.00	3.00
1988	31	69.00	999999.00	14.00	3.00	999999.00	5.30	999999.00	325.00	999999.00	86.50	18.50	999999.00
1989	1	56.00	29.20	3.00	18.00	3.00	18.00	11.00	29.30	194.00	187.90	246.00	53.10
1989	2	58.00	12.40	3.70	18.00	3.00	18.00	13.30	31.40	134.30	155.80	276.00	49.20
1989	3	107.00	16.60	6.60	18.00	3.00	3.00	10.40	28.80	248.40	138.60	278.90	47.20
1989	4	29.40	13.80	8.80	19.00	14.00	3.00	11.50	26.70	242.60	130.40	253.90	43.20
1989	5	25.20	12.40	7.00	20.00	15.00	5.00	10.90	24.00	166.60	129.80	212.90	46.40
1989	6	22.70	11.70	6.10	20.00	15.00	3.00	7.80	22.30	144.40	145.90	195.90	38.30
1989	7	22.10	12.70	3.00	19.00	3.00	3.00	7.10	22.60	139.50	274.50	183.80	38.30
1989	8	24.30	8.90	3.00	18.00	7.90	3.00	28.90	35.60	141.70	255.50	168.80	52.80
1989	9	25.00	11.00	3.10	18.00	17.00	3.00	33.90	78.80	146.80	237.50	150.90	47.60
1989	10	19.80	35.00	3.00	18.00	17.00	34.00	27.50	91.50	189.00	233.40	135.90	42.70
1989	11	43.00	13.40	3.00	18.00	17.00	8.10	32.40	89.30	158.30	226.30	132.80	42.70
1989	12	12.80	10.30	5.50	18.00	10.70	9.70	11.30	93.20	259.40	215.20	138.70	44.90
1989	13	44.00	15.30	21.00	18.00	17.00	9.70	10.70	92.10	286.90	256.00	148.70	46.90
1989	14	26.00	36.00	3.70	18.00	17.00	11.10	8.90	110.90	183.00	199.20	157.70	49.90
1989	15	43.00	3.80	5.90	19.00	17.00	9.80	10.90	148.00	133.70	195.10	167.70	65.80
1989	16	42.00	10.90	4.30	20.00	17.00	9.70	10.90	193.00	150.70	184.10	171.80	92.80
1989	17	42.00	30.00	3.00	20.00	17.00	8.90	12.50	184.00	147.80	173.20	224.00	101.80
1989	18	41.00	8.60	7.20	20.00	17.00	9.60	48.00	174.00	138.20	186.10	162.80	95.70
1989	19	40.00	15.50	3.00	3.00	18.00	8.50	55.00	180.00	138.20	173.10	148.80	93.70
1989	20	41.00	15.00	3.70	17.00	18.00	9.00	64.00	177.00	224.80	162.20	136.80	89.60
1989	21	9.10	14.00	5.30	17.00	18.00	31.00	25.20	178.00	158.10	143.20	125.80	83.90
1989	22	28.40	12.40	5.90	16.00	18.00	37.00	34.70	175.00	144.80	132.20	118.80	82.90
1989	23	32.70	38.00	20.00	16.00	18.00	37.00	87.20	177.00	131.70	121.20	114.80	77.70
1989	24	32.60	37.00	3.80	3.00	18.00	27.50	121.80	188.00	129.70	128.20	107.90	78.60
1989	25	34.10	11.80	3.00	3.00	18.00	37.00	140.40	190.00	127.70	126.20	100.90	61.80
1989	26	39.70	15.30	3.00	3.00	18.00	39.00	147.30	225.00	126.50	130.20	93.90	61.70
1989	27	35.20	23.00	3.00	5.30	17.00	39.00	149.60	199.00	122.50	132.20	89.00	62.70
1989	28	34.20	3.00	3.00	3.40	17.00	39.00	66.10	184.00	170.50	123.70	129.00	61.70
1989	29	33.20	3.00	3.00	5.70	999999.00	24.90	28.10	187.00	160.60	159.20	72.00	64.90
1989	30	32.50	3.00	18.00	3.00	999999.00	10.20	26.20	225.00	114.90	198.10	65.10	51.80
1989	31	29.30	999999.00	3.20	4.70	999999.00	10.20	999999.00	215.00	999999.00	223.00	60.10	999999.00
1990	1	51.10	12.70	3.00	3.00	3.00	26.00	26.70	116.20	239.40	138.80	120.40	48.10
1990	2	36.40	3.00	3.00	3.00	3.00	3.00	39.20	122.30	230.80	184.00	120.60	58.70
1990	3	37.90	6.10	3.00	3.00	3.00	3.00	51.60	97.30	196.80	143.70	114.00	103.00
1990	4	77.00	3.00	3.00	3.00	3.00	3.00	59.00	82.00	198.50	149.30	164.00	50.80
1990	5	78.00	16.50	3.00	3.00	3.00	27.00	75.80	79.00	228.00	147.50	164.00	47.80
1990	6	25.90	17.30	3.00	3.00	3.00	21.20	62.70	80.00	242.00	155.20	113.40	51.50
1990	7	16.90	17.60	3.00	3.00	3.00	3.00	67.00	82.70	403.00	145.30	107.20	49.60
1990	8	16.20	3.00	3.00	3.00	3.00	3.00	71.10	109.20	393.20	153.30	99.80	43.90
1990	9	14.90	38.00	3.00	3.00	3.00	3.00	72.10	121.20	369.80	199.90	91.90	43.90
1990	10	19.40	3.10	3.00	3.00	3.00	3.00	68.40	115.20	392.80	209.00	89.00	51.00
1990	11	19.70	3.00	3.00	3.00	3.00	5.30	60.60	123.30	434.80	161.10	86.20	46.20
1990	12	3.00	3.00	3.00	3.00	3.00	8.60	67.40	123.20	548.00	146.40	101.30	42.40
1990	13	23.60	3.00	3.00	3.00	3.00	15.60	79.10	119.50	556.00	131.20	106.30	80.00
1990	14	23.50	14.50	3.00	3.00	3.00	5.60	78.70	117.60	331.00	126.20	111.20	37.30
1990	15	10.90	3.00	3.00	3.00	3.00	9.40	92.90	183.00	296.60	125.20	110.20	35.50
1990	16	22.50	3.00	3.00	3.00	3.00	11.90	125.70	185.00	272.60	129.60	100.20	32.50
1990	17	25.50	5.70	3.00	3.00	3.00	9.10	136.30	183.00	205.60	127.50	100.30	30.50
1990	18	24.40	3.00	3.00	3.00	3.00	3.00	116.50	170.00	168.20	109.60	101.30	33.30
1990	19	19.10	4.40	3.00	3.00	3.00	3.00	122.40	171.00	196.80	135.70	96.30	41.80

(Note: 999999 = no data)

BIG THOMPSON AVERAGE RIVER FLOWS (CFS) **POWER**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1990	20	30.80	3.00	3.00	3.00	3.00	9.60	136.30	180.00	172.40	147.20	90.70	34.70
1990	21	22.60	6.40	3.00	3.00	3.00	18.40	140.20	180.00	154.50	173.80	90.50	34.90
1990	22	22.00	6.90	3.00	3.00	3.00	29.30	154.10	180.00	164.70	166.80	86.20	34.10
1990	23	25.00	3.00	3.00	3.00	3.00	36.10	185.70	186.00	161.10	165.90	84.00	32.20
1990	24	25.60	3.00	3.00	3.00	3.00	15.70	192.10	191.00	164.80	143.20	80.20	32.30
1990	25	21.60	5.90	3.00	3.00	3.00	13.90	201.00	195.00	167.50	138.20	77.10	27.50
1990	26	61.00	33.00	3.00	3.00	3.00	17.30	146.00	190.00	169.80	182.00	63.10	21.80
1990	27	18.40	12.20	3.00	3.00	3.00	15.10	104.10	195.00	181.70	130.20	53.20	23.90
1990	28	17.20	3.00	3.00	3.00	3.00	20.40	98.20	195.00	153.90	128.20	49.20	32.90
1990	29	54.00	8.00	3.00	3.00	999999.00	20.60	93.20	283.00	149.80	131.20	48.30	70.00
1990	30	13.10	3.00	3.00	3.00	999999.00	22.80	86.20	273.00	149.80	132.20	39.70	72.00
1990	31	16.30	999999.00	3.00	3.00	999999.00	18.60	999999.00	271.00	999999.00	126.30	42.00	999999.00
1991	1	72.00	47.00	3.00	20.00	17.00	3.00	3.00	13.90	255.40	194.00	178.00	130.00
1991	2	72.00	44.00	3.00	20.00	17.00	3.00	3.00	25.20	816.40	188.00	182.00	132.00
1991	3	70.00	47.00	17.00	20.00	17.00	3.00	3.00	26.20	549.00	185.00	205.00	130.00
1991	4	64.00	46.00	3.00	20.00	16.00	3.00	21.00	25.20	334.30	180.00	219.00	127.00
1991	5	61.00	46.00	3.90	20.00	17.00	3.00	22.00	33.40	276.10	171.00	204.00	125.00
1991	6	62.00	49.00	3.00	20.00	17.00	3.00	22.00	31.30	272.20	170.00	193.00	126.00
1991	7	68.00	38.00	3.00	20.00	17.00	18.00	22.00	21.00	301.10	166.00	190.00	125.00
1991	8	77.00	46.00	3.00	20.00	18.00	14.00	20.00	22.10	302.50	161.00	187.00	123.00
1991	9	79.00	45.00	3.00	20.00	18.00	17.00	29.00	32.70	271.50	166.00	186.00	121.00
1991	10	77.00	47.00	7.20	19.00	18.00	24.00	34.00	38.00	273.70	160.00	185.00	119.00
1991	11	75.00	42.00	3.00	17.00	18.00	3.00	35.00	70.40	254.60	150.00	182.00	117.00
1991	12	74.00	40.00	3.00	17.00	18.00	3.00	35.00	91.40	245.70	162.00	180.00	115.00
1991	13	71.00	40.00	3.00	16.00	18.00	3.00	35.00	91.30	245.40	153.00	189.00	116.00
1991	14	67.00	34.00	3.00	16.00	18.00	20.00	35.00	90.30	231.70	148.00	193.00	114.00
1991	15	67.00	33.00	22.00	16.00	17.00	3.00	36.00	96.30	233.90	146.00	183.00	105.00
1991	16	68.00	40.00	3.00	16.00	17.00	3.00	35.00	153.00	227.70	144.00	162.00	95.00
1991	17	70.00	39.00	3.00	16.00	17.00	3.00	38.00	135.60	201.70	153.00	152.00	89.00
1991	18	66.00	39.00	3.00	16.00	17.00	3.00	10.80	132.60	188.00	162.00	144.00	88.00
1991	19	58.00	40.00	3.00	17.00	16.00	17.80	3.00	136.70	190.60	172.00	157.00	87.00
1991	20	63.00	3.00	3.00	17.00	16.00	12.20	3.00	149.60	184.60	180.00	154.00	80.00
1991	21	70.00	3.00	3.00	17.00	17.00	3.00	9.90	175.00	226.00	207.00	158.00	78.00
1991	22	66.00	3.00	3.00	17.00	17.00	14.80	3.00	165.70	243.00	187.00	154.00	83.00
1991	23	61.00	3.00	3.00	17.00	17.00	7.40	37.00	194.60	234.00	205.00	154.00	85.00
1991	24	63.00	3.00	3.00	17.00	17.00	11.80	3.00	158.60	223.00	198.00	152.00	85.00
1991	25	65.00	3.00	3.00	17.00	17.00	22.00	31.00	181.00	215.00	210.00	149.00	89.00
1991	26	67.00	3.00	22.00	17.00	17.00	3.00	9.90	165.60	207.00	208.00	151.00	78.00
1991	27	64.00	3.00	22.00	17.00	18.00	3.00	21.60	192.00	204.00	197.00	153.00	77.00
1991	28	65.00	22.00	22.00	17.00	18.00	21.00	45.00	161.60	202.00	190.00	162.00	76.00
1991	29	56.00	3.00	23.00	17.00	999999.00	3.00	46.00	175.00	204.00	186.00	156.00	70.00
1991	30	53.00	3.00	23.00	17.00	999999.00	3.00	36.00	139.50	201.00	182.00	147.00	75.00
1991	31	52.00	999999.00	23.00	17.00	999999.00	3.00	999999.00	130.70	999999.00	176.00	137.00	999999.00
1992	1	75.00	36.00	22.00	11.20	9.10	9.80	7.30	142.00	171.20	140.90	100.40	999999.00
1992	2	72.00	34.00	6.00	19.00	6.40	9.80	6.00	163.00	152.20	133.20	104.10	999999.00
1992	3	67.00	40.00	6.00	14.80	6.00	38.00	6.00	156.00	146.30	131.60	98.00	999999.00
1992	4	62.00	55.00	12.90	12.10	10.50	45.00	8.10	108.10	143.40	128.30	93.00	999999.00
1992	5	62.00	24.10	20.40	14.20	13.00	43.00	8.50	108.20	144.50	126.80	93.00	999999.00
1992	6	63.00	14.10	27.70	15.50	7.80	39.00	13.80	110.80	141.60	129.00	91.00	999999.00
1992	7	60.00	6.10	6.00	11.20	11.40	10.30	8.80	82.00	140.00	124.50	88.10	999999.00
1992	8	67.00	43.00	6.80	12.30	8.90	11.20	19.20	145.00	141.50	134.10	82.00	999999.00
1992	9	72.00	42.00	6.00	16.90	8.60	38.00	9.90	156.00	144.00	131.80	78.10	999999.00
1992	10	67.00	43.00	6.00	13.40	9.60	6.00	15.30	153.00	148.90	126.60	126.00	999999.00
1992	11	63.00	42.00	6.20	10.20	10.90	10.20	17.90	143.00	154.80	132.80	133.00	999999.00
1992	12	65.00	39.00	9.60	11.10	36.00	14.80	18.20	101.00	211.00	135.60	139.00	999999.00
1992	13	77.00	39.00	11.40	11.80	36.00	12.90	21.30	100.40	205.00	129.00	137.00	999999.00
1992	14	81.00	39.00	18.90	14.00	37.00	11.00	21.90	107.50	155.30	119.90	133.00	999999.00
1992	15	79.00	6.00	15.30	9.70	37.00	11.00	26.50	157.00	173.00	117.90	116.00	999999.00
1992	16	78.00	7.70	10.90	11.60	37.00	44.00	68.30	211.00	153.50	117.90	105.00	999999.00
1992	17	77.00	6.00	7.70	6.00	38.00	10.40	96.40	198.00	149.50	116.90	109.00	999999.00
1992	18	68.00	6.00	47.00	12.50	38.00	9.10	100.80	186.00	146.80	113.00	111.00	999999.00
1992	19	61.00	9.00	6.00	12.20	38.00	6.00	98.20	188.00	145.70	112.00	116.00	999999.00
1992	20	70.00	7.70	6.00	10.50	39.00	6.00	93.60	188.00	151.80	117.00	107.00	999999.00
1992	21	63.00	7.60	10.90	8.70	39.00	6.00	87.60	206.00	170.20	110.00	108.00	999999.00
1992	22	60.00	9.40	6.60	11.60	39.00	6.00	82.00	219.00	159.40	106.90	102.00	999999.00
1992	23	60.00	6.00	7.70	12.70	39.00	6.00	77.10	212.00	199.00	107.90	111.00	999999.00
1992	24	62.00	6.00	14.40	7.50	39.00	6.00	65.60	217.00	151.60	108.00	127.00	999999.00
1992	25	63.00	12.40	44.00	6.00	39.00	6.00	57.60	228.00	158.70	111.90	145.00	999999.00
1992	26	64.00	6.00	13.20	6.00	38.00	39.00	50.00	219.00	176.70	110.90	147.00	999999.00
1992	27	65.00	6.00	11.50	6.00	38.00	39.00	49.10	223.00	187.70	104.90	135.00	999999.00
1992	28	57.00	38.00	11.90	6.00	9.60	50.00	54.90	212.00	169.70	103.70	125.00	999999.00
1992	29	42.00	6.00	6.00	6.00	38.00	6.00	60.50	140.70	167.10	96.70	104.00	999999.00
1992	30	36.00	7.80	6.00	6.40	999999.00	6.00	60.30	154.20	152.40	94.40	89.00	999999.00
1992	31	29.00	999999.00	13.40	6.00	999999.00	6.00	999999.00	174.10	999999.00	98.80	83.00	999999.00

(Note: 999999 = no data)

BIG THOMPSON AVERAGE RIVER FLOWS (CFS) **R2CROSS**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1988	1	43.00	68.00	35.00	15.00	16.00	19.00	20.00	56.30	309.10	286.70	86.00	50.00
1988	2	43.00	71.00	42.00	15.00	16.00	17.00	20.00	124.00	205.20	237.80	86.00	65.00
1988	3	42.00	68.00	43.00	16.00	16.00	17.00	20.00	83.30	154.20	215.80	120.00	50.00
1988	4	43.00	63.00	37.00	16.00	16.00	18.00	20.00	86.20	265.00	207.80	145.00	50.00
1988	5	43.00	63.00	34.00	15.00	16.00	18.00	20.00	78.70	435.50	199.80	149.00	50.00
1988	6	43.00	62.00	31.00	15.00	16.00	19.00	49.00	74.10	580.50	211.20	134.00	50.00
1988	7	43.00	61.00	29.00	16.00	16.00	19.00	57.00	78.20	597.00	202.90	129.00	50.00
1988	8	43.00	60.00	28.00	16.00	16.00	19.00	68.00	78.60	601.70	164.20	131.00	50.00
1988	9	41.00	58.00	26.00	16.00	17.00	20.00	66.00	64.00	581.00	136.10	87.00	50.00
1988	10	40.00	56.00	24.00	16.00	17.00	20.00	62.00	76.20	581.40	116.20	62.00	49.00
1988	11	40.00	58.00	24.00	17.00	17.00	20.00	64.00	70.20	575.00	131.50	100.00	50.00
1988	12	40.00	56.00	23.00	19.00	18.00	20.00	67.00	67.60	576.50	123.80	50.00	54.80
1988	13	40.00	57.00	23.00	20.00	18.00	20.00	70.00	76.20	544.90	114.20	50.00	77.00
1988	14	68.00	56.00	21.00	20.00	18.00	20.00	77.00	96.20	440.30	113.30	50.00	81.50
1988	15	82.00	59.00	20.00	20.00	19.00	20.00	86.00	209.70	347.50	110.30	50.00	109.00
1988	16	80.00	56.00	20.00	20.00	20.00	20.00	89.00	299.80	411.00	108.30	50.00	99.00
1988	17	78.00	59.00	21.00	20.00	20.00	20.00	98.00	256.50	508.20	107.30	50.00	99.00
1988	18	76.00	53.00	22.00	20.00	20.00	20.00	100.00	324.60	634.70	105.30	50.00	97.00
1988	19	66.00	54.00	23.00	20.00	20.00	20.00	104.00	450.70	678.10	108.30	50.00	92.00
1988	20	52.00	46.00	23.00	20.00	19.00	20.00	96.00	493.40	693.00	105.30	50.00	98.10
1988	21	46.00	34.00	23.00	20.00	19.00	20.00	96.00	289.00	680.50	102.30	50.00	97.00
1988	22	47.00	34.00	22.00	20.00	19.00	20.00	102.00	176.00	664.00	101.80	50.00	74.00
1988	23	49.00	33.00	21.00	20.00	20.00	20.00	46.90	165.00	692.50	97.00	50.00	66.00
1988	24	48.00	32.00	20.00	20.00	19.00	20.00	42.90	165.00	534.30	93.00	50.00	77.00
1988	25	49.00	33.00	18.00	20.00	19.00	20.00	43.90	187.00	508.30	80.00	50.00	81.00
1988	26	49.00	38.00	16.00	20.00	19.00	20.00	39.90	244.00	488.20	76.00	50.00	80.00
1988	27	61.00	32.00	16.00	19.00	19.00	20.00	36.70	300.00	483.10	78.00	50.00	93.00
1988	28	68.00	28.00	15.00	17.00	19.00	20.00	37.00	85.30	401.00	80.00	50.00	95.00
1988	29	68.00	30.00	15.00	17.00	19.00	20.00	39.90	96.20	353.80	82.00	50.00	100.00
1988	30	69.00	34.00	15.00	17.00	999999.00	20.00	39.00	169.10	338.70	85.00	50.00	40.00
1988	31	69.00	999999.00	14.00	17.00	999999.00	20.00	999999.00	325.00	999999.00	87.00	50.00	999999.00
1989	1	56.00	29.20	20.00	18.00	16.00	18.00	20.00	50.00	194.00	187.90	246.00	53.10
1989	2	58.00	20.00	20.00	18.00	15.00	18.00	20.00	50.00	134.30	155.80	276.00	50.00
1989	3	107.00	20.00	20.00	18.00	14.00	18.00	20.00	50.00	248.40	138.60	279.00	50.00
1989	4	50.00	20.00	20.00	19.00	14.00	17.00	20.00	50.00	242.60	130.40	254.00	50.00
1989	5	48.00	20.00	20.00	20.00	15.00	16.00	20.00	50.00	166.60	129.80	213.00	50.00
1989	6	46.00	20.00	20.00	20.00	15.00	16.00	20.00	50.00	144.40	145.90	196.00	50.00
1989	7	47.00	20.00	20.00	19.00	16.00	19.00	20.00	50.00	139.50	275.50	184.00	50.00
1989	8	47.00	20.00	20.00	18.00	16.00	20.00	28.90	50.00	141.70	255.50	169.00	52.80
1989	9	46.00	20.00	20.00	18.00	17.00	20.00	33.90	78.80	146.80	237.50	151.00	50.00
1989	10	42.00	35.00	20.00	18.00	17.00	34.00	27.50	91.50	189.00	233.40	136.00	50.00
1989	11	43.00	20.00	20.00	18.00	17.00	20.00	32.40	89.30	158.30	226.30	133.00	50.00
1989	12	47.00	20.00	20.00	18.00	17.00	20.00	20.00	93.20	259.40	215.20	139.00	50.00
1989	13	44.00	20.00	21.00	18.00	17.00	20.00	20.00	92.10	286.90	256.00	149.00	50.00
1989	14	42.00	36.00	20.00	18.00	17.00	20.00	20.00	110.90	183.00	199.20	158.00	50.00
1989	15	43.00	20.00	18.00	19.00	17.00	20.00	20.00	148.00	133.70	195.10	168.00	65.80
1989	16	42.00	20.00	18.00	20.00	17.00	20.00	20.00	193.00	150.70	184.10	172.00	92.80
1989	17	42.00	30.00	19.00	20.00	17.00	20.00	20.00	184.00	147.80	173.20	224.00	101.80
1989	18	41.00	20.00	20.00	20.00	17.00	20.00	48.00	174.00	138.20	186.10	163.00	95.70
1989	19	40.00	20.00	20.00	18.00	18.00	20.00	55.00	180.00	138.20	173.10	149.00	93.70
1989	20	41.00	20.00	20.00	17.00	18.00	20.00	64.00	177.00	224.80	162.20	137.00	89.60
1989	21	42.00	20.00	20.00	17.00	18.00	31.00	25.20	178.00	158.10	143.20	126.00	83.90
1989	22	41.00	20.00	20.00	16.00	18.00	37.00	34.70	175.00	144.80	132.20	119.00	82.90
1989	23	39.00	38.00	20.00	16.00	18.00	37.00	87.20	177.00	131.70	121.20	115.00	77.70
1989	24	40.00	37.00	19.00	16.00	18.00	27.50	121.80	188.00	129.70	128.20	108.00	78.60
1989	25	50.00	20.00	18.00	17.00	18.00	37.00	140.40	190.00	127.70	126.20	101.00	61.80
1989	26	50.00	20.00	18.00	16.00	18.00	39.00	147.30	225.00	126.50	130.20	94.00	61.70
1989	27	50.00	23.00	17.00	16.00	17.00	39.00	149.60	199.00	122.50	132.20	89.00	62.70
1989	28	50.00	20.00	17.00	16.00	17.00	39.00	66.10	184.00	170.50	123.70	129.00	61.70
1989	29	50.00	20.00	17.00	17.00	999999.00	24.90	28.10	187.00	160.60	159.20	72.00	64.90
1989	30	50.00	20.00	18.00	17.00	999999.00	20.00	26.20	225.00	114.90	198.10	65.10	51.80
1989	31	50.00	999999.00	18.00	17.00	999999.00	20.00	999999.00	215.00	999999.00	223.00	60.10	999999.00
1990	1	51.10	20.00	20.00	19.00	20.00	26.00	26.70	116.20	239.40	138.80	120.40	50.00
1990	2	50.00	20.00	17.00	20.00	20.00	20.00	39.20	122.30	230.80	184.00	120.60	59.70
1990	3	50.00	20.00	20.00	20.00	20.00	20.00	51.60	97.30	196.80	143.70	114.00	103.00
1990	4	77.00	20.00	20.00	19.00	20.00	20.00	59.00	82.00	198.50	149.30	164.00	50.80
1990	5	78.00	20.00	20.00	20.00	20.00	27.00	75.80	79.00	228.10	147.50	164.00	50.00
1990	6	50.00	20.00	20.00	20.00	20.00	21.20	62.70	80.00	242.00	155.20	113.40	51.50
1990	7	50.00	20.00	20.00	20.00	20.00	20.00	67.00	82.70	403.10	145.30	107.20	50.00
1990	8	50.00	20.00	20.00	20.00	19.00	20.00	71.10	109.20	393.20	153.30	99.80	50.00
1990	9	50.00	38.00	20.00	20.00	20.00	20.00	72.10	121.20	369.80	199.90	91.90	50.00
1990	10	50.00	20.00	20.00	20.00	20.00	20.00	68.40	115.20	392.80	209.00	89.00	51.00
1990	11	43.00	20.00	20.00	20.00	20.00	20.00	60.60	123.30	434.80	161.10	86.20	50.00
1990	12	35.00	20.00	20.00	20.00	20.00	20.00	67.40	123.20	548.00	146.40	101.30	50.00
1990	13	50.00	20.00	20.00	20.00	19.00	20.00	79.10	119.50	556.00	131.20	106.30	80.00
1990	14	50.00	20.00	20.00	20.00	19.00	20.00	78.70	117.60	331.00	126.20	111.20	50.00
1990	15	48.00	20.00	19.00	20.00	17.00	20.00	92.90	183.00	296.60	125.20	110.20	50.00
1990	16	50.00	20.00	18.00	20.00	16.00	20.00	125.70	185.00	272.60	129.60	100.20	50.00
1990	17	50.00	20.00	18.00	20.00	17.00	20.00	136.30	183.00	205.60	127.50	100.30	50.00
1990	18	50.00	20.00	18.00	20.00	18.00	20.00	116.50	170.00	168.20	109.60	101.30	50.00
1990	19	50.00	20.00	19.00	20.00	20.00	20.00	122.40	171.00	196.80	135.70	96.30	50.00
1990	20	50.00	20.00	18.00	20.00	20.00	20.00	136.30	180.00	172.40	147.20	90.70	50.00

Note: 999999 = no data)

BIG THOMPSON AVERAGE RIVER FLOWS (CFS) **R2CROSS**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1990	21	50.00	20.00	17.00	20.00	20.00	20.00	140.20	180.00	154.50	173.80	90.50	50.00
1990	22	50.00	20.00	17.00	20.00	20.00	29.30	154.10	180.00	164.70	166.80	86.20	50.00
1990	23	50.00	20.00	19.00	20.00	20.00	36.10	185.70	186.00	161.10	165.90	84.00	50.00
1990	24	50.00	20.00	19.00	20.00	20.00	20.00	192.10	191.00	164.80	143.20	80.20	50.00
1990	25	50.00	20.00	19.00	20.00	20.00	20.00	201.10	195.00	167.50	138.20	77.10	50.00
1990	26	61.00	33.00	20.00	20.00	20.00	20.00	146.00	190.00	169.80	182.00	63.10	50.00
1990	27	50.00	20.00	20.00	20.00	20.00	20.00	104.10	195.00	181.70	130.20	53.20	50.00
1990	28	50.00	12.00	21.00	20.00	20.00	20.40	98.20	195.00	153.90	128.20	50.00	50.00
1990	29	54.00	8.00	20.00	20.00	999999.00	20.60	93.20	283.00	149.80	131.20	50.00	70.00
1990	30	50.00	13.00	20.00	20.00	999999.00	22.80	86.20	273.00	149.80	132.20	50.00	72.00
1990	31	50.00	999999.00	20.00	20.00	999999.00	20.00	999999.00	271.00	999999.00	126.30	50.00	999999.00
1991	1	72.00	47.00	20.00	20.00	17.00	18.00	20.00	38.00	255.40	194.00	178.00	130.00
1991	2	72.00	44.00	20.00	20.00	17.00	18.00	20.00	49.00	816.40	188.00	182.00	132.00
1991	3	70.00	47.00	17.00	20.00	17.00	18.00	20.00	50.00	549.10	185.00	205.00	130.00
1991	4	64.00	46.00	20.00	20.00	16.00	19.00	21.00	49.00	334.30	180.00	219.00	127.00
1991	5	61.00	46.00	20.00	20.00	17.00	19.00	22.00	50.00	276.10	171.00	204.00	125.00
1991	6	62.00	49.00	20.00	20.00	17.00	20.00	22.00	50.00	272.20	170.00	193.00	126.00
1991	7	68.00	38.00	20.00	20.00	17.00	18.00	22.00	44.00	301.10	166.00	190.00	125.00
1991	8	77.00	46.00	20.00	20.00	18.00	14.00	20.00	45.00	302.50	161.00	187.00	123.00
1991	9	79.00	45.00	20.00	20.00	18.00	17.00	29.00	50.00	271.60	166.00	186.00	121.00
1991	10	77.00	47.00	20.00	19.00	18.00	24.00	34.00	50.00	273.70	160.00	185.00	119.00
1991	11	75.00	42.00	20.00	17.00	18.00	20.00	35.00	70.40	254.70	150.00	182.00	117.00
1991	12	74.00	40.00	20.00	17.00	18.00	20.00	35.00	91.40	245.70	162.00	180.00	115.00
1991	13	71.00	40.00	20.00	16.00	18.00	18.00	35.00	91.30	245.60	153.00	189.00	116.00
1991	14	67.00	34.00	20.00	16.00	18.00	20.00	35.00	90.30	231.70	148.00	193.00	114.00
1991	15	67.00	33.00	22.00	16.00	17.00	19.00	36.00	96.30	233.90	146.00	183.00	105.00
1991	16	68.00	40.00	20.00	16.00	17.00	18.00	35.00	153.00	227.70	144.00	162.00	95.00
1991	17	70.00	39.00	20.00	16.00	17.00	20.00	38.00	135.60	201.70	153.00	152.00	89.00
1991	18	66.00	39.00	20.00	16.00	17.00	20.00	20.00	132.60	188.00	162.00	144.00	88.00
1991	19	59.00	40.00	20.00	17.00	16.00	20.00	20.00	136.70	190.60	172.00	157.00	87.00
1991	20	63.00	20.00	20.00	17.00	16.00	20.00	20.00	149.60	184.60	180.00	154.00	80.00
1991	21	70.00	20.00	18.00	17.00	17.00	20.00	20.00	175.00	226.00	207.00	158.00	78.00
1991	22	66.00	20.00	16.00	17.00	17.00	20.00	20.00	189.00	243.00	187.00	154.00	83.00
1991	23	61.00	27.00	18.00	17.00	17.00	19.00	37.00	194.60	234.00	205.00	154.00	85.00
1991	24	63.00	20.00	19.00	17.00	17.00	20.00	20.00	158.60	223.00	198.00	152.00	85.00
1991	25	65.00	20.00	19.00	17.00	17.00	22.00	31.00	181.00	215.00	210.00	149.00	89.00
1991	26	67.00	20.00	22.00	17.00	17.00	20.00	20.00	165.60	207.00	208.00	151.00	78.00
1991	27	64.00	20.00	22.00	17.00	18.00	20.00	21.60	192.00	204.00	197.00	153.00	77.00
1991	28	65.00	22.00	22.00	17.00	18.00	21.00	45.00	161.60	202.00	190.00	162.00	76.00
1991	29	56.00	14.00	23.00	17.00	999999.00	20.00	46.00	175.00	204.00	196.00	156.00	70.00
1991	30	53.00	20.00	23.00	17.00	999999.00	20.00	36.00	139.50	201.00	182.00	147.00	75.00
1991	31	52.00	999999.00	23.00	17.00	999999.00	20.00	999999.00	130.70	999999.00	176.00	137.00	999999.00
1992	1	75.00	36.00	22.00	20.00	20.00	20.00	20.00	142.00	171.20	140.90	100.40	999999.00
1992	2	72.00	34.00	20.00	20.00	20.00	20.00	20.00	163.00	152.20	133.20	104.10	999999.00
1992	3	67.00	40.00	20.00	20.00	20.00	38.00	20.00	156.00	146.30	131.60	98.00	999999.00
1992	4	62.00	55.00	20.00	20.00	20.00	45.00	20.00	108.10	143.40	128.30	93.00	999999.00
1992	5	62.00	24.10	20.40	20.00	20.00	43.00	20.00	108.30	144.50	126.80	93.00	999999.00
1992	6	63.00	20.00	28.10	20.00	20.00	39.00	20.00	110.80	141.60	129.00	91.00	999999.00
1992	7	60.00	20.00	20.00	20.00	20.00	20.00	20.00	82.00	140.10	124.50	88.10	999999.00
1992	8	67.00	43.00	20.00	20.00	20.00	20.00	20.00	145.00	141.50	134.10	82.00	999999.00
1992	9	72.00	42.00	20.00	20.00	20.00	38.00	20.00	156.00	144.00	131.80	78.10	999999.00
1992	10	67.00	43.00	20.00	20.00	20.00	20.00	20.00	153.00	149.00	126.60	126.00	999999.00
1992	11	63.00	42.00	20.00	20.00	20.00	20.00	20.00	143.00	154.80	132.80	133.00	999999.00
1992	12	65.00	39.00	20.00	20.00	20.00	36.00	20.00	101.00	211.00	135.60	139.00	999999.00
1992	13	77.00	39.00	20.00	20.00	36.00	20.00	21.40	100.60	205.00	129.00	137.00	999999.00
1992	14	81.00	39.00	20.00	20.00	37.00	20.00	22.10	107.50	155.30	119.90	133.00	999999.00
1992	15	79.00	20.00	20.00	20.00	37.00	20.00	26.50	157.00	173.00	117.90	116.00	999999.00
1992	16	78.00	20.00	20.00	20.00	37.00	44.00	68.40	211.00	153.50	117.90	105.00	999999.00
1992	17	77.00	20.00	20.00	20.00	38.00	20.00	96.40	198.00	149.50	116.90	109.00	999999.00
1992	18	68.00	20.00	47.00	20.00	38.00	20.00	100.80	186.00	146.80	113.00	111.00	999999.00
1992	19	61.00	20.00	20.00	20.00	38.00	20.00	98.20	188.00	145.70	112.00	116.00	999999.00
1992	20	70.00	20.00	20.00	20.00	39.00	20.00	93.60	188.00	151.80	117.00	107.00	999999.00
1992	21	63.00	20.00	20.00	20.00	39.00	20.00	87.60	206.00	170.20	110.00	108.00	999999.00
1992	22	60.00	20.00	20.00	20.00	39.00	20.00	82.00	219.00	159.40	106.90	102.00	999999.00
1992	23	60.00	20.00	20.00	20.00	39.00	20.00	77.10	212.00	199.00	107.90	111.00	999999.00
1992	24	62.00	20.00	20.00	20.00	39.00	20.00	65.60	217.00	151.60	108.00	127.00	999999.00
1992	25	63.00	46.00	44.00	20.00	39.00	20.00	57.60	228.00	158.70	111.90	145.00	999999.00
1992	26	64.00	20.00	20.00	20.00	38.00	39.00	50.10	219.00	176.70	110.90	147.00	999999.00
1992	27	65.00	20.00	20.00	20.00	38.00	39.00	49.20	223.00	187.70	104.90	135.00	999999.00
1992	28	57.00	38.00	20.00	20.00	38.00	50.00	55.00	212.00	169.70	103.70	125.00	999999.00
1992	29	42.00	20.00	20.00	20.00	38.00	20.00	60.60	140.70	167.10	96.70	104.00	999999.00
1992	30	36.00	20.00	20.00	20.00	999999.00	20.00	60.30	154.20	152.40	94.40	89.00	999999.00
1992	31	29.00	999999.00	20.00	20.00	999999.00	20.00	999999.00	174.10	999999.00	98.80	83.00	999999.00

Note: 999999 = no data)

BIG THOMPSON AVERAGE RIVER FLOWS (CFS) 8 CFS

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1988	1	43.00	68.00	35.00	8.00	8.00	8.00	12.50	56.30	309.10	286.70	86.00	35.00
1988	2	43.00	71.00	42.00	8.00	8.00	8.00	15.60	124.00	205.20	237.80	86.00	65.00
1988	3	42.00	68.00	43.00	8.00	8.00	8.00	14.10	83.30	154.20	215.80	120.00	35.00
1988	4	43.00	63.00	37.00	8.00	8.00	8.00	14.70	86.20	265.00	207.80	145.00	35.00
1988	5	43.00	63.00	34.00	8.00	8.00	8.00	17.20	78.70	435.50	199.80	149.00	35.00
1988	6	43.00	62.00	31.00	8.00	16.00	8.00	49.00	74.10	580.50	211.20	134.00	35.00
1988	7	43.00	61.00	29.00	8.00	16.00	8.00	57.00	78.20	597.00	202.90	129.00	35.00
1988	8	43.00	60.00	28.00	8.00	8.00	8.00	68.00	78.60	601.70	164.20	131.00	35.00
1988	9	41.00	58.00	26.00	8.00	8.00	8.00	66.00	64.00	581.00	136.10	87.00	35.00
1988	10	40.00	56.00	24.00	8.00	8.00	8.00	62.00	76.20	581.40	116.20	62.00	35.00
1988	11	40.00	58.00	24.00	8.00	8.00	8.00	64.00	70.20	575.00	131.50	100.00	35.00
1988	12	40.00	56.00	23.00	8.00	8.00	8.00	67.00	67.60	576.50	123.80	41.20	54.80
1988	13	40.00	57.00	23.00	12.30	8.00	8.00	70.00	76.20	544.90	114.20	35.30	77.00
1988	14	68.00	56.00	21.00	13.40	8.00	8.00	77.00	96.20	440.30	113.30	35.00	81.50
1988	15	82.00	59.00	20.00	10.30	8.30	8.00	86.00	209.70	347.50	110.30	35.00	109.00
1988	16	80.00	56.00	20.00	9.30	8.00	8.00	89.00	299.80	411.00	108.30	35.00	99.00
1988	17	78.00	59.00	21.00	13.30	8.70	9.30	98.00	256.50	508.20	107.30	35.00	99.00
1988	18	76.00	53.00	22.00	13.50	8.00	11.00	100.00	324.60	634.70	105.30	35.00	97.00
1988	19	66.00	54.00	23.00	10.60	20.00	8.00	104.00	450.70	678.10	108.30	35.00	92.00
1988	20	52.00	46.00	23.00	12.10	8.00	12.40	96.00	493.40	693.00	105.30	35.00	98.10
1988	21	46.00	34.00	23.00	11.60	8.00	11.20	96.00	289.00	680.50	102.30	35.00	97.00
1988	22	47.00	34.00	22.00	10.50	8.00	8.30	102.00	176.00	664.00	101.80	35.00	74.00
1988	23	49.00	33.00	21.00	9.70	9.80	9.40	46.90	165.00	692.50	97.00	35.00	66.00
1988	24	48.00	32.00	20.00	12.00	8.00	8.00	42.90	165.00	534.30	93.00	35.00	77.00
1988	25	49.00	33.00	18.00	10.60	8.00	8.00	43.90	187.00	508.30	80.00	35.00	81.00
1988	26	49.00	38.00	16.00	13.80	8.00	10.30	39.90	244.00	488.20	76.00	35.00	80.00
1988	27	61.00	32.00	16.00	8.00	8.00	8.40	36.70	300.00	483.10	78.00	35.00	93.00
1988	28	68.00	28.00	15.00	8.00	8.00	8.00	37.00	85.30	401.00	80.00	35.00	95.00
1988	29	68.00	30.00	15.00	8.00	8.00	8.00	39.90	96.20	353.80	82.00	35.00	100.00
1988	30	69.00	34.00	15.00	8.00	999999.00	14.60	39.00	169.10	338.70	85.00	35.00	35.00
1988	31	69.00	999999.00	14.00	8.00	999999.00	8.00	999999.00	325.00	999999.00	87.00	35.00	999999.00
1989	1	56.00	29.20	8.00	18.00	8.00	18.00	11.00	35.00	194.00	187.90	246.00	53.10
1989	2	58.00	12.40	8.00	18.00	8.00	18.00	13.30	35.00	134.30	155.80	276.00	49.20
1989	3	107.00	16.60	8.00	18.00	8.00	8.00	10.40	35.00	248.40	138.60	279.00	47.20
1989	4	35.00	13.80	8.80	19.00	14.00	8.00	11.50	35.00	242.60	130.40	254.00	43.20
1989	5	35.00	12.40	8.00	20.00	15.00	8.00	10.90	35.00	166.60	129.80	213.00	47.20
1989	6	35.00	11.70	8.00	20.00	15.00	8.00	8.00	35.00	144.40	145.90	196.00	38.30
1989	7	35.00	14.20	8.00	19.00	8.00	8.00	8.00	35.00	139.50	275.50	184.00	38.30
1989	8	35.00	8.90	8.00	18.00	8.00	8.00	28.90	35.60	141.70	255.50	169.00	52.80
1989	9	35.00	11.00	8.00	18.00	17.00	8.00	33.90	78.80	146.80	237.50	151.00	47.60
1989	10	35.00	35.00	8.00	18.00	17.00	34.00	27.50	91.50	189.00	233.40	136.00	42.70
1989	11	43.00	13.40	8.00	18.00	17.00	8.10	32.40	89.30	158.30	226.30	133.00	42.70
1989	12	35.00	10.30	8.00	18.00	10.70	9.70	11.30	93.20	259.40	215.20	139.00	44.90
1989	13	44.00	15.30	21.00	18.00	17.00	9.70	10.70	92.10	286.90	256.00	149.00	46.90
1989	14	35.00	36.00	8.00	18.00	17.00	11.10	8.90	110.90	183.00	199.20	158.00	49.90
1989	15	43.00	8.00	8.00	19.00	17.00	9.80	10.90	148.00	133.70	195.10	168.00	65.80
1989	16	42.00	10.90	8.00	20.00	17.00	9.70	10.90	193.00	150.70	184.10	172.00	92.80
1989	17	42.00	30.00	8.00	20.00	17.00	8.90	12.50	184.00	147.80	173.20	224.00	101.80
1989	18	41.00	8.60	8.00	20.00	17.00	9.60	48.00	174.00	138.20	186.10	163.00	95.70
1989	19	40.00	15.50	8.00	8.00	18.00	8.50	55.00	180.00	138.20	173.10	149.00	93.70
1989	20	41.00	15.00	8.00	17.00	18.00	9.00	64.00	177.00	224.80	162.20	137.00	89.60
1989	21	35.00	14.00	8.00	17.00	18.00	31.00	25.20	178.00	158.10	143.20	126.00	83.90
1989	22	35.00	12.40	8.00	16.00	18.00	37.00	34.70	175.00	144.80	132.20	119.00	82.90
1989	23	35.00	38.00	20.00	16.00	18.00	37.00	87.20	177.00	131.70	121.20	115.00	77.70
1989	24	35.00	37.00	8.00	8.00	18.00	27.50	121.80	188.00	129.70	128.20	108.00	78.60
1989	25	35.00	11.80	8.00	8.00	18.00	37.00	140.40	190.00	127.70	126.20	101.00	61.80
1989	26	39.70	15.30	8.00	8.00	18.00	39.00	147.30	225.00	126.50	130.20	94.00	61.70
1989	27	35.20	23.00	8.00	8.00	17.00	39.00	149.60	199.00	122.50	132.20	89.00	62.70
1989	28	35.00	8.00	8.00	8.00	17.00	39.00	66.10	184.00	170.50	123.70	129.00	61.70
1989	29	35.00	8.00	8.00	8.00	999999.00	24.90	28.10	187.00	160.60	159.20	72.00	64.90
1989	30	35.00	8.00	18.00	8.00	999999.00	10.20	26.20	225.00	114.90	198.10	65.10	51.80
1989	31	35.00	999999.00	8.00	8.00	999999.00	10.20	999999.00	215.00	999999.00	223.00	60.10	999999.00
1990	1	51.10	12.70	8.00	8.00	8.00	26.00	26.70	116.20	239.40	138.80	120.40	48.10
1990	2	36.40	8.00	8.00	8.00	8.00	8.00	39.20	122.30	230.80	184.00	120.60	58.70
1990	3	37.90	8.00	8.00	8.00	8.00	8.00	51.60	97.30	196.80	143.70	114.00	103.00
1990	4	77.00	8.00	8.00	8.00	8.00	8.00	59.00	82.00	198.50	149.30	164.00	50.80
1990	5	78.00	16.50	8.00	8.00	8.00	27.00	75.80	79.00	228.10	147.50	164.00	47.80
1990	6	35.00	17.30	8.00	8.00	8.00	21.20	62.70	80.00	242.00	155.20	113.40	51.50
1990	7	35.00	17.60	8.00	8.00	8.00	8.00	67.00	82.70	403.10	145.30	107.20	49.60
1990	8	35.00	8.00	8.00	8.00	8.00	8.00	71.10	109.20	393.20	153.30	99.80	43.90
1990	9	35.00	38.00	8.00	8.00	8.00	8.00	72.10	121.20	369.80	199.90	91.90	43.90
1990	10	35.00	8.00	8.00	8.00	8.00	8.00	68.40	115.20	392.80	209.00	89.00	51.00
1990	11	35.00	8.00	8.00	8.00	8.00	8.00	60.60	123.30	434.80	161.10	86.20	46.20
1990	12	35.00	8.00	8.00	8.00	8.00	8.60	67.40	123.20	548.00	146.40	101.30	42.40
1990	13	35.00	8.00	8.00	8.00	8.00	15.60	79.10	119.50	556.00	131.20	106.30	80.00
1990	14	35.00	14.50	8.00	8.00	8.00	8.00	78.70	117.60	331.00	126.20	111.20	37.30
1990	15	35.00	8.00	8.00	8.00	8.00	9.40	92.90	183.00	296.60	125.20	110.20	35.50
1990	16	35.00	8.00	8.00	8.00	8.00	11.90	125.70	185.00	272.60	129.60	100.20	35.00
1990	17	35.00	8.00	8.00	8.00	8.00	9.10	136.30	183.00	205.60	127.50	100.30	35.00
1990	18	35.00	8.00	8.00	8.00	8.00	8.00	116.50	170.00	168.20	109.60	101.30	35.00
1990	19	35.00	8.00	8.00	8.00	8.00	8.00	122.40	171.00	196.80	135.70	96.30	41.80
1990	20	35.00	8.00	8.00	8.00	8.00	9.60	136.30	180.00	172.40	147.20	90.70	35.00

Note: 999999 = no data)

BIG THOMPSON AVERAGE RIVER FLOWS (CFS)
8 CFS

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1990	21	35.00	8.00	8.00	8.00	8.00	18.40	140.20	180.00	154.50	173.80	90.50	35.00
1990	22	35.00	8.00	8.00	8.00	8.00	29.30	154.10	180.00	164.70	166.80	86.20	35.00
1990	23	35.00	8.00	8.00	8.00	8.00	36.10	185.70	186.00	161.10	165.90	84.00	35.00
1990	24	35.00	8.00	8.00	8.00	8.00	15.70	192.10	191.00	164.80	143.20	80.20	35.00
1990	25	35.00	8.00	8.00	8.00	8.00	13.90	201.10	195.00	167.50	138.20	77.10	35.00
1990	26	61.00	33.00	8.00	8.00	8.00	17.30	146.00	190.00	169.80	182.00	63.10	35.00
1990	27	35.00	12.20	8.00	8.00	8.00	15.10	104.10	195.00	181.70	130.20	53.20	35.00
1990	28	35.00	8.00	21.00	8.00	8.00	20.40	98.20	195.00	153.90	128.20	49.20	35.00
1990	29	54.00	8.00	20.00	8.00	999999.00	20.60	93.20	283.00	149.80	131.20	48.30	70.00
1990	30	35.00	8.00	8.00	8.00	999999.00	22.80	86.20	273.00	149.80	132.20	39.70	72.00
1990	31	35.00	999999.00	8.00	8.00	999999.00	18.60	999999.00	271.00	999999.00	126.30	42.00	999999.00
1991	1	72.00	47.00	8.00	20.00	17.00	8.00	8.00	35.00	255.40	194.00	178.00	130.00
1991	2	72.00	44.00	8.00	20.00	17.00	8.00	8.00	35.00	816.40	188.00	182.00	132.00
1991	3	70.00	47.00	17.00	20.00	17.00	8.00	8.00	35.00	549.10	185.00	205.00	130.00
1991	4	64.00	46.00	8.00	20.00	16.00	8.00	21.00	35.00	334.30	180.00	219.00	127.00
1991	5	61.00	46.00	8.00	20.00	17.00	8.00	22.00	35.00	276.10	171.00	204.00	125.00
1991	6	62.00	49.00	8.00	20.00	17.00	8.00	22.00	35.00	272.20	170.00	193.00	126.00
1991	7	68.00	38.00	8.00	20.00	17.00	18.00	22.00	35.00	301.10	166.00	190.00	125.00
1991	8	77.00	46.00	8.00	20.00	18.00	14.00	22.00	35.00	302.50	161.00	187.00	123.00
1991	9	79.00	45.00	8.00	20.00	18.00	17.00	29.00	35.00	271.60	166.00	186.00	121.00
1991	10	77.00	47.00	8.00	19.00	18.00	24.00	34.00	38.00	273.70	160.00	185.00	119.00
1991	11	75.00	42.00	8.00	17.00	18.00	8.00	35.00	70.40	254.70	150.00	182.00	117.00
1991	12	74.00	40.00	8.00	17.00	18.00	8.00	35.00	91.40	245.70	162.00	180.00	115.00
1991	13	71.00	40.00	8.00	16.00	18.00	8.00	35.00	91.30	245.60	153.00	189.00	116.00
1991	14	67.00	34.00	8.00	16.00	18.00	20.00	35.00	90.30	231.70	148.00	193.00	114.00
1991	15	67.00	33.00	22.00	16.00	17.00	8.00	36.00	96.30	233.90	146.00	183.00	105.00
1991	16	68.00	40.00	8.00	16.00	17.00	8.00	35.00	153.00	227.70	144.00	162.00	95.00
1991	17	70.00	39.00	8.00	16.00	17.00	8.00	38.00	135.60	201.70	153.00	152.00	89.00
1991	18	66.00	39.00	8.00	16.00	17.00	8.00	10.80	132.60	188.00	162.00	144.00	88.00
1991	19	58.00	40.00	8.00	17.00	16.00	17.80	8.00	136.70	190.60	172.00	157.00	87.00
1991	20	63.00	8.00	8.00	17.00	16.00	12.20	8.00	149.60	184.60	180.00	154.00	80.00
1991	21	70.00	8.00	8.00	17.00	17.00	8.00	9.90	175.00	226.00	207.00	158.00	78.00
1991	22	66.00	8.00	8.00	17.00	17.00	14.80	8.00	189.00	243.00	187.00	154.00	83.00
1991	23	61.00	27.00	8.00	17.00	17.00	8.00	37.00	194.60	234.00	205.00	154.00	85.00
1991	24	63.00	8.00	8.00	17.00	17.00	11.80	8.00	158.60	223.00	198.00	152.00	85.00
1991	25	65.00	8.00	8.00	17.00	17.00	22.00	31.00	181.00	215.00	210.00	149.00	89.00
1991	26	67.00	8.00	22.00	17.00	17.00	8.00	9.90	165.60	207.00	208.00	151.00	78.00
1991	27	64.00	8.00	22.00	17.00	18.00	8.00	21.60	192.00	204.00	197.00	153.00	77.00
1991	28	65.00	22.00	22.00	17.00	18.00	21.00	45.00	161.60	202.00	190.00	162.00	76.00
1991	29	56.00	8.00	23.00	17.00	999999.00	8.00	46.00	175.00	204.00	186.00	156.00	70.00
1991	30	53.00	8.00	23.00	17.00	999999.00	8.00	36.00	139.50	201.00	182.00	147.00	75.00
1991	31	52.00	999999.00	23.00	17.00	999999.00	8.00	999999.00	130.70	999999.00	176.00	137.00	999999.00
1992	1	75.00	36.00	22.00	11.20	9.10	9.80	8.00	142.00	171.20	140.90	100.40	999999.00
1992	2	72.00	34.00	8.00	19.00	8.00	9.80	8.00	163.00	152.20	133.20	104.10	999999.00
1992	3	67.00	40.00	8.00	14.80	8.00	38.00	8.00	156.00	146.30	131.60	98.00	999999.00
1992	4	62.00	55.00	12.90	12.10	10.50	45.00	8.10	108.10	143.40	128.30	93.00	999999.00
1992	5	62.00	24.10	20.40	14.20	13.00	43.00	8.50	108.30	144.50	126.80	93.00	999999.00
1992	6	63.00	14.10	28.10	15.50	8.00	39.00	13.80	110.80	141.60	129.00	91.00	999999.00
1992	7	60.00	8.00	8.00	11.20	11.40	10.30	8.80	82.00	140.10	124.50	88.10	999999.00
1992	8	67.00	43.00	8.00	12.30	8.90	11.20	19.20	145.00	141.50	134.10	82.00	999999.00
1992	9	72.00	42.00	8.00	16.90	8.60	38.00	9.90	156.00	144.00	131.80	78.10	999999.00
1992	10	67.00	43.00	8.00	13.40	9.60	8.00	15.30	153.00	149.00	126.60	126.00	999999.00
1992	11	63.00	42.00	8.00	10.20	10.90	10.20	17.90	143.00	154.80	132.80	133.00	999999.00
1992	12	65.00	39.00	9.60	11.10	36.00	14.80	18.20	101.00	211.00	135.60	139.00	999999.00
1992	13	77.00	39.00	11.40	11.80	36.00	12.90	21.40	100.60	205.00	129.00	137.00	999999.00
1992	14	81.00	39.00	18.90	14.00	37.00	11.00	22.10	107.50	155.30	119.90	133.00	999999.00
1992	15	79.00	8.00	15.30	9.70	37.00	11.00	26.50	157.00	173.00	117.90	116.00	999999.00
1992	16	78.00	8.00	10.90	11.60	37.00	44.00	68.40	211.00	153.50	117.90	105.00	999999.00
1992	17	77.00	8.00	8.00	8.00	38.00	10.40	96.40	198.00	149.50	116.90	109.00	999999.00
1992	18	68.00	8.00	47.00	12.50	38.00	9.10	100.80	186.00	146.80	113.00	111.00	999999.00
1992	19	61.00	9.00	8.00	12.20	38.00	8.00	98.20	188.00	145.70	112.00	116.00	999999.00
1992	20	70.00	8.00	8.00	10.50	39.00	8.00	93.60	188.00	151.80	117.00	107.00	999999.00
1992	21	63.00	8.00	10.90	8.70	39.00	8.00	87.60	206.00	170.20	110.00	108.00	999999.00
1992	22	60.00	9.40	8.00	11.60	39.00	8.00	82.00	219.00	159.40	106.90	102.00	999999.00
1992	23	60.00	8.00	8.00	12.70	39.00	8.00	77.10	212.00	199.00	107.90	111.00	999999.00
1992	24	62.00	8.00	14.40	8.00	39.00	8.00	65.60	217.00	151.60	108.00	127.00	999999.00
1992	25	63.00	46.00	44.00	8.00	39.00	8.00	57.60	228.00	158.70	111.90	145.00	999999.00
1992	26	64.00	8.00	13.20	8.00	38.00	39.00	50.10	219.00	176.70	110.90	147.00	999999.00
1992	27	65.00	8.00	11.60	8.00	38.00	39.00	49.20	223.00	187.70	104.90	135.00	999999.00
1992	28	57.00	38.00	11.90	8.00	9.60	50.00	55.00	212.00	169.70	103.70	125.00	999999.00
1992	29	42.00	8.00	8.00	8.00	38.00	8.00	60.60	140.70	167.10	96.70	104.00	999999.00
1992	30	36.00	8.00	8.00	8.00	999999.00	8.00	60.30	154.20	152.40	94.40	89.00	999999.00
1992	31	29.00	999999.00	13.40	8.00	999999.00	8.00	999999.00	174.10	999999.00	98.80	83.00	999999.00

(Note: 999999 = no data)

BIG THOMPSON AVERAGE RIVER FLOWS (CFS) **6 CFS**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1988	1	43.00	68.00	35.00	6.00	6.00	6.00	12.50	56.30	309.10	286.70	86.00	35.00
1988	2	43.00	71.00	42.00	6.00	6.00	6.00	15.60	124.00	205.20	237.80	86.00	65.00
1988	3	42.00	68.00	43.00	6.00	6.00	6.00	14.10	83.30	154.20	215.80	120.00	35.00
1988	4	43.00	63.00	37.00	6.00	6.00	6.00	14.70	86.20	265.00	207.80	145.00	35.00
1988	5	43.00	63.00	34.00	6.00	6.00	6.00	17.20	78.70	435.50	199.80	149.00	35.00
1988	6	43.00	62.00	31.00	6.00	16.00	6.00	49.00	74.10	580.50	211.20	134.00	35.00
1988	7	43.00	61.00	29.00	6.00	16.00	6.00	57.00	78.20	597.00	202.90	129.00	35.00
1988	8	43.00	60.00	28.00	6.00	6.00	6.00	68.00	78.60	601.70	164.20	131.00	35.00
1988	9	41.00	58.00	26.00	6.00	6.00	6.00	66.00	64.00	581.00	136.10	87.00	35.00
1988	10	40.00	56.00	24.00	6.00	6.00	6.00	62.00	76.20	581.40	116.20	62.00	35.00
1988	11	40.00	58.00	24.00	6.00	6.00	6.00	64.00	70.20	575.00	131.50	100.00	35.00
1988	12	40.00	56.00	23.00	6.00	6.00	6.00	67.00	67.60	576.50	123.00	41.20	54.80
1988	13	40.00	57.00	23.00	12.30	6.00	6.00	70.00	76.20	544.90	114.20	35.30	77.00
1988	14	68.00	56.00	21.00	13.40	6.00	6.00	77.00	96.20	440.30	113.30	35.00	81.50
1988	15	82.00	59.00	20.00	10.30	8.30	6.00	86.00	209.70	347.50	110.30	35.00	109.00
1988	16	80.00	56.00	20.00	9.30	6.00	7.10	89.00	299.80	411.00	108.30	35.00	99.00
1988	17	78.00	59.00	21.00	13.30	8.70	9.30	98.00	256.50	508.20	107.30	35.00	99.00
1988	18	76.00	53.00	22.00	13.50	6.00	11.00	100.00	324.60	634.70	105.30	35.00	97.00
1988	19	66.00	54.00	23.00	10.60	20.00	6.00	104.00	450.70	678.10	108.30	35.00	92.00
1988	20	52.00	46.00	23.00	12.10	6.20	12.40	96.00	493.40	693.00	105.30	35.00	98.10
1988	21	46.00	34.00	23.00	11.60	6.00	11.20	96.00	289.00	680.50	102.30	35.00	97.00
1988	22	47.00	34.00	22.00	10.50	6.70	8.30	102.00	176.00	664.00	101.80	35.00	74.00
1988	23	49.00	33.00	21.00	9.70	9.80	9.40	46.90	165.00	692.50	97.00	35.00	66.00
1988	24	48.00	32.00	20.00	12.00	6.00	7.10	42.90	165.00	534.30	93.00	35.00	77.00
1988	25	49.00	33.00	18.00	10.60	6.00	6.90	43.90	187.00	508.30	80.00	35.00	81.00
1988	26	49.00	38.00	16.00	13.80	6.00	10.30	39.90	244.00	488.20	76.00	35.00	80.00
1988	27	61.00	32.00	16.00	6.00	6.00	8.40	36.70	300.00	483.10	78.00	35.00	93.00
1988	28	68.00	28.00	15.00	6.00	6.00	6.80	37.00	85.30	401.00	80.00	35.00	95.00
1988	29	68.00	30.00	15.00	6.00	6.00	6.00	39.90	96.20	353.80	82.00	35.00	100.00
1988	30	69.00	34.00	15.00	6.00	999999.00	14.60	39.00	169.10	338.70	85.00	35.00	35.00
1988	31	69.00	999999.00	14.00	6.00	999999.00	6.00	999999.00	325.00	999999.00	87.00	35.00	999999.00
1989	1	56.00	29.20	6.00	18.00	6.00	18.00	11.00	35.00	194.00	187.90	246.00	53.10
1989	2	58.00	12.40	6.00	18.00	6.00	18.00	13.30	35.00	134.30	155.80	276.00	49.20
1989	3	107.00	16.60	6.60	18.00	6.00	6.00	10.40	35.00	248.40	138.60	279.00	47.20
1989	4	35.00	13.80	8.80	19.00	14.00	6.00	11.50	35.00	242.60	130.40	254.00	43.20
1989	5	35.00	12.40	7.00	20.00	15.00	6.00	10.90	35.00	166.60	129.80	213.00	47.20
1989	6	35.00	11.70	6.10	20.00	15.00	6.00	7.80	35.00	144.40	145.90	196.00	38.30
1989	7	35.00	14.20	6.00	19.00	6.00	6.00	7.10	35.00	139.50	275.50	184.00	38.30
1989	8	35.00	8.90	6.00	18.00	7.90	6.00	28.90	35.60	141.70	255.50	169.00	52.80
1989	9	35.00	11.00	6.00	18.00	17.00	6.00	33.90	78.80	146.80	237.50	151.00	47.60
1989	10	35.00	35.00	6.00	18.00	17.00	34.00	27.50	91.50	189.00	233.40	136.00	42.70
1989	11	43.00	13.40	6.00	18.00	17.00	8.10	32.40	89.30	158.30	226.30	133.00	42.70
1989	12	35.00	10.30	6.00	18.00	10.70	9.70	11.30	93.20	259.40	215.20	139.00	44.90
1989	13	44.00	15.30	21.00	18.00	17.00	9.70	10.70	92.10	286.90	256.00	149.00	46.90
1989	14	35.00	36.00	6.00	18.00	17.00	11.10	8.90	110.90	183.00	199.20	158.00	49.90
1989	15	43.00	6.00	6.00	19.00	17.00	9.80	10.90	148.00	133.70	195.10	168.00	65.80
1989	16	42.00	10.90	6.00	20.00	17.00	9.70	10.90	193.00	150.70	184.10	172.00	92.80
1989	17	42.00	30.00	6.00	20.00	17.00	8.90	12.50	184.00	147.80	173.20	224.00	101.80
1989	18	41.00	8.60	7.20	20.00	17.00	9.60	48.00	174.00	138.20	186.10	163.00	95.70
1989	19	40.00	15.50	6.00	6.00	18.00	8.50	55.00	180.00	138.20	173.10	149.00	93.70
1989	20	41.00	15.00	6.00	17.00	18.00	9.00	64.00	177.00	224.80	162.20	137.00	89.60
1989	21	35.00	14.00	6.00	17.00	18.00	31.00	25.20	178.00	158.10	143.20	126.00	83.90
1989	22	35.00	12.40	6.00	16.00	18.00	37.00	34.70	175.00	144.80	132.20	119.00	82.90
1989	23	35.00	38.00	20.00	16.00	18.00	37.00	87.20	177.00	131.70	121.20	115.00	77.70
1989	24	35.00	37.00	6.00	6.00	18.00	27.50	121.80	188.00	129.70	128.20	108.00	78.60
1989	25	35.00	11.80	6.00	6.00	18.00	37.00	140.40	190.00	127.70	126.20	101.00	61.80
1989	26	39.70	15.30	6.00	6.00	18.00	39.00	147.30	225.00	126.50	130.20	94.00	61.70
1989	27	35.20	23.00	6.00	6.00	17.00	39.00	149.60	199.00	122.50	132.20	89.00	62.70
1989	28	35.00	6.00	6.00	6.00	17.00	39.00	66.10	184.00	170.50	123.70	129.00	61.70
1989	29	35.00	6.00	6.00	6.00	999999.00	24.90	28.10	187.00	160.60	159.20	72.00	64.90
1989	30	35.00	6.00	18.00	6.00	999999.00	10.20	26.20	225.00	114.90	198.10	65.10	51.80
1989	31	35.00	999999.00	6.00	6.00	999999.00	10.20	999999.00	215.00	999999.00	223.00	60.10	999999.00
1990	1	51.10	12.70	6.00	6.00	6.00	26.00	26.70	116.20	239.40	138.80	120.40	48.10
1990	2	36.40	6.00	6.00	6.00	6.00	6.00	39.20	122.30	230.80	184.00	120.60	58.70
1990	3	37.90	6.10	6.00	6.00	6.00	6.00	51.60	97.30	196.80	143.70	114.00	103.00
1990	4	77.00	6.00	6.00	6.00	6.00	6.00	59.00	82.00	198.50	149.30	164.00	50.80
1990	5	78.00	16.50	6.00	6.00	6.00	27.00	75.80	79.00	228.10	147.50	164.00	47.80
1990	6	35.00	17.30	6.00	6.00	6.00	21.20	62.70	80.00	242.00	155.20	113.40	51.50
1990	7	35.00	17.60	6.00	6.00	6.00	6.00	67.00	82.70	403.10	145.30	107.20	49.60
1990	8	35.00	6.00	6.00	6.00	6.00	6.00	71.10	109.20	393.20	153.30	99.80	43.90
1990	9	35.00	38.00	6.00	6.00	6.00	6.00	72.10	121.20	369.80	199.90	91.90	43.90
1990	10	35.00	6.00	6.00	6.00	6.00	6.00	68.40	115.20	392.80	209.00	89.00	51.00
1990	11	35.00	6.00	6.00	6.00	6.00	6.00	60.60	123.30	434.80	161.10	86.20	46.20
1990	12	35.00	6.00	6.00	6.00	6.00	8.60	67.40	123.20	548.00	146.40	101.30	42.40
1990	13	35.00	6.00	6.00	6.00	6.00	15.60	79.10	119.50	556.00	131.20	106.30	80.00
1990	14	35.00	14.50	6.00	6.00	6.00	6.00	78.70	117.60	331.00	126.20	111.20	37.30
1990	15	35.00	6.00	6.00	6.00	6.00	9.40	92.90	183.00	296.60	125.20	110.20	35.50
1990	16	35.00	6.00	6.00	6.00	6.00	11.90	125.70	185.00	272.60	129.60	100.20	35.00
1990	17	35.00	6.00	6.00	6.00	6.00	9.10	136.30	183.00	205.60	127.50	100.30	35.00
1990	18	35.00	6.00	6.00	6.00	6.00	6.00	116.50	170.00	168.20	109.60	101.30	35.00
1990	19	35.00	6.00	6.00	6.00	6.00	6.00	122.40	171.00	196.80	135.70	96.30	41.80
1990	20	35.00	6.00	6.00	6.00	6.00	9.60	136.30	180.00	172.40	147.20	90.70	35.00

Note: 999999 = no data)

BIG THOMPSON AVERAGE RIVER FLOWS (CFS) **6 CFS**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1990	21	35.00	6.40	6.00	6.00	6.00	18.40	140.20	180.00	154.50	173.80	90.50	35.00
1990	22	35.00	6.90	6.00	6.00	6.00	29.30	154.10	180.00	164.70	166.80	86.20	35.00
1990	23	35.00	6.00	6.00	6.00	6.00	36.10	185.70	186.00	161.10	165.90	84.00	35.00
1990	24	35.00	6.00	6.00	6.00	6.00	15.70	192.10	191.00	164.80	143.20	80.20	35.00
1990	25	35.00	6.00	6.00	6.00	6.00	13.90	201.10	195.00	167.50	138.20	77.10	35.00
1990	26	61.00	33.00	6.00	6.00	6.00	17.30	146.00	190.00	169.80	182.00	63.10	35.00
1990	27	35.00	12.20	6.00	6.00	6.00	15.10	104.10	195.00	181.70	130.20	53.20	35.00
1990	28	35.00	6.00	21.00	6.00	6.00	20.40	98.20	195.00	153.90	128.20	49.20	35.00
1990	29	54.00	8.00	20.00	6.00	999999.00	20.60	93.20	283.00	149.80	131.20	48.30	70.00
1990	30	35.00	6.00	6.00	6.00	999999.00	22.80	86.20	273.00	149.80	132.20	39.70	72.00
1990	31	35.00	999999.00	6.00	6.00	999999.00	18.60	999999.00	271.00	999999.00	126.30	42.00	999999.00
1991	1	72.00	47.00	6.00	20.00	17.00	6.00	6.00	35.00	255.40	194.00	178.00	130.00
1991	2	72.00	44.00	6.00	20.00	17.00	6.00	6.00	35.00	816.40	188.00	182.00	132.00
1991	3	70.00	47.00	17.00	20.00	17.00	6.00	6.00	35.00	549.10	185.00	205.00	130.00
1991	4	64.00	46.00	6.00	20.00	16.00	6.00	21.00	35.00	334.30	180.00	219.00	127.00
1991	5	61.00	46.00	6.00	20.00	17.00	6.00	22.00	35.00	276.10	171.00	204.00	125.00
1991	6	62.00	49.00	6.00	20.00	17.00	6.00	22.00	35.00	272.20	170.00	193.00	126.00
1991	7	68.00	38.00	6.00	20.00	17.00	18.00	22.00	35.00	301.10	166.00	190.00	125.00
1991	8	77.00	46.00	6.00	20.00	18.00	14.00	20.00	35.00	302.50	161.00	187.00	123.00
1991	9	79.00	45.00	6.00	20.00	18.00	17.00	29.00	35.00	271.60	166.00	186.00	121.00
1991	10	77.00	47.00	7.20	19.00	18.00	24.00	34.00	38.00	273.70	160.00	185.00	119.00
1991	11	75.00	42.00	6.00	17.00	18.00	6.00	35.00	70.40	254.70	150.00	182.00	117.00
1991	12	74.00	40.00	6.00	17.00	18.00	6.00	35.00	91.40	245.70	162.00	180.00	115.00
1991	13	71.00	40.00	6.00	16.00	18.00	6.00	35.00	91.30	245.60	153.00	189.00	116.00
1991	14	67.00	34.00	6.00	16.00	18.00	20.00	35.00	90.30	231.70	148.00	193.00	114.00
1991	15	67.00	33.00	22.00	16.00	17.00	6.00	36.00	96.30	233.90	146.00	183.00	105.00
1991	16	68.00	40.00	6.00	16.00	17.00	6.00	35.00	153.00	227.70	144.00	162.00	95.00
1991	17	70.00	39.00	6.00	16.00	17.00	6.00	38.00	135.60	201.70	153.00	152.00	89.00
1991	18	66.00	39.00	6.00	16.00	17.00	6.00	10.80	132.60	188.00	162.00	144.00	88.00
1991	19	58.00	40.00	6.00	17.00	16.00	17.80	6.00	136.70	190.60	172.00	157.00	87.00
1991	20	63.00	6.00	6.00	17.00	16.00	12.20	6.00	149.60	184.60	180.00	154.00	80.00
1991	21	70.00	6.00	6.00	17.00	17.00	6.00	9.90	175.00	226.00	207.00	158.00	78.00
1991	22	66.00	6.00	6.00	17.00	17.00	14.80	6.00	189.00	243.00	187.00	154.00	83.00
1991	23	61.00	27.00	6.00	17.00	17.00	7.40	37.00	194.60	234.00	205.00	154.00	85.00
1991	24	63.00	6.00	6.00	17.00	17.00	11.80	6.00	158.60	223.00	198.00	152.00	85.00
1991	25	65.00	6.00	6.00	17.00	17.00	22.00	31.00	181.00	215.00	210.00	149.00	89.00
1991	26	67.00	6.00	22.00	17.00	17.00	6.00	9.90	165.60	207.00	208.00	151.00	78.00
1991	27	64.00	6.00	22.00	17.00	18.00	6.00	21.60	192.00	204.00	197.00	153.00	77.00
1991	28	65.00	22.00	22.00	17.00	18.00	21.00	45.00	161.60	202.00	190.00	162.00	76.00
1991	29	56.00	6.00	23.00	17.00	999999.00	6.00	46.00	175.00	204.00	186.00	156.00	70.00
1991	30	53.00	6.00	23.00	17.00	999999.00	6.00	36.00	139.50	201.00	182.00	147.00	75.00
1991	31	52.00	999999.00	23.00	17.00	999999.00	6.00	999999.00	130.70	999999.00	176.00	137.00	999999.00
1992	1	75.00	36.00	22.00	11.20	9.10	9.80	7.40	142.00	171.20	140.90	100.40	999999.00
1992	2	72.00	34.00	6.00	19.00	6.40	9.80	6.00	163.00	152.20	133.20	104.10	999999.00
1992	3	67.00	40.00	6.00	14.80	6.00	38.00	6.00	156.00	146.30	131.60	98.00	999999.00
1992	4	62.00	55.00	12.90	12.10	10.50	45.00	8.10	108.10	143.40	128.30	93.00	999999.00
1992	5	62.00	24.10	20.40	14.20	13.00	43.00	8.50	108.30	144.50	126.80	93.00	999999.00
1992	6	63.00	14.10	28.10	15.50	7.80	39.00	13.80	110.80	141.60	129.00	91.00	999999.00
1992	7	60.00	6.10	6.00	11.20	11.40	10.30	6.80	82.00	140.10	124.50	88.10	999999.00
1992	8	67.00	43.00	6.80	12.30	8.90	11.20	19.20	145.00	141.50	134.10	82.00	999999.00
1992	9	72.00	42.00	6.00	16.90	8.60	38.00	9.90	156.00	144.00	131.80	78.10	999999.00
1992	10	67.00	43.00	6.00	13.40	9.60	6.00	15.30	153.00	149.00	126.60	126.00	999999.00
1992	11	63.00	42.00	6.20	10.20	10.90	10.20	17.90	143.00	154.80	132.80	133.00	999999.00
1992	12	65.00	39.00	9.60	11.10	36.00	14.80	18.20	101.00	211.00	135.60	139.00	999999.00
1992	13	77.00	39.00	11.40	11.80	36.00	12.90	21.40	100.60	205.00	129.00	137.00	999999.00
1992	14	81.00	39.00	18.90	14.00	37.00	11.00	22.10	107.50	155.30	119.90	133.00	999999.00
1992	15	79.00	6.00	15.30	9.70	37.00	11.00	26.50	157.00	173.00	117.90	116.00	999999.00
1992	16	78.00	7.70	10.90	11.60	37.00	44.00	68.40	211.00	153.50	117.90	105.00	999999.00
1992	17	77.00	6.00	7.70	6.00	38.00	10.40	96.40	198.00	149.50	116.90	109.00	999999.00
1992	18	68.00	6.00	47.00	12.50	38.00	9.10	100.80	186.00	146.80	113.00	111.00	999999.00
1992	19	61.00	9.00	6.00	12.20	38.00	6.00	98.20	188.00	145.70	112.00	116.00	999999.00
1992	20	70.00	7.80	6.00	10.50	39.00	6.00	93.60	188.00	151.80	117.00	107.00	999999.00
1992	21	63.00	7.60	10.90	8.70	39.00	6.00	87.60	206.00	170.20	110.00	108.00	999999.00
1992	22	60.00	9.40	6.60	11.60	39.00	6.00	82.00	219.00	159.40	106.90	102.00	999999.00
1992	23	60.00	6.00	7.70	12.70	39.00	6.00	77.10	212.00	199.00	107.90	111.00	999999.00
1992	24	62.00	6.00	14.40	7.50	39.00	6.00	65.60	217.00	151.60	108.00	127.00	999999.00
1992	25	63.00	46.00	44.00	6.00	39.00	6.00	57.60	228.00	158.70	111.90	145.00	999999.00
1992	26	64.00	6.00	13.20	6.00	38.00	39.00	50.10	219.00	176.70	110.90	147.00	999999.00
1992	27	65.00	6.00	11.60	6.00	38.00	39.00	49.20	223.00	187.70	104.90	135.00	999999.00
1992	28	57.00	38.00	11.90	6.00	9.60	50.00	55.00	212.00	169.70	103.70	125.00	999999.00
1992	29	42.00	6.00	6.00	6.00	38.00	6.00	60.60	140.70	167.10	96.70	104.00	999999.00
1992	30	36.00	7.80	6.00	6.40	999999.00	6.00	60.30	154.20	152.40	94.40	89.00	999999.00
1992	31	29.00	999999.00	13.40	6.00	999999.00	6.00	999999.00	174.10	999999.00	98.80	83.00	999999.00

Note: 999999 = no data)

BIG THOMPSON AVERAGE RIVER FLOWS (CFS)
7.1 CFS

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1988	1	43.00	68.00	35.00	7.10	7.10	7.10	12.50	56.30	309.10	286.70	86.00	35.00
1988	2	43.00	71.00	42.00	7.10	7.10	7.10	15.60	124.00	205.20	237.80	86.00	65.00
1988	3	42.00	68.00	43.00	7.10	7.10	7.10	14.10	83.30	154.20	215.80	120.00	35.00
1988	4	43.00	63.00	37.00	7.10	7.10	7.10	14.70	86.20	265.00	207.80	145.00	35.00
1988	5	43.00	63.00	34.00	7.10	7.10	7.10	17.20	78.70	435.50	199.80	149.00	35.00
1988	6	43.00	62.00	31.00	7.10	16.00	7.10	49.00	74.10	580.50	211.20	134.00	35.00
1988	7	43.00	61.00	29.00	7.10	16.00	7.10	57.00	78.20	597.00	202.90	129.00	35.00
1988	8	43.00	60.00	28.00	7.10	7.10	7.10	68.00	78.60	601.70	164.20	131.00	35.00
1988	9	41.00	58.00	26.00	7.10	7.10	7.10	66.00	64.00	581.00	136.10	87.00	35.00
1988	10	40.00	56.00	24.00	7.10	7.10	7.10	62.00	76.20	581.40	116.20	62.00	35.00
1988	11	40.00	58.00	24.00	7.10	7.10	7.10	64.00	70.20	575.00	131.50	100.00	35.00
1988	12	40.00	56.00	23.00	7.10	7.10	7.10	67.00	67.60	576.50	123.80	41.20	54.80
1988	13	40.00	57.00	23.00	12.30	7.10	7.10	70.00	76.20	544.90	114.20	35.30	77.00
1988	14	68.00	56.00	21.00	13.40	7.10	7.10	77.00	96.20	440.30	113.30	35.00	81.50
1988	15	82.00	59.00	20.00	10.30	8.30	7.10	86.00	209.70	347.50	110.30	35.00	109.00
1988	16	80.00	56.00	20.00	9.30	7.10	7.10	89.00	299.80	411.00	108.30	35.00	99.00
1988	17	78.00	59.00	21.00	13.30	8.70	9.30	98.00	256.50	508.20	107.30	35.00	99.00
1988	18	76.00	53.00	22.00	13.50	7.10	11.00	100.00	324.60	634.70	105.30	35.00	97.00
1988	19	66.00	54.00	23.00	10.60	20.00	7.10	104.00	450.70	678.10	108.30	35.00	92.00
1988	20	52.00	46.00	23.00	12.10	7.10	12.40	96.00	493.40	693.00	105.30	35.00	98.10
1988	21	46.00	34.00	23.00	11.60	7.10	11.20	96.00	269.00	680.50	102.30	35.00	97.00
1988	22	47.00	34.00	22.00	10.50	7.10	8.30	102.00	176.00	664.00	101.80	35.00	74.00
1988	23	49.00	33.00	21.00	9.70	9.80	9.40	46.90	165.00	692.50	97.00	35.00	66.00
1988	24	48.00	32.00	20.00	12.00	7.10	7.10	42.90	165.00	534.30	93.00	35.00	77.00
1988	25	49.00	33.00	18.00	10.60	7.10	7.10	43.90	187.00	508.30	80.00	35.00	81.00
1988	26	49.00	38.00	16.00	13.80	7.10	10.30	39.90	244.00	488.20	76.00	35.00	80.00
1988	27	61.00	32.00	16.00	7.10	7.10	8.40	36.70	300.00	483.10	78.00	35.00	93.00
1988	28	68.00	28.00	15.00	7.10	7.10	7.10	37.00	85.30	401.00	80.00	35.00	95.00
1988	29	68.00	30.00	15.00	7.10	7.10	7.10	39.90	96.20	353.80	82.00	35.00	100.00
1988	30	69.00	34.00	15.00	7.10	999999.00	14.60	39.00	169.10	338.70	85.00	35.00	35.00
1988	31	69.00	999999.00	14.00	7.10	999999.00	7.10	999999.00	325.00	999999.00	87.00	35.00	999999.00
1989	1	56.00	29.20	7.10	18.00	7.10	18.00	11.00	35.00	194.00	187.90	246.00	53.10
1989	2	58.00	12.40	7.10	18.00	7.10	18.00	13.30	35.00	134.30	155.80	276.00	49.20
1989	3	107.00	16.60	7.10	18.00	7.10	7.10	10.40	35.00	248.40	138.60	279.00	47.20
1989	4	35.00	13.80	8.80	19.00	14.00	7.10	11.50	35.00	242.60	130.40	254.00	43.20
1989	5	35.00	12.40	7.10	20.00	15.00	7.10	10.90	35.00	166.60	129.80	213.00	47.20
1989	6	35.00	11.70	7.10	20.00	15.00	7.10	7.80	35.00	144.40	145.90	196.00	38.30
1989	7	35.00	14.20	7.10	19.00	7.10	7.10	7.10	35.00	139.50	275.50	184.00	38.30
1989	8	35.00	8.90	7.10	18.00	7.90	7.10	28.90	35.60	141.70	255.50	169.00	52.80
1989	9	35.00	11.00	7.10	18.00	17.00	7.10	33.90	78.80	146.80	237.50	151.00	47.60
1989	10	35.00	35.00	7.10	18.00	17.00	34.00	27.50	91.50	189.00	233.40	136.00	42.70
1989	11	43.00	13.40	7.10	18.00	17.00	8.10	32.40	89.30	158.30	226.30	133.00	42.70
1989	12	35.00	10.30	7.10	18.00	10.70	9.70	11.30	93.20	259.40	215.20	139.00	44.90
1989	13	44.00	15.30	21.00	18.00	17.00	9.70	10.70	92.10	286.90	256.00	149.00	46.90
1989	14	35.00	36.00	7.10	18.00	17.00	11.10	8.90	110.90	183.00	199.20	158.00	49.90
1989	15	43.00	7.10	7.10	19.00	17.00	9.80	10.90	133.70	195.10	195.10	168.00	65.80
1989	16	42.00	10.90	7.10	20.00	17.00	9.70	10.90	193.00	150.70	184.10	172.00	92.80
1989	17	42.00	30.00	7.10	20.00	17.00	8.90	12.50	184.00	147.80	173.20	224.00	101.80
1989	18	41.00	8.60	7.20	20.00	17.00	9.60	48.00	174.00	138.20	186.10	163.00	95.70
1989	19	40.00	15.50	7.10	7.10	18.00	8.50	55.00	180.00	138.20	173.10	149.00	93.70
1989	20	41.00	15.00	7.10	17.00	18.00	9.00	64.00	177.00	224.80	162.20	137.00	89.60
1989	21	35.00	14.00	7.10	17.00	18.00	31.00	25.20	178.00	158.10	143.20	126.00	83.90
1989	22	35.00	12.40	7.10	16.00	18.00	37.00	34.70	175.00	144.80	132.20	119.00	82.90
1989	23	35.00	38.00	20.00	16.00	18.00	37.00	87.20	177.00	131.70	121.20	115.00	77.70
1989	24	35.00	37.00	7.10	7.10	18.00	27.50	121.80	188.00	129.70	128.20	108.00	78.60
1989	25	35.00	11.80	7.10	7.10	18.00	37.00	140.40	190.00	127.70	126.20	101.00	61.80
1989	26	39.70	15.30	7.10	7.10	18.00	39.00	147.30	225.00	126.50	130.20	94.00	61.70
1989	27	35.20	23.00	7.10	7.10	17.00	39.00	149.60	199.00	122.50	132.20	89.00	62.70
1989	28	35.00	7.10	7.10	7.10	17.00	39.00	66.10	184.00	170.50	123.70	129.00	61.70
1989	29	35.00	7.10	7.10	7.10	999999.00	24.90	28.10	187.00	160.60	159.20	72.00	64.90
1989	30	35.00	7.10	18.00	7.10	999999.00	10.20	26.20	225.00	114.90	198.10	65.10	51.80
1989	31	35.00	999999.00	7.10	7.10	999999.00	10.20	999999.00	215.00	999999.00	223.00	60.10	999999.00
1990	1	51.10	12.70	7.10	7.10	7.10	26.00	26.70	116.20	239.40	138.80	120.40	48.10
1990	2	36.40	7.10	7.10	7.10	7.10	7.10	39.20	122.30	230.80	184.00	120.60	58.70
1990	3	37.90	7.10	7.10	7.10	7.10	7.10	51.60	97.30	196.80	143.70	114.00	103.00
1990	4	77.00	7.10	7.10	7.10	7.10	7.10	59.00	82.00	198.50	149.30	164.00	50.80
1990	5	78.00	16.50	7.10	7.10	7.10	27.00	75.80	79.00	228.10	147.50	164.00	47.80
1990	6	35.00	17.30	7.10	7.10	7.10	21.20	62.70	80.00	242.00	155.20	113.40	51.50
1990	7	35.00	17.60	7.10	7.10	7.10	7.10	67.00	82.70	403.10	145.30	107.20	49.60
1990	8	35.00	7.10	7.10	7.10	7.10	7.10	71.10	109.20	393.20	153.30	99.80	43.90
1990	9	35.00	38.00	7.10	7.10	7.10	7.10	72.10	121.20	369.80	199.90	91.90	43.90
1990	10	35.00	7.10	7.10	7.10	7.10	7.10	68.40	115.20	392.80	209.00	89.00	51.00
1990	11	35.00	7.10	7.10	7.10	7.10	7.10	60.60	123.30	434.80	161.10	86.20	46.20
1990	12	35.00	7.10	7.10	7.10	7.10	8.60	67.40	123.20	548.00	146.40	101.30	42.40
1990	13	35.00	7.10	7.10	7.10	7.10	15.60	79.10	119.50	556.00	131.20	106.30	80.00
1990	14	35.00	14.50	7.10	7.10	7.10	7.10	78.70	117.60	331.00	126.20	111.20	37.30
1990	15	35.00	7.10	7.10	7.10	7.10	9.40	92.90	183.00	296.60	125.20	110.20	35.50
1990	16	35.00	7.10	7.10	7.10	7.10	11.90	125.70	185.00	272.60	129.60	100.20	35.00
1990	17	35.00	7.10	7.10	7.10	7.10	9.10	136.30	183.00	205.60	127.50	100.30	35.00
1990	18	35.00	7.10	7.10	7.10	7.10	7.10	116.50	170.00	168.20	109.60	101.30	35.00
1990	19	35.00	7.10	7.10	7.10	7.10	7.10	122.40	171.00	196.80	135.70	96.30	41.80
1990	20	35.00	7.10	7.10	7.10	7.10	9.60	136.30	180.00	172.40	147.20	90.70	35.00

Note: 999999 = no data)

BIG THOMPSON AVERAGE RIVER FLOWS (CFS)
7.1 CFS

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1990	21	35.00	7.10	7.10	7.10	7.10	18.40	140.20	180.00	154.50	173.80	90.50	35.00
1990	22	35.00	7.10	7.10	7.10	7.10	29.30	154.10	180.00	164.70	166.80	86.20	35.00
1990	23	35.00	7.10	7.10	7.10	7.10	36.10	185.70	186.00	161.10	165.90	84.00	35.00
1990	24	35.00	7.10	7.10	7.10	7.10	15.70	192.10	191.00	164.80	143.20	80.20	35.00
1990	25	35.00	7.10	7.10	7.10	7.10	13.90	201.10	195.00	167.50	138.20	77.10	35.00
1990	26	61.00	33.00	7.10	7.10	7.10	17.30	146.00	190.00	169.80	182.00	63.10	35.00
1990	27	35.00	12.20	7.10	7.10	7.10	15.10	104.10	195.00	181.70	130.20	53.20	35.00
1990	28	35.00	7.10	21.00	7.10	7.10	20.40	98.20	195.00	153.90	128.20	49.20	35.00
1990	29	54.00	8.00	20.00	7.10	999999.00	20.60	93.20	283.00	149.80	131.20	48.30	70.00
1990	30	35.00	7.10	7.10	7.10	999999.00	22.80	86.20	273.00	149.80	132.20	39.70	72.00
1990	31	35.00	999999.00	7.10	7.10	999999.00	18.60	999999.00	271.00	999999.00	126.30	42.00	999999.00
1991	1	72.00	47.00	7.10	20.00	17.00	7.10	7.10	35.00	255.40	194.00	178.00	130.00
1991	2	72.00	44.00	7.10	20.00	17.00	7.10	7.10	35.00	816.40	188.00	182.00	132.00
1991	3	70.00	47.00	17.00	20.00	17.00	7.10	7.10	35.00	549.10	185.00	205.00	130.00
1991	4	64.00	46.00	7.10	20.00	16.00	7.10	21.00	35.00	334.30	180.00	219.00	127.00
1991	5	61.00	46.00	7.10	20.00	17.00	7.10	22.00	35.00	276.10	171.00	204.00	125.00
1991	6	62.00	49.00	7.10	20.00	17.00	7.10	22.00	35.00	272.20	170.00	193.00	126.00
1991	7	68.00	38.00	7.10	20.00	17.00	18.00	22.00	35.00	301.10	166.00	190.00	125.00
1991	8	77.00	46.00	7.10	20.00	18.00	14.00	20.00	35.00	302.50	161.00	187.00	123.00
1991	9	79.00	45.00	7.10	20.00	18.00	17.00	29.00	35.00	271.60	166.00	186.00	121.00
1991	10	77.00	47.00	7.20	19.00	18.00	24.00	34.00	38.00	273.70	160.00	185.00	119.00
1991	11	75.00	42.00	7.10	17.00	18.00	7.10	35.00	70.40	254.70	150.00	182.00	117.00
1991	12	74.00	40.00	7.10	17.00	18.00	7.10	35.00	91.40	245.70	162.00	180.00	115.00
1991	13	71.00	40.00	7.10	16.00	18.00	7.10	35.00	91.30	245.60	153.00	189.00	116.00
1991	14	67.00	34.00	7.10	16.00	18.00	20.00	35.00	90.30	231.70	148.00	193.00	114.00
1991	15	67.00	33.00	22.00	16.00	17.00	7.10	36.00	96.30	233.90	146.00	183.00	105.00
1991	16	68.00	40.00	7.10	16.00	17.00	7.10	35.00	153.00	227.70	144.00	162.00	95.00
1991	17	70.00	39.00	7.10	16.00	17.00	7.10	38.00	135.60	201.70	153.00	152.00	89.00
1991	18	66.00	39.00	7.10	16.00	17.00	7.10	10.80	132.60	188.00	162.00	144.00	88.00
1991	19	58.00	40.00	7.10	17.00	16.00	17.80	7.10	136.70	190.60	172.00	157.00	87.00
1991	20	63.00	7.10	7.10	17.00	16.00	12.20	7.10	149.60	184.60	180.00	154.00	80.00
1991	21	70.00	7.10	7.10	17.00	17.00	7.10	9.90	175.00	226.00	207.00	158.00	78.00
1991	22	66.00	7.10	7.10	17.00	17.00	14.80	7.10	189.00	243.00	187.00	154.00	83.00
1991	23	61.00	27.00	7.10	17.00	17.00	7.40	37.00	194.60	234.00	205.00	154.00	85.00
1991	24	63.00	7.10	7.10	17.00	17.00	11.80	7.10	158.60	223.00	198.00	152.00	85.00
1991	25	65.00	7.10	7.10	17.00	17.00	22.00	31.00	181.00	215.00	210.00	149.00	89.00
1991	26	67.00	7.10	22.00	17.00	17.00	7.10	9.90	165.60	207.00	208.00	151.00	78.00
1991	27	64.00	7.10	22.00	17.00	18.00	7.10	21.60	192.00	204.00	197.00	153.00	77.00
1991	28	65.00	22.00	22.00	17.00	18.00	21.00	45.00	161.60	202.00	190.00	162.00	76.00
1991	29	56.00	7.10	23.00	17.00	999999.00	7.10	46.00	175.00	204.00	186.00	156.00	70.00
1991	30	53.00	7.10	23.00	17.00	999999.00	7.10	36.00	139.50	201.00	182.00	147.00	75.00
1991	31	52.00	999999.00	23.00	17.00	999999.00	7.10	999999.00	130.70	999999.00	176.00	137.00	999999.00
1992	1	75.00	36.00	22.00	11.20	9.10	9.80	7.40	142.00	171.20	140.90	100.40	999999.00
1992	2	72.00	34.00	7.10	19.00	7.10	9.80	7.10	163.00	152.20	133.20	104.10	999999.00
1992	3	67.00	40.00	7.10	14.80	7.10	38.00	7.10	156.00	146.30	131.60	98.00	999999.00
1992	4	62.00	55.00	12.90	12.10	10.50	45.00	8.10	108.10	143.40	128.30	93.00	999999.00
1992	5	62.00	24.10	20.40	14.20	13.00	43.00	8.50	108.30	144.50	126.80	93.00	999999.00
1992	6	63.00	14.10	28.10	15.50	7.80	39.00	13.80	110.80	141.60	129.00	91.00	999999.00
1992	7	60.00	7.10	7.10	11.20	11.40	10.30	8.80	82.00	140.10	124.50	88.10	999999.00
1992	8	67.00	43.00	7.10	12.30	8.90	11.20	19.20	145.00	141.50	134.10	82.00	999999.00
1992	9	72.00	42.00	7.10	16.90	8.60	38.00	9.90	156.00	144.00	131.80	78.10	999999.00
1992	10	67.00	43.00	7.10	13.40	9.60	7.10	15.30	153.00	149.00	126.60	126.00	999999.00
1992	11	63.00	42.00	7.10	10.20	10.90	10.20	17.90	143.00	154.80	132.80	133.00	999999.00
1992	12	65.00	39.00	9.60	11.10	36.00	14.80	18.20	101.00	211.00	135.60	139.00	999999.00
1992	13	77.00	39.00	11.40	11.80	36.00	12.90	21.40	100.60	205.00	129.00	137.00	999999.00
1992	14	81.00	39.00	18.90	14.00	37.00	11.00	22.10	107.50	155.30	119.90	133.00	999999.00
1992	15	79.00	7.10	15.30	9.70	37.00	11.00	26.50	157.00	173.00	117.90	116.00	999999.00
1992	16	78.00	7.70	10.90	11.60	37.00	44.00	68.40	211.00	153.50	117.90	105.00	999999.00
1992	17	77.00	7.10	7.70	7.10	38.00	10.40	96.40	198.00	149.50	116.90	109.00	999999.00
1992	18	68.00	7.10	47.00	12.50	38.00	9.10	100.80	186.00	146.80	113.00	111.00	999999.00
1992	19	61.00	9.00	7.10	12.20	38.00	7.10	98.20	188.00	145.70	112.00	116.00	999999.00
1992	20	70.00	7.80	7.10	10.50	39.00	7.10	93.60	188.00	151.80	117.00	107.00	999999.00
1992	21	63.00	7.60	10.90	8.70	39.00	7.10	87.60	206.00	170.20	110.00	108.00	999999.00
1992	22	60.00	9.40	7.10	11.60	39.00	7.10	82.00	219.00	159.40	106.90	102.00	999999.00
1992	23	60.00	7.10	7.70	12.70	39.00	7.10	77.10	212.00	199.00	107.90	111.00	999999.00
1992	24	62.00	7.10	14.40	7.50	39.00	7.10	65.60	217.00	151.60	108.00	127.00	999999.00
1992	25	63.00	46.00	44.00	7.10	39.00	7.10	57.60	228.00	158.70	111.90	145.00	999999.00
1992	26	64.00	7.10	13.20	7.10	38.00	39.00	50.10	219.00	176.70	110.90	147.00	999999.00
1992	27	65.00	7.10	11.60	7.10	38.00	39.00	49.20	223.00	187.70	104.90	135.00	999999.00
1992	28	57.00	38.00	11.90	7.10	9.60	50.00	55.00	212.00	169.70	103.70	125.00	999999.00
1992	29	42.00	7.10	7.10	7.10	38.00	7.10	60.60	140.70	167.10	96.70	104.00	999999.00
1992	30	36.00	7.80	7.10	7.10	999999.00	7.10	60.30	154.20	152.40	94.40	89.00	999999.00
1992	31	29.00	999999.00	13.40	7.10	999999.00	7.10	999999.00	174.10	999999.00	98.80	83.00	999999.00

(Note: 999999 = no data)

MINIMUM DAILY FLOWS

BIG THOMPSON RIVER FLOWS (CFS) **POWER**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1988	1	43	68	35	3	3	3	3	55	309	287	86	14
1988	2	43	71	42	3	3	3	3	124	205	238	86	65
1988	3	42	68	43	3	3	3	3	79	153	216	120	15
1988	4	43	63	37	3	3	3	3	82	265	208	145	14
1988	5	43	63	34	3	4	3	3	78	435	200	149	13
1988	6	43	62	31	3	16	3	49	73	579	207	134	12
1988	7	43	61	29	3	16	3	57	77	595	200	129	10
1988	8	43	60	28	3	3	3	68	78	602	164	131	5
1988	9	41	58	26	3	3	3	66	59	581	136	87	3
1988	10	40	56	24	3	3	3	62	71	581	116	62	3
1988	11	40	58	24	3	3	3	64	69	574	116	100	12
1988	12	40	56	23	3	3	3	67	63	575	117	41	55
1988	13	40	57	23	3	3	3	70	76	541	114	35	77
1988	14	68	56	21	3	3	3	77	96	437	113	33	81
1988	15	82	59	20	3	3	3	86	209	347	110	30	109
1988	16	80	56	20	3	3	3	89	299	411	108	29	99
1988	17	78	59	21	3	3	3	98	256	508	107	29	99
1988	18	76	53	22	3	3	3	100	312	634	105	30	97
1988	19	66	54	23	3	20	3	104	429	678	108	30	92
1988	20	52	46	23	3	3	3	96	493	678	105	26	97
1988	21	46	34	23	3	3	3	96	289	669	102	24	97
1988	22	47	34	22	3	3	3	102	176	663	100	22	74
1988	23	49	33	21	3	3	3	46	165	692	97	21	66
1988	24	48	32	20	3	3	3	43	165	534	93	19	77
1988	25	49	33	18	3	3	3	42	187	508	80	18	81
1988	26	49	38	16	12	3	3	38	244	488	76	20	80
1988	27	61	32	16	3	3	3	35	300	483	78	20	93
1988	28	68	28	15	3	3	3	35	85	401	80	23	95
1988	29	68	30	15	3	3	3	37	96	354	82	24	100
1988	30	69	34	15	3	999999	3	35	169	338	85	20	3
1988	31	69	999999	14	3	999999	3	999999	325	999999	87	18	999999
1989	1	56	29	3	18	3	18	9	29	194	187	246	53
1989	2	58	3	3	18	3	18	8	31	129	155	276	49
1989	3	107	3	3	18	3	3	3	28	248	138	279	47
1989	4	26	3	3	19	14	3	3	26	242	130	254	43
1989	5	23	3	3	20	15	3	3	24	166	130	213	47
1989	6	21	3	3	20	15	3	3	22	144	145	196	38
1989	7	3	3	3	19	3	3	3	22	139	275	184	38
1989	8	23	3	3	18	3	3	26	35	141	255	169	48
1989	9	23	3	3	18	17	3	29	77	147	237	151	47
1989	10	18	35	3	18	17	34	24	91	189	233	136	42
1989	11	43	3	3	18	17	3	30	89	158	226	133	42
1989	12	3	8	3	18	11	3	3	93	259	215	139	45
1989	13	44	3	21	18	17	3	3	92	286	256	149	47
1989	14	14	36	3	18	17	3	3	110	183	199	158	50
1989	15	43	3	3	19	17	3	3	148	133	195	168	66
1989	16	42	3	3	20	17	3	11	193	150	184	172	93
1989	17	42	30	3	20	17	3	3	184	147	173	224	102
1989	18	41	3	5	20	17	3	48	174	138	186	163	96
1989	19	40	3	3	3	18	3	55	180	138	173	149	93
1989	20	41	3	3	17	18	3	64	177	213	162	137	89
1989	21	3	3	3	17	18	31	23	178	157	143	126	83
1989	22	3	3	3	16	18	37	34	175	133	132	119	79
1989	23	12	38	20	16	18	37	87	177	132	121	115	78
1989	24	3	37	3	3	18	9	121	188	130	128	108	67
1989	25	11	3	3	3	18	37	139	190	127	126	101	62
1989	26	36	3	3	3	18	39	144	225	126	130	94	61
1989	27	35	23	3	3	17	39	145	199	122	132	89	62
1989	28	34	3	3	3	17	39	66	184	170	122	129	61
1989	29	33	3	3	3	999999	11	28	187	160	159	72	64
1989	30	32	3	18	3	999999	3	26	225	115	198	65	52
1989	31	31	999999	3	3	999999	6	999999	215	999999	223	60	999999

(Note: 999999 = no data)

**BIG THOMPSON RIVER FLOWS (CFS)
POWER**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1990	1	44	5	3	3	3	26	22	116	239	139	119	48
1990	2	36	3	3	3	3	3	31	122	231	184	121	58
1990	3	35	3	3	3	3	3	46	97	197	144	112	103
1990	4	77	3	3	3	3	3	54	82	198	149	164	49
1990	5	78	13	3	3	3	27	71	79	217	146	164	48
1990	6	25	14	3	3	3	5	57	80	242	155	112	51
1990	7	17	12	3	3	3	3	62	82	403	145	107	47
1990	8	11	3	3	3	3	3	66	109	390	153	96	44
1990	9	12	38	3	3	3	3	67	121	369	199	86	44
1990	10	12	3	3	3	3	3	63	115	392	209	79	51
1990	11	3	3	3	3	3	3	54	123	433	159	78	46
1990	12	3	3	3	3	3	3	59	123	548	146	101	38
1990	13	7	3	3	3	3	8	71	119	556	131	106	80
1990	14	13	11	3	3	3	3	71	117	330	126	111	33
1990	15	3	3	3	3	3	3	87	183	296	125	110	35
1990	16	12	3	3	3	3	3	120	185	272	129	100	32
1990	17	15	3	3	3	3	3	135	183	205	127	100	30
1990	18	14	3	3	3	3	3	116	170	157	110	101	32
1990	19	9	3	3	3	3	3	122	171	196	136	96	41
1990	20	15	3	3	3	3	3	136	180	172	147	90	34
1990	21	12	3	3	3	3	10	140	180	154	174	90	35
1990	22	12	3	3	3	3	21	154	180	165	165	86	34
1990	23	14	3	3	3	3	24	185	186	161	165	84	32
1990	24	15	3	3	3	3	7	192	191	164	143	80	32
1990	25	13	3	3	3	3	6	201	195	167	138	77	27
1990	26	61	33	3	3	3	9	146	190	169	182	63	22
1990	27	10	8	3	3	3	10	104	195	178	130	53	24
1990	28	9	3	3	3	3	15	98	195	154	128	49	30
1990	29	54	8	3	3	999999	15	93	283	150	131	48	70
1990	30	5	3	3	3	999999	14	86	273	150	132	39	72
1990	31	8	999999	3	3	999999	12	999999	271	999999	126	42	999999
1991	1	72	47	3	20	17	3	3	5	254	194	178	130
1991	2	72	44	3	20	17	3	3	25	810	188	182	132
1991	3	70	47	17	20	17	3	3	26	546	185	205	130
1991	4	64	46	3	20	16	3	21	25	334	180	219	127
1991	5	61	46	3	20	17	3	22	33	275	171	204	125
1991	6	62	49	3	20	17	3	22	31	272	170	193	126
1991	7	68	38	3	20	17	18	22	9	299	166	190	125
1991	8	77	46	3	20	18	14	20	19	302	161	187	123
1991	9	79	45	3	20	18	17	29	32	270	166	186	121
1991	10	77	47	3	19	18	24	34	26	274	160	185	119
1991	11	75	42	3	17	18	3	35	68	253	150	182	117
1991	12	74	40	3	17	18	3	35	91	243	162	180	115
1991	13	71	40	3	16	18	3	35	91	243	153	189	116
1991	14	67	34	3	16	18	20	35	90	232	148	193	114
1991	15	67	33	22	16	17	3	36	96	233	146	183	105
1991	16	68	40	3	16	17	3	35	153	227	144	162	95
1991	17	70	39	3	16	17	3	38	135	201	153	152	89
1991	18	66	39	3	16	17	3	3	132	188	162	144	88
1991	19	58	40	3	17	16	15	3	136	185	172	157	87
1991	20	63	3	3	17	16	12	3	149	177	180	154	80
1991	21	70	3	3	17	17	3	3	175	226	207	158	78
1991	22	66	3	3	17	17	11	3	165	243	187	154	83
1991	23	61	3	3	17	17	7	37	194	234	205	154	85
1991	24	63	3	3	17	17	12	3	158	223	198	152	85
1991	25	65	3	3	17	17	22	31	181	215	210	149	89
1991	26	67	3	22	17	17	3	3	165	207	208	151	78
1991	27	64	3	22	17	18	3	21	192	204	197	153	77
1991	28	65	22	22	17	18	21	45	161	202	190	162	76
1991	29	56	3	23	17	999999	3	46	175	204	186	156	70
1991	30	53	3	23	17	999999	3	36	129	201	182	147	75
1991	31	52	999999	23	17	999999	3	999999	130	999999	176	137	999999

(Note: 999999 = no data)

**BIG THOMPSON RIVER FLOWS (CFS)
POWER**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1992	1	75	36	22	6	6	10	6	142	171	141	100	999999
1992	2	72	34	6	11	6	10	6	163	152	133	104	999999
1992	3	67	40	6	7	6	38	6	156	146	131	98	999999
1992	4	62	55	6	10	6	45	6	108	143	127	93	999999
1992	5	62	9	11	10	6	43	6	105	144	126	93	999999
1992	6	63	6	9	6	6	39	11	109	141	128	91	999999
1992	7	60	6	6	7	6	6	6	77	139	121	88	999999
1992	8	67	43	6	9	7	6	9	145	141	134	82	999999
1992	9	72	42	6	6	7	38	9	156	143	131	78	999999
1992	10	67	43	6	8	7	6	11	153	146	126	126	999999
1992	11	63	42	6	6	10	6	14	143	154	132	133	999999
1992	12	65	39	6	8	36	11	18	100	211	135	139	999999
1992	13	77	39	6	10	36	6	17	99	205	129	137	999999
1992	14	81	39	9	10	37	8	17	107	155	120	133	999999
1992	15	79	6	8	6	37	8	23	157	172	118	116	999999
1992	16	78	6	6	9	37	44	53	211	153	118	105	999999
1992	17	77	6	6	6	38	6	96	198	149	117	109	999999
1992	18	68	6	47	7	38	6	101	186	146	113	111	999999
1992	19	61	6	6	9	38	6	98	188	145	112	116	999999
1992	20	70	6	6	8	39	6	92	188	152	117	107	999999
1992	21	63	6	6	7	39	6	86	206	170	110	108	999999
1992	22	60	6	6	6	39	6	76	219	159	107	102	999999
1992	23	60	6	6	9	39	6	66	212	199	108	111	999999
1992	24	62	6	11	6	39	6	59	217	151	108	127	999999
1992	25	63	6	44	6	39	6	57	228	159	112	145	999999
1992	26	64	6	6	6	38	39	47	219	177	111	147	999999
1992	27	65	6	6	6	38	39	46	223	188	105	135	999999
1992	28	57	38	6	6	9	50	52	212	169	104	125	999999
1992	29	42	6	6	6	38	6	54	137	167	97	104	999999
1992	30	36	6	6	6	999999	6	59	149	152	94	89	999999
1992	31	29	999999	6	6	999999	6	999999	174	999999	99	83	999999

(Note: 999999 = no data)

BIG THOMPSON RIVER FLOWS (CFS) **R2CROSS**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1988	1	43	68	35	15	16	19	20	55	309	287	86	50
1988	2	43	71	42	15	16	17	20	124	205	238	86	65
1988	3	42	68	43	16	16	17	20	79	153	216	120	50
1988	4	43	63	37	16	16	18	20	82	265	208	145	50
1988	5	43	63	34	15	16	18	20	78	435	200	149	50
1988	6	43	62	31	15	16	19	49	73	579	207	134	50
1988	7	43	61	29	16	16	19	57	77	595	200	129	50
1988	8	43	60	28	16	16	19	68	78	602	164	131	50
1988	9	41	58	26	16	17	20	66	59	581	136	87	50
1988	10	40	56	24	16	17	20	62	71	581	116	62	49
1988	11	40	58	24	17	17	20	64	69	574	116	100	50
1988	12	40	56	23	19	18	20	67	63	575	117	50	55
1988	13	40	57	23	20	18	20	70	76	541	114	50	77
1988	14	68	56	21	20	18	20	77	96	437	113	50	81
1988	15	82	59	20	20	19	20	86	209	347	110	50	109
1988	16	80	56	20	20	20	20	89	299	411	108	50	99
1988	17	78	59	21	20	20	20	98	256	508	107	50	99
1988	18	76	53	22	20	20	20	100	312	634	105	50	97
1988	19	66	54	23	20	20	20	104	429	678	108	50	92
1988	20	52	46	23	20	19	20	96	493	678	105	50	97
1988	21	46	34	23	20	19	20	96	289	669	102	50	97
1988	22	47	34	22	20	19	20	102	176	663	100	50	74
1988	23	49	33	21	20	20	20	46	165	692	97	50	66
1988	24	48	32	20	20	19	20	43	165	534	93	50	77
1988	25	49	33	18	20	19	20	42	187	508	80	50	81
1988	26	49	38	16	20	19	20	38	244	488	76	50	80
1988	27	61	32	16	19	19	20	35	300	483	78	50	93
1988	28	68	28	15	17	19	20	35	85	401	80	50	95
1988	29	68	30	15	17	19	20	37	96	354	82	50	100
1988	30	69	34	15	17	999999	20	35	169	338	85	50	40
1988	31	69	999999	14	17	999999	20	999999	325	999999	87	50	999999
1989	1	56	29	20	18	16	18	20	50	194	187	246	53
1989	2	58	20	20	18	15	18	20	50	129	155	276	50
1989	3	107	20	20	18	14	18	20	50	248	138	279	50
1989	4	50	20	20	19	14	17	20	50	242	130	254	50
1989	5	48	20	20	20	15	16	20	50	166	130	213	50
1989	6	46	20	20	20	15	16	20	50	144	145	196	50
1989	7	47	20	20	19	16	19	20	50	139	275	184	50
1989	8	47	20	20	18	16	20	26	50	141	255	169	50
1989	9	46	20	20	18	17	20	29	77	147	237	151	50
1989	10	42	35	20	18	17	34	24	91	189	233	136	50
1989	11	43	20	20	18	17	20	30	89	158	226	133	50
1989	12	47	20	20	18	17	20	20	93	259	215	139	50
1989	13	44	20	21	18	17	20	20	92	286	256	149	50
1989	14	42	36	20	18	17	20	20	110	183	199	158	50
1989	15	43	20	18	19	17	20	20	148	133	195	168	66
1989	16	42	20	18	20	17	20	20	193	150	184	172	93
1989	17	42	30	19	20	17	20	20	184	147	173	224	102
1989	18	41	20	20	20	17	20	48	174	138	186	163	96
1989	19	40	20	20	18	18	20	55	180	138	173	149	93
1989	20	41	20	20	17	18	20	64	177	213	162	137	89
1989	21	42	20	20	17	18	31	23	178	157	143	126	83
1989	22	41	20	20	16	18	37	34	175	133	132	119	79
1989	23	39	38	20	16	18	37	87	177	132	121	115	78
1989	24	40	37	19	16	18	20	121	188	130	128	108	67
1989	25	50	20	18	17	18	37	139	190	127	126	101	62
1989	26	50	20	18	16	18	39	144	225	126	130	94	61
1989	27	50	23	17	16	17	39	145	199	122	132	89	62
1989	28	50	20	17	16	17	39	66	184	170	122	129	61
1989	29	50	20	17	17	999999	20	28	187	160	159	72	64
1989	30	50	20	18	17	999999	20	26	225	115	198	65	52
1989	31	50	999999	18	17	999999	20	999999	215	999999	223	60	999999

(Note: 999999 = no data)

BIG THOMPSON RIVER FLOWS (CFS)
R2CROSS

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1990	1	50	20	20	19	20	26	22	116	239	139	119	50
1990	2	50	20	17	20	20	20	31	122	231	184	121	58
1990	3	50	20	20	20	20	20	46	97	197	144	112	103
1990	4	77	20	20	19	20	20	54	82	198	149	164	50
1990	5	78	20	20	20	20	27	71	79	217	146	164	50
1990	6	50	20	20	20	20	20	57	80	242	155	112	51
1990	7	50	20	20	20	20	20	62	82	403	145	107	50
1990	8	50	20	20	20	19	20	66	109	390	153	96	50
1990	9	50	38	20	20	20	20	67	121	369	199	86	50
1990	10	50	20	20	20	20	20	63	115	392	209	79	51
1990	11	43	20	20	20	20	20	54	123	433	159	78	50
1990	12	35	20	20	20	20	20	59	123	548	146	101	50
1990	13	50	20	20	20	19	20	71	119	556	131	106	80
1990	14	50	20	20	20	19	20	71	117	330	126	111	50
1990	15	48	20	19	20	17	20	87	183	296	125	110	50
1990	16	50	20	18	20	16	20	120	185	272	129	100	50
1990	17	50	20	18	20	17	20	135	183	205	127	100	50
1990	18	50	20	18	20	18	20	116	170	157	110	101	50
1990	19	50	20	19	20	20	20	122	171	196	136	96	50
1990	20	50	20	18	20	20	20	136	180	172	147	90	50
1990	21	50	20	17	20	20	20	140	180	154	174	90	50
1990	22	50	20	17	20	20	21	154	180	165	165	86	50
1990	23	50	20	19	20	20	24	185	186	161	165	84	50
1990	24	50	20	19	20	20	20	192	191	164	143	80	50
1990	25	50	20	19	20	20	20	201	195	167	138	77	50
1990	26	61	33	20	20	20	20	146	190	169	182	63	50
1990	27	50	20	20	20	20	20	104	195	178	130	53	50
1990	28	50	12	20	20	20	20	98	195	154	128	50	50
1990	29	54	8	20	20	999999	20	93	283	150	131	50	70
1990	30	50	13	20	20	999999	20	86	273	150	132	50	72
1990	31	50	999999	20	20	999999	20	999999	271	999999	126	50	999999
1991	1	72	47	20	20	17	18	20	38	254	194	178	130
1991	2	72	44	20	20	17	18	20	49	810	188	182	132
1991	3	70	47	17	20	17	18	20	50	546	185	205	130
1991	4	64	46	20	20	16	19	21	49	334	180	219	127
1991	5	61	46	20	20	17	19	22	50	275	171	204	125
1991	6	62	49	20	20	17	20	22	50	272	170	193	126
1991	7	68	38	20	20	17	18	22	44	299	166	190	125
1991	8	77	46	20	20	18	14	20	45	302	161	187	123
1991	9	79	45	20	20	18	17	29	50	270	166	186	121
1991	10	77	47	20	19	18	24	34	50	274	160	185	119
1991	11	75	42	20	17	18	20	35	68	253	150	182	117
1991	12	74	40	20	17	18	20	35	91	243	162	180	115
1991	13	71	40	20	16	18	18	35	91	243	153	189	116
1991	14	67	34	20	16	18	20	35	90	232	148	193	114
1991	15	67	33	22	16	17	19	36	96	233	146	183	105
1991	16	68	40	20	16	17	18	35	153	227	144	162	95
1991	17	70	39	20	16	17	20	38	135	201	153	152	89
1991	18	66	39	20	16	17	20	20	132	188	162	144	88
1991	19	58	40	20	17	16	20	20	136	185	172	157	87
1991	20	63	20	20	17	16	20	20	149	177	180	154	80
1991	21	70	20	18	17	17	20	20	175	226	207	158	78
1991	22	66	20	16	17	17	20	20	165	243	187	154	83
1991	23	61	20	18	17	17	19	37	194	234	205	154	85
1991	24	63	20	19	17	17	20	20	158	223	198	152	85
1991	25	65	20	19	17	17	22	31	181	215	210	149	89
1991	26	67	20	22	17	17	20	20	165	207	208	151	78
1991	27	64	20	22	17	18	20	21	192	204	197	153	77
1991	28	65	22	22	17	18	21	45	161	202	190	162	76
1991	29	56	14	23	17	999999	20	46	175	204	186	156	70
1991	30	53	20	23	17	999999	20	36	129	201	182	147	75
1991	31	52	999999	23	17	999999	20	999999	130	999999	176	137	999999

(Note: 999999 = no data)

BIG THOMPSON RIVER FLOWS (CFS)
R2CROSS

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1992	1	75	36	22	20	20	20	20	142	171	141	100	999999
1992	2	72	34	20	20	20	20	20	163	152	133	104	999999
1992	3	67	40	20	20	20	38	20	156	146	131	98	999999
1992	4	62	55	20	20	20	45	20	108	143	127	93	999999
1992	5	62	20	20	20	20	43	20	105	144	126	93	999999
1992	6	63	20	20	20	20	39	20	109	141	128	91	999999
1992	7	60	20	20	20	20	20	20	77	139	121	88	999999
1992	8	67	43	20	20	20	20	20	145	141	134	82	999999
1992	9	72	42	20	20	20	38	20	156	143	131	78	999999
1992	10	67	43	20	20	20	20	20	153	146	126	126	999999
1992	11	63	42	20	20	20	20	20	143	154	132	133	999999
1992	12	65	39	20	20	36	20	20	100	211	135	139	999999
1992	13	77	39	20	20	36	20	20	99	205	129	137	999999
1992	14	81	39	20	20	37	20	20	107	155	120	133	999999
1992	15	79	20	20	20	37	20	23	157	172	118	116	999999
1992	16	78	20	20	20	37	44	53	211	153	118	105	999999
1992	17	77	20	20	20	38	20	96	198	149	117	109	999999
1992	18	68	20	47	20	38	20	101	186	146	113	111	999999
1992	19	61	20	20	20	38	20	98	188	145	112	116	999999
1992	20	70	20	20	20	39	20	92	188	152	117	107	999999
1992	21	63	20	20	20	39	20	86	206	170	110	108	999999
1992	22	60	20	20	20	39	20	76	219	159	107	102	999999
1992	23	60	20	20	20	39	20	66	212	199	108	111	999999
1992	24	62	20	20	20	39	20	59	217	151	108	127	999999
1992	25	63	20	44	20	39	20	57	228	159	112	145	999999
1992	26	64	20	20	20	38	39	47	219	177	111	147	999999
1992	27	65	20	20	20	38	39	46	223	188	105	135	999999
1992	28	57	38	20	20	20	50	52	212	169	104	125	999999
1992	29	42	20	20	20	38	20	54	137	167	97	104	999999
1992	30	36	20	20	20	999999	20	59	149	152	94	89	999999
1992	31	29	999999	20	20	999999	20	999999	174	999999	99	83	999999

(Note: 999999 = no data)

BIG THOMPSON RIVER FLOWS (CFS) **8 CFS**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1988	1	43	68	35	8	8	8	8	55	309	287	86	40
1988	2	43	71	42	8	8	8	8	124	205	238	86	65
1988	3	42	68	43	8	8	8	8	79	153	216	120	40
1988	4	43	63	37	8	8	8	8	82	265	208	145	40
1988	5	43	63	34	8	8	8	8	78	435	200	149	40
1988	6	43	62	31	8	16	8	49	73	579	207	134	40
1988	7	43	61	29	8	16	8	57	77	595	200	129	40
1988	8	43	60	28	8	8	8	68	78	602	164	131	40
1988	9	41	58	26	8	8	8	66	59	581	136	87	40
1988	10	40	56	24	8	8	8	62	71	581	116	62	40
1988	11	40	58	24	8	8	8	64	69	574	116	100	40
1988	12	40	56	23	8	8	8	67	63	575	117	41	55
1988	13	40	57	23	8	8	8	70	76	541	114	40	77
1988	14	68	56	21	8	8	8	77	96	437	113	40	81
1988	15	82	59	20	8	8	8	86	209	347	110	40	109
1988	16	80	56	20	8	8	8	89	299	411	108	40	99
1988	17	78	59	21	8	8	8	98	256	508	107	40	99
1988	18	76	53	22	8	8	8	100	312	634	105	40	97
1988	19	66	54	23	8	20	8	104	429	678	108	40	92
1988	20	52	46	23	8	8	8	96	493	678	105	40	97
1988	21	46	34	23	8	8	8	96	289	669	102	40	97
1988	22	47	34	22	8	8	8	102	176	663	100	40	74
1988	23	49	33	21	8	8	8	46	165	692	97	40	66
1988	24	48	32	20	8	8	8	43	165	534	93	40	77
1988	25	49	33	18	8	8	8	42	187	508	80	40	81
1988	26	49	38	16	12	8	8	38	244	488	76	40	80
1988	27	61	32	16	8	8	8	35	300	483	78	40	93
1988	28	68	28	15	8	8	8	35	85	401	80	40	95
1988	29	68	30	15	8	8	8	37	96	354	82	40	100
1988	30	69	34	15	8	999999	8	35	169	338	85	40	40
1988	31	69	999999	14	8	999999	8	999999	325	999999	87	40	999999
1989	1	56	29	8	18	8	18	9	40	194	187	246	53
1989	2	58	8	8	18	8	18	8	40	129	155	276	49
1989	3	107	8	8	18	8	8	8	40	248	138	279	47
1989	4	40	8	8	19	14	8	8	40	242	130	254	43
1989	5	40	8	8	20	15	8	8	40	166	130	213	47
1989	6	40	8	8	20	15	8	8	40	144	145	196	40
1989	7	40	8	8	19	8	8	8	40	139	275	184	40
1989	8	40	8	8	18	8	8	26	40	141	255	169	48
1989	9	40	8	8	18	17	8	29	77	147	237	151	47
1989	10	40	35	8	18	17	34	24	91	189	233	136	42
1989	11	43	8	8	18	17	8	30	89	158	226	133	42
1989	12	40	8	8	18	11	8	8	93	259	215	139	45
1989	13	44	8	21	18	17	8	8	92	286	256	149	47
1989	14	40	36	8	18	17	8	8	110	183	199	158	50
1989	15	43	8	8	19	17	8	8	148	133	195	168	66
1989	16	42	8	8	20	17	8	11	193	150	184	172	93
1989	17	42	30	8	20	17	8	8	184	147	173	224	102
1989	18	41	8	8	20	17	8	48	174	138	186	163	96
1989	19	40	8	8	8	18	8	55	180	138	173	149	93
1989	20	41	8	8	17	18	8	64	177	213	162	137	89
1989	21	40	8	8	17	18	31	23	178	157	143	126	83
1989	22	40	8	8	16	18	37	34	175	133	132	119	79
1989	23	39	38	20	16	18	37	87	177	132	121	115	78
1989	24	40	37	8	8	18	9	121	188	130	128	108	67
1989	25	40	8	8	8	18	37	139	190	127	126	101	62
1989	26	40	8	8	8	18	39	144	225	126	130	94	61
1989	27	40	23	8	8	17	39	145	199	122	132	89	62
1989	28	40	8	8	8	17	39	66	184	170	122	129	61
1989	29	40	8	8	8	999999	11	28	187	160	159	72	64
1989	30	40	8	18	8	999999	8	26	225	115	198	65	52
1989	31	40	999999	8	8	999999	8	999999	215	999999	223	60	999999

(Note: 999999 = no data)

BIG THOMPSON RIVER FLOWS (CFS)
8 CFS

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1990	1	44	8	8	8	8	26	22	116	239	139	119	48
1990	2	40	8	8	8	8	8	31	122	231	184	121	58
1990	3	40	8	8	8	8	8	46	97	197	144	112	103
1990	4	77	8	8	8	8	8	54	82	198	149	164	49
1990	5	78	13	8	8	8	27	71	79	217	146	164	48
1990	6	40	14	8	8	8	8	57	80	242	155	112	51
1990	7	40	12	8	8	8	8	62	82	403	145	107	47
1990	8	40	8	8	8	8	8	66	109	390	153	96	44
1990	9	40	38	8	8	8	8	67	121	369	199	86	44
1990	10	40	8	8	8	8	8	63	115	392	209	79	51
1990	11	40	8	8	8	8	8	54	123	433	159	78	46
1990	12	35	8	8	8	8	8	59	123	548	146	101	40
1990	13	40	8	8	8	8	8	71	119	556	131	106	80
1990	14	40	11	8	8	8	8	71	117	330	126	111	40
1990	15	40	8	8	8	8	8	87	183	296	125	110	40
1990	16	40	8	8	8	8	8	120	185	272	129	100	40
1990	17	40	8	8	8	8	8	135	183	205	127	100	40
1990	18	40	8	8	8	8	8	116	170	157	110	101	40
1990	19	40	8	8	8	8	8	122	171	196	136	96	41
1990	20	40	8	8	8	8	8	136	180	172	147	90	40
1990	21	40	8	8	8	8	10	140	180	154	174	90	40
1990	22	40	8	8	8	8	21	154	180	165	165	86	40
1990	23	40	8	8	8	8	24	185	186	161	165	84	40
1990	24	40	8	8	8	8	8	192	191	164	143	80	40
1990	25	40	8	8	8	8	8	201	195	167	138	77	40
1990	26	61	33	8	8	8	9	146	190	169	182	63	40
1990	27	40	8	8	8	8	10	104	195	178	130	53	40
1990	28	40	8	8	8	8	15	98	195	154	128	49	40
1990	29	54	8	8	8	999999	15	93	283	150	131	48	70
1990	30	40	8	8	8	999999	14	86	273	150	132	40	72
1990	31	40	999999	8	8	999999	12	999999	271	999999	126	42	999999
1991	1	72	47	8	20	17	8	8	38	254	194	178	130
1991	2	72	44	8	20	17	8	8	40	810	188	182	132
1991	3	70	47	17	20	17	8	8	40	546	185	205	130
1991	4	64	46	8	20	16	8	21	40	334	180	219	127
1991	5	61	46	8	20	17	8	22	40	275	171	204	125
1991	6	62	49	8	20	17	8	22	40	272	170	193	126
1991	7	68	38	8	20	17	18	22	40	299	166	190	125
1991	8	77	46	8	20	18	14	20	40	302	161	187	123
1991	9	79	45	8	20	18	17	29	40	270	166	186	121
1991	10	77	47	8	19	18	24	34	40	274	160	185	119
1991	11	75	42	8	17	18	8	35	68	253	150	182	117
1991	12	74	40	8	17	18	8	35	91	243	162	180	115
1991	13	71	40	8	16	18	8	35	91	243	153	189	116
1991	14	67	34	8	16	18	20	35	90	232	148	193	114
1991	15	67	33	22	16	17	8	36	96	233	146	183	105
1991	16	68	40	8	16	17	8	35	153	227	144	162	95
1991	17	70	39	8	16	17	8	38	135	201	153	152	89
1991	18	66	39	8	16	17	8	8	132	188	162	144	88
1991	19	58	40	8	17	16	15	8	136	185	172	157	87
1991	20	63	8	8	17	16	12	8	149	177	180	154	80
1991	21	70	8	8	17	17	8	8	175	226	207	158	78
1991	22	66	8	8	17	17	11	8	165	243	187	154	83
1991	23	61	8	8	17	17	8	37	194	234	205	154	85
1991	24	63	8	8	17	17	12	8	158	223	198	152	85
1991	25	65	8	8	17	17	22	31	181	215	210	149	89
1991	26	67	8	22	17	17	8	8	165	207	208	151	78
1991	27	64	8	22	17	18	8	21	192	204	197	153	77
1991	28	65	22	22	17	18	21	45	161	202	190	162	76
1991	29	56	8	23	17	999999	8	46	175	204	186	156	70
1991	30	53	8	23	17	999999	8	36	129	201	182	147	75
1991	31	52	999999	23	17	999999	8	999999	130	999999	176	137	999999

(Note: 999999 = no data)

BIG THOMPSON RIVER FLOWS (CFS)
8 CFS

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1992	1	75	36	22	8	8	10	8	142	171	141	100	999999
1992	2	72	34	8	11	8	10	8	163	152	133	104	999999
1992	3	67	40	8	8	8	38	8	156	146	131	98	999999
1992	4	62	55	8	10	8	45	8	108	143	127	93	999999
1992	5	62	9	11	10	8	43	8	105	144	126	93	999999
1992	6	63	8	9	8	8	39	11	109	141	128	91	999999
1992	7	60	8	8	8	8	8	8	77	139	121	88	999999
1992	8	67	43	8	9	8	8	9	145	141	134	82	999999
1992	9	72	42	8	8	8	38	9	156	143	131	78	999999
1992	10	67	43	8	8	8	8	11	153	146	126	126	999999
1992	11	63	42	8	8	10	8	14	143	154	132	133	999999
1992	12	65	39	8	8	36	11	18	100	211	135	139	999999
1992	13	77	39	8	10	36	8	17	99	205	129	137	999999
1992	14	81	39	9	10	37	8	17	107	155	120	133	999999
1992	15	79	8	8	8	37	8	23	157	172	118	116	999999
1992	16	78	8	8	9	37	44	53	211	153	118	105	999999
1992	17	77	8	8	8	38	8	96	198	149	117	109	999999
1992	18	68	8	47	8	38	8	101	186	146	113	111	999999
1992	19	61	8	8	9	38	8	98	188	145	112	116	999999
1992	20	70	8	8	8	39	8	92	188	152	117	107	999999
1992	21	63	8	8	8	39	8	86	206	170	110	108	999999
1992	22	60	8	8	8	39	8	76	219	159	107	102	999999
1992	23	60	8	8	9	39	8	66	212	199	108	111	999999
1992	24	62	8	11	8	39	8	59	217	151	108	127	999999
1992	25	63	8	44	8	39	8	57	228	159	112	145	999999
1992	26	64	8	8	8	38	39	47	219	177	111	147	999999
1992	27	65	8	8	8	38	39	46	223	188	105	135	999999
1992	28	57	38	8	8	9	50	52	212	169	104	125	999999
1992	29	42	8	8	8	38	8	54	137	167	97	104	999999
1992	30	36	8	8	8	999999	8	59	149	152	94	89	999999
1992	31	29	999999	8	8	999999	8	999999	174	999999	99	83	999999

(Note: 999999 = no data)

BIG THOMPSON RIVER FLOWS (CFS) **6 CFS**

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1988	1	43	68	35	6	6	6	6	55	309	287	86	40
1988	2	43	71	42	6	6	6	6	124	205	238	86	65
1988	3	42	68	43	6	6	6	6	79	153	216	120	40
1988	4	43	63	37	6	6	6	6	82	265	208	145	40
1988	5	43	63	34	6	6	6	6	78	435	200	149	40
1988	6	43	62	31	6	16	6	49	73	579	207	134	40
1988	7	43	61	29	6	16	6	57	77	595	200	129	40
1988	8	43	60	28	6	6	6	68	78	602	164	131	40
1988	9	41	58	26	6	6	6	66	59	581	136	87	40
1988	10	40	56	24	6	6	6	62	71	581	116	62	40
1988	11	40	58	24	6	6	6	64	69	574	116	100	40
1988	12	40	56	23	6	6	6	67	63	575	117	41	55
1988	13	40	57	23	6	6	6	70	76	541	114	40	77
1988	14	68	56	21	6	6	6	77	96	437	113	40	81
1988	15	82	59	20	6	6	6	86	209	347	110	40	109
1988	16	80	56	20	6	6	6	89	299	411	108	40	99
1988	17	78	59	21	6	6	6	98	256	508	107	40	99
1988	18	76	53	22	6	6	6	100	312	634	105	40	97
1988	19	66	54	23	6	20	6	104	429	678	108	40	92
1988	20	52	46	23	6	6	6	96	493	678	105	40	97
1988	21	46	34	23	6	6	6	96	289	669	102	40	97
1988	22	47	34	22	6	6	6	102	176	663	100	40	74
1988	23	49	33	21	6	6	6	46	165	692	97	40	66
1988	24	48	32	20	6	6	6	43	165	534	93	40	77
1988	25	49	33	18	6	6	6	42	187	508	80	40	81
1988	26	49	38	16	12	6	6	38	244	488	76	40	80
1988	27	61	32	16	6	6	6	35	300	483	78	40	93
1988	28	68	28	15	6	6	6	35	85	401	80	40	95
1988	29	68	30	15	6	6	6	37	96	354	82	40	100
1988	30	69	34	15	6	999999	6	35	169	338	85	40	40
1988	31	69	999999	14	6	999999	6	999999	325	999999	87	40	999999
1989	1	56	29	6	18	6	18	9	40	194	187	246	53
1989	2	58	6	6	18	6	18	8	40	129	155	276	49
1989	3	107	6	6	18	6	6	6	40	248	138	279	47
1989	4	40	6	6	19	14	6	6	40	242	130	254	43
1989	5	40	6	6	20	15	6	6	40	166	130	213	47
1989	6	40	6	6	20	15	6	6	40	144	145	196	40
1989	7	40	6	6	19	6	6	6	40	139	275	184	40
1989	8	40	6	6	18	6	6	26	40	141	255	169	48
1989	9	40	6	6	18	17	6	29	77	147	237	151	47
1989	10	40	35	6	18	17	34	24	91	189	233	136	42
1989	11	43	6	6	18	17	6	30	89	158	226	133	42
1989	12	40	8	6	18	11	6	6	93	259	215	139	45
1989	13	44	6	21	18	17	6	6	92	286	256	149	47
1989	14	40	36	6	18	17	6	6	110	183	199	158	50
1989	15	43	6	6	19	17	6	6	148	133	195	168	66
1989	16	42	6	6	20	17	6	11	193	150	184	172	93
1989	17	42	30	6	20	17	6	6	184	147	173	224	102
1989	18	41	6	6	20	17	6	48	174	138	186	163	96
1989	19	40	6	6	6	18	6	55	180	138	173	149	93
1989	20	41	6	6	17	18	6	64	177	213	162	137	89
1989	21	40	6	6	17	18	31	23	178	157	143	126	83
1989	22	40	6	6	16	18	37	34	175	133	132	119	79
1989	23	39	38	20	16	18	37	87	177	132	121	115	78
1989	24	40	37	6	6	18	9	121	188	130	128	108	67
1989	25	40	6	6	6	18	37	139	190	127	126	101	62
1989	26	40	6	6	6	18	39	144	225	126	130	94	61
1989	27	40	23	6	6	17	39	145	199	122	132	89	62
1989	28	40	6	6	6	17	39	66	184	170	122	129	61
1989	29	40	6	6	6	999999	11	28	187	160	159	72	64
1989	30	40	6	18	6	999999	6	26	225	115	198	65	52
1989	31	40	999999	6	6	999999	6	999999	215	999999	223	60	999999

(Note: 999999 = no data)

BIG THOMPSON RIVER FLOWS (CFS)
6 CFS

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1990	1	44	6	6	6	6	26	22	116	239	139	119	48
1990	2	40	6	6	6	6	6	31	122	231	184	121	58
1990	3	40	6	6	6	6	6	46	97	197	144	112	103
1990	4	77	6	6	6	6	6	54	82	198	149	164	49
1990	5	78	13	6	6	6	27	71	79	217	146	164	48
1990	6	40	14	6	6	6	6	57	80	242	155	112	51
1990	7	40	12	6	6	6	6	62	82	403	145	107	47
1990	8	40	6	6	6	6	6	66	109	390	153	96	44
1990	9	40	38	6	6	6	6	67	121	369	199	86	44
1990	10	40	6	6	6	6	6	63	115	392	209	79	51
1990	11	40	6	6	6	6	6	54	123	433	159	78	46
1990	12	35	6	6	6	6	6	59	123	548	146	101	40
1990	13	40	6	6	6	6	8	71	119	556	131	106	80
1990	14	40	11	6	6	6	6	71	117	330	126	111	40
1990	15	40	6	6	6	6	6	87	183	296	125	110	40
1990	16	40	6	6	6	6	6	120	185	272	129	100	40
1990	17	40	6	6	6	6	6	135	183	205	127	100	40
1990	18	40	6	6	6	6	6	116	170	157	110	101	40
1990	19	40	6	6	6	6	6	122	171	196	136	96	41
1990	20	40	6	6	6	6	6	136	180	172	147	90	40
1990	21	40	6	6	6	6	10	140	180	154	174	90	40
1990	22	40	6	6	6	6	21	154	180	165	165	86	40
1990	23	40	6	6	6	6	24	185	186	161	165	84	40
1990	24	40	6	6	6	6	7	192	191	164	143	80	40
1990	25	40	6	6	6	6	6	201	195	167	138	77	40
1990	26	61	33	6	6	6	9	146	190	169	182	63	40
1990	27	40	8	6	6	6	10	104	195	178	130	53	40
1990	28	40	6	6	6	6	15	98	195	154	128	49	40
1990	29	54	8	6	6	999999	15	93	283	150	131	48	70
1990	30	40	6	6	6	999999	14	86	273	150	132	40	72
1990	31	40	999999	6	6	999999	12	999999	271	999999	126	42	999999
1991	1	72	47	6	20	17	6	6	38	254	194	178	130
1991	2	72	44	6	20	17	6	6	40	810	188	182	132
1991	3	70	47	17	20	17	6	6	40	546	185	205	130
1991	4	64	46	6	20	16	6	21	40	334	180	219	127
1991	5	61	46	6	20	17	6	22	40	275	171	204	125
1991	6	62	49	6	20	17	6	22	40	272	170	193	126
1991	7	68	38	6	20	17	18	22	40	299	166	190	125
1991	8	77	46	6	20	18	14	20	40	302	161	187	123
1991	9	79	45	6	20	18	17	29	40	270	166	186	121
1991	10	77	47	6	19	18	24	34	40	274	160	185	119
1991	11	75	42	6	17	18	6	35	68	253	150	182	117
1991	12	74	40	6	17	18	6	35	91	243	162	180	115
1991	13	71	40	6	16	18	6	35	91	243	153	189	116
1991	14	67	34	6	16	18	20	35	90	232	148	193	114
1991	15	67	33	22	16	17	6	36	96	233	146	183	105
1991	16	68	40	6	16	17	6	35	153	227	144	162	95
1991	17	70	39	6	16	17	6	38	135	201	153	152	89
1991	18	66	39	6	16	17	6	6	132	188	162	144	88
1991	19	58	40	6	17	16	15	6	136	185	172	157	87
1991	20	63	6	6	17	16	12	6	149	177	180	154	80
1991	21	70	6	6	17	17	6	6	175	226	207	158	78
1991	22	66	6	6	17	17	11	6	165	243	187	154	83
1991	23	61	6	6	17	17	7	37	194	234	205	154	85
1991	24	63	6	6	17	17	12	6	158	223	198	152	85
1991	25	65	6	6	17	17	22	31	181	215	210	149	89
1991	26	67	6	22	17	17	6	6	165	207	208	151	78
1991	27	64	6	22	17	18	6	21	192	204	197	153	77
1991	28	65	22	22	17	18	21	45	161	202	190	162	76
1991	29	56	6	23	17	999999	6	46	175	204	186	156	70
1991	30	53	6	23	17	999999	6	36	129	201	182	147	75
1991	31	52	999999	23	17	999999	6	999999	130	999999	176	137	999999

(Note: 999999 = no data)

BIG THOMPSON RIVER FLOWS (CFS)
6 CFS

YEAR	DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1992	1	75	36	22	6	6	10	6	142	171	141	100	999999
1992	2	72	34	6	11	6	10	6	163	152	133	104	999999
1992	3	67	40	6	7	6	38	6	156	146	131	98	999999
1992	4	62	55	6	10	6	45	6	108	143	127	93	999999
1992	5	62	9	11	10	6	43	6	105	144	126	93	999999
1992	6	63	6	9	6	6	39	11	109	141	128	91	999999
1992	7	60	6	6	7	6	6	6	77	139	121	88	999999
1992	8	67	43	6	9	7	6	9	145	141	134	82	999999
1992	9	72	42	6	6	7	38	9	156	143	131	78	999999
1992	10	67	43	6	8	7	6	11	153	146	126	126	999999
1992	11	63	42	6	6	10	6	14	143	154	132	133	999999
1992	12	65	39	6	8	36	11	18	100	211	135	139	999999
1992	13	77	39	6	10	36	6	17	99	205	129	137	999999
1992	14	81	39	9	10	37	8	17	107	155	120	133	999999
1992	15	79	6	8	6	37	8	23	157	172	118	116	999999
1992	16	78	6	6	9	37	44	53	211	153	118	105	999999
1992	17	77	6	6	6	38	6	96	198	149	117	109	999999
1992	18	68	6	47	7	38	6	101	186	146	113	111	999999
1992	19	61	6	6	9	38	6	98	188	145	112	116	999999
1992	20	70	6	6	8	39	6	92	188	152	117	107	999999
1992	21	63	6	6	7	39	6	86	206	170	110	108	999999
1992	22	60	6	6	6	39	6	76	219	159	107	102	999999
1992	23	60	6	6	9	39	6	66	212	199	108	111	999999
1992	24	62	6	11	6	39	6	59	217	151	108	127	999999
1992	25	63	6	44	6	39	6	57	228	159	112	145	999999
1992	26	64	6	6	6	38	39	47	219	177	111	147	999999
1992	27	65	6	6	6	38	39	46	223	188	105	135	999999
1992	28	57	38	6	6	9	50	52	212	169	104	125	999999
1992	29	42	6	6	6	38	6	54	137	167	97	104	999999
1992	30	36	6	6	6	999999	6	59	149	152	94	89	999999
1992	31	29	999999	6	6	999999	6	999999	174	999999	99	83	999999

(Note: 999999 = no data)