FISHERY RESEARCH

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WINTER HABITAT AVAILABILITY AND UTILIZATION BY JUVENILE CUTTHROAT TROUT, BROWN TROUT, AND MOUNTAIN WHITEFISH IN THE SOUTH FORK SNAKE RIVER, IDAHO

Final Progress Report

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ABSTRACT

We used snorkel gear and SCUBA to identify and quantify winter habitat used by juvenile salmonids in the South Fork Snake River between Palisades Dam and the confluence of the Henrys Fork Snake River. Few fish were observed during day dives, and numbers of yearling fish were low during day and night.

For all species, nighttime densities of subyearlings were highest in side channels and in small woody debris cover. Cutthroat trout Oncorhynchus clarki densities were generally higher than brown trout Salmo trutta and mountain whitefish Prosopium williamsoni. Densities by channel type ranged from 14.8 cutthroat trout/100 yd^2 in side channels to 0.4 mountain whitefish/100 yd^2 in main channels. Densities by cover type ranged from 38.5 cutthroat trout/100 yd^2 in small woody debris to zero mountain whitefish in boulders. Mountain whitefish differed from trout by having relatively high densities in backwater areas and in areas with no cover.

At night, subyearling cutthroat and brown trout were closely associated with cover (mean distance <1 ft), and all species used slow water (optimum column velocities <0.2 ft/s). Cutthroat trout used a more narrow range of water column depths (optimum 1.3 to 1.6 ft) compared to brown trout and mountain whitefish (optimum 1.3 to 3.3 ft). Subyearling mountain whitefish were farther from cover (mean distance = 5.7 ft) and they used relatively fewer areas with small or large boulder substrate than cutthroat and brown trout. Use of substrate by cutthroat and brown trout, in descending order of frequency, was generally cobble, large boulder, fines, small boulder, and gravel.

The winter flow versus habitat relationship developed for each species was curvilinear. Weighted available habitat at 30 sites sampled in the upper river (above the Dry Bed Canal) decreased with discharge during winter, but not at a

constant rate. The greatest rate of winter habitat loss for cutthroat trout, brown trout, and mountain whitefish occurred between 1,540 and 1,240 cfs.

Of the weighted habitat available to subyearling cutthroat trout at 3,370 cfs, one-third was lost as flows were reduced to 1,540 cfs and over half (53%) was lost at 1,240 cfs. For brown trout, about half (49%) was lost at 1,540 cfs and two-thirds at 1,240 cfs. And for mountain whitefish, over half (55%) was lost at 1,540 cfs and three-fourths at 1,240 cfs. Although not directly comparable, these results concur with aerial photograph work done in 1988 (U.S. Fish and Wildlife Service, unpublished data); photographs showed that more than half (56%) of upriver side channel area was dewatered when flows were reduced from 2,200 to 750 cfs.

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INTRODUCTION

The South Fork Snake River below Palisades Dam provides a blue-ribbon trout fishery and is becoming an increasingly popular recreation area. It provides world-class fishing for large (>16 in) Yellowstone cutthroat trout Oncorhynchus clarki bouvieri and brown trout. The current state record brown trout, which weighed 26.4 lbs, was caught in the South Fork Snake River in 1981 (Idaho Department of Fish and Game [IDFG] files). Mountain whitefish are the most abundant game fish in the river but are rarely sought by anglers (Jeppson 1970; Moore et al. 1981). Many are caught incidentally by anglers seeking cutthroat and brown trout. Mountain whitefish in the South Fork Snake River are also an important prey species for threatened bald eagles Haliaeetus leucocephalus (Whitefield et al. 1988).

South Fork Snake River winter discharge is regulated at Palisades Dam primarily for irrigation needs. The dam was completed in 1956, and flows are regulated by the U.S. Bureau of Reclamation (BOR) for seasonal irrigation demand. Most flow manipulations occur during the flood and irrigation season (April 1 to October 31), but winter flows are established beginning in November that allow for the filling of Palisades Reservoir.

Drought has plagued the South Fork Snake River drainage since the winter of 1986-87, winter discharge has been unusually low, and recruitment to the cutthroat trout fishery has severely declined. Average winter discharge at the dam since 1956 has been about 2,300 cfs. But since the beginning of the drought (1983), minimum flows have ranged from 700 to 1,200 cfs (Figure 1). Abundance estimates of age 2 cutthroat trout from 1988 to 1991 were only 10 to 30% of pre-drought abundance in 1986 (Steve Elle and Mark Gamblin, 1992). Reductions in recruitment were significant and consistent, and they appear to be winter flow-related. Low abundance of age 2 fish correspond to flow conditions from the

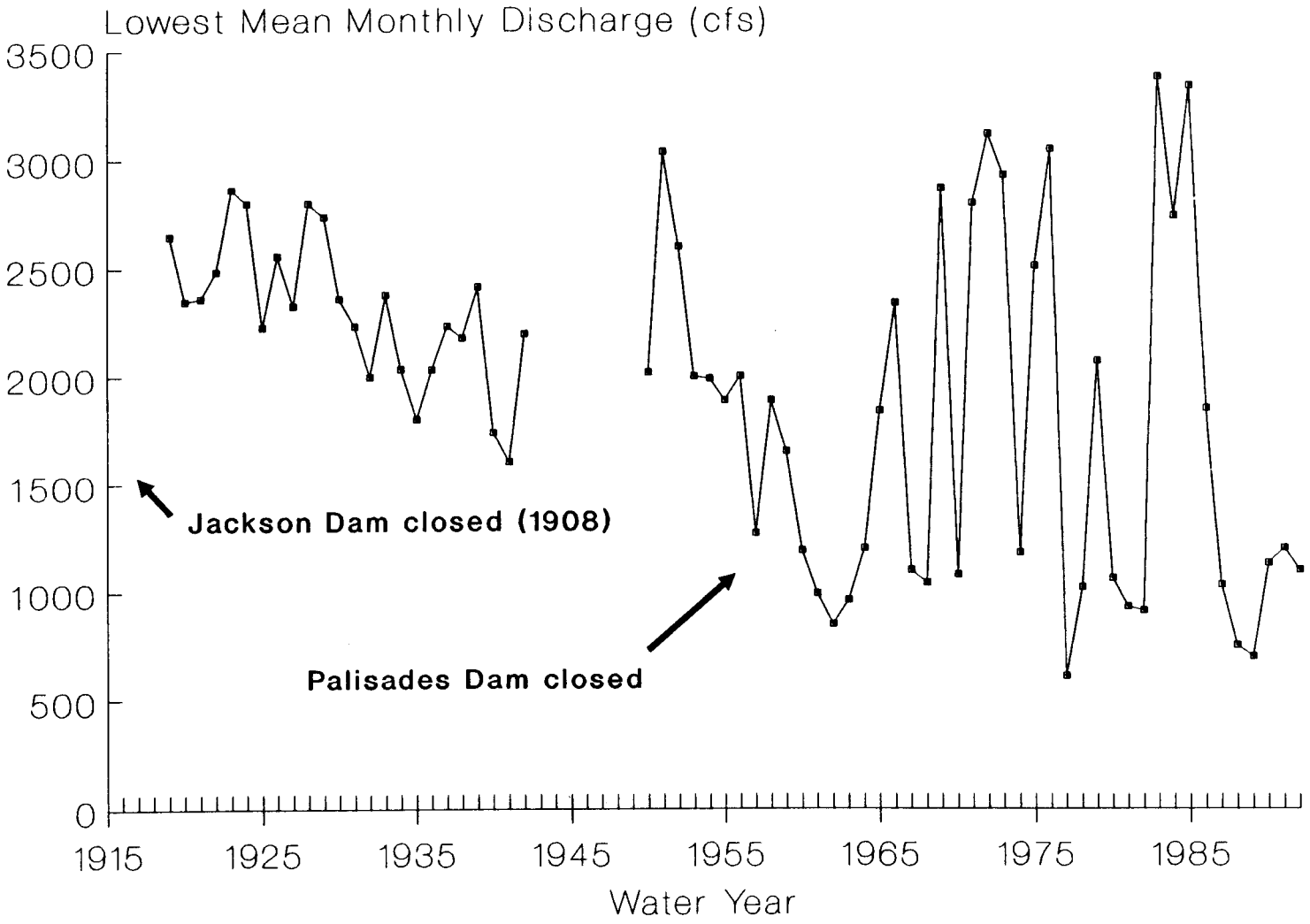

Figure 1. Lowest mean monthly discharge during winter storage (November 1 to March 31) for water years 1919-42 and 1950-92 at the Irwin gaging station just below Palisades Dam, South Fork Snake River (USGS, unpublished data).

previous two winters. Strong year classes produced prior to the drought have continued to support the fishery. However, there appears to be fewer large (>16 in) fish and fewer 14- to 16-in fish to replace them (Steve Elle, IDFG, personal communication).

Habitat requirements of juvenile salmonids during winter are often different and generally more restrictive than during other seasons. During winter, juveniles are closely associated with concealment cover (Bustard and Narver 1975a; Rimmer et al. 1983; Johnson and Kucera 1985; Hillman et al. 1987), in shallow water (Cunjak and Power 1986; Johnson and Kucera 1985; Sheppard and Johnson 1985), and in relatively slow water (Cunjak and Power 1981; Johnson and Kucera 1985; Sheppard and Johnson 1985). The major factor limiting salmonid abundance in some streams may be the quantity and quality of winter habitat available (Mason 1976; Hall and Knight 1981; Tschaplinski and Hartman 1983).

A minimum winter instream flow agreement has not been reached for the South Fork Snake River. Cochnauer and Buettner (1978) recommended a minimum flow of 1,084 cfs based on a wetted perimeter model. This model is used to predict the wetted stream bottom at various flows but does not incorporate habitat criteria. Their flow recommendation was based on a single channel (non-braided) section of the river, near Irwin, Idaho. No agreement was reached between BOR and IDFG concerning this flow recommendation. At the present time, BOR and the water users have agreed to maintain a minimum flow release of 550 cfs at Palisades Dam.

To better understand what winter flows are necessary to maintain fish populations in the South Fork Snake River, the IDFG began a two-year research project in 1990 (Griswold 1991). Our goal is to determine winter habitats used by juvenile salmonids and relate these uses to flows released at Palisades Dam. The study is being conducted in cooperation with the BOR, U.S. Fish and Wildlife Service (FWS), U.S. Forest Service (USFS), and U.S. Bureau of Land Management

(BLM). The results of this study will be used to recommend a minimum instream flow for the South Fork Snake River during winter.

OBJECTIVES

1. To identify and quantify winter habitat used by juvenile salmonids in the South Fork Snake River, Idaho.

2. To quantify the relationships between flows and the relative amount of winter habitat available to juvenile salmonids in the South Fork Snake River.

STUDY AREA

The South Fork Snake River flows into Southeastern Idaho from Western Wyoming. The stream originates in Yellowstone and Grand Teton National Parks. It flows northwest from the Idaho-Wyoming state line to its confluence with the Henrys Fork Snake River, a distance of 83 miles (Figure 2). Completion of Palisades Dam in 1956 inundated the upper 20 miles of the river, and flows in the remaining 63 miles are regulated by the dam. The dam was authorized in 1950 (Public Law 81-864) and is operated by the BOR. The primary purpose of the Palisades Project is to provide water for irrigation, power production, flood control, and recreation.

Our study area is the portion of regulated river between Palisades Dam and the Henrys Fork Snake River. The river passes through a mountain valley between the dam and Conant Valley. This section is characterized by long runs and

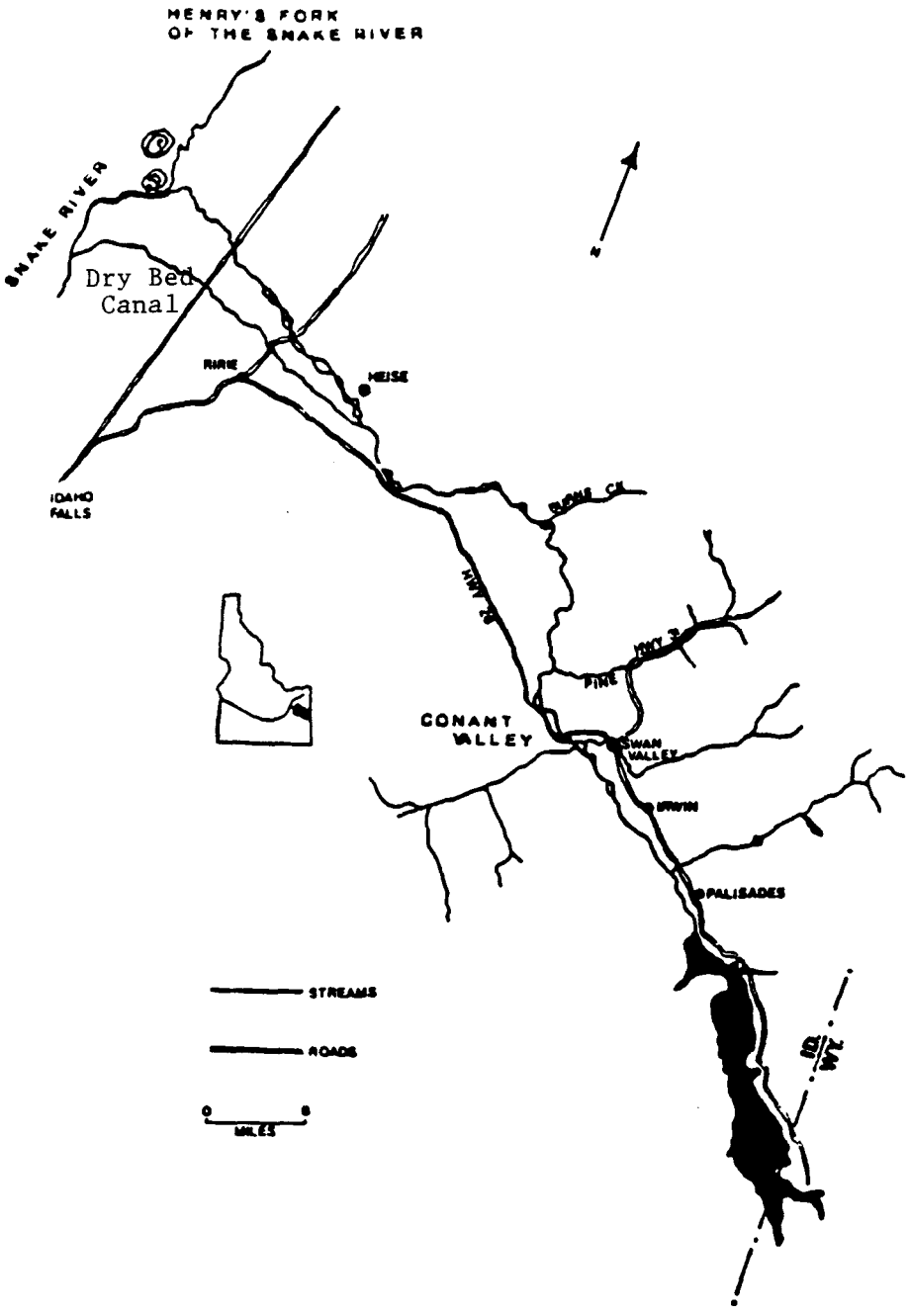

Figure 2. Study area on the South Fork Snake River from Palisades Dam downstream to the Henrys Fork Snake River.

riffles with few pools and side channels. Between Conant Valley and Heise, the river is contained by a relatively steep-sided canyon. The river is moderately braided with good pool/riffle/run structure (FWS, unpublished data). Below Heise, the river flows through a wide flood plain and is characterized by extensive side channels and a large cottonwood riparian area.

METHODS

For the purpose of this study, we define "juvenile" fish as those age 0 (subyearlings) or age 1 (yearlings). "Salmonids" include cutthroat trout, brown trout, and mountain whitefish. "Winter" is defined as that period between November 1 and March 31 and corresponds to the time when irrigation withdrawals are generally not occurring. "Discharge" or "flows", unless otherwise noted, are in reference to water released at Palisades Dam and measured at the Irwin gage near Irwin, Idaho.

Winter Habitat Use

We used snorkeling and SCUBA techniques to identify and quantify habitats used by juvenile salmonids in the South Fork Snake River during winter, 1990-91. Over 56 hours were spent in the water during 149 dives. Snorkel gear was used for 139 of the dives, and 10 dives were made using SCUBA. Project personnel randomly sampled 105 areas for fish; 44 were sampled both day and night, 35 during the day only, and 26 at night only. Water temperatures ranged from 33 to 43°F during diving.

Divers first determined fish densities associated with various channel types (main, side, or backwater) and cover types (Table 1). They randomly selected dive locations by predominant cover type, and each location was classified by channel type. Fish were counted in the entire area containing cover; however, large areas of cobble and boulders were subsampled. Individual dives were confined to an area with uniform cover and in the same channel; this allowed comparing fish densities by cover and channel type. Areas lacking cover were sampled less frequently than they occurred in the river because fish were rarely observed there.

Underwater observations were made by a diver equipped with drysuit, mask, snorkel, and flashlight. The diver approached each area from the downstream end and worked upstream. In areas with deep and fast water, divers ascended a rope which was anchored above the sampled area. When a fish or aggregate of fish was observed, the diver counted them and visually determined species and size/age class. We also observed fish to determine if they had been disturbed. All juvenile salmonids were counted; however, fish which were displaced or appeared alarmed were excluded from habitat use measurements.

The diver also marked the focal point location of individual fish (the point at the fish's snout) with weighted buoys and collected the following habitat data: distance to nearest cover, water column depth, focal point depth, average water column velocity, focal point velocity, and substrate type. Water temperatures were measured to the nearest 1°F at each sampling location as well.

Distance to the nearest escape cover was measured to the nearest 0.1 ft. Water column depth and focal point depth (distance between the focal point and substrate) were measured to the nearest 0.1 ft with a 4 ft graduated aluminum rod.

Table 1. Cover classification system developed for cover types found on the South Fork Snake River.

Classification	Diameter (mm)	Diameter (in)
Small woody debris (SWD)[a]	<152	<6.0
Large woody debris (LWD)	>152	>6.0
Cobble (CB)[b]	76-303	3.0-11.9
Small boulder (SB)	304-608	12.0-23.9
Large boulder (LB)	>609	>24.0
Undercut bank (UB)	-	-
Bedrock (BR)	-	-
No cover (NC)[c]	-	-
Aquatic vegetation (AV)	-	-

[a] Includes root wads and willow clumps.
[b] Includes only large, clean cobbles with interstitial spaces available for concealment cover.
[c] Includes all other classifications which lack interstitial spaces due to presence of fines.

Velocity measurements were taken immediately after the observation period, except that measurements were made the following day if air temperatures were below 20°F during nighttime sampling. A temporary staff gage was set within the sample area to monitor changes in water elevation between the observation and measurement periods (Bovee 1986). If water levels changed more than 0.05 ft, velocities were not measured. Velocities were measured to the nearest 0.1 ft/s with a Swoffer Model 2100-14 current meter. Average water column velocities were estimated by measuring at 0.6 of the depth for depths <2.5 ft and by averaging measurements taken at 0.2 and 0.8 of the depth for depths >2.5 ft (Bovee 1986). Focal point velocities were measured at each marked focal point.

Substrate was classified using a modified particle-size scale (Table 2; Platts et al. 1983). Substrate proportions were visually estimated to the nearest 10% within a 1 x 1 ft area centered on the focal point.

Utilization functions were developed for channel and cover types using subyearling cutthroat trout, brown trout, and mountain whitefish nighttime density data. Sampling during the day was less efficient than at night. Apparently, young fish hid within the substrate and could not be seen. This precluded development of daytime utilization curves. Likewise, few yearling salmonids were observed during day or night, and curves were not developed for them. Functions were developed by normalizing data to a scale of 0 to 1. We normalized data to allow comparisons between species and to provide weighing factors for winter habitat availability calculations.

Utilization functions were also developed for water column depth using subyearling trout and mountain whitefish nighttime use data. Discrete, or step, functions were developed by normalizing frequencies of use by one foot depth intervals. These functions were also used in the winter habitat availability calculations.

Table 2. Substrate classification system based on particle size as modified from Platts et al. (1983).

Classification	Diameter (mm)	Diameter (in)
Fines	<4.7	<0.18
Gravel	4.8-75	0.19-2.9
Cobble	76-303	3.0-11.9
Small boulder	304-608	12.0-23.9
Large boulder	>609	>24.0
Bedrock	-	-

Flow versus Habitat Relationships

To quantify the flow versus habitat relationship, we first selected a random sample of habitat sites to evaluate. A "habitat site" is an area of river characterized by some channel type (side, main, or backwater) and some cover type (Table 1) except that bedrock, no cover, and aquatic vegetation were not included. Because sites often contained more than one type of cover, we classified the site by the predominant type. We classified and enumerated all habitat sites from Palisades Dam downstream to the confluence with the Henrys Fork Snake River during October, 1990, when discharge was 3,500 cfs. After stratifying by cover type, we randomly selected sites for evaluation. Over 1,400 habitat sites were counted with a selected sample size of 122 (Table 3).

From November 1990 to April 1991, all 122 sites were photographed and partially mapped. A permanent baseline was constructed at each site above the mean high water mark and parallel to the streamflow (Figure 3). Two steel reinforcing rods marked the beginning and end of the baseline (headpin and tailpin). Baselines varied in length from less than 50 to over 200 ft. Transects perpendicular to the baseline were then established at 0.1, 0.3, 0.5, 0.7, and 0.9 of the baseline length. Next, the elevation of the headpin and of the stream bottom at points along the transects was measured with a level and survey rod. Stream bottom elevations were subtracted from the headpin elevation to give a relative elevation for each point. Cover and substrate were also classified at each point. Finally, the relative elevations of the baseline and the stream bottom were mapped to scale on graph paper. Substrate and cover were mapped to scale on transparencies that could be overlain. Cover polygons were constructed by interpolating between points.

Peak discharge of >22,200 cfs during late spring 1991 eliminated over half (66) of the original 122 sites (Figure 4). Sites were considered unusable if

Table 3. Original sample size of habitat sites randomly selected for evaluation on the South Fork Snake River.

Cover type[a]	Channel type			Total	Percent
	Side	Main	Back		
SWD	40	51	3	94	77
LWD	2	2	0	4	3
CB	1	0	0	1	<1
SB	2	10	1	13	11
LB	0	2	0	2	2
UB	2	6	0	8	7
Total	47	71	4	122	
Percent	39	58	3		100

[a] SWD = Small Woody Debris, LWD = Large Woody Debris, CB = Cobble, SB = Small Boulder, LB = Large Boulder, UB = Undercut Bank.

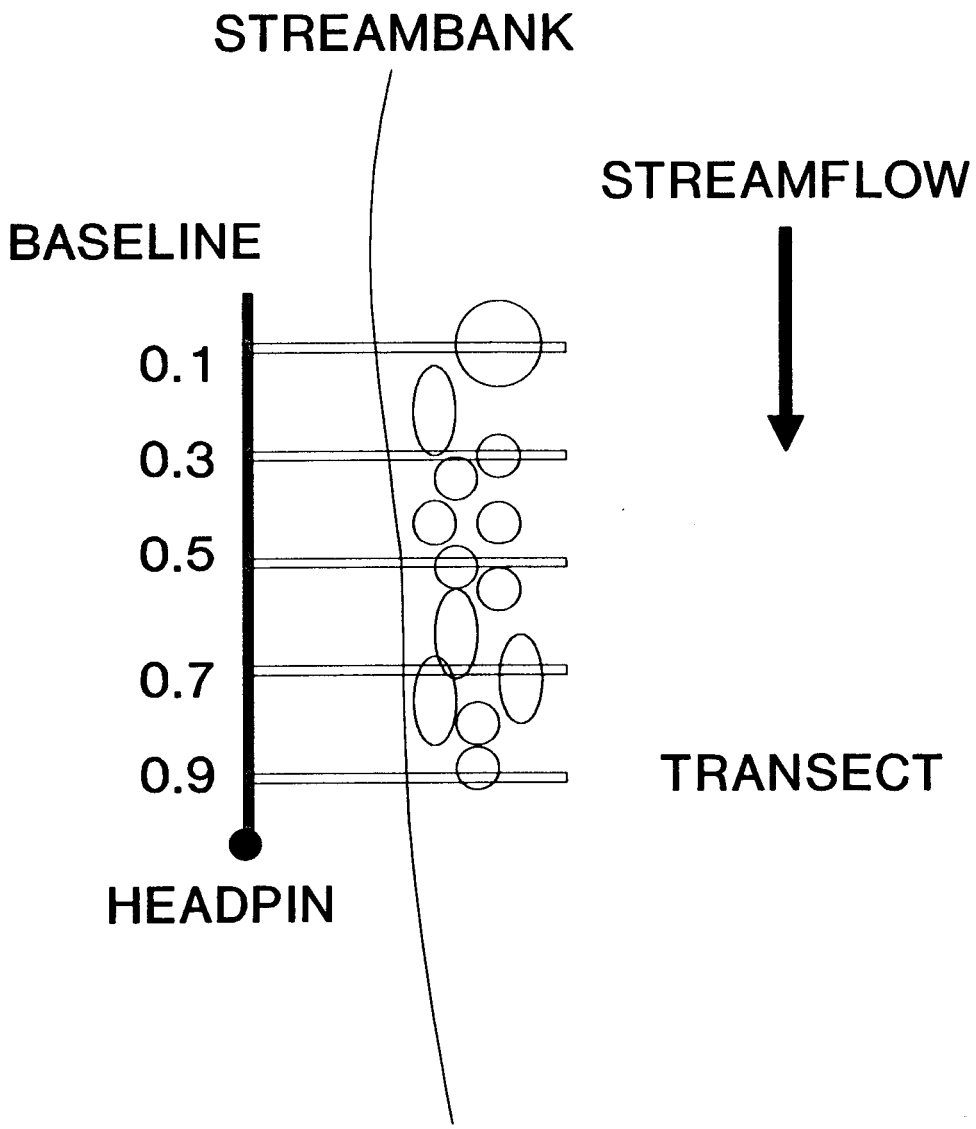

Figure 3. Map of a typical habitat site in the South Fork Snake River.

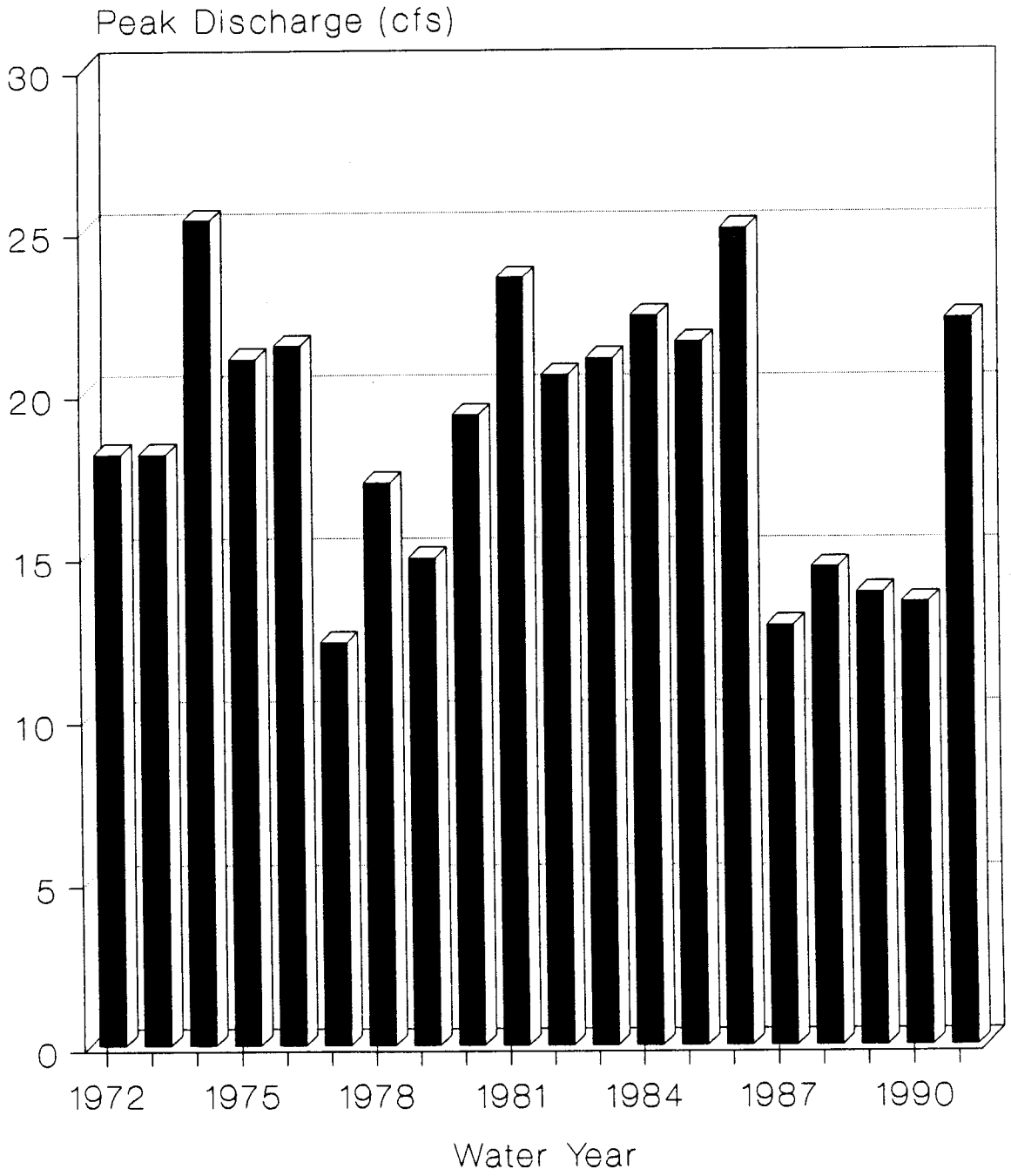

Figure 4. Peak discharge for water years 1972-92 at the Irwin gaging station just below Palisades Dam, South Fork Snake River (USGS, unpublished data).

headpins had moved or were missing. We also used photographs and maps to identify and eliminate sites which had experienced major channel changes caused by erosion or deposition. Sites where the channel had not visibly changed were used even if the cover, especially small woody debris, had been altered. These sites were still considered usable because cover had been previously mapped. We attempted to resurvey some of the sites, but time did not permit resurveying and remapping all of them. We assumed channel changes would average out, i.e. some sites would increase in elevation, some would decrease, but channel controls would remain about the same.

From October to December 1991, BOR provided six different flows at Palisades Dam in order to complete our habitat mapping measurements. Flows were 3,370, 2,430, 2,000, 1,540, 1,240, and 830 cfs. During each of these flows we returned to the remaining 56 sites to measure headpin and water surface elevations. Water surface elevations were measured at the 0.1, 0.5, and 0.9 transects, except at larger sites where we measured all five transects. Water surface elevations were subtracted from the headpin elevation to give a water surface relative elevation for each transect. For each point along a transect, subtracting the stream bottom relative elevation from the water surface relative elevation gave the depth of the water column.

Thirty remaining upper river sites were used to complete the mapping and to develop the flow versus habitat relationship (Table 4). The lower one-third of the river (below the Dry Bed Canal) was not used because large irrigation withdrawals kept flows in this section low and variable (Figure 5). Further, flows in the lower river (measured at Lorenzo) did not correlate to discharge at Palisades Dam until the end of the irrigation season (October 31).

Using the calculated water column depths, wetted edges and one foot depth contours were mapped to scale on transparencies that could be overlain. The

Table 4. Final sample size of habitat sites evaluated on the upper (above the Dry Bed Canal) South Fork Snake River. Percent of the original sample is in parentheses.

Cover type[a]	Channel type						Total	Percent
	Side		Main		Back			
SWD	15		4		1		20(21)	67
LWD	0		0		0		0(0)	0
CB	1		0		0		1(100)	3
SB	0		8		0		8(62)	27
LB	0		1		0		1(50)	3
UB	0		0		0		0(0)	0
Total	16	(34)	13	(18)	1	(25)	30 (25)	
Percent	53		43		3			100

[a] SWD = Small Woody Debris, LWD = Large Woody Debris, CB = Cobble, SB = Small Boulder, LB = Large Boulder, UB = Undercut Bank.

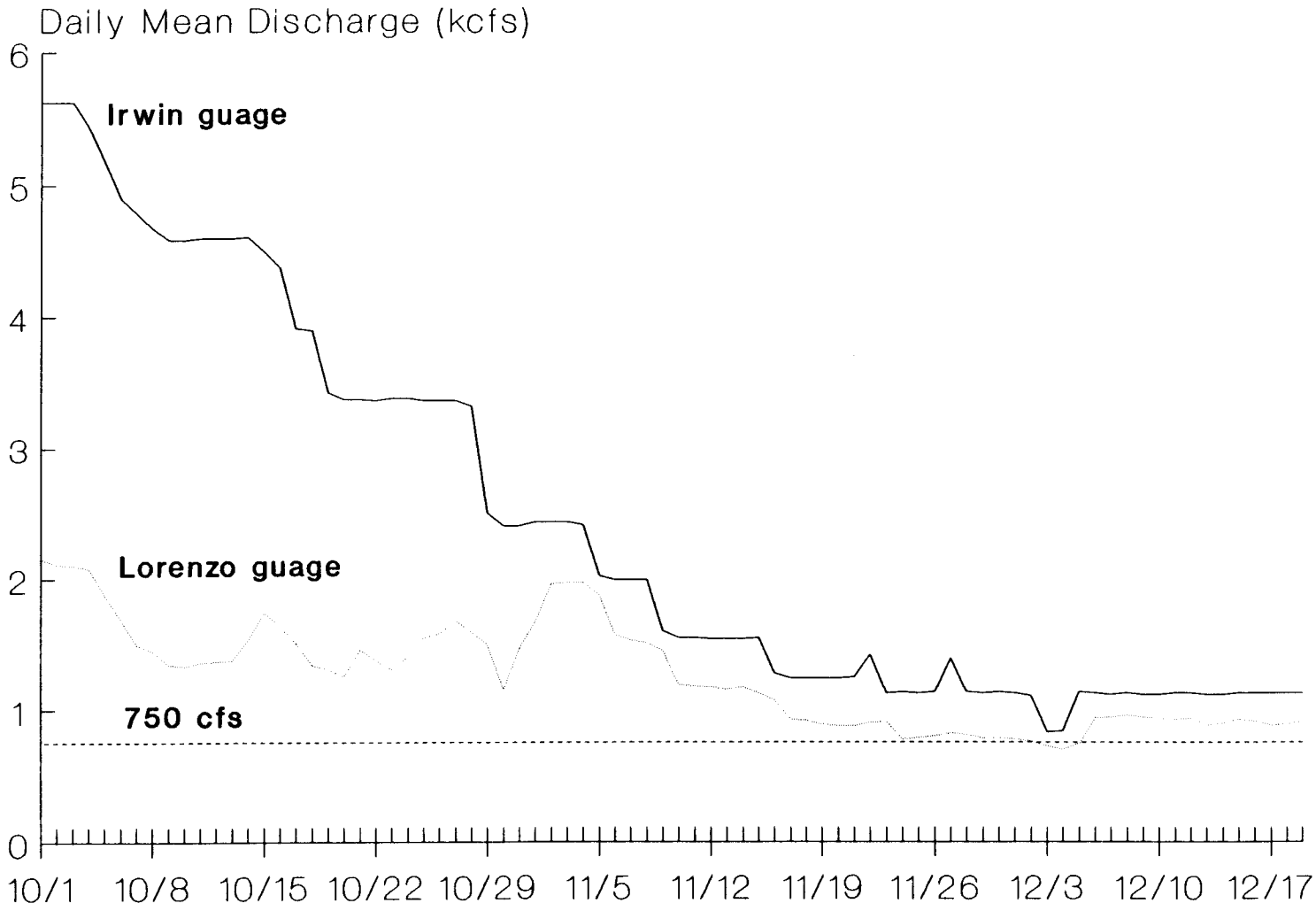

Figure 5. Hydrographs at the Irwin and Lorenzo gauges during the fall 1991 requested flow regime, South Fork Snake River (USGS, unpublished data).

contours were interpolated between measured points. Six different depth contour maps, one for each flow, were made for each site.

Once the maps were made, we measured surface areas of available habitat. We laid the depth contour map over the cover map and measured surface areas of cover by depth interval for each flow. A Lasico Model 42-P digital planimeter that could be calibrated for different map scales was used for measuring. Measurements were always made twice and averaged; if the measurements were >5% of the averaged value, we repeated them.

Surface areas were then weighted using utilization functions, summed over the depth intervals, and summed over the sites to estimate the weighted available habitat at each flow for each species. "Weighing factors" were species specific and were the probability of fish using a particular type of habitat. Our weighing factors were derived for subyearling fish at night from the winter habitat use portion of this study. We believe channel type, cover type, and depth to be the most important habitat variables to juvenile salmonids in the South Fork Snake River; others such as substrate and velocity were not used as weighing factors. Hence, each measured surface area was weighted by multiplying by a channel, cover, and depth weighing factor. Summing the weighted surface areas gave the weighted area for each site, and summing these gave the weighted available habitat for the sample at each flow. We used a computer spreadsheet (Lotus 1-2-3) for data analysis.

RESULTS

Winter Habitat Use

Nighttime densities of subyearling cutthroat trout, brown trout, and mountain whitefish were highest in side channels (Table 5; Figure 6). Cutthroat trout density was higher than the other species in side and main channels, but mountain whitefish density was higher in backwaters. Densities in side channels ranged from 14.8 cutthroat trout/100 yd^2 to 1.6 brown trout/100 yd^2. Cutthroat trout density was higher in the main channel than in backwater areas, but densities were nearly equal for brown trout. Mountain whitefish density was higher in backwater areas than main channels.

Nighttime densities of subyearling cutthroat trout, brown trout, and mountain whitefish were highest in small woody debris (Table 6; Figure 7). Except for areas that lacked cover, cutthroat trout densities were always larger than other species. Cutthroat trout density was next largest in aquatic vegetation, but only one area was sampled. Cutthroat trout densities were intermediate in small and large boulder and large woody debris areas, and were low in areas with cobble and no cover. Brown trout densities were next highest in areas with large and small boulders and large woody debris. Their densities were low in areas with aquatic vegetation, cobble, and no cover. Unlike the other species, mountain whitefish densities were next highest in areas with no cover, and they were not observed using small or large boulders or large woody debris. Their densities were low in aquatic vegetation and cobble areas.

Mean distance to nearest cover was less than 1.0 ft for subyearling trout at night, but ranged from 0.0 to 15.7 ft for cutthroat (n = 222) and 0.0 to

Table 5. Nightime densities of subyearling cutthroat trout, brown trout, and mountain whitefish by channel type in the South Fork Snake River. Sample size is the number of areas dived during winter, 1990-91.

Channel type	Sample size	Density (fish/100 yd^2)		
		Cutthroat trout	Brown trout	Mountain whitefish
Side	31	14.8	1.6	10.9
Main	26	5.8	0.7	0.4
Backwater	9	1.9	0.6	4.5
Combined	66	7.6	1.0	5.3

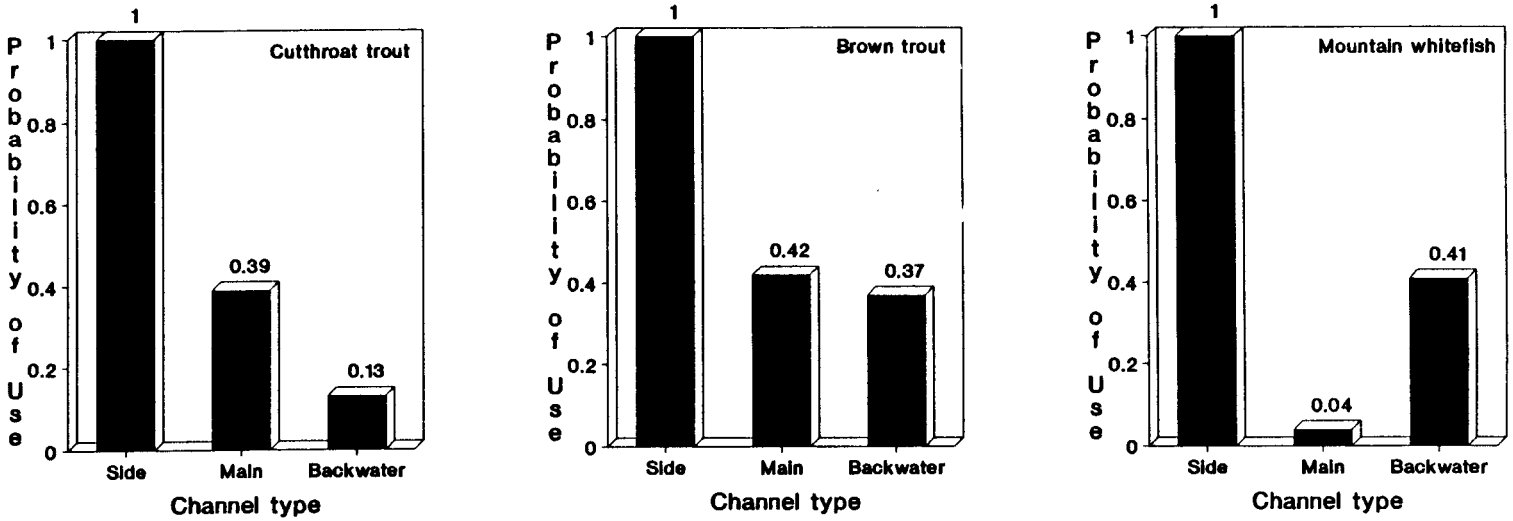

Figure 6. Probability of use for subyearling cutthroat trout, brown trout, and mountain whitefish at night for various channel types found in the South Fork Snake River during winter 1990-91 (n = 66).

Table 6. Nightime densities of subyearling cutthroat trout, brown trout, and mountain whitefish by cover type in the South Fork Snake River. Sample size is the number of areas dived during winter, 1990-91.

Channel type[a]	Sample size	Density (fish/100 yd^2)		
		Cutthroat trout	Brown trout	Mountain whitefish
NC	13	1.5	0.5	9.6
AV	1	18.5	0.0	2.3
CB	12	3.6	0.2	0.2
SB	10	11.3	1.3	0.0
LB	7	9.0	2.0	0.0
SWD	22	38.5	4.0	14.9
LWD	1	7.0	1.4	0.0
Combined	66	7.6	1.0	5.3

[a] NC = No Cover, AV = Aquatic Vegetation, CB = Cobble, SB = Small Boulder, LB = Large Boulder, SWD = Small Woody Debris, LWD = Large Woody Debris.

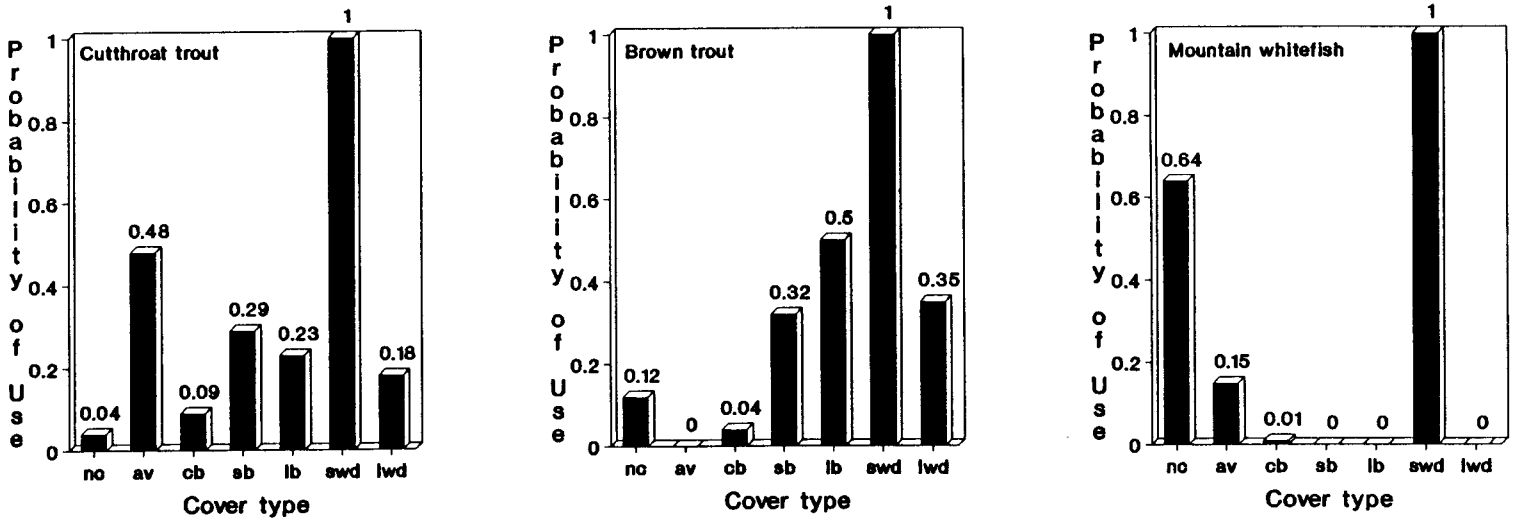

Figure 7. Probability of use for subyearling cutthroat trout, brown trout, and mountain whitefish at night for various cover types found in the South Fork Snake River during winter 1990-91 (n = 66). Cover types are: nc = no cover, av = aquatic vegetation, cb = cobble, sb = small boulder, lb = large boulder, swd = small woody debris, and lwd = large woody debris.

4.0 ft for brown trout (n = 65). Mountain whitefish were found farther from cover with a mean distance of 5.6 ft and a range of 0.0 to 29.3 ft (n = 30).

Relative to the other species, subyearling cutthroat trout used a more narrow range of water column depths at night (Figure 8; Appendix A-1 - A-3). Optimum depths for this species were 1.3 to 1.6 ft, and depths used ranged from 0.3 to 4.4 ft (n = 235). Brown trout and mountain whitefish used a wider range of depths with the optimum between 1.3 to 3.3 ft. They used depths ranging from 1.0 to 10.0 ft for brown trout (n = 78) and 0.6 to 15.0 ft for mountain whitefish (n = 116). Mean focal point depths were 0.20 ft for subyearling cutthroat trout at night, 0.14 ft for brown trout, and 0.10 ft for mountain whitefish.

Optimum nighttime average water column velocities for all species was less than 0.2 ft/s. The maximum water column velocities observed were 1.80 ft/s for subyearling cutthroat trout, 0.83 ft/s for brown trout, and 1.43 ft/s for mountain whitefish (Appendix A-4 - A-6). Focal point velocities reflected this use of near zero water column velocities, with the optimum for all species less than 0.1 ft/s. No fish were observed with focal point velocities greater than 0.8 ft/s (Appendix A-7 - A-9).

Nighttime use of substrate by subyearling trout, in descending order of frequency, was generally cobble, large boulder, fines, small boulder and gravel (Appendix A-10). Mountain whitefish differed from cutthroat and brown trout in that they used relatively fewer areas with small and large boulders and more areas with fines and gravel.

Winter habitat use data is incomplete for subyearling salmonids during day and for yearlings during day and night. However, we report their densities by channel and cover types and any habitat use data with more than 20 observations for possible application in other habitat models (Appendix B).

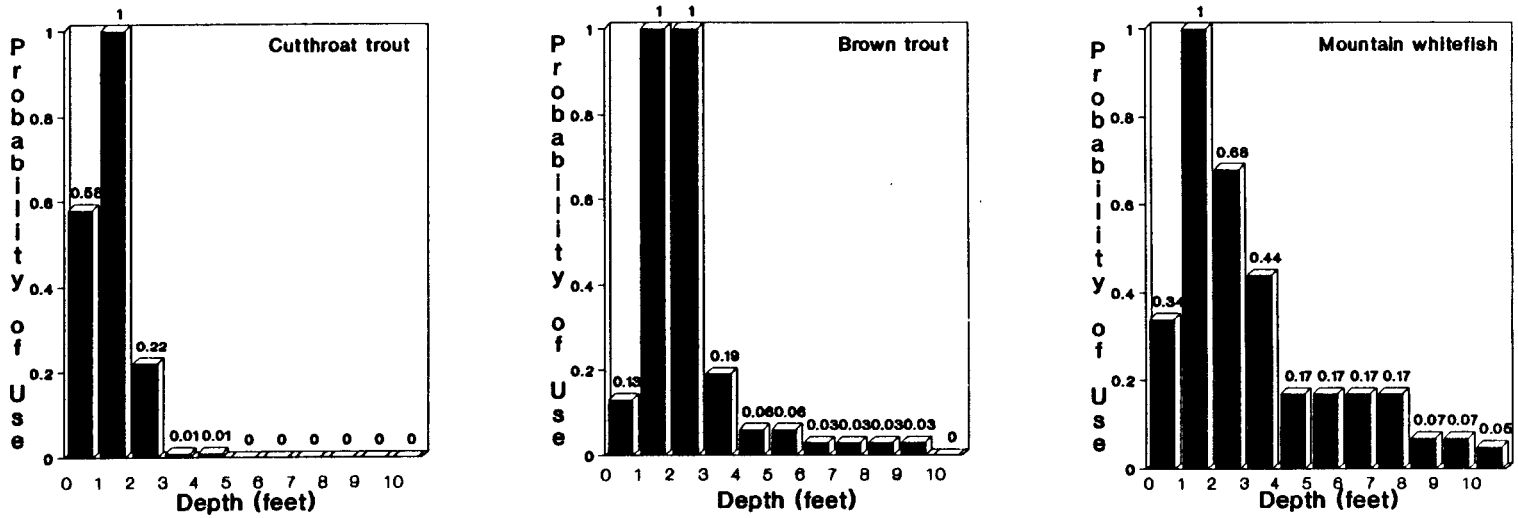

Figure 8. Probability of use for subyearling cutthroat trout, brown trout, and mountain whitefish at night for various water depths in the South Fork Snake River during winter 1990-91 (n = 66).

Flow versus Habitat Relationships

Weighted available habitat of the 30 sites sampled in the upper South Fork Snake River decreased with discharge, but not at a constant rate (Figure 9). The flow versus habitat relationship for each species is curvilinear with the greatest rate of decrease occurring between 1,540 and 1,240 cfs. The rate of habitat loss declined between 1,240 and 830 cfs.

Of the weighted habitat available to subyearling cutthroat trout at 3,370 cfs, one-third (33%) was lost as flows were reduced to 1,540 cfs, and over half (53%) was lost at 1,240 cfs (Table 7, Appendix C-1 - C-3). For brown trout, about half (49%) was lost at 1,540 cfs and two-thirds (66%) at 1,240 cfs. And for mountain whitefish, over half (55%) was lost at 1,540 cfs and three-fourths (75%) at 1,240 cfs.

DISCUSSION

We evaluated winter habitats used by juvenile salmonids during both day and night, but concentrated our efforts on nighttime use. Daytime observations were not very effective in sampling juveniles in the South Fork Snake River. Juveniles move into concealment cover during the day where they are less visible to divers. Densities at night were 2.5, 2.2 and 3.2 times higher than during the day for cutthroat trout, brown trout, and mountain whitefish, respectively. After consulting with cooperating agencies during late winter 1991 we decided to concentrate our efforts on nighttime work, which allowed us to collect more data. Although habitat use changes between day and night, we believe that the differences are not significant when considering loss of habitat with reduction in discharge. Fish generally stayed within one foot of concealment cover when

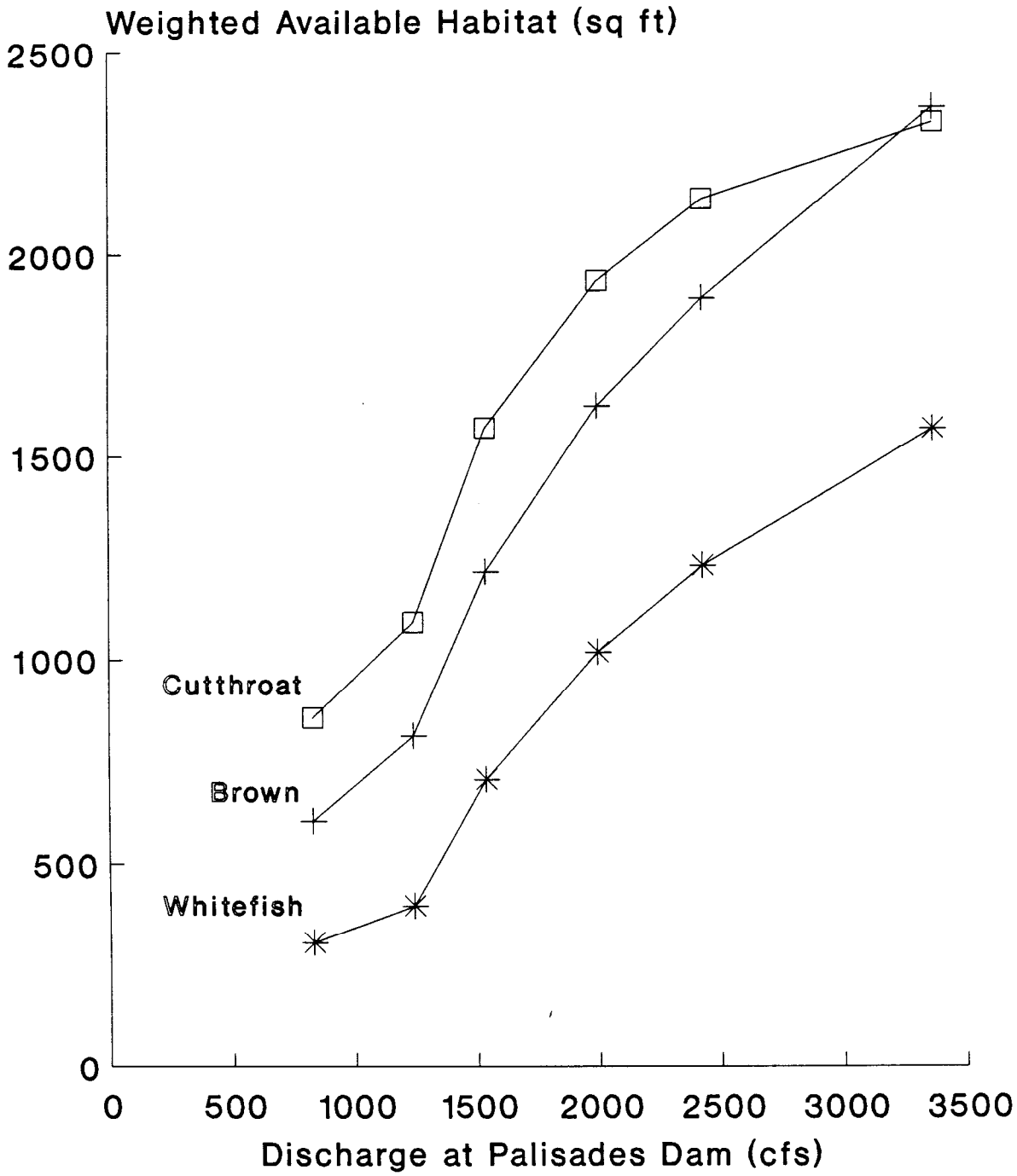

Figure 9. Relationships of weighted available habitat with discharge in the upper (above the Dry Bed Canal) South Fork Snake River. Weighted available habitat is the sum of the 30 sites sampled during fall 1991.

Table 7. Percent loss of weighted available habitat (WAH) with reduced discharge in the upper (above the Dry Bed Canal) South Fork Snake River. WAH is the sum of the 30 sites sampled; percent loss is the difference in WAH relative to 3,370 cfs.

Discharge at Palisades Dam (cfs)	Cutthroat trout WAH (sq ft)	Cutthroat trout % Loss	Brown trout WAH (sq ft)	Brown trout % Loss	Mountain whitefish WAH (sq ft)	Mountain whitefish % Loss
3,370	2,325	0	2,363	0	1,566	0
2,430	2,136	8	1,890	20	1,230	21
2,000	1,933	17	1,624	31	1,017	35
1,540	1,569	33	1,215	49	705	55
1,240	1,091	53	811	66	395	75
830	856	63	603	74	305	81

they emerged at dusk, and we never observed them leaving an area of habitat that we measured.

We evaluated winter habitats used by subyearling and yearling salmonids, but we observed few yearlings and concentrated our efforts on subyearlings. Our observed low densities of yearlings (0.0 to 0.8 fish/100 yd^2) may be a result of poor recruitment but was compounded by difficulties we encountered during sampling. Yearlings in the South Fork Snake River used a wider range of habitats than subyearlings and were more difficult to observe. Yearlings were found in habitats ranging from the shallow water areas with dense concealment cover used by subyearlings to deep pools with little cover used by adult fish. The yearlings we observed in open water were more mobile and were disturbed more easily than subyearling fish. This, combined with relatively poor visibility (approximately 8 ft), made their identification difficult. When we were able to identify yearlings they were frequently displaced, which precluded measurement of habitat parameters.

During the planning stages of this project we recognized that it would not be practical to use all the habitat variables to develop the flow versus habitat relationships. We decided, however, to collect as much data as possible while diving in case it was needed for this project or for future work on the South Fork Snake River. The data might also be used in other habitat models or on other streams. After completing our dive work, we decided to use channel type, cover type, and depth as weighing factors. We did not use velocity or substrate for the following reasons:

First, juvenile salmonids were observed using areas with water velocities <0.1 ft/s when water temperatures were <43°F. Areas with dense cover generally provided these low velocities regardless of velocities in adjacent areas. Therefore, we believe as adequate cover is provided with discharge, young fish will be provided with near zero water velocities.

Second, substrate was not included as a weighing factor because it was partly accounted for in our cover designations, i.e. no cover, cobble, small boulder, and large boulder. Areas designated "no cover" lacked interstitial spaces where fish could be concealed. These included areas with fines, gravel, or larger substrate which were embedded with fines. We did not observe differences in substrate used except when used as cover.

Nighttime densities of subyearling salmonids varied by channel and cover type, with side channels and small woody debris being most important during winter for all species. Side channels have been previously recognized as important wintering areas for juvenile salmonids (Bustard and Narver 1975b; Tschaplinski and Hartman 1983; Swales et al. 1986). Our results show they are important during night as well as day and for mountain whitefish as well as cutthroat and brown trout.

Cutthroat and brown trout densities were two to four times higher in small woody debris than in small and large boulders, and 9 to 25 times higher than in cobble or areas with no cover. Close association of young trout with cover during winter has been well documented (Bustard and Narver 1975a; Rimmer et al. 1983; Johnson and Kucera 1985; Hillman et al. 1987). Our results show cover is perhaps as important during night as day, and that woody debris cover is particularly important.

Aquatic vegetation had the second highest subyearling cutthroat trout densities. However, we sampled only one area with aquatic vegetation at night. Two areas with aquatic vegetation were sampled during the day, and subyearling densities were higher in this cover type than in any other type. We observed that aquatic vegetation dies and decomposes by midwinter, forcing fish to seek other cover. Since aquatic vegetation does not persist throughout the winter, it was not included as a weighing factor to develop the flow versus habitat relationships.

Mountain whitefish do not appear to be as dependent on these cover components as cutthroat and brown trout. Although highest densities were observed in small woody debris, large numbers were also observed in areas devoid of cover. In addition, distance to cover was greater for mountain whitefish than cutthroat and brown trout. Because we were unable to determine if mountain whitefish moved into cover during the day, we do not know if its presence is an important factor in determining juvenile habitat use.

Subyearling mountain whitefish were rarely observed, but when they were seen, they were often in schools which numbered up to 280 individuals. They were observed at night in low-velocity pools and pool tailouts in areas with little or no concealment cover. They were seldom seen during the day. When observed at daytime, they were using deep (>4 ft), low velocity pools near tailouts where they had been observed at night. We were unable to locate subyearling mountain whitefish during the day in many areas where they had been previously observed at night.

Observations during our SCUBA sampling support the concept that subyearling salmonids generally use shallow, near-shore habitats associated with concealment cover. We used SCUBA to sample seven deep water areas. At four locations we found no juveniles, and at one location we did not observe any fish because of poor visibility. At the other locations, adults were seen using depths between 5 and 20 ft. We rarely saw salmonids deeper than 15 ft and never deeper than 20 ft, although we sampled depths greater than 25 ft at several locations.

Use of shallow, near-shore habitats by subyearling salmonids is supported by other observations. At a site near Twin Bridges, we observed numerous (>30) subyearling cutthroat trout in shallow water (<2 ft) using small boulder cover. As we moved away from the boulders and descended into the pool, we observed yearlings and adults in 2- to 6-ft of water. On the opposite side of the pool, subyearling and yearling mountain whitefish were on silt substrate in 2- to 4-ft

of water. Adult mountain whitefish were generally seen midchannel in water 4 to 6 ft deep.

Near the Sunnydale Canal headgate, we observed yearling cutthroat trout in depths 7 to 12 ft and adults 10 to 12 ft. We observed only one subyearling cutthroat trout, and it was in 1 ft of water. Mountain whitefish at this site followed the same pattern with more than 40 subyearlings in shallow water (2 to 4 ft), yearlings in about four ft of water, and adults using the deepest water (4 to 12 ft).

The only area where we observed subyearlings using deep water was at a site near the Heise Bridge. This site is a large backwater with small boulders along one side. The backwater slopes into a deep, 15 ft pool at the entrance to the main river. During a night dive, subyearling mountain whitefish were seen at the base of the small boulder ledge in water 8 to 15 ft deep. Two subyearling cutthroat trout were also observed in 12 ft of water, and one subyearling brown trout in 10 ft of water. During a day dive at the same location, we found one cutthroat trout and one mountain whitefish, both subyearlings, in water 10 to 12 ft deep. They were observed along the boulder shoreline, generally within 1 ft of the boulders, while yearling and older fish were seen farther from cover in the center of the backwater and in the pool near the mouth of the channel.

Our observations on the South Fork Snake River confirm the flow versus habitat relationships presented. We began to see habitat sites drying up or freezing at 1,540 cfs with the greatest number becoming unusable between 1,540 and 1,240 cfs. In the upper river, one site became dry or frozen at 1,540 cfs, an additional five sites at 1,240 cfs, and another four sites at 830 cfs. Most of these sites were in side channels. We also noted dramatic changes in the river between 1,540 and 1,240 cfs, but not as much change between 1,240 and 830 cfs. For example, a large number of side channels went dry between 1,540 and

1,240 cfs and floating the river became very difficult. Such a dramatic change was not observed between 1,240 and 830 cfs.

Our criteria was to call a site dry if there was no surface outflow. Standing pools, or pools with inflow but no outflow, were often observed in side channels but would probably freeze and not provide overwintering habitat to juvenile salmonids.

Our results (Figure 9) generally agree with aerial photo work done on the South Fork Snake River in 1988 (Figure 10; FWS unpublished data, Boise, Idaho). In both studies, winter habitat availability decreased with discharge at Palisades Dam. Decreases were at similar rates as well. Our results showed that of the weighted habitat available at 2,430 cfs, from 60 to 75% was lost as flows were reduced to 830 cfs; the aerial photo work showed more than half (56%) of the upriver side channel area was lost when flows were reduced from 2,200 to 750 cfs.

Winter flow reductions have the most potential to affect mountain whitefish habitat availability, followed by brown trout and cutthroat trout. At any given flow, the percent loss of weighted habitat (relative to that available at 3,370 cfs) was greatest for mountain whitefish followed by brown trout and cutthroat trout. Differences between the species are due to different weighing factors used. We emphasize these relationships were developed for subyearling fish at night; the relationships might be different if other age class or daytime criteria were used.

We consider our relative habitat losses with reduced discharge to be conservative for several reasons. First, optimum or peak amounts of weighted habitat were not measured, i.e. they were at flows above our requested flow regime (Figure 9). Our curves indicate that these peaks probably occurred at flows greater than 3370 cfs. Had we measured habitat at larger flows, relative losses would have been greater as well.

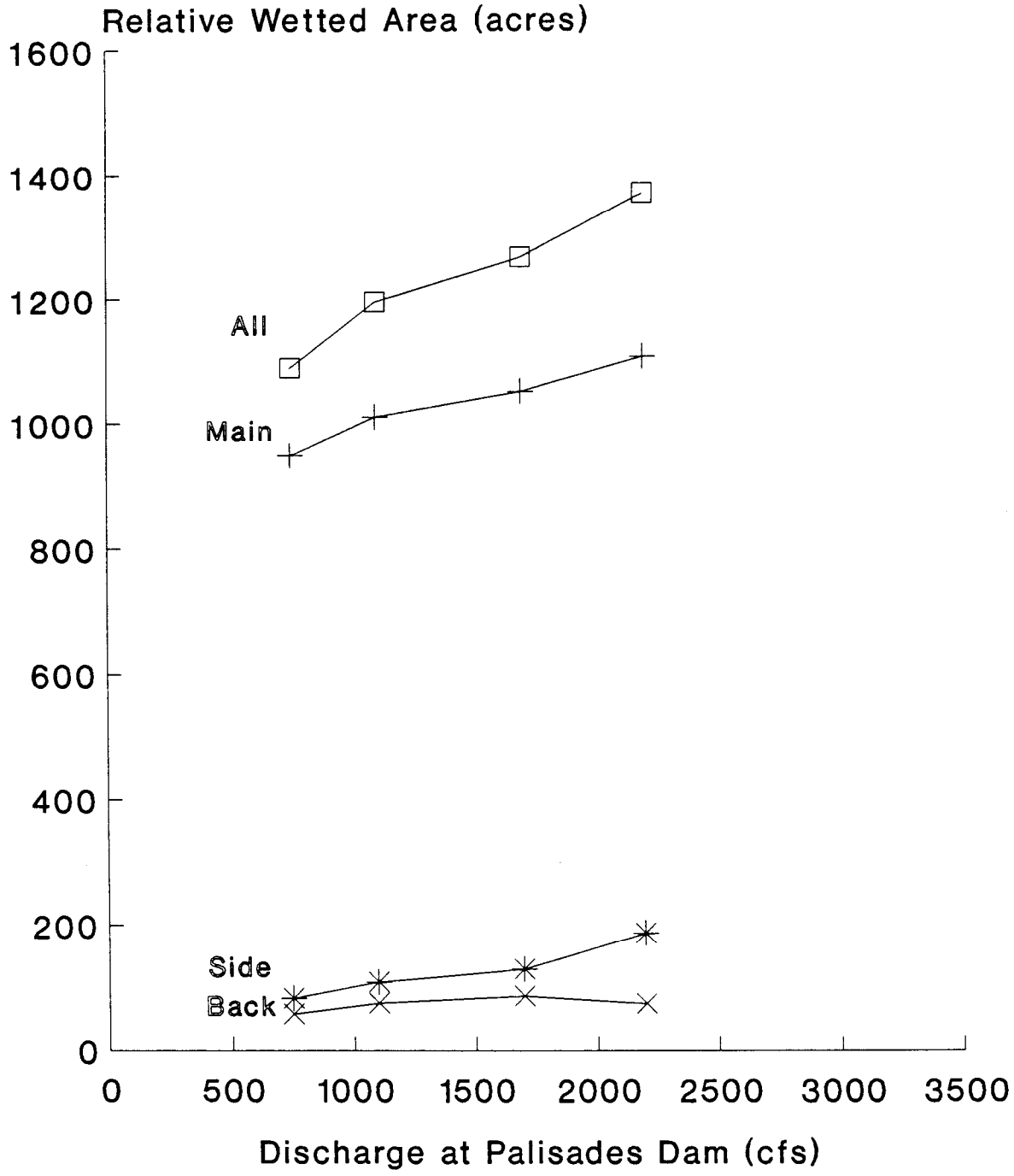

Figure 10. Relationships of relative wetted area with discharge in the upper (above Riley Ditch) South Fork Snake River. Data are from aerial photos taken during fall 1988 (USFWS, unpublished report, Boise, Idaho.)

Second, our random sample of habitat sites may have become biased against our most important cover type (small woody debris). The sample may have become biased due to the disproportionate reduction of sites by spring runoff in 1991 and our elimination of lower river sites. Small woody debris sites made up 77% of our original sample (Table 3), whereas our final sample contained only 67% (Table 4). In contrast, small boulder sites increased from 11 to 27% of the sample. Weighted habitat losses with reduced discharge may have been greater had the number of small woody debris sites not been disproportionately reduced. Alternatively, the increase in side channels from 39 to 53% may have *****.

We believe the flow versus habitat curves developed for the upper river may be applied to the lower river as well. Although habitat use did not differ between the two river sections, such application would probably be conservative. The lower river is more braided, contains relatively more side channels and woody debris, and is more shallow on average than the upper river. As flows decrease, these important habitat types are probably lost at a greater rate than in the upper river. Therefore, we suspect that recruitment may be more limited by winter flow reductions in the lower river than in the upper river.

Recruitment may be more limiting in the lower river for additional reasons. A significant amount of its water (sometimes more than half) is diverted into the Dry Bed Canal during low water years, and diversion generally continues through the winter period. As a result, flows in the lower river at Lorenzo are often less than 500 cfs (USGS, unpublished data). The lower river is also affected by erratic and extreme flow fluctuations during the fall due to irrigation withdrawals (Figure 5). We observed little relationship between flows at Palisades Dam and flows in the lower river during our mapping efforts. Fish were often observed stranded in side channels, and flow fluctuations may contribute to stranding losses by repeatedly dewatering many of these channels.

A major assumption of this study is that salmonid populations in the South Fork are limited primarily to the quantity and quality of winter habitat available to them. This winter habitat, as we have shown, is limited primarily by flows released at Palisades Dam. Our study has provided the flow versus habitat relationships; we have not tried to provide the habitat versus abundance relationships. However, population estimates by IDFG personnel suggest that winter flows, and hence winter habitat, are limiting recruitment to the fishery. Further monitoring is needed to fully test this assumption.

RECOMMENDATIONS

1. Maintain a minimum flow of at least 1,540 cfs at Palisades Dam during winter. This would provide for the upper river 45 to 67% of the juvenile salmonid habitat available at 3,370 cfs. Additional flows above 1,540 cfs would provide additional habitat. Historic winter low flows prior to Palisades Dam were above this level (Figure 1).

2. Losses of fish due to stranding could be reduced by using longer ramp rates with an evaluation to quantify benefits.

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A P P E N D I C E S

Appendix A

Appendix A-1. Number of subyearling cutthroat trout observed at different water column depths during night dives on the South Fork Snake River, winter 1990-1991.

Depth (ft)	Number observed	Depth (ft)	Number observed	Depth (ft)	Number observed
0.0	0	1.7	8	3.4	0
0.1	0	1.8	8	3.5	0
0.2	0	1.9	5	3.6	0
0.3	2	2.0	12	3.7	0
0.4	6	2.1	4	3.8	0
0.5	5	2.2	6	3.9	0
0.6	10	2.3	3	4.0	0
0.7	9	2.4	3	4.1	0
0.8	11	2.5	4	4.2	0
0.9	16	2.6	3	4.3	0
1.0	16	2.7	2	4.4	1
1.1	17	2.8	1	4.5	0
1.2	11	2.9	1	4.6	0
1.3	15	3.0	2	4.7	0
1.4	16	3.1	0	4.8	0
1.5	18	3.2	0	4.9	0
1.6	19	3.3	1	5.0	0
				Total	235

Appendix A-2. Number of subyearling brown trout observed at different water column depths during night dives on the South Fork Snake River, winter 1990-1991.

Depth (ft)	Number observed	Depth (ft)	Number observed	Depth (ft)	Number observed
0.0	0	3.6	0	7.2	0
0.1	0	3.7	0	7.3	0
0.2	0	3.8	0	7.4	0
0.3	0	3.9	0	7.5	0
0.4	0	4.0	1	7.6	0
0.5	0	4.1	0	7.7	0
0.6	0	4.2	0	7.8	0
0.7	0	4.3	0	7.9	0
0.8	0	4.4	0	8.0	1
0.9	0	4.5	0	8.1	0
1.0	4	4.6	0	8.2	0
1.1	2	4.7	0	8.3	0
1.2	1	4.8	0	8.4	0
1.3	6	4.9	0	8.5	0
1.4	4	5.0	2	8.6	0
1.5	4	5.1	0	8.7	0
1.6	3	5.2	0	8.8	0
1.7	2	5.3	0	8.9	0
1.8	2	5.4	0	9.0	0
1.9	1	5.5	0	9.1	0
2.0	7	5.6	0	9.2	0
2.1	3	5.7	0	9.3	0
2.2	2	5.8	0	9.4	0
2.3	5	5.9	0	9.5	0
2.4	4	6.0	2	9.6	0
2.5	1	6.1	0	9.7	0
2.6	1	6.2	0	9.8	0
2.7	2	6.3	0	9.9	0
2.8	4	6.4	0	10.0	1
2.9	6	6.5	0	10.2	0
3.0	2	6.6	0	10.3	0
3.1	1	6.7	0	10.4	0
3.2	0	6.8	0	10.5	0
3.3	2	6.9	0	10.6	0
3.4	0	7.0	0	10.7	0
3.5	2	7.1	0	10.8	0
				Total	78

Appendix A-3. Number of subyearling mountain whitefish observed at different water column depths during night dives on the South Fork Snake River, winter 1990-1991.

Depth (ft)	Number observed	Depth (ft)	Number observed	Depth (ft)	Number observed
0.0	0	4.1	0	8.2	0
0.1	0	4.2	0	8.3	0
0.2	0	4.3	1	8.4	0
0.3	0	4.4	0	8.5	0
0.4	0	4.5	0	8.6	0
0.5	0	4.6	0	8.7	0
0.6	4	4.7	0	8.8	0
0.7	0	4.8	0	8.9	0
0.8	2	4.9	0	9.0	0
0.9	3	5.0	0	9.1	0
1.0	5	5.1	0	9.2	0
1.1	3	5.2	0	9.3	0
1.2	4	5.3	0	9.4	0
1.3	4	5.4	0	9.5	0
1.4	6	5.5	0	9.6	0
1.5	6	3.6	0	9.7	0
1.6	4	5.7	0	9.8	0
1.7	3	5.8	0	9.9	0
1.8	2	5.9	0	10.0	3
1.9	2	6.0	0	10.1	0
2.0	7	6.1	0	10.2	0
2.1	5	6.2	1	10.3	0
2.2	5	6.3	0	10.4	0
2.3	2	6.4	0	10.5	0
2.4	3	6.5	0	10.6	0
2.5	1	6.6	0	10.7	0
2.6	0	6.7	0	10.8	0
2.7	1	6.8	0	10.9	0
2.8	4	6.9	0	11.0	0
2.9	3	7.0	0	11.1	0
3.0	4	7.1	0	11.2	0
3.1	1	7.2	0	11.3	0
3.2	3	7.3	0	11.4	0
3.3	3	7.4	0	11.5	0
3.4	1	7.5	0	11.6	0
3.5	1	7.6	0	11.7	0
3.6	1	7.7	0	11.8	0
3.7	2	7.8	0	11.9	0
3.8	1	7.9	0	12.0	2
3.9	0	8.0	7	12.1	0
4.0	5	8.1	0	.	.
				15.0	1
				Total	116

Appendix A-4. Number of subyearling cutthroat trout observed at different mean water column velocities during night dives on the South Fork Snake River, winter 1990-1991.

Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed
0.00	152	0.35	1	0.70	0
0.01	7	0.36	0	0.71	0
0.02	5	0.37	0	0.72	0
0.03	0	0.38	0	0.73	0
0.04	1	0.39	0	0.74	0
0.05	4	0.40	1	0.75	0
0.06	1	0.41	0	0.76	0
0.07	2	0.42	0	0.77	0
0.08	1	0.43	0	0.78	0
0.09	5	0.44	0	0.79	0
0.10	2	0.45	0	0.80	0
0.11	0	0.46	0	0.81	0
0.12	5	0.47	0	0.82	0
0.13	3	0.48	0	0.83	0
0.14	1	0.49	0	0.84	0
0.15	1	0.50	0	0.85	0
0.16	1	0.51	0	0.86	0
0.17	0	0.52	0	0.87	0
0.18	0	0.53	0	0.88	0
0.19	0	0.54	0	0.89	0
0.20	0	0.55	0	0.90	1
0.21	0	0.56	0	0.91	0
0.22	0	0.57	0	0.92	0
0.23	0	0.58	0	0.93	1
0.24	0	0.59	1	0.94	0
0.25	0	0.60	0	0.95	0
0.26	1	0.61	0	0.96	0
0.27	0	0.62	1	0.97	0
0.28	0	0.63	1	0.98	0
0.29	0	0.64	0	0.99	0
0.30	1	0.65	0	1.00	0
0.31	1	0.66	0	.	.
0.32	1	0.67	0	.	.
0.33	0	0.68	0	1.77	0
0.34	0	0.69	0	1.78	0
				1.79	0
				1.80	1
				Total	203

Appendix A-5. Number of subyearling brown trout observed at different mean water column velocities during night dives on the South Fork Snake River, winter 1990-1991.

Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed
0.00	33	0.30	0	0.60	0
0.01	1	0.31	0	0.61	0
0.02	3	0.32	0	0.62	0
0.03	1	0.33	1	0.63	0
0.04	0	0.34	0	0.64	0
0.05	0	0.35	0	0.65	0
0.06	0	0.36	0	0.66	1
0.07	0	0.37	0	0.67	0
0.08	0	0.38	0	0.68	0
0.09	0	0.39	0	0.69	0
0.10	1	0.40	0	0.70	0
0.11	0	0.41	0	0.71	0
0.12	0	0.42	1	0.72	0
0.13	1	0.43	0	0.73	0
0.14	2	0.44	0	0.74	0
0.15	0	0.45	1	0.75	1
0.16	0	0.46	0	0.76	0
0.17	1	0.47	1	0.77	0
0.18	1	0.48	0	0.78	0
0.19	0	0.49	0	0.79	0
0.20	0	0.50	1	0.80	0
0.21	0	0.51	0	0.81	0
0.22	0	0.52	0	0.82	0
0.23	1	0.53	0	0.83	1
0.24	0	0.54	0	0.84	0
0.25	0	0.55	0	0.85	0
0.26	1	0.56	0	0.86	0
0.27	0	0.57	0	0.87	0
0.28	0	0.58	0	0.88	0
0.29	0	0.59	0	0.89	0
				Total	54

Appendix A-6. Number of subyearling mountain whitefish observed at different mean water column velocities during night dives on the South Fork Snake River, winter 1990-1991.

Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed
0.00	34	0.32	1	0.64	0
0.01	2	0.33	0	0.65	0
0.02	1	0.34	0	0.66	0
0.03	0	0.35	0	0.67	0
0.04	1	0.36	0	0.68	0
0.05	0	0.37	0	0.69	0
0.06	0	0.38	0	0.70	0
0.07	1	0.39	0	0.71	0
0.08	1	0.40	0	0.72	0
0.09	1	0.41	0	0.73	0
0.10	2	0.42	0	0.74	0
0.11	3	0.43	0	0.75	0
0.12	1	0.44	0	0.76	0
0.13	1	0.45	0	0.77	0
0.14	0	0.46	0	0.78	0
0.15	1	0.47	0	0.79	0
0.16	0	0.48	0	0.80	1
0.17	1	0.49	0	0.81	0
0.18	0	0.50	0	0.82	0
0.19	1	0.51	0	0.83	0
0.20	0	0.52	0	0.84	0
0.21	0	0.53	0	0.85	0
0.22	1	0.54	0	0.86	0
0.23	0	0.55	0	0.87	0
0.24	0	0.56	0	0.88	1
0.25	1	0.57	1	0.89	0
0.26	0	0.58	0	0.90	1
0.27	0	0.59	0	.	.
0.28	0	0.60	0	.	.
0.29	1	0.61	0	1.34	0
0.30	1	0.62	0	1.35	1
0.31	0	0.63	0	.	.
				.	.
				1.43	1
				Total	62

Appendix A-7. Number of subyearling cutthroat trout observed at different focal point water velocities during night dives on the South Fork Snake River, winter 1990-1991.

Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed
0.00	167	0.12	0	0.24	0
0.01	4	0.13	1	0.25	0
0.02	5	0.14	2	0.26	0
0.03	6	0.15	0	0.27	0
0.04	0	0.16	0	0.28	1
0.05	3	0.17	1	0.29	0
0.06	1	0.18	0	0.30	0
0.07	2	0.19	1	0.31	0
0.08	1	0.20	0	0.32	0
0.09	0	0.21	2	0.33	0
0.10	1	0.22	0	0.34	0
0.11	2	0.23	1	0.35	1
				Total	202

Appendix A-8. Number of subyearling brown trout observed at different focal point water velocities during night dives on the South Fork Snake River, winter 1990-1991.

Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed
0.00	43	0.14	0	0.28	0
0.01	2	0.15	0	0.29	0
0.02	0	0.16	1	0.30	0
0.03	1	0.17	0	0.31	0
0.04	2	0.18	1	0.32	0
0.05	1	0.19	0	0.33	0
0.06	0	0.20	0	0.34	0
0.07	0	0.21	0	0.35	0
0.08	0	0.22	0	0.36	0
0.09	0	0.23	0	0.37	0
0.10	0	0.24	0	0.38	0
0.11	0	0.25	1	0.39	0
0.12	0	0.26	0	0.40	0
0.13	0	0.27	1	0.41	1
				Total	54

Appendix A-9. Number of subyearling mountain whitefish observed at different focal point water velocities during night dives on the South Fork Snake River, winter 1990-1991.

Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed
0.00	50	0.27	0	0.54	0
0.01	3	0.28	0	0.55	1
0.02	0	0.29	0	0.56	0
0.03	3	0.30	0	0.57	0
0.04	0	0.31	0	0.58	0
0.05	0	0.32	0	0.59	0
0.06	0	0.33	0	0.60	0
0.07	0	0.34	0	0.61	0
0.08	0	0.35	0	0.62	0
0.09	1	0.36	0	0.63	0
0.10	0	0.37	0	0.64	0
0.11	0	0.38	1	0.65	0
0.12	0	0.39	0	0.66	0
0.13	0	0.40	0	0.67	0
0.14	1	0.41	0	0.68	0
0.15	0	0.42	0	0.69	0
0.16	0	0.43	0	0.70	0
0.17	0	0.44	0	0.71	1
0.18	0	0.45	0	0.72	0
0.19	0	0.46	0	0.73	0
0.20	0	0.47	0	0.74	0
0.21	0	0.48	0	0.75	0
0.22	0	0.49	0	0.76	0
0.23	0	0.50	0	0.77	0
0.24	0	0.51	0	0.78	0
0.25	0	0.52	0	0.79	1
0.26	0	0.53	0	0.80	0
				Total	62

Appendix A-10. Number of subyearling cutthroat trout, brown trout, and mountain whitefish observed using different substrate types during night dives on the South Fork Snake River, winter 1990-1991.

Substrate	Number observed		
	Cutthroat trout	Brown trout	Mountain whitefish
Fines	33	17	20
Gravel	17	2	26
Cobble	115	26	55
Small boulder	34	9	1
Large boulder	38	21	4
Other*	3	2	0
Total	240	77	106

* Other includes detritus and small woody debris

Appendix B

Appendix B-1. Number observed and densities of subyearling and yearling cutthroat trout for each channel type during night dives on the South Fork Snake River, winter 1990-1991.

Channel type	Number of dive sites	Area sampled (sq yd)	Number observed		Density (#/100 sq yd)	
			subyearlings	yearlings	subyearlings	yearlings
Side	31	3,097	459	38	14.82	1.23
Main	26	3,023	174	27	5.76	0.89
Back	9	2,947	56	8	1.90	0.27
Total	66	9,068	689	73	7.60	0.81

Appendix B-2. Number observed and densities of subyearling and yearling cutthroat trout for each channel type during day dives on the South Fork Snake River, winter 1990-1991.

Channel type	Number of dive sites	Area sampled (sq yd)	Number observed		Density (#/100 sq yd)	
			subyearlings	yearlings	subyearlings	yearlings
Side	22	2,214	79	5	3.57	0.23
Main	31	3,285	80	3	2.44	0.09
Back	7	1,970	72	7	3.65	0.36
Total	60	7,469	231	15	3.09	0.20

Appendix B-3. Number observed and densities of subyearling and yearling brown trout for each channel type during night dives on the South Fork Snake River, winter 1990-1991.

Channel type	Number of dive sites	Area sampled (sq yd)	Number observed		Density (#/100 sq yd)	
			subyearlings	yearlings	subyearlings	yearlings
Side	31	3,097	51	5	1.65	0.16
Main	26	3,023	21	1	0.69	0.03
Back	9	2,947	18	1	0.61	0.03
Total	66	9,068	90	7	0.99	0.08

Appendix B-4. Number observed and densities of subyearling and yearling brown trout for each channel type during day dives on the South Fork Snake River, winter 1990-1991.

Channel type	Number of dive sites	Area sampled (sq yd)	Number observed		Density (#/100 sq yd)	
			subyearlings	yearlings	subyearlings	yearlings
Side	22	2,214	5	1	0.23	0.05
Main	31	3,285	2	1	0.06	0.03
Back	7	1,970	27	0	1.37	0.00
Total	60	7,469	34	2	0.46	0.03

Appendix B-5. Number observed and densities of subyearling and yearling mountain whitefish for each channel type during night dives on the South Fork Snake River, winter 1990-1991.

Channel type	Number of dive sites	Area sampled (sq yd)	Number observed		Density (#/100 sq yd)	
			subyearlings	yearlings	subyearlings	yearlings
Side	31	3,097	338	13	10.91	0.42
Main	26	3,023	13	8	0.43	0.26
Back	9	2,947	134	0	4.55	0.00
Total	66	9,068	485	21	5.35	0.23

Appendix B-6. Number observed and densities of subyearling and yearling mountain whitefish for each channel type during day dives on the South Fork Snake River, winter 1990-1991.

Channel type	Number of dive sites	Area sampled (sq yd)	Number observed		Density (#/100 sq yd)	
			subyearlings	yearlings	subyearlings	yearlings
Side	22	2,214	125	0	5.65	0.00
Main	31	3,285	0	0	0.00	0.00
Back	7	1,970	0	0	0.00	0.00
Total	60	7,469	125	0	1.67	0.00

Appendix B-7. Number observed and densities of subyearling and yearling cutthroat trout for each cover type during night dives on the South Fork Snake River, winter 1990-1991.

COVER	Number of dive sites	Area sampled (sq yd)	Number observed		Density (#/100 sq yd)	
			subyearlings	yearlings	subyearlings	yearlings
NC	13	3,855	59	14	1.53	0.36
AV	1	43	8	0	18.46	0.00
CB	12	1,855	66	8	3.56	0.43
SB	10	1,704	193	24	11.33	1.41
LB	7	796	72	13	9.04	1.63
SWD	22	743	286	13	38.50	1.75
LWD	1	71	5	1	7.05	1.41
TOTAL	66	9,068	689	73	7.60	0.81

Appendix B-8. Number observed and densities of subyearling and yearling cutthroat trout for each cover type during day dives on the South Fork Snake River, winter 1990-1991.

COVER	Number of dive sites	Area sampled (sq yd)	Number observed		Density (#/100 sq yd)	
			subyearlings	yearlings	subyearlings	yearlings
NC	7	2,864	1	0	0.03	0.00
AV	2	75	25	0	33.39	0.00
CB	11	1,416	1	0	0.07	0.00
SB	9	1,406	33	3	2.35	0.21
LB	9	1,050	14	2	1.33	0.19
SWD	21	633	157	10	24.80	1.58
LWD	0	0	0	0	-	-
TOTAL	59	7,443	231	15	3.10	0.20

Appendix B-9. Number observed and densities of subyearling and yearling brown trout for each cover type during night dives on the South Fork Snake River, winter 1990-1991.

COVER	Number of dive sites	Area sampled (sq yd)	Number observed		Density (#/100 sq yd)	
			subyearlings	yearlings	subyearlings	yearlings
NC	13	3,855	18	0	0.47	0.00
AV	1	43	0	0	0.00	0.00
CB	12	1,855	3	0	0.16	0.00
SB	10	1,704	22	3	1.29	0.18
LB	7	796	16	0	2.01	0.00
SWD	22	743	30	4	4.04	0.54
LWD	1	71	1	0	1.41	0.00
TOTAL	66	9,068	90	7	0.99	0.08

Appendix B-10. Number observed and densities of subyearling and yearling brown trout for each cover type during day dives on the South Fork Snake River, winter 1990-1991.

COVER	Number of dive sites	Area sampled (sq yd)	Number observed		Density (#/100 sq yd)	
			subyearlings	yearlings	subyearlings	yearlings
NC	7	2,864	0	0	0.00	0.00
AV	2	75	0	0	0.00	0.00
CB	11	1,416	0	0	0.00	0.00
SB	9	1,406	1	1	0.07	0.07
LB	9	1,050	0	0	0.00	0.00
SWD	21	633	33	1	5.21	0.16
LWD	0	0	0	0	-	-
TOTAL	59	7,443	34	2	0.46	0.03

Appendix B-11. Number observed and densities of subyearling and yearling mountain whitefish for each cover type during night dives on the South Fork Snake River, winter 1990-1991.

COVER	Number of dive sites	Area sampled (sq yd)	Number observed		Density (#/100 sq yd)	
			subyearlings	yearlings	subyearlings	yearlings
NC	13	3,855	369	19	9.57	0.49
AV	1	43	1	0	2.31	0.00
CB	12	1,855	4	0	0.22	0.00
SB	10	1,704	0	0	0.00	0.00
LB	7	796	0	0	0.00	0.00
SWD	22	743	111	2	14.94	0.27
LWD	1	71	0	0	0.00	0.00
TOTAL	66	9,068	485	21	5.35	0.23

Appendix B-12. Number observed and densities of subyearling and yearling mountain whitefish for each cover type during day dives on the South Fork Snake River, winter 1990-1991.

COVER	Number of dive sites	Area sampled (sq yd)	Number observed		Density (#/100 sq yd)	
			subyearlings	yearlings	subyearlings	yearlings
NC	7	2,864	125	0	4.37	0.00
AV	2	75	0	0	0.00	0.00
CB	11	1,416	0	0	0.00	0.00
SB	9	1,406	0	0	0.00	0.00
LB	9	1,050	0	0	0.00	0.00
SWD	21	633	0	0	0.00	0.00
LWD	0	0	0	0	-	-
TOTAL	59	7,443	125	0	1.68	0.00

Appendix B-13. Number of subyearling cutthroat trout observed at different depths during day dives on the South Fork Snake River, winter 1990-1991.

Depth (ft)	Number observed	Depth (ft)	Number observed	Depth (ft)	Number observed
0.0	0	3.4	1	6.8	0
0.1	0	3.5	0	6.9	0
0.2	0	3.6	0	7.0	0
0.3	0	3.7	0	7.1	0
0.4	0	3.8	0	7.2	0
0.5	0	3.9	0	7.3	0
0.6	0	4.0	0	7.4	0
0.7	1	4.1	0	7.5	0
0.8	3	4.2	0	7.6	0
0.9	3	4.3	0	7.7	0
1.0	2	4.4	0	7.8	0
1.1	0	4.5	0	7.9	0
1.2	3	4.6	0	8.0	0
1.3	3	4.7	0	8.1	0
1.4	4	4.8	0	8.2	0
1.5	2	4.9	0	8.3	0
1.6	4	5.0	0	8.4	0
1.7	3	5.1	0	8.5	0
1.8	1	5.2	0	8.6	0
1.9	4	5.3	0	8.7	0
2.0	2	5.4	0	8.8	0
2.1	1	5.5	0	8.9	0
2.2	0	5.6	0	9.0	0
2.3	1	5.7	0	9.1	0
2.4	0	5.8	0	9.2	0
2.5	2	5.9	0	9.3	0
2.6	0	6.0	0	9.4	0
2.7	0	6.1	0	9.5	0
2.8	1	6.2	0	9.6	0
2.9	0	6.3	0	9.7	0
3.0	0	6.4	0	9.8	0
3.1	0	6.5	0	9.9	0
3.2	1	6.6	0	10.0	1
3.3	0	6.7	0		
				Total	43

Appendix B-14. Number of yearling cutthroat trout observed at different depths during night dives on the South Fork Snake River, winter 1990-1991.

Depth (ft)	Number observed	Depth (ft)	Number observed	Depth (ft)	Number observed
0.0	0	4.1	0	8.2	0
0.1	0	4.2	0	8.3	0
0.2	0	4.3	0	8.4	0
0.3	0	4.4	0	8.5	0
0.4	1	4.5	0	8.6	0
0.5	0	4.6	1	8.7	0
0.6	0	4.7	0	8.8	0
0.7	1	4.8	0	8.9	0
0.8	0	4.9	0	9.0	0
0.9	0	5.0	3	9.1	0
1.0	1	5.1	0	9.2	0
1.1	2	5.2	0	9.3	0
1.2	3	5.3	0	9.4	0
1.3	2	5.4	0	9.5	0
1.4	1	5.5	0	9.6	0
1.5	3	5.6	0	9.7	0
1.6	0	5.7	0	9.8	0
1.7	0	5.8	0	9.9	0
1.8	0	5.9	0	10.0	1
1.9	2	6.0	4	10.1	0
2.0	5	6.1	0	10.2	0
2.1	2	6.2	1	10.3	0
2.2	0	6.3	0	10.4	0
2.3	0	6.4	0	10.5	0
2.4	1	6.5	0	10.6	0
2.5	6	6.6	0	10.7	0
2.6	2	6.7	0	10.8	0
2.7	1	6.8	0	10.9	0
2.8	3	6.9	0	11.0	0
2.9	3	7.0	1	11.1	0
3.0	3	7.1	0	11.2	0
3.1	2	7.2	0	11.3	0
3.2	2	7.3	0	11.4	0
3.3	0	7.4	0	11.5	0
3.4	0	7.5	0	11.6	0
3.5	1	7.6	0	11.7	0
3.6	0	7.7	0	11.8	0
3.7	0	7.8	0	11.9	0
3.8	1	7.9	0	12.0	2
3.9	0	8.0	3	12.1	0
4.0	3	8.1	0	.	.
				14.9	0
				15.0	1
				Total	68

Appendix B-15. Number of yearling mountain whitefish observed at different depths during night dives on the South Fork Snake River, winter 1990-1991.

Depth (ft)	Number observed	Depth (ft)	Number observed	Depth (ft)	Number observed
0.0	0	2.9	0	5.8	0
0.1	0	3.0	1	5.9	0
0.2	0	3.1	0	6.0	0
0.3	0	3.2	0	6.1	0
0.4	0	3.3	0	6.2	0
0.5	0	3.4	0	6.3	0
0.6	0	3.5	0	6.4	0
0.7	0	3.6	0	6.5	0
0.8	0	3.7	1	6.6	0
0.9	0	3.8	0	6.7	0
1.0	0	3.9	0	6.8	0
1.1	0	4.0	4	6.9	1
1.2	0	4.1	1	7.0	0
1.3	0	4.2	0	7.1	0
1.4	0	4.3	0	7.2	0
1.5	1	4.4	0	7.3	0
1.6	0	4.5	0	7.4	0
1.7	1	4.6	0	7.5	0
1.8	0	4.7	0	7.6	0
1.9	0	4.8	0	7.7	0
2.0	3	4.9	0	7.8	0
2.1	0	5.0	0	7.9	0
2.2	0	5.1	0	8.0	2
2.3	1	5.2	1	8.1	0
2.4	0	5.3	0	.	.
2.5	0	5.4	2	9.9	0
2.6	0	5.5	1	10.0	1
2.7	0	5.6	1	.	.
2.8	0	5.7	0	11.9	0
				12.0	1
				Total	23

Appendix B-16. Number of subyearling cutthroat trout observed at different mean water column velocities during day dives on the South Fork Snake River, winter 1990-1991.

Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed
0.00	38	0.10	0	0.20	0
0.01	0	0.11	0	0.21	0
0.02	0	0.12	1	0.22	0
0.03	0	0.13	0	0.23	0
0.04	0	0.14	0	0.24	0
0.05	0	0.15	0	0.25	0
0.06	0	0.16	0	0.26	0
0.07	0	0.17	0	0.27	0
0.08	0	0.18	0	0.28	0
0.09	0	0.19	0	0.29	0
				Total	39

Appendix B-17. Number of yearling cutthroat trout observed at different mean water column velocities during night dives on the South Fork Snake River, winter 1990-1991.

Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed
0.00	27	0.33	0	0.66	0
0.01	0	0.34	0	0.67	0
0.02	1	0.35	0	0.68	0
0.03	1	0.36	0	0.69	0
0.04	2	0.37	1	0.70	2
0.05	0	0.38	0	0.71	0
0.06	0	0.39	0	0.72	0
0.07	0	0.40	0	0.73	0
0.08	1	0.41	0	0.74	0
0.09	0	0.42	0	0.75	0
0.10	0	0.43	0	0.76	0
0.11	1	0.44	0	0.77	0
0.12	0	0.45	0	0.78	0
0.13	1	0.46	0	0.79	0
0.14	0	0.47	0	0.80	0
0.15	0	0.48	0	0.81	0
0.16	0	0.49	0	0.82	0
0.17	0	0.50	0	0.83	1
0.18	0	0.51	0	0.84	0
0.19	0	0.52	0	0.85	0
0.20	0	0.53	0	0.86	0
0.21	0	0.54	0	0.87	0
0.22	0	0.55	0	0.88	0
0.23	0	0.56	0	0.89	0
0.24	0	0.57	0	0.90	0
0.25	0	0.58	0	0.91	0
0.26	0	0.59	0	0.92	1
0.27	0	0.60	0	0.93	0
0.28	1	0.61	0	0.94	0
0.29	0	0.62	0	0.95	0
0.30	0	0.63	0	0.96	1
0.31	0	0.64	0	0.97	0
0.32	0	0.65	0	0.98	0
				0.99	0
				Total	41

Appendix B-18. Number of subyearling cutthroat trout observed at different focal point water velocities during day dives on the South Fork Snake River, winter 1990-1991.

Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed
0.00	38	0.10	0	0.20	0
0.01	0	0.11	0	0.21	0
0.02	0	0.12	0	0.22	0
0.03	0	0.13	0	0.23	0
0.04	0	0.14	0	0.24	0
0.05	0	0.15	0	0.25	0
0.06	1	0.16	0	0.26	0
0.07	0	0.17	0	0.27	0
0.08	0	0.18	1	0.28	0
0.09	0	0.19	0	0.29	0
				0.30	0
				Total	40

Appendix B-19. Number of yearling cutthroat trout observed at different focal point water velocities during night dives on the South Fork Snake River, winter 1990-1991.

Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed	Velocity (ft/s)	Number observed
0.00	35	0.19	0	0.38	0
0.01	0	0.20	0	0.39	1
0.02	1	0.21	0	0.40	0
0.03	0	0.22	0	0.41	1
0.04	1	0.23	0	0.42	0
0.05	0	0.24	0	0.43	0
0.06	0	0.25	0	0.44	0
0.07	0	0.26	0	0.45	0
0.08	0	0.27	0	0.46	0
0.09	0	0.28	0	0.47	0
0.10	0	0.29	0	0.48	0
0.11	0	0.30	0	0.49	0
0.12	0	0.31	0	0.50	0
0.13	0	0.32	0	0.51	0
0.14	0	0.33	0	0.52	1
0.15	0	0.34	0	0.53	0
0.16	0	0.35	0	0.54	0
0.17	1	0.36	0	0.55	0
0.18	0	0.37	0	0.56	0
				Total	41

Appendix B-20. Number of subyearling cutthroat trout, brown trout, and mountain whitefish observed using different substrate types during day dives on the South Fork Snake River, winter 1990-1991.

	Number observed		
Substrate	Cutthroat trout	Brown trout	Mountain whitefish
Fines	21	3	0
Gravel	1	0	1
Cobble	11	2	1
Small boulder	6	0	0
Large boulder	7	0	1
Total	46	5	3

Appendix B-21. Number of yearling cutthroat trout, brown trout, and mountain whitefish observed using different substrate types during night dives on the South Fork Snake River, winter 1990-1991.

	Number observed		
Substrate	Cutthroat trout	Brown trout	Mountain whitefish
Fines	16	5	5
Gravel	3	0	1
Cobble	19	1	10
Small boulder	4	0	0
Large boulder	21	2	1
Total	63	8	17

Appendix B-22. Number of yearling cutthroat trout, brown trout, and mountain whitefish observed using different substrate types during day dives on the South Fork Snake River, winter 1990-1991.

	Number observed		
Substrate	Cutthroat trout	Brown trout	Mountain whitefish
Fines	3	3	0
Gravel	0	1	0
Cobble	2	0	0
Small boulder	0	0	0
Large boulder	0	0	0
Total	5	4	0

Appendix C

Appendix C-1. Measured surface area and calculated weighted available habitat for subyearling cutthroat trout in the South Fork Snake River. Weighting factors are for night time use during winter.

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.39	1	3370	0-1	16	0.58	3.6
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	16		3.6
SB	84	863.1	Main	0.39	0.29	3370	0-1	702	0.58	46.0
				0.39	0.29		1-2	702	1.00	79.4
				0.39	0.29		2-3	511	0.22	12.7
				0.39	0.29		3-4	86	0.01	0.1
				0.39	0.29		4-5	48	0.01	0.1
				0.39	0.29		5-6	0	0	0.0
							Total	2,049		138.3
SB	83	863.7	Main	0.39	0.29	3370	0-1	0	0.58	0.0
				0.39	0.29		1-2	39	1.00	4.4
				0.39	0.29		2-3	124	0.22	3.1
				0.39	0.29		3-4	54	0.01	0.1
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	217		7.6
SB	82	864	Main	0.39	0.29	3370	0-1	44	0.58	2.9
				0.39	0.29		1-2	11	1.00	1.2
				0.39	0.29		2-3	36	0.22	0.9
				0.39	0.29		3-4	6	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	97		5.0
SWD	336	864.2	Back	0.13	1	3370	0-1	22	0.58	1.7
				0.13	1		1-2	10	1.00	1.3
				0.13	1		2-3	0	0.22	0.0
				0.13	1		3-4	0	0.01	0.0
				0.13	1		4-5	0	0.01	0.0
				0.13	1		5-6	0	0	0.0
							Total	32		3.0
SB	74	865.8	Main	0.39	0.29	3370	0-1	70	0.58	4.6
				0.39	0.29		1-2	60	1.00	6.8
				0.39	0.29		2-3	63	0.22	1.6
				0.39	0.29		3-4	30	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	223		13.0

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.39	1	3370	0-1	41	0.58	9.3
				0.39	1		1-2	88	1.00	34.3
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	129		43.6
SWD	319	867.7	Side	1	1	3370	0-1	94	0.58	54.5
				1	1		1-2	104	1.00	104.0
				1	1		2-3	53	0.22	11.7
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	251		170.2
SWD	313	868.4	Side	1	1	3370	0-1	97	0.58	56.3
				1	1		1-2	4	1.00	4.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	101		60.3
SWD	292	869	Side	1	1	3370	0-1	69	0.58	40.0
				1	1		1-2	144	1.00	144.0
				1	1		2-3	78	0.22	17.2
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	291		201.2
SWD	290	869.1	Side	1	1	3370	0-1	27	0.58	15.7
				1	1		1-2	48	1.00	48.0
				1	1		2-3	52	0.22	11.4
				1	1		3-4	78	0.01	0.8
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	205		75.9
SWD	274	869.8	Side	1	1	3370	0-1	147	0.58	85.3
				1	1		1-2	82	1.00	82.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	229		167.3

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.39	1	3370	0-1	20	0.58	4.5
				0.39	1		1-2	7	1.00	2.7
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	27		7.3
SB	69	872.7	Main	0.39	0.29	3370	0-1	108	0.58	7.1
				0.39	0.29		1-2	910	1.00	102.9
				0.39	0.29		2-3	934	0.22	23.2
				0.39	0.29		3-4	648	0.01	0.7
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	2,600		134.0
SWD	256	872.8	Side	1	1	3370	0-1	22	0.58	12.8
				1	1		1-2	31	1.00	31.0
				1	1		2-3	36	0.22	7.9
				1	1		3-4	33	0.01	0.3
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	122		52.0
SWD	235	875.4	Side	1	1	3370	0-1	120	0.58	69.6
				1	1		1-2	16	1.00	16.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	136		85.6
SWD	233	876.4	Main	0.39	1	3370	0-1	123	0.58	27.8
				0.39	1		1-2	38	1.00	14.8
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	161		42.6
SB	46	877.8	Main	0.39	0.29	3370	0-1	360	0.58	23.6
				0.39	0.29		1-2	398	1.00	45.0
				0.39	0.29		2-3	1,273	0.22	31.7
				0.39	0.29		3-4	298	0.01	0.3
				0.39	0.29		4-5	212	0.01	0.2
				0.39	0.29		5-6	20	0	0.0
							Total	2,561		100.9

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.39	0.29	3370	0-1	36	0.58	2.4
				0.39	0.29		1-2	0	1.00	0.0
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	36		2.4
SWD	192	882.4	Side	1	1	3370	0-1	44	0.58	25.5
				1	1		1-2	38	1.00	38.0
				1	1		2-3	17	0.22	3.7
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	99		67.3
LC	2	885.3	Side	1	0.09	3370	0-1	85	0.58	4.4
				1	0.09		1-2	481	1.00	43.3
				1	0.09		2-3	211	0.22	4.2
				1	0.09		3-4	240	0.01	0.2
				1	0.09		4-5	0	0.01	0.0
				1	0.09		5-6	0	0	0.0
							Total	1,017		52.1
SWD	154	885.4	Side	1	1	3370	0-1	84	0.58	48.7
				1	1		1-2	8	1.00	8.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	92		56.7
SWD	126	886.7	Side	1	1	3370	0-1	57	0.58	33.1
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	57		33.1
RW	29	887.1	Side	1	1	3370	0-1	0	0.58	0.0
				1	1		1-2	17	1.00	17.0
				1	1		2-3	7	0.22	1.5
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	24		18.5

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	3370	0-1	52	0.58	30.2
				1	1		1-2	48	1.00	48.0
				1	1		2-3	9	0.22	2.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	109		80.1
SWD	88	889.1	Side	1	1	3370	0-1	242	0.58	140.4
				1	1		1-2	154	1.00	154.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	396		294.4
SWD	27	893.05	Side	1	1	3370	0-1	56	0.58	32.5
				1	1		1-2	167	1.00	167.0
				1	1		2-3	54	0.22	11.9
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	277		211.4
SWD	25	893.1	Side	1	1	3370	0-1	140	0.58	81.2
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	140		81.2
LB	2	899.1	Main	0.39	0.23	3370	0-1	50	0.58	2.6
				0.39	0.23		1-2	100	1.00	9.0
				0.39	0.23		2-3	0	0.22	0.0
				0.39	0.23		3-4	0	0.01	0.0
				0.39	0.23		4-5	0	0.01	0.0
				0.39	0.23		5-6	0	0	0.0
							Total	150		11.6
SB	2	901	Main	0.39	0.29	3370	0-1	187	0.58	12.3
				0.39	0.29		1-2	774	1.00	87.5
				0.39	0.29		2-3	188	0.22	4.7
				0.39	0.29		3-4	824	0.01	0.9
				0.39	0.29		4-5	84	0.01	0.1
				0.39	0.29		5-6	0	0	0.0
							Total	2,057		105.5
							Sum Total	13,901		2,325

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.39	1	2430	0-1	1	0.58	0.2
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	1		0.2
SB	84	863.1	Main	0.39	0.29	2430	0-1	536	0.58	35.2
				0.39	0.29		1-2	701	1.00	79.3
				0.39	0.29		2-3	151	0.22	3.8
				0.39	0.29		3-4	44	0.01	0.0
				0.39	0.29		4-5	14	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	1,446		118.3
SB	83	863.7	Main	0.39	0.29	2430	0-1	34	0.58	2.2
				0.39	0.29		1-2	67	1.00	7.6
				0.39	0.29		2-3	118	0.22	2.9
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	219		12.7
SB	82	864	Main	0.39	0.29	2430	0-1	2	0.58	0.1
				0.39	0.29		1-2	10	1.00	1.1
				0.39	0.29		2-3	42	0.22	1.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	54		2.3
SWD	336	864.2	Back	0.13	1	2430	0-1	24	0.58	1.8
				0.13	1		1-2	0	1.00	0.0
				0.13	1		2-3	0	0.22	0.0
				0.13	1		3-4	0	0.01	0.0
				0.13	1		4-5	0	0.01	0.0
				0.13	1		5-6	0	0	0.0
							Total	24		1.8
SB	74	865.8	Main	0.39	0.29	2430	0-1	63	0.58	4.1
				0.39	0.29		1-2	78	1.00	8.8
				0.39	0.29		2-3	37	0.22	0.9
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	178		13.9

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.39	1	2430	0-1	88	0.58	19.9
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	88		19.9
SWD	319	867.7	Side	1	1	2430	0-1	93	0.58	53.9
				1	1		1-2	108	1.00	108.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	201		161.9
SWD	313	868.4	Side	1	1	2430	0-1	100	0.58	58.0
				1	1		1-2	1	1.00	1.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	101		59.0
SWD	292	869	Side	1	1	2430	0-1	98	0.58	56.8
				1	1		1-2	128	1.00	128.0
				1	1		2-3	30	0.22	6.6
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	256		191.4
SWD	290	869.1	Side	1	1	2430	0-1	52	0.58	30.2
				1	1		1-2	52	1.00	52.0
				1	1		2-3	75	0.22	16.5
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	179		98.7
SWD	274	869.8	Side	1	1	2430	0-1	149	0.58	86.4
				1	1		1-2	43	1.00	43.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	192		129.4

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.39	1	2430	0-1	18	0.58	4.1
				0.39	1		1-2	4	1.00	1.6
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	22		5.6
SB	69	872.7	Main	0.39	0.29	2430	0-1	609	0.58	39.9
				0.39	0.29		1-2	968	1.00	109.5
				0.39	0.29		2-3	993	0.22	24.7
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	2,570		174.1
SWD	256	872.8	Side	1	1	2430	0-1	26	0.58	15.1
				1	1		1-2	28	1.00	28.0
				1	1		2-3	41	0.22	9.0
				1	1		3-4	18	0.01	0.2
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	113		52.3
SWD	235	875.4	Side	1	1	2430	0-1	62	0.58	36.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	62		36.0
SWD	233	876.4	Main	0.39	1	2430	0-1	53	0.58	12.0
				0.39	1		1-2	9	1.00	3.5
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	62		15.5
SB	46	877.8	Main	0.39	0.29	2430	0-1	249	0.58	16.3
				0.39	0.29		1-2	1,122	1.00	126.9
				0.39	0.29		2-3	620	0.22	15.4
				0.39	0.29		3-4	208	0.01	0.2
				0.39	0.29		4-5	165	0.01	0.2
				0.39	0.29		5-6	0	0	0.0
							Total	2,364		159.1

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.39	0.29	2430	0-1	0	0.58	0.0
				0.39	0.29		1-2	0	1.00	0.0
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	2430	0-1	32	0.58	18.6
				1	1		1-2	42	1.00	42.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	74		60.6
LC	2	885.3	Side	1	0.09	2430	0-1	240	0.58	12.5
				1	0.09		1-2	404	1.00	36.4
				1	0.09		2-3	323	0.22	6.4
				1	0.09		3-4	13	0.01	0.0
				1	0.09		4-5	0	0.01	0.0
				1	0.09		5-6	0	0	0.0
							Total	980		55.3
SWD	154	885.4	Side	1	1	2430	0-1	44	0.58	25.5
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	44		25.5
SWD	126	886.7	Side	1	1	2430	0-1	57	0.58	33.1
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	57		33.1
RW	29	887.1	Side	1	1	2430	0-1	1	0.58	0.6
				1	1		1-2	23	1.00	23.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	24		23.6

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	2430	0-1	54	0.58	31.3
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	0.22	1.3
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	101		73.6
SWD	88	889.1	Side	1	1	2430	0-1	322	0.58	186.8
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	322		186.8
SWD	27	893.05	Side	1	1	2430	0-1	73	0.58	42.3
				1	1		1-2	188	1.00	188.0
				1	1		2-3	12	0.22	2.6
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	273		233.0
SWD	25	893.1	Side	1	1	2430	0-1	140	0.58	81.2
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	140		81.2
LB	2	899.1	Main	0.39	0.23	2430	0-1	94	0.58	4.9
				0.39	0.23		1-2	40	1.00	3.6
				0.39	0.23		2-3	0	0.22	0.0
				0.39	0.23		3-4	0	0.01	0.0
				0.39	0.23		4-5	0	0.01	0.0
				0.39	0.23		5-6	0	0	0.0
							Total	134		8.5
SB	2	901	Main	0.39	0.29	2430	0-1	504	0.58	33.1
				0.39	0.29		1-2	515	1.00	58.2
				0.39	0.29		2-3	417	0.22	10.4
				0.39	0.29		3-4	602	0.01	0.7
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	2,038		102.4
							Sum Total	12,319		2,136

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.39	1	2000	0-1	0	0.58	0.0
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	0		0.0
SB	84	863.1	Main	0.39	0.29	2000	0-1	464	0.58	30.4
				0.39	0.29		1-2	612	1.00	69.2
				0.39	0.29		2-3	62	0.22	1.5
				0.39	0.29		3-4	44	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	1,182		101.2
SB	83	863.7	Main	0.39	0.29	2000	0-1	43	0.58	2.8
				0.39	0.29		1-2	132	1.00	14.9
				0.39	0.29		2-3	46	0.22	1.1
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	221		18.9
SB	82	864	Main	0.39	0.29	2000	0-1	4	0.58	0.3
				0.39	0.29		1-2	33	1.00	3.7
				0.39	0.29		2-3	18	0.22	0.4
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	55		4.4
SWD	336	864.2	Back	0.13	1	2000	0-1	20	0.58	1.5
				0.13	1		1-2	0	1.00	0.0
				0.13	1		2-3	0	0.22	0.0
				0.13	1		3-4	0	0.01	0.0
				0.13	1		4-5	0	0.01	0.0
				0.13	1		5-6	0	0	0.0
							Total	20		1.5
SB	74	865.8	Main	0.39	0.29	2000	0-1	58	0.58	3.8
				0.39	0.29		1-2	62	1.00	7.0
				0.39	0.29		2-3	30	0.22	0.7
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	150		11.6

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.39	1	2000	0-1	73	0.58	16.5
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	73		16.5
SWD	319	867.7	Side	1	1	2000	0-1	78	0.58	45.2
				1	1		1-2	80	1.00	80.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	158		125.2
SWD	313	868.4	Side	1	1	2000	0-1	99	0.58	57.4
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	99		57.4
SWD	292	869	Side	1	1	2000	0-1	122	0.58	70.8
				1	1		1-2	78	1.00	78.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	200		148.8
SWD	290	869.1	Side	1	1	2000	0-1	54	0.58	31.3
				1	1		1-2	42	1.00	42.0
				1	1		2-3	58	0.22	12.8
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	154		86.1
SWD	274	869.8	Side	1	1	2000	0-1	133	0.58	77.1
				1	1		1-2	19	1.00	19.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	152		96.1

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.39	1	2000	0-1	17	0.58	3.8
				0.39	1		1-2	1	1.00	0.4
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	18		4.2
SB	69	872.7	Main	0.39	0.29	2000	0-1	854	0.58	56.0
				0.39	0.29		1-2	997	1.00	112.8
				0.39	0.29		2-3	741	0.22	18.4
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	2,592		187.2
SWD	256	872.8	Side	1	1	2000	0-1	28	0.58	16.2
				1	1		1-2	29	1.00	29.0
				1	1		2-3	40	0.22	8.8
				1	1		3-4	12	0.01	0.1
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	109		54.2
SWD	235	875.4	Side	1	1	2000	0-1	31	0.58	18.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	31		18.0
SWD	233	876.4	Main	0.39	1	2000	0-1	44	0.58	10.0
				0.39	1		1-2	2	1.00	0.8
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	46		10.7
SB	46	877.8	Main	0.39	0.29	2000	0-1	312	0.58	20.5
				0.39	0.29		1-2	1,324	1.00	149.7
				0.39	0.29		2-3	340	0.22	8.5
				0.39	0.29		3-4	220	0.01	0.2
				0.39	0.29		4-5	59	0.01	0.1
				0.39	0.29		5-6	0	0	0.0
							Total	2,255		179.0

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.39	0.29	2000	0-1	0	0.58	0.0
				0.39	0.29		1-2	0	1.00	0.0
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	2000	0-1	34	0.58	19.7
				1	1		1-2	30	1.00	30.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	64		49.7
LC	2	885.3	Side	1	0.09	2000	0-1	260	0.58	13.6
				1	0.09		1-2	424	1.00	38.2
				1	0.09		2-3	274	0.22	5.4
				1	0.09		3-4	13	0.01	0.0
				1	0.09		4-5	0	0.01	0.0
				1	0.09		5-6	0	0	0.0
							Total	971		57.2
SWD	154	885.4	Side	1	1	2000	0-1	27	0.58	15.7
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	27		15.7
SWD	126	886.7	Side	1	1	2000	0-1	57	0.58	33.1
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	57		33.1
RW	29	887.1	Side	1	1	2000	0-1	2	0.58	1.2
				1	1		1-2	22	1.00	22.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	24		23.2

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	2000	0-1	54	0.58	31.3
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	0.22	1.3
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	101		73.6
SWD	88	889.1	Side	1	1	2000	0-1	245	0.58	142.1
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	245		142.1
SWD	27	893.05	Side	1	1	2000	0-1	95	0.58	55.1
				1	1		1-2	180	1.00	180.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	275		235.1
SWD	25	893.1	Side	1	1	2000	0-1	140	0.58	81.2
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	140		81.2
LB	2	899.1	Main	0.39	0.23	2000	0-1	106	0.58	5.5
				0.39	0.23		1-2	0	1.00	0.0
				0.39	0.23		2-3	0	0.22	0.0
				0.39	0.23		3-4	0	0.01	0.0
				0.39	0.23		4-5	0	0.01	0.0
				0.39	0.23		5-6	0	0	0.0
							Total	106		5.5
SB	2	901	Main	0.39	0.29	2000	0-1	642	0.58	42.1
				0.39	0.29		1-2	276	1.00	31.2
				0.39	0.29		2-3	894	0.22	22.2
				0.39	0.29		3-4	80	0.01	0.1
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	1,892		95.7
							Sum Total	11,417		1,933

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.39	1	1540	0-1	0	0.58	0.0
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	0		0.0
SB	84	863.1	Main	0.39	0.29	1540	0-1	592	0.58	38.8
				0.39	0.29		1-2	211	1.00	23.9
				0.39	0.29		2-3	26	0.22	0.6
				0.39	0.29		3-4	26	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	855		63.4
SB	83	863.7	Main	0.39	0.29	1540	0-1	71	0.58	4.7
				0.39	0.29		1-2	154	1.00	17.4
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	225		22.1
SB	82	864	Main	0.39	0.29	1540	0-1	11	0.58	0.7
				0.39	0.29		1-2	43	1.00	4.9
				0.39	0.29		2-3	1	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	55		5.6
SWD	336	864.2	Back	0.13	1	1540	0-1	10	0.58	0.8
				0.13	1		1-2	0	1.00	0.0
				0.13	1		2-3	0	0.22	0.0
				0.13	1		3-4	0	0.01	0.0
				0.13	1		4-5	0	0.01	0.0
				0.13	1		5-6	0	0	0.0
							Total	10		0.8
SB	74	865.8	Main	0.39	0.29	1540	0-1	72	0.58	4.7
				0.39	0.29		1-2	23	1.00	2.6
				0.39	0.29		2-3	27	0.22	0.7
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	122		8.0

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.39	1	1540	0-1	60	0.58	13.6
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	60		13.6
SWD	319	867.7	Side	1	1	1540	0-1	52	0.58	30.2
				1	1		1-2	68	1.00	68.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	120		98.2
SWD	313	868.4	Side	1	1	1540	0-1	68	0.58	39.4
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	68		39.4
SWD	292	869	Side	1	1	1540	0-1	104	0.58	60.3
				1	1		1-2	8	1.00	8.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	112		68.3
SWD	290	869.1	Side	1	1	1540	0-1	50	0.58	29.0
				1	1		1-2	72	1.00	72.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	122		101.0
SWD	274	869.8	Side	1	1	1540	0-1	97	0.58	56.3
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	97		56.3

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.39	1	1540	0-1	16	0.58	3.6
				0.39	1		1-2	1	1.00	0.4
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	17		4.0
SB	69	872.7	Main	0.39	0.29	1540	0-1	912	0.58	59.8
				0.39	0.29		1-2	1,274	1.00	144.1
				0.39	0.29		2-3	322	0.22	8.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	2,508		211.9
SWD	256	872.8	Side	1	1	1540	0-1	28	0.58	16.2
				1	1		1-2	30	1.00	30.0
				1	1		2-3	44	0.22	9.7
				1	1		3-4	4	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	106		56.0
SWD	235	875.4	Side	1	1	1540	0-1	14	0.58	8.1
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	14		8.1
SWD	233	876.4	Main	0.39	1	1540	0-1	24	0.58	5.4
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	24		5.4
SB	46	877.8	Main	0.39	0.29	1540	0-1	656	0.58	43.0
				0.39	0.29		1-2	1,048	1.00	118.5
				0.39	0.29		2-3	284	0.22	7.1
				0.39	0.29		3-4	176	0.01	0.2
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	2,164		168.8

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.39	0.29	1540	0-1	0	0.58	0.0
				0.39	0.29		1-2	0	1.00	0.0
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	1540	0-1	36	0.58	20.9
				1	1		1-2	16	1.00	16.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	52		36.9
LC	2	885.3	Side	1	0.09	1540	0-1	276	0.58	14.4
				1	0.09		1-2	416	1.00	37.4
				1	0.09		2-3	273	0.22	5.4
				1	0.09		3-4	11	0.01	0.0
				1	0.09		4-5	0	0.01	0.0
				1	0.09		5-6	0	0	0.0
							Total	976		57.3
SWD	154	885.4	Side	1	1	1540	0-1	0	0.58	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	0		0.0
SWD	126	886.7	Side	1	1	1540	0-1	56	0.58	32.5
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	56		32.5
RW	29	887.1	Side	1	1	1540	0-1	7	0.58	4.1
				1	1		1-2	17	1.00	17.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	24		21.1

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	1540	0-1	54	0.58	31.3
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	0.22	1.3
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	101		73.6
SWD	88	889.1	Side	1	1	1540	0-1	66	0.58	38.3
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	66		38.3
SWD	27	893.05	Side	1	1	1540	0-1	178	0.58	103.2
				1	1		1-2	86	1.00	86.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	264		189.2
SWD	25	893.1	Side	1	1	1540	0-1	134	0.58	77.7
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	134		77.7
LB	2	899.1	Main	0.39	0.23	1540	0-1	100	0.58	5.2
				0.39	0.23		1-2	0	1.00	0.0
				0.39	0.23		2-3	0	0.22	0.0
				0.39	0.23		3-4	0	0.01	0.0
				0.39	0.23		4-5	0	0.01	0.0
				0.39	0.23		5-6	0	0	0.0
							Total	100		5.2
SB	2	901	Main	0.39	0.29	1540	0-1	638	0.58	41.9
				0.39	0.29		1-2	414	1.00	46.8
				0.39	0.29		2-3	697	0.22	17.3
				0.39	0.29		3-4	27	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	1,776		106.0
							Sum Total	10,228		1,569

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.39	1	1240	0-1	0	0.58	0.0
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	0		0.0
SB	84	863.1	Main	0.39	0.29	1240	0-1	646	0.58	42.4
				0.39	0.29		1-2	27	1.00	3.1
				0.39	0.29		2-3	30	0.22	0.7
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	703		46.2
SB	83	863.7	Main	0.39	0.29	1240	0-1	96	0.58	6.3
				0.39	0.29		1-2	95	1.00	10.7
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	191		17.0
SB	82	864	Main	0.39	0.29	1240	0-1	20	0.58	1.3
				0.39	0.29		1-2	36	1.00	4.1
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	56		5.4
SWD	336	864.2	Back	0.13	1	1240	0-1	6	0.58	0.5
				0.13	1		1-2	0	1.00	0.0
				0.13	1		2-3	0	0.22	0.0
				0.13	1		3-4	0	0.01	0.0
				0.13	1		4-5	0	0.01	0.0
				0.13	1		5-6	0	0	0.0
							Total	6		0.5
SB	74	865.8	Main	0.39	0.29	1240	0-1	79	0.58	5.2
				0.39	0.29		1-2	39	1.00	4.4
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	118		9.6

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.39	1	1240	0-1	0	0.58	0.0
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	0		0.0
SWD	319	867.7	Side	1	1	1240	0-1	52	0.58	30.2
				1	1		1-2	58	1.00	58.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	110		88.2
SWD	313	868.4	Side	1	1	1240	0-1	14	0.58	8.1
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	14		8.1
SWD	292	869	Side	1	1	1240	0-1	64	0.58	37.1
				1	1		1-2	10	1.00	10.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	74		47.1
SWD	290	869.1	Side	1	1	1240	0-1	108	0.58	62.6
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	108		62.6
SWD	274	869.8	Side	1	1	1240	0-1	73	0.58	42.3
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	73		42.3

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.39	1	1240	0-1	16	0.58	3.6
				0.39	1		1-2	1	1.00	0.4
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	17		4.0
SB	69	872.7	Main	0.39	0.29	1240	0-1	1,101	0.58	72.2
				0.39	0.29		1-2	1,153	1.00	130.4
				0.39	0.29		2-3	14	0.22	0.3
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	2,268		203.0
SWD	256	872.8	Side	1	1	1240	0-1	30	0.58	17.4
				1	1		1-2	32	1.00	32.0
				1	1		2-3	40	0.22	8.8
				1	1		3-4	1	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	103		58.2
SWD	235	875.4	Side	1	1	1240	0-1	0	0.58	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	0		0.0
SWD	233	876.4	Main	0.39	1	1240	0-1	0	0.58	0.0
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	0		0.0
SB	46	877.8	Main	0.39	0.29	1240	0-1	1,102	0.58	72.3
				0.39	0.29		1-2	620	1.00	70.1
				0.39	0.29		2-3	235	0.22	5.8
				0.39	0.29		3-4	168	0.01	0.2
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	2,125		148.4

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.39	0.29	1240	0-1	0	0.58	0.0
				0.39	0.29		1-2	0	1.00	0.0
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	1240	0-1	46	0.58	26.7
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	46		26.7
LC	2	885.3	Side	1	0.09	1240	0-1	393	0.58	20.5
				1	0.09		1-2	318	1.00	28.6
				1	0.09		2-3	158	0.22	3.1
				1	0.09		3-4	0	0.01	0.0
				1	0.09		4-5	0	0.01	0.0
				1	0.09		5-6	0	0	0.0
							Total	869		52.3
SWD	154	885.4	Side	1	1	1240	0-1	0	0.58	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	0		0.0
SWD	126	886.7	Side	1	1	1240	0-1	55	0.58	31.9
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	55		31.9
RW	29	887.1	Side	1	1	1240	0-1	10	0.58	5.8
				1	1		1-2	14	1.00	14.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	24		19.8

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	1240	0-1	54	0.58	31.3
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	0.22	1.3
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	101		73.6
SWD	88	889.1	Side	1	1	1240	0-1	8	0.58	4.6
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	8		4.6
SWD	27	893.05	Side	1	1	1240	0-1	0	0.58	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	0		0.0
SWD	25	893.1	Side	1	1	1240	0-1	79	0.58	45.8
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	79		45.8
LB	2	899.1	Main	0.39	0.23	1240	0-1	62	0.58	3.2
				0.39	0.23		1-2	0	1.00	0.0
				0.39	0.23		2-3	0	0.22	0.0
				0.39	0.23		3-4	0	0.01	0.0
				0.39	0.23		4-5	0	0.01	0.0
				0.39	0.23		5-6	0	0	0.0
							Total	62		3.2
SB	2	901	Main	0.39	0.29	1240	0-1	306	0.58	20.1
				0.39	0.29		1-2	520	1.00	58.8
				0.39	0.29		2-3	538	0.22	13.4
				0.39	0.29		3-4	28	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	1,392		92.3
							Sum Total	8,602		1,091

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.39	1	830	0-1	0	0.58	0.0
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	0		0.0
SB	84	863.1	Main	0.39	0.29	830	0-1	0	0.58	0.0
				0.39	0.29		1-2	0	1.00	0.0
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	0		0.0
SB	83	863.7	Main	0.39	0.29	830	0-1	174	0.58	11.4
				0.39	0.29		1-2	0	1.00	0.0
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	174		11.4
SB	82	864	Main	0.39	0.29	830	0-1	20	0.58	1.3
				0.39	0.29		1-2	28	1.00	3.2
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	48		4.5
SWD	336	864.2	Back	0.13	1	830	0-1	0	0.58	0.0
				0.13	1		1-2	0	1.00	0.0
				0.13	1		2-3	0	0.22	0.0
				0.13	1		3-4	0	0.01	0.0
				0.13	1		4-5	0	0.01	0.0
				0.13	1		5-6	0	0	0.0
							Total	0		0.0
SB	74	865.8	Main	0.39	0.29	830	0-1	63	0.58	4.1
				0.39	0.29		1-2	31	1.00	3.5
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	94		7.6

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.39	1	830	0-1	0	0.58	0.0
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	0		0.0
SWD	319	867.7	Side	1	1	830	0-1	63	0.58	36.5
				1	1		1-2	44	1.00	44.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	107		80.5
SWD	313	868.4	Side	1	1	830	0-1	8	0.58	4.6
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	8		4.6
SWD	292	869	Side	1	1	830	0-1	64	0.58	37.1
				1	1		1-2	4	1.00	4.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	68		41.1
SWD	290	869.1	Side	1	1	830	0-1	90	0.58	52.2
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	90		52.2
SWD	274	869.8	Side	1	1	830	0-1	46	0.58	26.7
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	46		26.7

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.39	1	830	0-1	12	0.58	2.7
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	12		2.7
SB	69	872.7	Main	0.39	0.29	830	0-1	913	0.58	59.9
				0.39	0.29		1-2	816	1.00	92.3
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	1,729		152.2
SWD	256	872.8	Side	1	1	830	0-1	29	0.58	16.8
				1	1		1-2	36	1.00	36.0
				1	1		2-3	31	0.22	6.8
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	96		59.6
SWD	235	875.4	Side	1	1	830	0-1	0	0.58	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	0		0.0
SWD	233	876.4	Main	0.39	1	830	0-1	0	0.58	0.0
				0.39	1		1-2	0	1.00	0.0
				0.39	1		2-3	0	0.22	0.0
				0.39	1		3-4	0	0.01	0.0
				0.39	1		4-5	0	0.01	0.0
				0.39	1		5-6	0	0	0.0
							Total	0		0.0
SB	46	877.8	Main	0.39	0.29	830	0-1	1,306	0.58	85.7
				0.39	0.29		1-2	312	1.00	35.3
				0.39	0.29		2-3	212	0.22	5.3
				0.39	0.29		3-4	33	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	1,863		126.3

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.39	0.29	830	0-1	0	0.58	0.0
				0.39	0.29		1-2	0	1.00	0.0
				0.39	0.29		2-3	0	0.22	0.0
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	830	0-1	0	0.58	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	0		0.0
LC	2	885.3	Side	1	0.09	830	0-1	403	0.58	21.0
				1	0.09		1-2	329	1.00	29.6
				1	0.09		2-3	9	0.22	0.2
				1	0.09		3-4	0	0.01	0.0
				1	0.09		4-5	0	0.01	0.0
				1	0.09		5-6	0	0	0.0
							Total	741		50.8
SWD	154	885.4	Side	1	1	830	0-1	0	0.58	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	0		0.0
SWD	126	886.7	Side	1	1	830	0-1	53	0.58	30.7
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	53		30.7
RW	29	887.1	Side	1	1	830	0-1	19	0.58	11.0
				1	1		1-2	5	1.00	5.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	24		16.0

Appendix C-1. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	830	0-1	54	0.58	31.3
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	0.22	1.3
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	101		73.6
SWD	88	889.1	Side	1	1	830	0-1	0	0.58	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	0		0.0
SWD	27	893.05	Side	1	1	830	0-1	0	0.58	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	0		0.0
SWD	25	893.1	Side	1	1	830	0-1	0	0.58	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.22	0.0
				1	1		3-4	0	0.01	0.0
				1	1		4-5	0	0.01	0.0
				1	1		5-6	0	0	0.0
							Total	0		0.0
LB	2	899.1	Main	0.39	0.23	830	0-1	0	0.58	0.0
				0.39	0.23		1-2	0	1.00	0.0
				0.39	0.23		2-3	0	0.22	0.0
				0.39	0.23		3-4	0	0.01	0.0
				0.39	0.23		4-5	0	0.01	0.0
				0.39	0.23		5-6	0	0	0.0
							Total	0		0.0
SB	2	901	Main	0.39	0.29	830	0-1	287	0.58	18.8
				0.39	0.29		1-2	830	1.00	93.9
				0.39	0.29		2-3	117	0.22	2.9
				0.39	0.29		3-4	0	0.01	0.0
				0.39	0.29		4-5	0	0.01	0.0
				0.39	0.29		5-6	0	0	0.0
							Total	1,234		115.6
							Sum Total	6,488		856

Appendix C-2. Measured surface area and calculated weighted available habitat for subyearling brown trout in the South Fork Snake River. Weighting factors are for night time use during winter.

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.42	1	3370	0-1	16	0.13	0.9
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	16		0.9
SB	84	863.1	Main	0.42	0.32	3370	0-1	702	0.13	12.3
				0.42	0.32		1-2	702	1.00	94.3
				0.42	0.32		2-3	511	1.00	68.7
				0.42	0.32		3-4	86	0.19	2.2
				0.42	0.32		4-5	48	0.06	0.4
				0.42	0.32		5-6	0	0.06	0.0
							Total	2,049		177.9
SB	83	863.7	Main	0.42	0.32	3370	0-1	0	0.13	0.0
				0.42	0.32		1-2	39	1.00	5.2
				0.42	0.32		2-3	124	1.00	16.7
				0.42	0.32		3-4	54	0.19	1.4
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	217		23.3
SB	82	864	Main	0.42	0.32	3370	0-1	44	0.13	0.8
				0.42	0.32		1-2	11	1.00	1.5
				0.42	0.32		2-3	36	1.00	4.8
				0.42	0.32		3-4	6	0.19	0.2
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	97		7.2
SWD	336	864.2	Back	0.37	1	3370	0-1	22	0.13	1.1
				0.37	1		1-2	10	1.00	3.7
				0.37	1		2-3	0	1.00	0.0
				0.37	1		3-4	0	0.19	0.0
				0.37	1		4-5	0	0.06	0.0
				0.37	1		5-6	0	0.06	0.0
							Total	32		4.8
SB	74	865.8	Main	0.42	0.32	3370	0-1	70	0.13	1.2
				0.42	0.32		1-2	60	1.00	8.1
				0.42	0.32		2-3	63	1.00	8.5
				0.42	0.32		3-4	30	0.19	0.8
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	223		18.5

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.42	1	3370	0-1	41	0.13	2.2
				0.42	1		1-2	88	1.00	37.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	129		39.2
SWD	319	867.7	Side	1	1	3370	0-1	94	0.13	12.2
				1	1		1-2	104	1.00	104.0
				1	1		2-3	53	1.00	53.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	251		169.2
SWD	313	868.4	Side	1	1	3370	0-1	97	0.13	12.6
				1	1		1-2	4	1.00	4.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	101		16.6
SWD	292	869	Side	1	1	3370	0-1	69	0.13	9.0
				1	1		1-2	144	1.00	144.0
				1	1		2-3	78	1.00	78.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	291		231.0
SWD	290	869.1	Side	1	1	3370	0-1	27	0.13	3.5
				1	1		1-2	48	1.00	48.0
				1	1		2-3	52	1.00	52.0
				1	1		3-4	78	0.19	14.8
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	205		118.3
SWD	274	869.8	Side	1	1	3370	0-1	147	0.13	19.1
				1	1		1-2	82	1.00	82.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	229		101.1

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.42	1	3370	0-1	20	0.13	1.1
				0.42	1		1-2	7	1.00	2.9
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	27		4.0
SB	69	872.7	Main	0.42	0.32	3370	0-1	108	0.13	1.9
				0.42	0.32		1-2	910	1.00	122.3
				0.42	0.32		2-3	934	1.00	125.5
				0.42	0.32		3-4	648	0.19	16.5
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	2,600		266.3
SWD	256	872.8	Side	1	1	3370	0-1	22	0.13	2.9
				1	1		1-2	31	1.00	31.0
				1	1		2-3	36	1.00	36.0
				1	1		3-4	33	0.19	6.3
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	122		76.1
SWD	235	875.4	Side	1	1	3370	0-1	120	0.13	15.6
				1	1		1-2	16	1.00	16.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	136		31.6
SWD	233	876.4	Main	0.42	1	3370	0-1	123	0.13	6.7
				0.42	1		1-2	38	1.00	16.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	161		22.7
SB	46	877.8	Main	0.42	0.32	3370	0-1	360	0.13	6.3
				0.42	0.32		1-2	398	1.00	53.5
				0.42	0.32		2-3	1,273	1.00	171.1
				0.42	0.32		3-4	298	0.19	7.6
				0.42	0.32		4-5	212	0.06	1.7
				0.42	0.32		5-6	20	0.06	0.2
							Total	2,561		240.4

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.42	0.32	3370	0-1	36	0.13	0.6
				0.42	0.32		1-2	0	1.00	0.0
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	36		0.6
SWD	192	882.4	Side	1	1	3370	0-1	44	0.13	5.7
				1	1		1-2	38	1.00	38.0
				1	1		2-3	17	1.00	17.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	99		60.7
LC	2	885.3	Side	1	0.04	3370	0-1	85	0.13	0.4
				1	0.04		1-2	481	1.00	19.2
				1	0.04		2-3	211	1.00	8.4
				1	0.04		3-4	240	0.19	1.8
				1	0.04		4-5	0	0.06	0.0
				1	0.04		5-6	0	0.06	0.0
							Total	1,017		29.9
SWD	154	885.4	Side	1	1	3370	0-1	84	0.13	10.9
				1	1		1-2	8	1.00	8.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	92		18.9
SWD	126	886.7	Side	1	1	3370	0-1	57	0.13	7.4
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	57		7.4
RW	29	887.1	Side	1	1	3370	0-1	0	0.13	0.0
				1	1		1-2	17	1.00	17.0
				1	1		2-3	7	1.00	7.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	24		24.0

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	3370	0-1	52	0.13	6.8
				1	1		1-2	48	1.00	48.0
				1	1		2-3	9	1.00	9.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	109		63.8
SWD	88	889.1	Side	1	1	3370	0-1	242	0.13	31.5
				1	1		1-2	154	1.00	154.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	396		185.5
SWD	27	893.05	Side	1	1	3370	0-1	56	0.13	7.3
				1	1		1-2	167	1.00	167.0
				1	1		2-3	54	1.00	54.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	277		228.3
SWD	25	893.1	Side	1	1	3370	0-1	140	0.13	18.2
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	140		18.2
LB	2	899.1	Main	0.42	0.5	3370	0-1	50	0.13	1.4
				0.42	0.5		1-2	100	1.00	21.0
				0.42	0.5		2-3	0	1.00	0.0
				0.42	0.5		3-4	0	0.19	0.0
				0.42	0.5		4-5	0	0.06	0.0
				0.42	0.5		5-6	0	0.06	0.0
							Total	150		22.4
SB	2	901	Main	0.42	0.32	3370	0-1	187	0.13	3.3
				0.42	0.32		1-2	774	1.00	104.0
				0.42	0.32		2-3	188	1.00	25.3
				0.42	0.32		3-4	824	0.19	21.0
				0.42	0.32		4-5	84	0.06	0.7
				0.42	0.32		5-6	0	0.06	0.0
							Total	2,057		154.3
							Sum Total	13,901		2,363

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.42	1	2430	0-1	1	0.13	0.1
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	1		0.1
SB	84	863.1	Main	0.42	0.32	2430	0-1	536	0.13	9.4
				0.42	0.32		1-2	701	1.00	94.2
				0.42	0.32		2-3	151	1.00	20.3
				0.42	0.32		3-4	44	0.19	1.1
				0.42	0.32		4-5	14	0.06	0.1
				0.42	0.32		5-6	0	0.06	0.0
							Total	1,446		125.1
SB	83	863.7	Main	0.42	0.32	2430	0-1	34	0.13	0.6
				0.42	0.32		1-2	67	1.00	9.0
				0.42	0.32		2-3	118	1.00	15.9
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	219		25.5
SB	82	864	Main	0.42	0.32	2430	0-1	2	0.13	0.0
				0.42	0.32		1-2	10	1.00	1.3
				0.42	0.32		2-3	42	1.00	5.6
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	54		7.0
SWD	336	864.2	Back	0.37	1	2430	0-1	24	0.13	1.2
				0.37	1		1-2	0	1.00	0.0
				0.37	1		2-3	0	1.00	0.0
				0.37	1		3-4	0	0.19	0.0
				0.37	1		4-5	0	0.06	0.0
				0.37	1		5-6	0	0.06	0.0
							Total	24		1.2
SB	74	865.8	Main	0.42	0.32	2430	0-1	63	0.13	1.1
				0.42	0.32		1-2	78	1.00	10.5
				0.42	0.32		2-3	37	1.00	5.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	178		16.6

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.42	1	2430	0-1	88	0.13	4.8
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42			5-6	0	0.06	0.0
							Total	88		4.8
SWD	319	867.7	Side	1	1	2430	0-1	93	0.13	12.1
				1	1		1-2	108	1.00	108.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	201		120.1
SWD	313	868.4	Side	1	1	2430	0-1	100	0.13	13.0
				1	1		1-2	1	1.00	1.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	101		14.0
SWD	292	869	Side	1	1	2430	0-1	98	0.13	12.7
				1	1		1-2	128	1.00	128.0
				1	1		2-3	30	1.00	30.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	256		170.7
SWD	290	869.1	Side	1	1	2430	0-1	52	0.13	6.8
				1	1		1-2	52	1.00	52.0
				1	1		2-3	75	1.00	75.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	179		133.8
SWD	274	869.8	Side	1	1	2430	0-1	149	0.13	19.4
				1	1		1-2	43	1.00	43.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	192		62.4

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.42	1	2430	0-1	18	0.13	1.0
				0.42	1		1-2	4	1.00	1.7
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	22		2.7
SB	69	872.7	Main	0.42	0.32	2430	0-1	609	0.13	10.6
				0.42	0.32		1-2	968	1.00	130.1
				0.42	0.32		2-3	993	1.00	133.5
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	2,570		274.2
SWD	256	872.8	Side	1	1	2430	0-1	26	0.13	3.4
				1	1		1-2	28	1.00	28.0
				1	1		2-3	41	1.00	41.0
				1	1		3-4	18	0.19	3.4
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	113		75.8
SWD	235	875.4	Side	1	1	2430	0-1	62	0.13	8.1
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	62		8.1
SWD	233	876.4	Main	0.42	1	2430	0-1	53	0.13	2.9
				0.42	1		1-2	9	1.00	3.8
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	62		6.7
SB	46	877.8	Main	0.42	0.32	2430	0-1	249	0.13	4.4
				0.42	0.32		1-2	1,122	1.00	150.8
				0.42	0.32		2-3	620	1.00	83.3
				0.42	0.32		3-4	208	0.19	5.3
				0.42	0.32		4-5	165	0.06	1.3
				0.42	0.32		5-6	0	0.06	0.0
							Total	2,364		245.1

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.42	0.32	2430	0-1	0	0.13	0.0
				0.42	0.32		1-2	0	1.00	0.0
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	2430	0-1	32	0.13	4.2
				1	1		1-2	42	1.00	42.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	74		46.2
LC	2	885.3	Side	1	0.04	2430	0-1	240	0.13	1.2
				1	0.04		1-2	404	1.00	16.2
				1	0.04		2-3	323	1.00	12.9
				1	0.04		3-4	13	0.19	0.1
				1	0.04		4-5	0	0.06	0.0
				1	0.04		5-6	0	0.06	0.0
							Total	980		30.4
SWD	154	885.4	Side	1	1	2430	0-1	44	0.13	5.7
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	44		5.7
SWD	126	886.7	Side	1	1	2430	0-1	57	0.13	7.4
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	57		7.4
RW	29	887.1	Side	1	1	2430	0-1	1	0.13	0.1
				1	1		1-2	23	1.00	23.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	24		23.1

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	2430	0-1	54	0.13	7.0
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	1.00	6.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	101		54.0
SWD	88	889.1	Side	1	1	2430	0-1	322	0.13	41.9
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	322		41.9
SWD	27	893.05	Side	1	1	2430	0-1	73	0.13	9.5
				1	1		1-2	188	1.00	188.0
				1	1		2-3	12	1.00	12.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	273		209.5
SWD	25	893.1	Side	1	1	2430	0-1	140	0.13	18.2
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	140		18.2
LB	2	899.1	Main	0.42	0.5	2430	0-1	94	0.13	2.6
				0.42	0.5		1-2	40	1.00	8.4
				0.42	0.5		2-3	0	1.00	0.0
				0.42	0.5		3-4	0	0.19	0.0
				0.42	0.5		4-5	0	0.06	0.0
				0.42	0.5		5-6	0	0.06	0.0
							Total	134		11.0
SB	2	901	Main	0.42	0.32	2430	0-1	504	0.13	8.8
				0.42	0.32		1-2	515	1.00	69.2
				0.42	0.32		2-3	417	1.00	56.0
				0.42	0.32		3-4	602	0.19	15.4
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	2,038		149.4
							Sum Total	12,319		1,890

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.42	1	2000	0-1	0	0.13	0.0
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	0		0.0
SB	84	863.1	Main	0.42	0.32	2000	0-1	464	0.13	8.1
				0.42	0.32		1-2	612	1.00	82.3
				0.42	0.32		2-3	62	1.00	8.3
				0.42	0.32		3-4	44	0.19	1.1
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	1,182		99.8
SB	83	863.7	Main	0.42	0.32	2000	0-1	43	0.13	0.8
				0.42	0.32		1-2	132	1.00	17.7
				0.42	0.32		2-3	46	1.00	6.2
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	221		24.7
SB	82	864	Main	0.42	0.32	2000	0-1	4	0.13	0.1
				0.42	0.32		1-2	33	1.00	4.4
				0.42	0.32		2-3	18	1.00	2.4
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	55		6.9
SWD	336	864.2	Back	0.37	1	2000	0-1	20	0.13	1.0
				0.37	1		1-2	0	1.00	0.0
				0.37	1		2-3	0	1.00	0.0
				0.37	1		3-4	0	0.19	0.0
				0.37	1		4-5	0	0.06	0.0
				0.37	1		5-6	0	0.06	0.0
							Total	20		1.0
SB	74	865.8	Main	0.42	0.32	2000	0-1	58	0.13	1.0
				0.42	0.32		1-2	62	1.00	8.3
				0.42	0.32		2-3	30	1.00	4.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	150		13.4

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.42	1	2000	0-1	73	0.13	4.0
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	73		4.0
SWD	319	867.7	Side	1	1	2000	0-1	78	0.13	10.1
				1	1		1-2	80	1.00	80.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	158		90.1
SWD	313	868.4	Side	1	1	2000	0-1	99	0.13	12.9
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	99		12.9
SWD	292	869	Side	1	1	2000	0-1	122	0.13	15.9
				1	1		1-2	78	1.00	78.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	200		93.9
SWD	290	869.1	Side	1	1	2000	0-1	54	0.13	7.0
				1	1		1-2	42	1.00	42.0
				1	1		2-3	58	1.00	58.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	154		107.0
SWD	274	869.8	Side	1	1	2000	0-1	133	0.13	17.3
				1	1		1-2	19	1.00	19.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	152		36.3

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.42	1	2000	0-1	17	0.13	0.9
				0.42	1		1-2	1	1.00	0.4
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	18		1.3
SB	69	872.7	Main	0.42	0.32	2000	0-1	854	0.13	14.9
				0.42	0.32		1-2	997	1.00	134.0
				0.42	0.32		2-3	741	1.00	99.6
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	2,592		248.5
SWD	256	872.8	Side	1	1	2000	0-1	28	0.13	3.6
				1	1		1-2	29	1.00	29.0
				1	1		2-3	40	1.00	40.0
				1	1		3-4	12	0.19	2.3
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	109		74.9
SWD	235	875.4	Side	1	1	2000	0-1	31	0.13	4.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	31		4.0
SWD	233	876.4	Main	0.42	1	2000	0-1	44	0.13	2.4
				0.42	1		1-2	2	1.00	0.8
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	46		3.2
SB	46	877.8	Main	0.42	0.32	2000	0-1	312	0.13	5.5
				0.42	0.32		1-2	1,324	1.00	177.9
				0.42	0.32		2-3	340	1.00	45.7
				0.42	0.32		3-4	220	0.19	5.6
				0.42	0.32		4-5	59	0.06	0.5
				0.42	0.32		5-6	0	0.06	0.0
							Total	2,255		235.2

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.42	0.32	2000	0-1	0	0.13	0.0
				0.42	0.32		1-2	0	1.00	0.0
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	2000	0-1	34	0.13	4.4
				1	1		1-2	30	1.00	30.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	64		34.4
LC	2	885.3	Side	1	0.04	2000	0-1	260	0.13	1.4
				1	0.04		1-2	424	1.00	17.0
				1	0.04		2-3	274	1.00	11.0
				1	0.04		3-4	13	0.19	0.1
				1	0.04		4-5	0	0.06	0.0
				1	0.04		5-6	0	0.06	0.0
							Total	971		29.4
SWD	154	885.4	Side	1	1	2000	0-1	27	0.13	3.5
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	27		3.5
SWD	126	886.7	Side	1	1	2000	0-1	57	0.13	7.4
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	57		7.4
RW	29	887.1	Side	1	1	2000	0-1	2	0.13	0.3
				1	1		1-2	22	1.00	22.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	24		22.3

Appendix C-2. (continued)

Hab Type ft)	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq
SWD	113	888.8	Side	1	1	2000	0-1	54	0.13	7.0
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	1.00	6.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	101		54.0
SWD	88	889.1	Side	1	1	2000	0-1	245	0.13	31.9
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	245		31.9
SWD	27	893.05	Side	1	1	2000	0-1	95	0.13	12.4
				1	1		1-2	180	1.00	180.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	275		192.4
SWD	25	893.1	Side	1	1	2000	0-1	140	0.13	18.2
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	140		18.2
LB	2	899.1	Main	0.42	0.5	2000	0-1	106	0.13	2.9
				0.42	0.5		1-2	0	1.00	0.0
				0.42	0.5		2-3	0	1.00	0.0
				0.42	0.5		3-4	0	0.19	0.0
				0.42	0.5		4-5	0	0.06	0.0
				0.42	0.5		5-6	0	0.06	0.0
							Total	106		2.9
SB	2	901	Main	0.42	0.32	2000	0-1	642	0.13	11.2
				0.42	0.32		1-2	276	1.00	37.1
				0.42	0.32		2-3	894	1.00	120.2
				0.42	0.32		3-4	80	0.19	2.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	1,892		170.5
							Sum Total	11,417		1,624

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.42	1	1540	0-1	0	0.13	0.0
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	0		0.0
SB	84	863.1	Main	0.42	0.32	1540	0-1	592	0.13	10.3
				0.42	0.32		1-2	211	1.00	28.4
				0.42	0.32		2-3	26	1.00	3.5
				0.42	0.32		3-4	26	0.19	0.7
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	855		42.9
SB	83	863.7	Main	0.42	0.32	1540	0-1	71	0.13	1.2
				0.42	0.32		1-2	154	1.00	20.7
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	225		21.9
SB	82	864	Main	0.42	0.32	1540	0-1	11	0.13	0.2
				0.42	0.32		1-2	43	1.00	5.8
				0.42	0.32		2-3	1	1.00	0.1
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	55		6.1
SWD	336	864.2	Back	0.37	1	1540	0-1	10	0.13	0.5
				0.37	1		1-2	0	1.00	0.0
				0.37	1		2-3	0	1.00	0.0
				0.37	1		3-4	0	0.19	0.0
				0.37	1		4-5	0	0.06	0.0
				0.37	1		5-6	0	0.06	0.0
							Total	10		0.5
SB	74	865.8	Main	0.42	0.32	1540	0-1	72	0.13	1.3
				0.42	0.32		1-2	23	1.00	3.1
				0.42	0.32		2-3	27	1.00	3.6
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	122		8.0

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.42	1	1540	0-1	60	0.13	3.3
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	60		3.3
SWD	319	867.7	Side	1	1	1540	0-1	52	0.13	6.8
				1	1		1-2	68	1.00	68.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	120		74.8
SWD	313	868.4	Side	1	1	1540	0-1	68	0.13	8.8
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	68		8.8
SWD	292	869	Side	1	1	1540	0-1	104	0.13	13.5
				1	1		1-2	8	1.00	8.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	112		21.5
SWD	290	869.1	Side	1	1	1540	0-1	50	0.13	6.5
				1	1		1-2	72	1.00	72.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	122		78.5
SWD	274	869.8	Side	1	1	1540	0-1	97	0.13	12.6
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	97		12.6

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.42	1	1540	0-1	16	0.13	0.9
				0.42	1		1-2	1	1.00	0.4
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	17		1.3
SB	69	872.7	Main	0.42	0.32	1540	0-1	912	0.13	15.9
				0.42	0.32		1-2	1,274	1.00	171.2
				0.42	0.32		2-3	322	1.00	43.3
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	2,508		230.4
SWD	256	872.8	Side	1	1	1540	0-1	28	0.13	3.6
				1	1		1-2	30	1.00	30.0
				1	1		2-3	44	1.00	44.0
				1	1		3-4	4	0.19	0.8
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	106		78.4
SWD	235	875.4	Side	1	1	1540	0-1	14	0.13	1.8
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	14		1.8
SWD	233	876.4	Main	0.42	1	1540	0-1	24	0.13	1.3
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	24		1.3
SB	46	877.8	Main	0.42	0.32	1540	0-1	656	0.13	11.5
				0.42	0.32		1-2	1,048	1.00	140.9
				0.42	0.32		2-3	284	1.00	38.2
				0.42	0.32		3-4	176	0.19	4.5
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	2,164		195.0

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.42	0.32	1540	0-1	0	0.13	0.0
				0.42	0.32		1-2	0	1.00	0.0
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	1540	0-1	36	0.13	4.7
				1	1		1-2	16	1.00	16.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	52		20.7
LC	2	885.3	Side	1	0.04	1540	0-1	276	0.13	1.4
				1	0.04		1-2	416	1.00	16.6
				1	0.04		2-3	273	1.00	10.9
				1	0.04		3-4	11	0.19	0.1
				1	0.04		4-5	0	0.06	0.0
				1	0.04		5-6	0	0.06	0.0
							Total	976		29.1
SWD	154	885.4	Side	1	1	1540	0-1	0	0.13	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	0		0.0
SWD	126	886.7	Side	1	1	1540	0-1	56	0.13	7.3
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	56		7.3
RW	29	887.1	Side	1	1	1540	0-1	7	0.13	0.9
				1	1		1-2	17	1.00	17.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	24		17.9

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	1540	0-1	54	0.13	7.0
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	1.00	6.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	101		54.0
SWD	88	889.1	Side	1	1	1540	0-1	66	0.13	8.6
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	66		8.6
SWD	27	893.05	Side	1	1	1540	0-1	178	0.13	23.1
				1	1		1-2	86	1.00	86.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	264		109.1
SWD	25	893.1	Side	1	1	1540	0-1	134	0.13	17.4
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	134		17.4
LB	2	899.1	Main	0.42	0.5	1540	0-1	100	0.13	2.7
				0.42	0.5		1-2	0	1.00	0.0
				0.42	0.5		2-3	0	1.00	0.0
				0.42	0.5		3-4	0	0.19	0.0
				0.42	0.5		4-5	0	0.06	0.0
				0.42	0.5		5-6	0	0.06	0.0
							Total	100		2.7
SB	2	901	Main	0.42	0.32	1540	0-1	638	0.13	11.1
				0.42	0.32		1-2	414	1.00	55.6
				0.42	0.32		2-3	697	1.00	93.7
				0.42	0.32		3-4	27	0.19	0.7
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	1,776		161.2
							Sum Total	10,228		1,215

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.42	1	1240	0-1	0	0.13	0.0
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	0		0.0
SB	84	863.1	Main	0.42	0.32	1240	0-1	646	0.13	11.3
				0.42	0.32		1-2	27	1.00	3.6
				0.42	0.32		2-3	30	1.00	4.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	703		18.9
SB	83	863.7	Main	0.42	0.32	1240	0-1	96	0.13	1.7
				0.42	0.32		1-2	95	1.00	12.8
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	191		14.4
SB	82	864	Main	0.42	0.32	1240	0-1	20	0.13	0.3
				0.42	0.32		1-2	36	1.00	4.8
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	56		5.2
SWD	336	864.2	Back	0.37	1	1240	0-1	6	0.13	0.3
				0.37	1		1-2	0	1.00	0.0
				0.37	1		2-3	0	1.00	0.0
				0.37	1		3-4	0	0.19	0.0
				0.37	1		4-5	0	0.06	0.0
				0.37	1		5-6	0	0.06	0.0
							Total	6		0.3
SB	74	865.8	Main	0.42	0.32	1240	0-1	79	0.13	1.4
				0.42	0.32		1-2	39	1.00	5.2
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	118		6.6

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.42	1	1240	0-1	0	0.13	0.0
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	0		0.0
SWD	319	867.7	Side	1	1	1240	0-1	52	0.13	6.8
				1	1		1-2	58	1.00	58.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	110		64.8
SWD	313	868.4	Side	1	1	1240	0-1	14	0.13	1.8
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	14		1.8
SWD	292	869	Side	1	1	1240	0-1	64	0.13	8.3
				1	1		1-2	10	1.00	10.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	74		18.3
SWD	290	869.1	Side	1	1	1240	0-1	108	0.13	14.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	108		14.0
SWD	274	869.8	Side	1	1	1240	0-1	73	0.13	9.5
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	73		9.5

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.42	1	1240	0-1	16	0.13	0.9
				0.42	1		1-2	1	1.00	0.4
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	17		1.3
SB	69	872.7	Main	0.42	0.32	1240	0-1	1,101	0.13	19.2
				0.42	0.32		1-2	1,153	1.00	155.0
				0.42	0.32		2-3	14	1.00	1.9
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	2,268		176.1
SWD	256	872.8	Side	1	1	1240	0-1	30	0.13	3.9
				1	1		1-2	32	1.00	32.0
				1	1		2-3	40	1.00	40.0
				1	1		3-4	1	0.19	0.2
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	103		76.1
SWD	235	875.4	Side	1	1	1240	0-1	0	0.13	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	0		0.0
SWD	233	876.4	Main	0.42	1	1240	0-1	0	0.13	0.0
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	0		0.0
SB	46	877.8	Main	0.42	0.32	1240	0-1	1,102	0.13	19.3
				0.42	0.32		1-2	620	1.00	83.3
				0.42	0.32		2-3	235	1.00	31.6
				0.42	0.32		3-4	168	0.19	4.3
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	2,125		138.5

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.42	0.32	1240	0-1	0	0.13	0.0
				0.42	0.32		1-2	0	1.00	0.0
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	1240	0-1	46	0.13	6.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	46		6.0
LC	2	885.3	Side	1	0.04	1240	0-1	393	0.13	2.0
				1	0.04		1-2	318	1.00	12.7
				1	0.04		2-3	158	1.00	6.3
				1	0.04		3-4	0	0.19	0.0
				1	0.04		4-5	0	0.06	0.0
				1	0.04		5-6	0	0.06	0.0
							Total	869		21.1
SWD	154	885.4	Side	1	1	1240	0-1	0	0.13	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	0		0.0
SWD	126	886.7	Side	1	1	1240	0-1	55	0.13	7.2
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	55		7.2
RW	29	887.1	Side	1	1	1240	0-1	10	0.13	1.3
				1	1		1-2	14	1.00	14.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	24		15.3

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	1240	0-1	54	0.13	7.0
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	1.00	6.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	101		54.0
SWD	88	889.1	Side	1	1	1240	0-1	8	0.13	1.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	8		1.0
SWD	27	893.05	Side	1	1	1240	0-1	0	0.13	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	0		0.0
SWD	25	893.1	Side	1	1	1240	0-1	79	0.13	10.3
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	79		10.3
LB	2	899.1	Main	0.42	0.5	1240	0-1	62	0.13	1.7
				0.42	0.5		1-2	0	1.00	0.0
				0.42	0.5		2-3	0	1.00	0.0
				0.42	0.5		3-4	0	0.19	0.0
				0.42	0.5		4-5	0	0.06	0.0
				0.42	0.5		5-6	0	0.06	0.0
							Total	62		1.7
SB	2	901	Main	0.42	0.32	1240	0-1	306	0.13	5.3
				0.42	0.32		1-2	520	1.00	69.9
				0.42	0.32		2-3	538	1.00	72.3
				0.42	0.32		3-4	28	0.19	0.7
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	1,392		148.3
							Sum Total	8,602		811

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.42	1	830	0-1	0	0.13	0.0
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	0		0.0
SB	84	863.1	Main	0.42	0.32	830	0-1	0	0.13	0.0
				0.42	0.32		1-2	0	1.00	0.0
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	0		0.0
SB	83	863.7	Main	0.42	0.32	830	0-1	174	0.13	3.0
				0.42	0.32		1-2	0	1.00	0.0
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	174		3.0
SB	82	864	Main	0.42	0.32	830	0-1	20	0.13	0.3
				0.42	0.32		1-2	28	1.00	3.8
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	48		4.1
SWD	336	864.2	Back	0.37	1	830	0-1	0	0.13	0.0
				0.37	1		1-2	0	1.00	0.0
				0.37	1		2-3	0	1.00	0.0
				0.37	1		3-4	0	0.19	0.0
				0.37	1		4-5	0	0.06	0.0
				0.37	1		5-6	0	0.06	0.0
							Total	0		0.0
SB	74	865.8	Main	0.42	0.32	830	0-1	63	0.13	1.1
				0.42	0.32		1-2	31	1.00	4.2
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	94		5.3

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.42	1	830	0-1	0	0.13	0.0
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	0		0.0
SWD	319	867.7	Side	1	1	830	0-1	63	0.13	8.2
				1	1		1-2	44	1.00	44.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	107		52.2
SWD	313	868.4	Side	1	1	830	0-1	8	0.13	1.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	8		1.0
SWD	292	869	Side	1	1	830	0-1	64	0.13	8.3
				1	1		1-2	4	1.00	4.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	68		12.3
SWD	290	869.1	Side	1	1	830	0-1	90	0.13	11.7
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	90		11.7
SWD	274	869.8	Side	1	1	830	0-1	46	0.13	6.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	46		6.0

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.42	1	830	0-1	12	0.13	0.7
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	12		0.7
SB	69	872.7	Main	0.42	0.32	830	0-1	913	0.13	16.0
				0.42	0.32		1-2	816	1.00	109.7
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	1,729		125.6
SWD	256	872.8	Side	1	1	830	0-1	29	0.13	3.8
				1	1		1-2	36	1.00	36.0
				1	1		2-3	31	1.00	31.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	96		70.8
SWD	235	875.4	Side	1	1	830	0-1	0	0.13	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	0		0.0
SWD	233	876.4	Main	0.42	1	830	0-1	0	0.13	0.0
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	1.00	0.0
				0.42	1		3-4	0	0.19	0.0
				0.42	1		4-5	0	0.06	0.0
				0.42	1		5-6	0	0.06	0.0
							Total	0		0.0
SB	46	877.8	Main	0.42	0.32	830	0-1	1,306	0.13	22.8
				0.42	0.32		1-2	312	1.00	41.9
				0.42	0.32		2-3	212	1.00	28.5
				0.42	0.32		3-4	33	0.19	0.8
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	1,863		94.1

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.42	0.32	830	0-1	0	0.13	0.0
				0.42	0.32		1-2	0	1.00	0.0
				0.42	0.32		2-3	0	1.00	0.0
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	830	0-1	0	0.13	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	0		0.0
LC	2	885.3	Side	1	0.04	830	0-1	403	0.13	2.1
				1	0.04		1-2	329	1.00	13.2
				1	0.04		2-3	9	1.00	0.4
				1	0.04		3-4	0	0.19	0.0
				1	0.04		4-5	0	0.06	0.0
				1	0.04		5-6	0	0.06	0.0
							Total	741		15.6
SWD	154	885.4	Side	1	1	830	0-1	0	0.13	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	0		0.0
SWD	126	886.7	Side	1	1	830	0-1	53	0.13	6.9
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	53		6.9
RW	29	887.1	Side	1	1	830	0-1	19	0.13	2.5
				1	1		1-2	5	1.00	5.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	24		7.5

Appendix C-2. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	830	0-1	54	0.13	7.0
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	1.00	6.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	101		54.0
SWD	88	889.1	Side	1	1	830	0-1	0	0.13	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	0		0.0
SWD	27	893.05	Side	1	1	830	0-1	0	0.13	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	0		0.0
SWD	25	893.1	Side	1	1	830	0-1	0	0.13	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	1.00	0.0
				1	1		3-4	0	0.19	0.0
				1	1		4-5	0	0.06	0.0
				1	1		5-6	0	0.06	0.0
							Total	0		0.0
LB	2	899.1	Main	0.42	0.5	830	0-1	0	0.13	0.0
				0.42	0.5		1-2	0	1.00	0.0
				0.42	0.5		2-3	0	1.00	0.0
				0.42	0.5		3-4	0	0.19	0.0
				0.42	0.5		4-5	0	0.06	0.0
				0.42	0.5		5-6	0	0.06	0.0
							Total	0		0.0
SB	2	901	Main	0.42	0.32	830	0-1	287	0.13	5.0
				0.42	0.32		1-2	830	1.00	111.6
				0.42	0.32		2-3	117	1.00	15.7
				0.42	0.32		3-4	0	0.19	0.0
				0.42	0.32		4-5	0	0.06	0.0
				0.42	0.32		5-6	0	0.06	0.0
							Total	1,234		132.3
							Sum Total	6,488		603

Appendix C-3. Measured surface area and calculated weighted available habitat for subyearling mountain whitefish in the South Fork Snake River. Weighting factors are for night time use during winter.

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.04	1	3370	0-1	16	0.34	0.2
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	16		0.2
SB	84	863.1	Main	0.04	0	3370	0-1	702	0.34	0.0
				0.04	0		1-2	702	1.00	0.0
				0.04	0		2-3	511	0.68	0.0
				0.04	0		3-4	86	0.44	0.0
				0.04	0		4-5	48	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	2,049		0.0
SB	83	863.7	Main	0.04	0	3370	0-1	0	0.34	0.0
				0.04	0		1-2	39	1.00	0.0
				0.04	0		2-3	124	0.68	0.0
				0.04	0		3-4	54	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	217		0.0
SB	82	864	Main	0.04	0	3370	0-1	44	0.34	0.0
				0.04	0		1-2	11	1.00	0.0
				0.04	0		2-3	36	0.68	0.0
				0.04	0		3-4	6	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	97		0.0
SWD	336	864.2	Back	0.42	1	3370	0-1	22	0.34	3.1
				0.42	1		1-2	10	1.00	4.2
				0.42	1		2-3	0	0.68	0.0
				0.42	1		3-4	0	0.44	0.0
				0.42	1		4-5	0	0.17	0.0
				0.42	1		5-6	0	0.17	0.0
							Total	32		7.3
SB	74	865.8	Main	0.04	0	3370	0-1	70	0.34	0.0
				0.04	0		1-2	60	1.00	0.0
				0.04	0		2-3	63	0.68	0.0
				0.04	0		3-4	30	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	223		0.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.04	1	3370	0-1	41	0.34	0.6
				0.04	1		1-2	88	1.00	3.5
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	129		4.1
SWD	319	867.7	Side	1	1	3370	0-1	94	0.34	32.0
				1	1		1-2	104	1.00	104.0
				1	1		2-3	53	0.68	36.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	251		172.0
SWD	313	868.4	Side	1	1	3370	0-1	97	0.34	33.0
				1	1		1-2	4	1.00	4.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	101		37.0
SWD	292	869	Side	1	1	3370	0-1	69	0.34	23.5
				1	1		1-2	144	1.00	144.0
				1	1		2-3	78	0.68	53.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	291		220.5
SWD	290	869.1	Side	1	1	3370	0-1	27	0.34	9.2
				1	1		1-2	48	1.00	48.0
				1	1		2-3	52	0.68	35.4
				1	1		3-4	78	0.44	34.3
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	205		126.9
SWD	274	869.8	Side	1	1	3370	0-1	147	0.34	50.0
				1	1		1-2	82	1.00	82.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	229		132.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.04	1	3370	0-1	20	0.34	0.3
				0.04	1		1-2	7	1.00	0.3
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	27		0.6
SB	69	872.7	Main	0.04	0	3370	0-1	108	0.34	0.0
				0.04	0		1-2	910	1.00	0.0
				0.04	0		2-3	934	0.68	0.0
				0.04	0		3-4	648	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	2,600		0.0
SWD	256	872.8	Side	1	1	3370	0-1	22	0.34	7.5
				1	1		1-2	31	1.00	31.0
				1	1		2-3	36	0.68	24.5
				1	1		3-4	33	0.44	14.5
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	122		77.5
SWD	235	875.4	Side	1	1	3370	0-1	120	0.34	40.8
				1	1		1-2	16	1.00	16.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	136		56.8
SWD	233	876.4	Main	0.04	1	3370	0-1	123	0.34	1.7
				0.04	1		1-2	38	1.00	1.5
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	161		3.2
SB	46	877.8	Main	0.04	0	3370	0-1	360	0.34	0.0
				0.04	0		1-2	398	1.00	0.0
				0.04	0		2-3	1,273	0.68	0.0
				0.04	0		3-4	298	0.44	0.0
				0.04	0		4-5	212	0.17	0.0
				0.04	0		5-6	20	0.17	0.0
							Total	2,561		0.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.04	0	3370	0-1	36	0.34	0.0
				0.04	0		1-2	0	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	36		0.0
SWD	192	882.4	Side	1	1	3370	0-1	44	0.34	15.0
				1	1		1-2	38	1.00	38.0
				1	1		2-3	17	0.68	11.6
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	99		64.5
LC	2	885.3	Side	1	0.01	3370	0-1	85	0.34	0.3
				1	0.01		1-2	481	1.00	4.8
				1	0.01		2-3	211	0.68	1.4
				1	0.01		3-4	240	0.44	1.1
				1	0.01		4-5	0	0.17	0.0
				1	0.01		5-6	0	0.17	0.0
							Total	1,017		7.6
SWD	154	885.4	Side	1	1	3370	0-1	84	0.34	28.6
				1	1		1-2	8	1.00	8.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	92		36.6
SWD	126	886.7	Side	1	1	3370	0-1	57	0.34	19.4
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	57		19.4
RW	29	887.1	Side	1	1	3370	0-1	0	0.34	0.0
				1	1		1-2	17	1.00	17.0
				1	1		2-3	7	0.68	4.8
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	24		21.8

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	3370	0-1	52	0.34	17.7
				1	1		1-2	48	1.00	48.0
				1	1		2-3	9	0.68	6.1
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	109		71.8
SWD	88	889.1	Side	1	1	3370	0-1	242	0.34	82.3
				1	1		1-2	154	1.00	154.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	396		236.3
SWD	27	893.05	Side	1	1	3370	0-1	56	0.34	19.0
				1	1		1-2	167	1.00	167.0
				1	1		2-3	54	0.68	36.7
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	277		222.8
SWD	25	893.1	Side	1	1	3370	0-1	140	0.34	47.6
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	140		47.6
LB	2	899.1	Main	0.04	0	3370	0-1	50	0.34	0.0
				0.04	0		1-2	100	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	150		0.0
SB	2	901	Main	0.04	0	3370	0-1	187	0.34	0.0
				0.04	0		1-2	774	1.00	0.0
				0.04	0		2-3	188	0.68	0.0
				0.04	0		3-4	824	0.44	0.0
				0.04	0		4-5	84	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	2,057		0.0
							Sum Total	13,901		1,566

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.04	1	2430	0-1	1	0.34	0.0
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	1		0.0
SB	84	863.1	Main	0.04	0	2430	0-1	536	0.34	0.0
				0.04	0		1-2	701	1.00	0.0
				0.04	0		2-3	151	0.68	0.0
				0.04	0		3-4	44	0.44	0.0
				0.04	0		4-5	14	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	1,446		0.0
SB	83	863.7	Main	0.04	0	2430	0-1	34	0.34	0.0
				0.04	0		1-2	67	1.00	0.0
				0.04	0		2-3	118	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	219		0.0
SB	82	864	Main	0.04	0	2430	0-1	2	0.34	0.0
				0.04	0		1-2	10	1.00	0.0
				0.04	0		2-3	42	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	54		0.0
SWD	336	864.2	Back	0.42	1	2430	0-1	24	0.34	3.4
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	0.68	0.0
				0.42	1		3-4	0	0.44	0.0
				0.42	1		4-5	0	0.17	0.0
				0.42	1		5-6	0	0.17	0.0
							Total	24		3.4
SB	74	865.8	Main	0.04	0	2430	0-1	63	0.34	0.0
				0.04	0		1-2	78	1.00	0.0
				0.04	0		2-3	37	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	178		0.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.04	1	2430	0-1	88	0.34	1.2
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	88		1.2
SWD	319	867.7	Side	1	1	2430	0-1	93	0.34	31.6
				1	1		1-2	108	1.00	108.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	201		139.6
SWD	313	868.4	Side	1	1	2430	0-1	100	0.34	34.0
				1	1		1-2	1	1.00	1.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	101		35.0
SWD	292	869	Side	1	1	2430	0-1	98	0.34	33.3
				1	1		1-2	128	1.00	128.0
				1	1		2-3	30	0.68	20.4
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	256		181.7
SWD	290	869.1	Side	1	1	2430	0-1	52	0.34	17.7
				1	1		1-2	52	1.00	52.0
				1	1		2-3	75	0.68	51.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	179		120.7
SWD	274	869.8	Side	1	1	2430	0-1	149	0.34	50.7
				1	1		1-2	43	1.00	43.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	192		93.7

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.04	1	2430	0-1	18	0.34	0.2
				0.04	1		1-2	4	1.00	0.2
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	22		0.4
SB	69	872.7	Main	0.04	0	2430	0-1	609	0.34	0.0
				0.04	0		1-2	968	1.00	0.0
				0.04	0		2-3	993	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	2,570		0.0
SWD	256	872.8	Side	1	1	2430	0-1	26	0.34	8.8
				1	1		1-2	28	1.00	28.0
				1	1		2-3	41	0.68	27.9
				1	1		3-4	18	0.44	7.9
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	113		72.6
SWD	235	875.4	Side	1	1	2430	0-1	62	0.34	21.1
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	62		21.1
SWD	233	876.4	Main	0.04	1	2430	0-1	53	0.34	0.7
				0.04	1		1-2	9	1.00	0.4
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	62		1.1
SB	46	877.8	Main	0.04	0	2430	0-1	249	0.34	0.0
				0.04	0		1-2	1,122	1.00	0.0
				0.04	0		2-3	620	0.68	0.0
				0.04	0		3-4	208	0.44	0.0
				0.04	0		4-5	165	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	2,364		0.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.04	0	2430	0-1	0	0.34	0.0
				0.04	0		1-2	0	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	2430	0-1	32	0.34	10.9
				1	1		1-2	42	1.00	42.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	74		52.9
LC	2	885.3	Side	1	0.01	2430	0-1	240	0.34	0.8
				1	0.01		1-2	404	1.00	4.0
				1	0.01		2-3	323	0.68	2.2
				1	0.01		3-4	13	0.44	0.1
				1	0.01		4-5	0	0.17	0.0
				1	0.01		5-6	0	0.17	0.0
							Total	980		7.1
SWD	154	885.4	Side	1	1	2430	0-1	44	0.34	15.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	44		15.0
SWD	126	886.7	Side	1	1	2430	0-1	57	0.34	19.4
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	57		19.4
RW	29	887.1	Side	1	1	2430	0-1	1	0.34	0.3
				1	1		1-2	23	1.00	23.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	24		23.3

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	2430	0-1	54	0.34	18.4
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	0.68	4.1
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	101		63.4
SWD	88	889.1	Side	1	1	2430	0-1	322	0.34	109.5
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	322		109.5
SWD	27	893.05	Side	1	1	2430	0-1	73	0.34	24.8
				1	1		1-2	188	1.00	188.0
				1	1		2-3	12	0.68	8.2
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	273		221.0
SWD	25	893.1	Side	1	1	2430	0-1	140	0.34	47.6
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	140		47.6
LB	2	899.1	Main	0.04	0	2430	0-1	94	0.34	0.0
				0.04	0		1-2	40	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	134		0.0
SB	2	901	Main	0.04	0	2430	0-1	504	0.34	0.0
				0.04	0		1-2	515	1.00	0.0
				0.04	0		2-3	417	0.68	0.0
				0.04	0		3-4	602	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	2,038		0.0
							Sum Total	12,319		1,230

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.04	1	2000	0-1	0	0.34	0.0
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	0		0.0
SB	84	863.1	Main	0.04	0	2000	0-1	464	0.34	0.0
				0.04	0		1-2	612	1.00	0.0
				0.04	0		2-3	62	0.68	0.0
				0.04	0		3-4	44	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	1,182		0.0
SB	83	863.7	Main	0.04	0	2000	0-1	43	0.34	0.0
				0.04	0		1-2	132	1.00	0.0
				0.04	0		2-3	46	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	221		0.0
SB	82	864	Main	0.04	0	2000	0-1	4	0.34	0.0
				0.04	0		1-2	33	1.00	0.0
				0.04	0		2-3	18	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	55		0.0
SWD	336	864.2	Back	0.42	1	2000	0-1	20	0.34	2.9
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	0.68	0.0
				0.42	1		3-4	0	0.44	0.0
				0.42	1		4-5	0	0.17	0.0
				0.42	1		5-6	0	0.17	0.0
							Total	20		2.9
SB	74	865.8	Main	0.04	0	2000	0-1	58	0.34	0.0
				0.04	0		1-2	62	1.00	0.0
				0.04	0		2-3	30	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	150		0.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.04	1	2000	0-1	73	0.34	1.0
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	73		1.0
SWD	319	867.7	Side	1	1	2000	0-1	78	0.34	26.5
				1	1		1-2	80	1.00	80.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	158		106.5
SWD	313	868.4	Side	1	1	2000	0-1	99	0.34	33.7
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	99		33.7
SWD	292	869	Side	1	1	2000	0-1	122	0.34	41.5
				1	1		1-2	78	1.00	78.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	200		119.5
SWD	290	869.1	Side	1	1	2000	0-1	54	0.34	18.4
				1	1		1-2	42	1.00	42.0
				1	1		2-3	58	0.68	39.4
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	154		99.8
SWD	274	869.8	Side	1	1	2000	0-1	133	0.34	45.2
				1	1		1-2	19	1.00	19.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	152		64.2

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.04	1	2000	0-1	17	0.34	0.2
				0.04	1		1-2	1	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	18		0.3
SB	69	872.7	Main	0.04	0	2000	0-1	854	0.34	0.0
				0.04	0		1-2	997	1.00	0.0
				0.04	0		2-3	741	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	2,592		0.0
SWD	256	872.8	Side	1	1	2000	0-1	28	0.34	9.5
				1	1		1-2	29	1.00	29.0
				1	1		2-3	40	0.68	27.2
				1	1		3-4	12	0.44	5.3
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	109		71.0
SWD	235	875.4	Side	1	1	2000	0-1	31	0.34	10.5
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	31		10.5
SWD	233	876.4	Main	0.04	1	2000	0-1	44	0.34	0.6
				0.04	1		1-2	2	1.00	0.1
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	46		0.7
SB	46	877.8	Main	0.04	0	2000	0-1	312	0.34	0.0
				0.04	0		1-2	1,324	1.00	0.0
				0.04	0		2-3	340	0.68	0.0
				0.04	0		3-4	220	0.44	0.0
				0.04	0		4-5	59	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	2,255		0.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.04	0	2000	0-1	0	0.34	0.0
				0.04	0		1-2	0	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	2000	0-1	34	0.34	11.6
				1	1		1-2	30	1.00	30.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	64		41.6
LC	2	885.3	Side	1	0.01	2000	0-1	260	0.34	0.9
				1	0.01		1-2	424	1.00	4.2
				1	0.01		2-3	274	0.68	1.9
				1	0.01		3-4	13	0.44	0.1
				1	0.01		4-5	0	0.17	0.0
				1	0.01		5-6	0	0.17	0.0
							Total	971		7.0
SWD	154	885.4	Side	1	1	2000	0-1	27	0.34	9.2
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	27		9.2
SWD	126	886.7	Side	1	1	2000	0-1	57	0.34	19.4
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	57		19.4
RW	29	887.1	Side	1	1	2000	0-1	2	0.34	0.7
				1	1		1-2	22	1.00	22.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	24		22.7

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	2000	0-1	54	0.34	18.4
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	0.68	4.1
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	101		63.4
SWD	88	889.1	Side	1	1	2000	0-1	245	0.34	83.3
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	245		83.3
SWD	27	893.05	Side	1	1	2000	0-1	95	0.34	32.3
				1	1		1-2	180	1.00	180.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	275		212.3
SWD	25	893.1	Side	1	1	2000	0-1	140	0.34	47.6
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	140		47.6
LB	2	899.1	Main	0.04	0	2000	0-1	106	0.34	0.0
				0.04	0		1-2	0	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	106		0.0
SB	2	901	Main	0.04	0	2000	0-1	642	0.34	0.0
				0.04	0		1-2	276	1.00	0.0
				0.04	0		2-3	894	0.68	0.0
				0.04	0		3-4	80	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	1,892		0.0
							Sum Total	11,417		1,017

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.04	1	1540	0-1	0	0.34	0.0
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	0		0.0
SB	84	863.1	Main	0.04	0	1540	0-1	592	0.34	0.0
				0.04	0		1-2	211	1.00	0.0
				0.04	0		2-3	26	0.68	0.0
				0.04	0		3-4	26	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	855		0.0
SB	83	863.7	Main	0.04	0	1540	0-1	71	0.34	0.0
				0.04	0		1-2	154	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	225		0.0
SB	82	864	Main	0.04	0	1540	0-1	11	0.34	0.0
				0.04	0		1-2	43	1.00	0.0
				0.04	0		2-3	1	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	55		0.0
SWD	336	864.2	Back	0.42	1	1540	0-1	10	0.34	1.4
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	0.68	0.0
				0.42	1		3-4	0	0.44	0.0
				0.42	1		4-5	0	0.17	0.0
				0.42	1		5-6	0	0.17	0.0
							Total	10		1.4
SB	74	865.8	Main	0.04	0	1540	0-1	72	0.34	0.0
				0.04	0		1-2	23	1.00	0.0
				0.04	0		2-3	27	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	122		0.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.04	1	1540	0-1	60	0.34	0.8
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	60		0.8
SWD	319	867.7	Side	1	1	1540	0-1	52	0.34	17.7
				1	1		1-2	68	1.00	68.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	120		85.7
SWD	313	868.4	Side	1	1	1540	0-1	68	0.34	23.1
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	68		23.1
SWD	292	869	Side	1	1	1540	0-1	104	0.34	35.4
				1	1		1-2	8	1.00	8.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	112		43.4
SWD	290	869.1	Side	1	1	1540	0-1	50	0.34	17.0
				1	1		1-2	72	1.00	72.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	122		89.0
SWD	274	869.8	Side	1	1	1540	0-1	97	0.34	33.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	97		33.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.04	1	1540	0-1	16	0.34	0.2
				0.04	1		1-2	1	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	17		0.3
SB	69	872.7	Main	0.04	0	1540	0-1	912	0.34	0.0
				0.04	0		1-2	1,274	1.00	0.0
				0.04	0		2-3	322	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	2,508		0.0
SWD	256	872.8	Side	1	1	1540	0-1	28	0.34	9.5
				1	1		1-2	30	1.00	30.0
				1	1		2-3	44	0.68	29.9
				1	1		3-4	4	0.44	1.8
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	106		71.2
SWD	235	875.4	Side	1	1	1540	0-1	14	0.34	4.8
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	14		4.8
SWD	233	876.4	Main	0.04	1	1540	0-1	24	0.34	0.3
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	24		0.3
SB	46	877.8	Main	0.04	0	1540	0-1	656	0.34	0.0
				0.04	0		1-2	1,048	1.00	0.0
				0.04	0		2-3	284	0.68	0.0
				0.04	0		3-4	176	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	2,164		0.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.04	0	1540	0-1	0	0.34	0.0
				0.04	0		1-2	0	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	1540	0-1	36	0.34	12.2
				1	1		1-2	16	1.00	16.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	52		28.2
LC	2	885.3	Side	1	0.01	1540	0-1	276	0.34	0.9
				1	0.01		1-2	416	1.00	4.2
				1	0.01		2-3	273	0.68	1.9
				1	0.01		3-4	11	0.44	0.0
				1	0.01		4-5	0	0.17	0.0
				1	0.01		5-6	0	0.17	0.0
							Total	976		7.0
SWD	154	885.4	Side	1	1	1540	0-1	0	0.34	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	0		0.0
SWD	126	886.7	Side	1	1	1540	0-1	56	0.34	19.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	56		19.0
RW	29	887.1	Side	1	1	1540	0-1	7	0.34	2.4
				1	1		1-2	17	1.00	17.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	24		19.4

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	1540	0-1	54	0.34	18.4
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	0.68	4.1
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	101		63.4
SWD	88	889.1	Side	1	1	1540	0-1	66	0.34	22.4
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	66		22.4
SWD	27	893.05	Side	1	1	1540	0-1	178	0.34	60.5
				1	1		1-2	86	1.00	86.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	264		146.5
SWD	25	893.1	Side	1	1	1540	0-1	134	0.34	45.6
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	134		45.6
LB	2	899.1	Main	0.04	0	1540	0-1	100	0.34	0.0
				0.04	0		1-2	0	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	100		0.0
SB	2	901	Main	0.04	0	1540	0-1	638	0.34	0.0
				0.04	0		1-2	414	1.00	0.0
				0.04	0		2-3	697	0.68	0.0
				0.04	0		3-4	27	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	1,776		0.0
							Sum Total	10,228		705

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.04	1	1240	0-1	0	0.34	0.0
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	0		0.0
SB	84	863.1	Main	0.04	0	1240	0-1	646	0.34	0.0
				0.04	0		1-2	27	1.00	0.0
				0.04	0		2-3	30	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	703		0.0
SB	83	863.7	Main	0.04	0	1240	0-1	96	0.34	0.0
				0.04	0		1-2	95	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	191		0.0
SB	82	864	Main	0.04	0	1240	0-1	20	0.34	0.0
				0.04	0		1-2	36	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	56		0.0
SWD	336	864.2	Back	0.42	1	1240	0-1	6	0.34	0.9
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	0.68	0.0
				0.42	1		3-4	0	0.44	0.0
				0.42	1		4-5	0	0.17	0.0
				0.42	1		5-6	0	0.17	0.0
							Total	6		0.9
SB	74	865.8	Main	0.04	0	1240	0-1	79	0.34	0.0
				0.04	0		1-2	39	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	118		0.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.04	1	1240	0-1	0	0.34	0.0
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	0		0.0
SWD	319	867.7	Side	1	1	1240	0-1	52	0.34	17.7
				1	1		1-2	58	1.00	58.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	110		75.7
SWD	313	868.4	Side	1	1	1240	0-1	14	0.34	4.8
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	14		4.8
SWD	292	869	Side	1	1	1240	0-1	64	0.34	21.8
				1	1		1-2	10	1.00	10.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	74		31.8
SWD	290	869.1	Side	1	1	1240	0-1	108	0.34	36.7
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	108		36.7
SWD	274	869.8	Side	1	1	1240	0-1	73	0.34	24.8
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	73		24.8

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.04	1	1240	0-1	16	0.34	0.2
				0.04	1		1-2	1	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	17		0.3
SB	69	872.7	Main	0.04	0	1240	0-1	1,101	0.34	0.0
				0.04	0		1-2	1,153	1.00	0.0
				0.04	0		2-3	14	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	2,268		0.0
SWD	256	872.8	Side	1	1	1240	0-1	30	0.34	10.2
				1	1		1-2	32	1.00	32.0
				1	1		2-3	40	0.68	27.2
				1	1		3-4	1	0.44	0.4
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	103		69.8
SWD	235	875.4	Side	1	1	1240	0-1	0	0.34	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	0		0.0
SWD	233	876.4	Main	0.04	1	1240	0-1	0	0.34	0.0
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	0		0.0
SB	46	877.8	Main	0.04	0	1240	0-1	1,102	0.34	0.0
				0.04	0		1-2	620	1.00	0.0
				0.04	0		2-3	235	0.68	0.0
				0.04	0		3-4	168	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	2,125		0.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.04	0	1240	0-1	0	0.34	0.0
				0.04	0		1-2	0	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	1240	0-1	46	0.34	15.6
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	46		15.6
LC	2	885.3	Side	1	0.01	1240	0-1	393	0.34	1.3
				1	0.01		1-2	318	1.00	3.2
				1	0.01		2-3	158	0.68	1.1
				1	0.01		3-4	0	0.44	0.0
				1	0.01		4-5	0	0.17	0.0
				1	0.01		5-6	0	0.17	0.0
							Total	869		5.6
SWD	154	885.4	Side	1	1	1240	0-1	0	0.34	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	0		0.0
SWD	126	886.7	Side	1	1	1240	0-1	55	0.34	18.7
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	55		18.7
RW	29	887.1	Side	1	1	1240	0-1	10	0.34	3.4
				1	1		1-2	14	1.00	14.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	24		17.4

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	1240	0-1	54	0.34	18.4
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	0.68	4.1
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	101		63.4
SWD	88	889.1	Side	1	1	1240	0-1	8	0.34	2.7
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	8		2.7
SWD	27	893.05	Side	1	1	1240	0-1	0	0.34	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	0		0.0
SWD	25	893.1	Side	1	1	1240	0-1	79	0.34	26.9
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	79		26.9
LB	2	899.1	Main	0.04	0	1240	0-1	62	0.34	0.0
				0.04	0		1-2	0	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	62		0.0
SB	2	901	Main	0.04	0	1240	0-1	306	0.34	0.0
				0.04	0		1-2	520	1.00	0.0
				0.04	0		2-3	538	0.68	0.0
				0.04	0		3-4	28	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	1,392		0.0
							Sum Total	8,602		395

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	343	862.9	Main	0.04	1	830	0-1	0	0.34	0.0
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	0		0.0
SB	84	863.1	Main	0.04	0	830	0-1	0	0.34	0.0
				0.04	0		1-2	0	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	0		0.0
SB	83	863.7	Main	0.04	0	830	0-1	174	0.34	0.0
				0.04	0		1-2	0	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	174		0.0
SB	82	864	Main	0.04	0	830	0-1	20	0.34	0.0
				0.04	0		1-2	28	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	48		0.0
SWD	336	864.2	Back	0.42	1	830	0-1	0	0.34	0.0
				0.42	1		1-2	0	1.00	0.0
				0.42	1		2-3	0	0.68	0.0
				0.42	1		3-4	0	0.44	0.0
				0.42	1		4-5	0	0.17	0.0
				0.42	1		5-6	0	0.17	0.0
							Total	0		0.0
SB	74	865.8	Main	0.04	0	830	0-1	63	0.34	0.0
				0.04	0		1-2	31	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	94		0.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	326	866.9	Main	0.04	1	830	0-1	0	0.34	0.0
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	0		0.0
SWD	319	867.7	Side	1	1	830	0-1	63	0.34	21.4
				1	1		1-2	44	1.00	44.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	107		65.4
SWD	313	868.4	Side	1	1	830	0-1	8	0.34	2.7
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	8		2.7
SWD	292	869	Side	1	1	830	0-1	64	0.34	21.8
				1	1		1-2	4	1.00	4.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	68		25.8
SWD	290	869.1	Side	1	1	830	0-1	90	0.34	30.6
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	90		30.6
SWD	274	869.8	Side	1	1	830	0-1	46	0.34	15.6
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	46		15.6

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	273	869.9	Main	0.04	1	830	0-1	12	0.34	0.2
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	12		0.2
SB	69	872.7	Main	0.04	0	830	0-1	913	0.34	0.0
				0.04	0		1-2	816	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	1,729		0.0
SWD	256	872.8	Side	1	1	830	0-1	29	0.34	9.9
				1	1		1-2	36	1.00	36.0
				1	1		2-3	31	0.68	21.1
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	96		66.9
SWD	235	875.4	Side	1	1	830	0-1	0	0.34	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	0		0.0
SWD	233	876.4	Main	0.04	1	830	0-1	0	0.34	0.0
				0.04	1		1-2	0	1.00	0.0
				0.04	1		2-3	0	0.68	0.0
				0.04	1		3-4	0	0.44	0.0
				0.04	1		4-5	0	0.17	0.0
				0.04	1		5-6	0	0.17	0.0
							Total	0		0.0
SB	46	877.8	Main	0.04	0	830	0-1	1,306	0.34	0.0
				0.04	0		1-2	312	1.00	0.0
				0.04	0		2-3	212	0.68	0.0
				0.04	0		3-4	33	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	1,863		0.0

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SB	39	878.9	Main	0.04	0	830	0-1	0	0.34	0.0
				0.04	0		1-2	0	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	0		0.0
SWD	192	882.4	Side	1	1	830	0-1	0	0.34	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	0		0.0
LC	2	885.3	Side	1	0.01	830	0-1	403	0.34	1.4
				1	0.01		1-2	329	1.00	3.3
				1	0.01		2-3	9	0.68	0.1
				1	0.01		3-4	0	0.44	0.0
				1	0.01		4-5	0	0.17	0.0
				1	0.01		5-6	0	0.17	0.0
							Total	741		4.7
SWD	154	885.4	Side	1	1	830	0-1	0	0.34	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	0		0.0
SWD	126	886.7	Side	1	1	830	0-1	53	0.34	18.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	53		18.0
RW	29	887.1	Side	1	1	830	0-1	19	0.34	6.5
				1	1		1-2	5	1.00	5.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	24		11.5

Appendix C-3. (continued)

Hab Type	#	River Mile	Chnl Type	Chnl Weight Factor	Cover Weight Factor	Flow (cfs)	Depth Interval (ft)	Surface Area (sq ft)	Depth Weight Factor	Avail Habitat (sq ft)
SWD	113	888.8	Side	1	1	830	0-1	54	0.34	18.4
				1	1		1-2	41	1.00	41.0
				1	1		2-3	6	0.68	4.1
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	101		63.4
SWD	88	889.1	Side	1	1	830	0-1	0	0.34	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	0		0.0
SWD	27	893.05	Side	1	1	830	0-1	0	0.34	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	0		0.0
SWD	25	893.1	Side	1	1	830	0-1	0	0.34	0.0
				1	1		1-2	0	1.00	0.0
				1	1		2-3	0	0.68	0.0
				1	1		3-4	0	0.44	0.0
				1	1		4-5	0	0.17	0.0
				1	1		5-6	0	0.17	0.0
							Total	0		0.0
LB	2	899.1	Main	0.04	0	830	0-1	0	0.34	0.0
				0.04	0		1-2	0	1.00	0.0
				0.04	0		2-3	0	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	0		0.0
SB	2	901	Main	0.04	0	830	0-1	287	0.34	0.0
				0.04	0		1-2	830	1.00	0.0
				0.04	0		2-3	117	0.68	0.0
				0.04	0		3-4	0	0.44	0.0
				0.04	0		4-5	0	0.17	0.0
				0.04	0		5-6	0	0.17	0.0
							Total	1,234		0.0
							Sum Total	6,488		305