

**SUMMER CHINOOK SALMON SPORT FISHERY  
ON THE  
SOUTH FORK SALMON RIVER, IDAHO  
2003**

By

**Nicole Warburton Dyson  
Fishery Technician  
and  
Kimberly A. Apperson  
Regional Anadromous Fishery Biologist**

**IDFG 05-57  
November 2005**

**TABLE OF CONTENTS**

	<u>Page</u>
ABSTRACT .....	1
INTRODUCTION .....	2
History of Summer Chinook in the South Fork Salmon River .....	2
METHODS .....	2
Development of Sport Fishing Seasons and Regulations .....	2
Coordination with Agencies and Tribes .....	3
Incidental Take of Listed Summer Chinook Salmon .....	3
Monitoring .....	3
Enforcement Strategy.....	6
Adult Chinook Trapping and Outplanting (Recycling) .....	6
RESULTS.....	6
Sport Harvest and Incidental Take of Chinook Salmon .....	6
Enforcement .....	9
DISCUSSION.....	9
LITERATURE CITED.....	13

**LIST OF FIGURES**

Figure 1.	Map of Chinook salmon sport fishery area on South Fork Salmon River, Idaho .....	5
Figure 2.	Daily summary of 2003 summer Chinook salmon sport fishery, South Fork Salmon River, Idaho .....	7
Figure 3.	Summary of the five recent sport fisheries for summer Chinook salmon on the South Fork Salmon River, Idaho .....	12

**LIST OF TABLES**

Table 1.	Daily summary of 2003 summer Chinook salmon sport fishery, South Fork Salmon River, Idaho .....	8
----------	---	---

## TABLE OF CONTENTS (continued)

	<u>Page</u>
Table 2. Age and gender distribution of summer Chinook salmon sampled during the 2003 sport fishery, South Fork Salmon River, Idaho. Length criteria are consistent with those used by McCall Fish Hatchery .....	11
Table 3. Summary of enforcement by Idaho Department of Fish and Game conservation officers during the 2003 summer Chinook salmon sport fisheries, South Fork Salmon River, Idaho .....	11
Table 4. Comparison of enforcement by Idaho Department of Fish and Game conservation officers for the 2001, 2002, 2003 summer Chinook salmon sport fisheries, South Fork Salmon River, Idaho .....	12

## LIST OF APPENDICES

Appendix A. Daily check station data and estimate worksheet tables from the 2003 summer Chinook salmon sport fishery, South Fork Salmon River, Idaho. ...	15
---	----

## ABSTRACT

A sport fishery for hatchery summer Chinook salmon *Oncorhynchus tshawytscha* was held on the South Fork Salmon River in 2003. Anglers harvested an estimated 5,456 surplus hatchery summer Chinook salmon. During 2003, the 29 day fishery attracted 14,966 angler days with effort totaling 80,948 hours fished. Sport fishery boundaries were downstream from the adult salmon trap to Goat Creek, a distance of approximately six miles. This fishery gave Idaho sport anglers the fifth (fourth consecutive) opportunity since 1964 to fish for summer Chinook salmon in the South Fork Salmon River.

## INTRODUCTION

### **History of Summer Chinook Salmon in the South Fork Salmon River**

Historically, the South Fork Salmon River (SFSR) produced 60 to 70 percent of Idaho's summer Chinook salmon, and approximately one-third of the state's sport harvest of Chinook salmon (Hassemer 1998; IDFG 2001). Annual harvest in the 1960's ranged from 1,700 to 3,900 fish. The sport fishery for Chinook was closed in 1965, following heavy siltation of spawning and rearing habitat in 1964 and 1965. Since completion of four federal hydroelectric dams on the lower Snake River, Chinook salmon runs have generally been below replacement levels (Servheen and Huntington 2001). The first sport fishery since 1964 occurred in 1997 (Apperson and Wilson 1998): followed by three consecutive fisheries in 2000 through 2002 (Apperson 2003).

Hatchery production of summer Chinook from the SFSR began in 1980 as part of Lower Snake River Compensation Program (LSRCP) to mitigate for fish losses occurring by operation of the lower Snake River dams. The annual LSRCP mitigation goal for the McCall Fish Hatchery program on the SFSR is to return 8,000 adults to the Snake River upstream from Lower Granite Dam (Hassemer 1998). McCall Fish Hatchery was designed to rear one million smolts. Eggs are collected from adults trapped at a weir located about 70 miles upstream from the mouth of the SFSR.

In 1992, all natural-origin spring/summer Chinook upstream of Lower Granite Dam (except those in the Clearwater River) were listed as threatened pursuant to the Endangered Species Act (ESA) by the National Oceanic and Atmospheric Administration (NOAA Fisheries). The listing included all naturally produced spring, summer, and fall Chinook salmon in the Snake River Basin as well as hatchery progeny that had at least one natural origin parent.

Beginning with brood year 1991, all hatchery-produced Chinook salmon in Idaho were marked. Hatchery production intended for harvest (called "reserve" fish) was marked with an adipose fin clip to allow identification for harvest. Fish produced to evaluate the feasibility of increasing natural production by out-planting fish that have one natural origin parent, and one hatchery-origin parent were called "supplementation" fish. Supplementation fish were marked with either a ventral fin clip, elastomer mark, or coded wire tag only (Lutch et al. 2002).

## METHODS

### **Development of Sport Fishing Seasons and Regulations**

Preseason forecasts for the number of summer Chinook expected to return to the SFSR weir were based on cohort analyses. The fishery was conducted as specified in Permit Number 1233 (Modification 1), issued by NOAA Fisheries to Idaho Department of Fish and Game (Department) for the incidental take of ESA listed species; and sport fishing regulations set by the Idaho Fish and Game Commission.

Fishing was allowed from 100 yards below the weir, downstream to the mouth of Goat Creek, a distance of approximately six miles. This area is mostly within the Boise National Forest. The

opening date for fishing was based on predicted run timing to ensure that angling would be allowed to occur as soon as the run arrived in the fishing area. In 2003, daily fishing hours were from one-half hour before sunrise to one hour past sunset to be consistent with other salmon fisheries in the state. Harvest was limited to two, adipose fin-clipped (reserve), summer Chinook per day, and six in possession. The statewide season limit was 20 fish in 2003. Fishing gear was restricted to hook-and-line with barbless hooks. Bait, (which is otherwise prohibited in the SFSR) was allowed for salmon fishing only.

### **Coordination with Agencies and Tribes**

Prior to the season, a meeting was held with personnel from the Department's Enforcement and Fisheries Bureaus, Boise and Payette National Forests, Nez Perce and Shoshone-Bannock tribes, and Valley County Sheriff to discuss logistics of conducting and monitoring the fishery, appropriate parking and camping areas, locations for portable outhouses, and other recreational use restrictions. The Department arranged, and paid for, outhouses to be delivered and maintained throughout the fishery area and season. The Department also arranged for a number of trash cans to be set up in the area and maintained by the check station crew. The Payette National Forest arranged to have an informational check station set up at Knox ranch. A map was developed by both agencies showing the fishery area, access, parking, and camping (Figure 1).

### **Incidental Take of Listed Summer Chinook Salmon**

In 2003, the incidental take was based on the projected run size of approximately 9,600 adult summer Chinook salmon to the SFSR trap, analysis of impacts to ESA listed adult Chinook, and consultation between IDFG and NOAA Fisheries. The total incidental take limits for the year provided by NOAA Fisheries were limits for the IDFG fishery, in conjunction with other fisheries proposed by treaty tribes. Angler interviews at the check station were expanded to provide an estimate of the number of Chinook caught-and-released with an intact adipose fin. Those estimates were then adjusted to discount fish expected to be bound for the river reach between Goat Creek and the weir (10%). During fin clipping operations, the adipose fin may not be completely removed. Estimates of the proportion of the fish released each year with a partial or unclipped adipose fin are made. We adjusted the number of fish released by anglers with an intact adipose fin using an estimate of the proportion of unmarked reserve fish expected to be present in the fishery area. When making estimates of the incidental take of listed Chinook in 2003, 29 percent of the returning unmarked adult Chinook were estimated to be unclipped reserve fish based on fin clip quality evaluations of brood year 1998 and 1999 smolt releases. We then applied a 10 percent catch-and-release mortality rate on the ESA listed Chinook incidentally caught and released. This became the basis for the estimated lethal harvest of listed Chinook (IDFG 2003).

### **Monitoring**

In all previous recent sport fisheries (1997 – 2002) an effort was made to interview all anglers and physically observe all summer Chinook salmon harvested by imposing a mandatory check regulation on harvested fish. During those prior fisheries we observed that the flow of anglers leaving the fishery area was consistent on a daily basis. We applied this pattern of "flow of anglers"

to design a sampling program that applied non-uniform probabilities to periods of the day (Hayne 1991). Simulations run from samples of the 2002 fishery data showed the most accurate estimate and most precise bounds were obtained by dividing the fishing day into two eight-hour strata during which anglers would be interviewed as they exited the fishery. Data from 2002 showed that 33% of anglers left between 0700 and 1500 hours (a.m. stratum), and 67% left between 1500 and 2300 hours (p.m. stratum). We developed a stratified random schedule, applying the same weighting shown by the flow of anglers leaving the fishery area, to sample anglers at the Knox Check Station for either the a.m. or p.m. stratum. This was the same station used to monitor prior fisheries, located on the South Fork Salmon River road, upstream from the fishing area (Figure 1). Because the check station would not be operated during all fishing hours, we removed the mandatory check regulation for harvested fish.

Anglers could leave the fishery area from two other access points: the SFSR Road northbound from the downstream boundary at Goat Creek; and the Two-Bit Six-Bit road leading to the hatchery facility at the upstream boundary of the fishery. In absence of the mandatory check regulation we needed to collect angler interview data from these access points. A check station operated during the 1997 fishery downstream from Goat Creek collected less than 5% of that year's angler interview data; and the Two-Bit Six-Bit Road provides access to only the upper half-mile of the fishery reach of river. We therefore assumed that these were minor access locations and designed a sampling schedule of relative low intensity compared to the Knox station. Treated as a separate survey, we stratified our sample of anglers leaving through these two access points by applying the same pattern of flow of anglers leaving the fishery observed through the Knox Check Station. Having no knowledge regarding the relative distribution of anglers leaving through these two access points, we distributed our sample equally between these two locations. Three weekdays were randomly chosen each week, along with every weekend day and holiday (July 4). One of the two stations was operated on each scheduled day. We divided the 8-hour shifts that were applied to the Knox station sampling design into four 4-hour shifts, and stratified a random selection of shifts by applying the 'flow of anglers' weighting within each shift period.

Funds for monitoring were provided by LSRCP and from Department salmon and steelhead tag sales revenue.

All anglers were required to stop at any of the three check stations, if they were operating, to report fishing activities, regardless of fish harvested. Information collected from angler interviews at the check station included:

- Number of hours fished each day by each angler
- Number of summer Chinook caught and released with vs. without an adipose fin; and by jacks vs. adults noted
- Number of summer Chinook harvested, and the date of harvest
- Number of other fish species caught incidental to fishing for summer Chinook

Harvested salmon were measured for fork length to the nearest cm, sex was recorded and the fish were examined for external marks, tags, radio transmitters, passive integrated transponder (PIT) tags, and coded wire tags (CWT). Snouts were removed from fish with a CWT when permitted by the angler. Radio transmitters and other external tags were removed and returned to the respective agency.

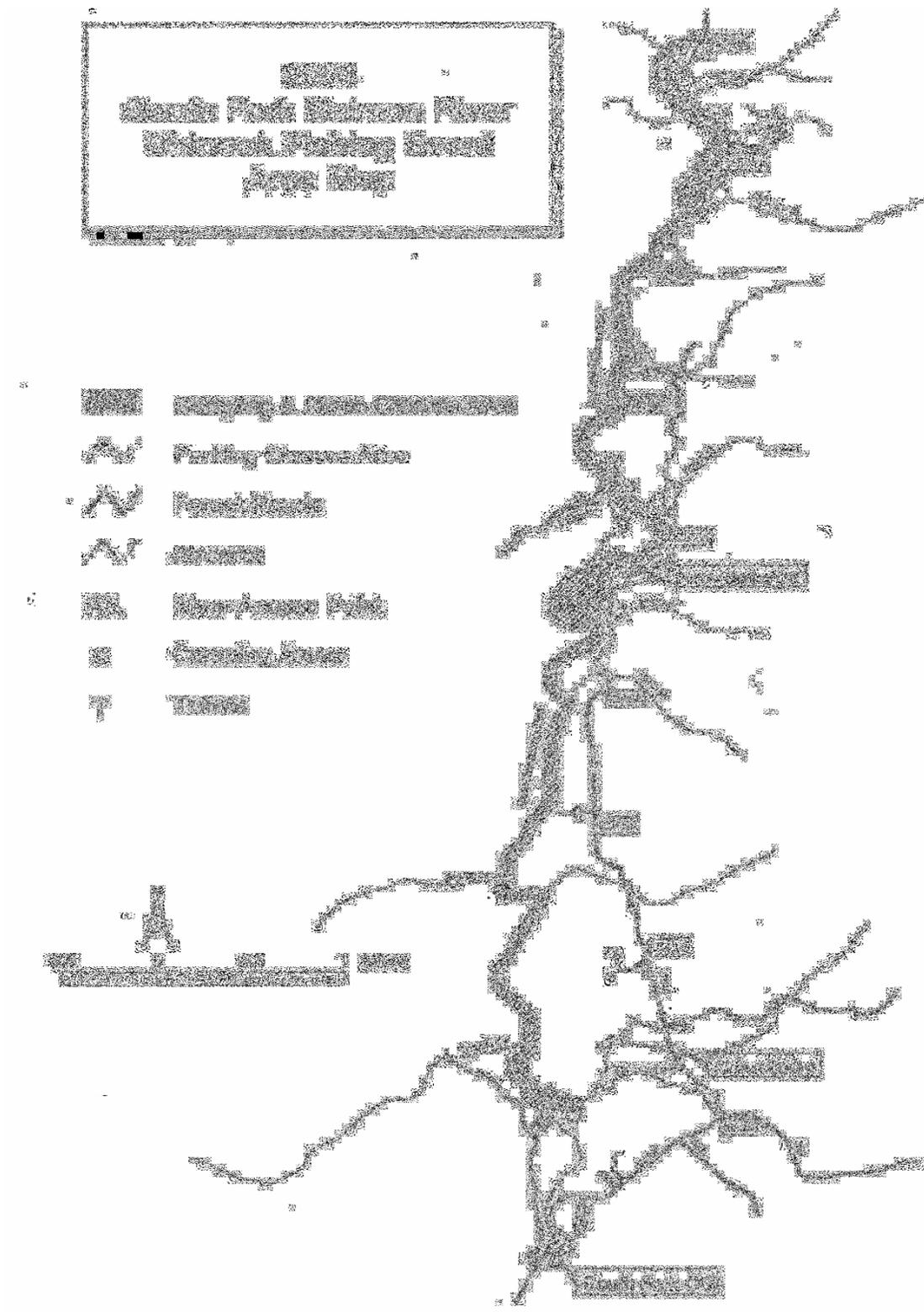


Figure 1. Map of sport fishery area on South Fork Salmon River, Idaho.

## **Enforcement Strategy**

Conservation officers from the McCall District managed enforcement efforts and were assisted by staff from other regions. Conservation officers were present every day during the fishery.

## **Adult Chinook Salmon Trapping and Outplanting (Recycling)**

Hatchery staff periodically transported reserve fish from the trap back downstream to be “recycled” through the fishery. Fish to be recycled were marked with a hole punch in the operculum and transported to either Dollar Creek or Goat Creek (Figure 1) (McPherson et al. 2004). This transport of salmon downstream accomplished two objectives: it relieved overcrowding and thus stress on fish in the adult trap, and it provided for a higher concentration of harvestable fish available to anglers in the fishery.

## **RESULTS**

### **Sport Harvest and Incidental Take of Chinook Salmon**

Daily estimates for the 2003 sports fishery are provided in Table 1 and shown graphically in Figure 2. Estimated season harvest of adult reserve summer Chinook salmon was 5,030 with 95% CI of +/- 329 fish. An estimated 426 +/- 35 reserve jacks were harvested. Details of daily survey data and fishery estimates are provided in Appendix A.

The McCall Fish Hatchery staff uses fork length to estimate the age of fish. Fish less than 67 cm are presumed to be 3 years old (jacks), fish between 67 cm and 89 cm are presumed to be 4 years old, and fish longer than 89 cm are presumed to be 5 years old. We used these same criteria to estimate the age composition of the sample of summer Chinook harvested during the 2003 fishery. Table 2 shows the distribution of the harvest by age and gender.

Approximately 26% of the fish sampled in the harvest had a coded wire tag (CWT). Nine percent of these Chinook were <67 cm FL (age 3), 60% were between 67 and 89 cm FL (age 4), and 31% were >89 cm FL (age 5).

PIT tags were detected in 26 fish, approximately 1% of the fish sampled. Eight percent of these fish were age 3, 46% were age 4, and 46% were age 5.

Of the 1,297 total fish recycled, 448 +/-43 (approximately 35%) were harvested by sport anglers. Fewer than 1% of the recycled fish were recaptured at the trap during the sport fishery.

Incidental lethal take of ESA-listed adults through catch-and-release mortality was 301 +/- 23 fish. Direct harvest of 9 adult unclipped (full adipose fin) fish was detected. These 9 fish consisted of 1 unmarked fish, 3 ventral clip supplementation fish, and 5 fish of unknown origin. The five fish of unknown origin were found filleted in a dumpster. It is unknown whether these fish were harvested by anglers or tribal members.

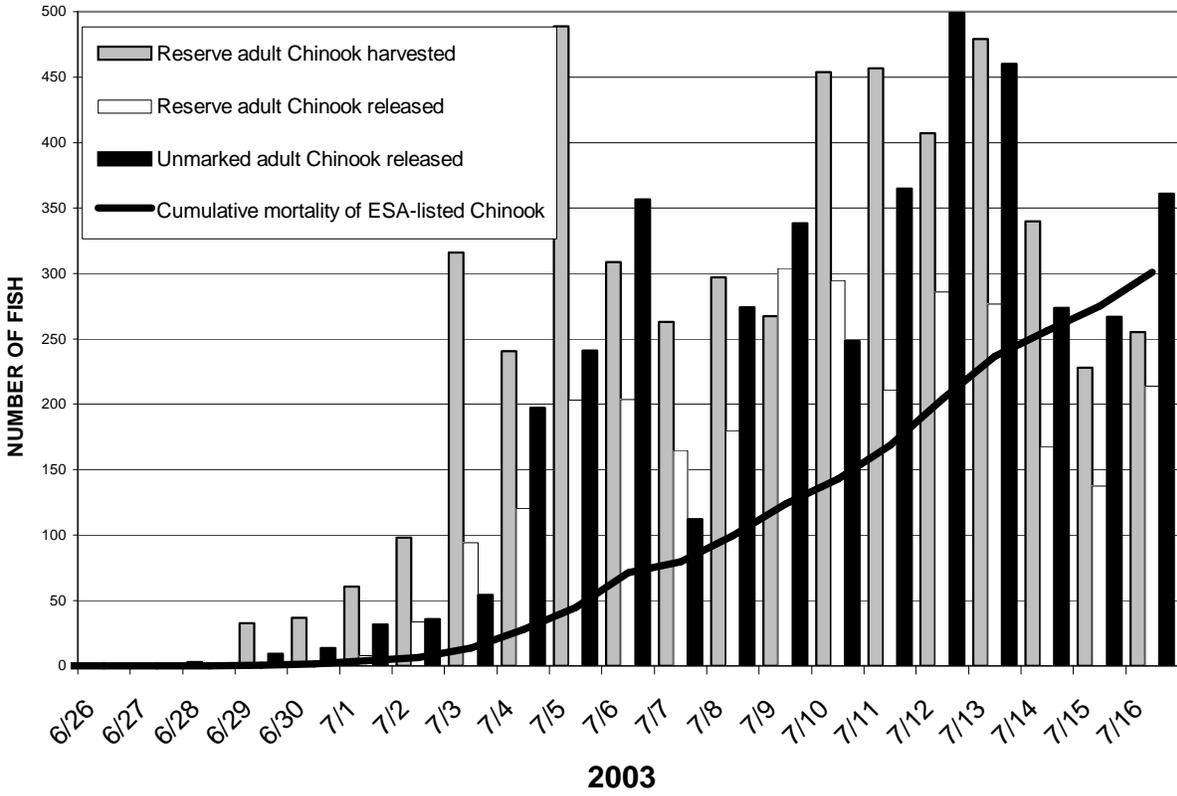


Figure 2. Daily summary of 2003 summer chinook salmon sport fishery, South Fork Salmon River, Idaho.

Table 1. Daily summary of 2003 summer Chinook salmon sport fishery, South Fork Salmon River, Idaho.

Date	Total number of anglers	Total hours fished	Reserve fish harvested			Fish released on day of interview				Catch rate (hours/fish)	Direct illegal take	(.71 x .90) x unmarked adults reported released x 0.1 mortality rate	Total estimated lethal take of adult Chinook
			Adults	Jacks	Total harvest	Reserve (Ad-clipped)		Unmarked					
						Adults	Jacks	Adults	Jacks				
6/18	122	395	0	0	0	0	0	0	0			0.00	0.00
6/19	33	43	0	0	0	0	0	0	0			0.00	0.00
6/20	75	205	0	0	0	0	0	0	0			0.00	0.00
6/21	158	433	0	0	0	0	0	0	0			0.00	0.00
6/22	97	197	0	0	0	0	0	0	0			0.00	0.00
6/23	15	53	0	0	0	0	0	0	0			0.00	0.00
6/24	92	323	0	0	0	0	0	0	0			0.00	0.00
6/25	228	201	0	0	0	0	0	0	0			0.00	0.00
6/26	51	115	0	0	0	0	0	0	0			0.00	0.00
6/27	149	389	0	0	0	0	6	0	0	60.37		0.00	0.00
6/28	271	969	3	0	3	0	8	0	0	88.63		0.00	0.00
6/29	550	1,603	33	0	33	0	0	9	0	38.47		0.58	0.58
6/30	321	1,496	37	1	38	1	3	13	0	26.66		0.86	0.86
7/1	361	1,912	61	8	69	8	2	31	0	17.48		2.00	2.00
7/2	470	2,579	97	8	105	33	0	36	2	14.61		2.29	2.29
7/3	826	3,493	316	9	325	94	6	55	0	7.27	5 <sup>a</sup>	3.49	6.68
7/4	743	3,699	240	5	246	121	23	197	14	6.18		12.60	12.60
7/5	1,161	5,009	488	36	524	203	61	241	6	4.84		15.39	15.39
7/6	787	4,559	308	16	324	204	30	357	5	4.96	2	22.79	24.07
7/7	573	2,715	263	37	300	165	68	112	0	4.21		7.17	7.17
7/8	738	4,465	297	20	317	180	39	274	4	5.48	1	17.51	18.15
7/9	746	4,747	267	38	305	304	75	338	24	4.54		21.61	21.61
7/10	959	6,368	454	21	475	294	24	249	5	6.09	1	15.88	17.16
7/11	1,009	6,700	457	15	472	211	18	365	4	6.26		23.32	23.32
7/12	1,111	7,196	407	34	441	286	36	499	1	5.7		31.88	31.88
7/13	1,067	7,114	479	44	523	276	55	460	4	5.39		29.39	29.39
7/14	755	4,791	340	43	383	167	27	273	4	5.61		17.47	17.47
7/15	628	3,791	228	53	281	138	32	267	0	5.28		17.05	17.05
7/16	870	5,388	255	38	293	214	19	361	6	6.03		23.07	23.07
<b>Totals</b>	<b>14,966</b>	<b>80,948</b>	<b>5,030</b>	<b>426</b>	<b>5,456</b>	<b>2,899</b>	<b>532</b>	<b>4,137</b>	<b>79</b>	<b>324</b>	<b>9</b>	<b>264</b>	<b>271</b>
Variance <sup>b</sup> $\frac{\sum(x-x)^2}{(n-1)}$			26,980	306	30,886	11,629	542	26,735	33	495	—	109	108
Standard Error ( $\sqrt{\text{Var}}$ )			164	18	176	108	23	164	6	22	—	10	10
95% CI (2(SE))			329	35	351	216	47	327	12	44	—	21	21
lower 95% CI			4,704	390	5,108	2,683	484	3,810	63	280	—	243	250
upper 95% CI			5,362	460	5,810	3,115	578	4,464	87	369	—	285	292

<sup>a</sup> Fish found in dumpster within fishery area; unknown whether harvested by sport or tribal fishers

<sup>b</sup> Survey data prior to June 27 was excluded from analyses

## **Enforcement**

Table 3 summarizes enforcement activity during the 2003 fishery (L. Jindrich and M. O'Connell, personal communication). The average enforcement hours per day were 24 for the 29-day season. The violation rate was 6.4 hours per violation with an average of 11 license checks per violation. The four most common violations were, barbed hooks (35 violations), harvesting snagged or foul-hooked Chinook (17 violations), failure to card a fish after keeping it (16 violations), and fishing in a closed area or during a closed season (13 violations). Some of the other violations included possession of wild fish, possession of fish in a closed season, and continuing to fish after reaching the daily bag limit.

## **DISCUSSION**

Anglers seemed to be very receptive to the changes we made to the daily check station procedures this year once they understood checking fish was not mandatory. It was no longer mandatory for anglers to report their effort and harvest unless they came across an open check station while leaving the fishing boundary. The Knox check station remained where it has been during past fisheries. However, the hours changed from operating during all fishing hours to operating in random eight-hour blocks during fishing hours. The two remote check stations were operated at random in four-hour blocks during fishing hours.

By randomly sampling at the two remote check stations we may have acquired data from a sample of anglers that were not complying with the mandatory check station regulations in past years. Due to the nature of the random check station along with the remote station set-up, the catch-rate estimates obtained during the 2003 fishery may have been less biased than they have been for past sports fisheries on the South Fork Salmon River. In prior years our sample was likely biased toward successful anglers, those required to report to the mandatory check station.

The survey method employed to monitor the 2003 fishery provided a very good estimate of both harvest and lethal take with much less manpower than that used in previous years. Ninety-five percent confidence intervals for Chinook harvest and lethal take of ESA-listed Chinook were within 6% and 8%, respectively, of the estimates. We propose to use the same monitoring approach for future Chinook salmon fisheries on the SFSR.

Analysis of the remote check stations showed that a significant amount of the angler effort was gathered from all stations. When a remote station ran during the same time period as Knox check station, the remote station data contributed, on average, 25% of the angler effort for that day. The remote station data was so variable that no pattern of "angler flow" developed. Therefore, it will be important to keep these remote stations running at random during future fisheries on the South Fork Salmon River.

Figure 3 summarizes the SFSR sport fishery catch and effort since 1997. The SFSR has quickly become a very popular fishery; providing approximately 11 to 37 percent of the recent (since 1997) statewide sport salmon harvest on only 3 to 11 percent of Idaho's stream miles that are open to Chinook salmon fishing.

Anglers fished every day of the week during the 2003 fishery, as they have since 2000. The rate of harvest of recycled fish was consistent with the prior three years' fisheries. It was approximately 35%, and <1% of the recycled fish were recaptured at the trap during the fishery. Recapture of recycled salmon at the adult trap increased, as in prior years, after the sport fishery ended.

Table 4 shows that the number of patrol hours per violation has increased significantly since the 2001 fishery. The violation rate was down to 9% of anglers compared with 22% in 2001 and 19% in 2002. Enforcement hours increased from 20 hours per day in 2001 to 24 hours per day in 2003. One concern expressed by enforcement this year was that plainclothes or undercover work has lost its effectiveness. There was a drastic decrease in undercover violations per hour vs. uniform violations per hour.

The US Forest Service has been under scrutiny by US Fish and Wildlife Service and NOAA Fisheries to maintain and improve instream and riparian habitat throughout the South Fork Salmon River drainage. Heavy angler use throughout the six-mile fishery area has exacerbated stream bank erosion. The Boise National Forest and the Department of Fish and Game have been cooperating to improve trail systems, expand parking access, and manage camping to accommodate future salmon fisheries on this section of river. A number of trail improvements were in place prior to the 2003 fishery. Subsequently, a major parking access and trail improvement program was implemented during the summer after the salmon season closed. Anglers have voiced a great deal of appreciation for these improvements.

Table 2. Age and gender distribution of summer Chinook sampled during the 2003 sport fishery, South Fork Salmon River, Idaho. Length criteria are consistent with those used by McCall Fish Hatchery.

Proportions of fish harvested by age and gender					
Fork length (cm)	Age	Percentage			Total
		Female	Male	Unknown	
< 67	3	0.08	7.42	0.00	7.50
67 to 89	4	33.98	25.41	0.04	59.43
>89	5	15.31	17.64	0.04	32.99
Unknown		0.00	0.00	0.08	0.08
Total		49.37	50.47	0.16	100.00

Table 3. Summary of enforcement by Idaho Department of Fish and Game conservation officers during the 2003 summer Chinook salmon sport fishery, South Fork Salmon River, Idaho.

SOUTH FORK SALMON RIVER FISHERY ENFORCMENT SUMMARY-2003			
Category	Uniform	Undercover	Total
Total enforcement hours	473	235	708
License checks	n/a	n/a	1215
Citations issued	46	9	55
Warnings issued	43	3	46
Incidents	10	0	10
Total violations	99	12	111

Table 4. Comparison of enforcement by Idaho Department of Fish and Game conservation officers for the 2001, 2002, and 2003 summer Chinook salmon sport fisheries, South Fork Salmon River, Idaho.

Chinook Salmon Season Enforcement Summary-South Fork Salmon River									
Category	2001 (23 days)			2002 (28 days)			2003 (29 days)		
	Under			Under			Under		
	Uniform	cover	Total	Uniform	cover	Total	Uniform	cover	Total
Enforcement Hours	363	86	449	514	100	614	473	235	708
Enforcement Hrs/Day	16	4	20	18	4	22	16	8	24
License Checks	970	84	1054	854	33	907			1215
Total Violations	177	55	232	138	34	172	99	12	111
Citations	59	21	80	46	18	64	46	9	55
Warnings	86	21	107	66	12	78	43	3	46
Incidents	32	13	45	26	4	30	10	0	10
Hours/Violation	2.1	1.6	--	4.4	2.9	--	4.8	19.6	--

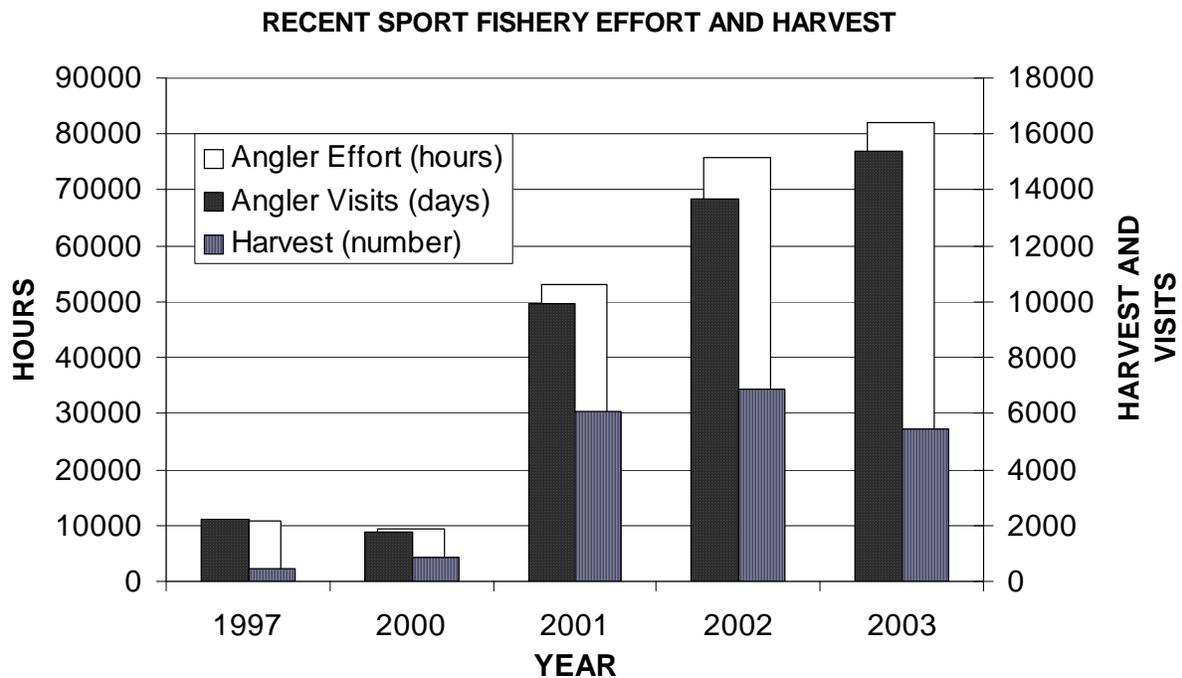


Figure 3. Summary of the five recent sport fisheries for summer chinook Salmon on the South Fork Salmon River, Idaho.

## LITERATURE CITED

- Apperson, K.A. 2003. Summer Chinook salmon sport fisheries on the South Fork Salmon River, Idaho, 2000, 2001, and 2002. IDFG #03-25. Idaho Department of Fish and Game, Boise.
- Apperson, K.A. and G.R. Wilson. 1998. 1997 Chinook salmon fishery on the South Fork Salmon River, Idaho. IDFG 98-32. Idaho Department of Fish and Game, Boise.
- Hassemer, P.F. 1998. Upper South Fork Salmon River summer Chinook salmon. Pages 167-176 *in* Proceedings of the Lower Snake River Compensation Plan Status Review Symposium. U.S. Fish and Wildlife Service, Lower Snake River Compensation Plan Office, Boise, Idaho.
- Hayne, D.W. 1991. Access Point Surveys -- The Access Point Creel Survey: Procedures and Comparison with the Roving-Clerk Creel Survey. Pages 123-138 *in* American Fisheries Society Symposium 12. Institute of Statistics, North Carolina State University, Raleigh.
- Idaho Department of Fish and Game. 2001. Fisheries management plan, 2001-2006. Idaho Department of Fish and Game, Boise.
- Idaho Department of Fish and Game. 2003. Proposal to conduct a recreational fishery in 2003 for unlisted McCall Fish Hatchery summer Chinook salmon in the South Fork Salmon River. Submitted to NOAA Fisheries as required by Permit 1233.
- Lutch, J. J., K. Steinhorst, and C. Beasley. 2002. Evaluation and statistical review of Idaho Supplementation Studies, 1991-2001. Idaho Fish and Game Department, Annual Report to Bonneville Power Administration. Contract No. DE-B179-89BPO1466. Portland, Oregon.
- McPherson, D. E, S. Kammeyer, J. Patterson, and D. Munson. 2004. McCall Fish Hatchery 2003 summer Chinook salmon brood year report. Idaho Department of Fish and Game, Boise.
- Servheen, G. and C. Huntington. 2001. Draft Salmon subbasin summary. Prepared for the Northwest Power Planning Council.

## APPENDIX

Appendix A. Daily check station data and estimate worksheet tables from the 2003 summer Chinook salmon sport fishery, South Fork Salmon River, Idaho.

South Fork Salmon River Chinook Fishery 2003 -- Raw Data from Knox Check Station										
Date	Total Anglers	Total Effort	Surveyed Hours (AM=0700-1500; PM=1500-2300)	Reserve Fish Harvested						Total
				New			Recycled			
				Age 5	Age 4	Jack	Age 5	Age 4	Jack	
06/18/03	60	206	PM	0	0	0	0	0	0	0
06/19/03	22	29	PM	0	0	0	0	0	0	0
06/20/03	50	137	PM	0	0	0	0	0	0	0
06/21/03	61	167	PM	0	0	0	0	0	0	0
06/22/03	32	65	AM	0	0	0	0	0	0	0
06/23/03	10	36	PM	0	0	0	0	0	0	0
06/24/03	26	81	AM	0	0	0	0	0	0	0
06/25/03	19	34	PM	0	0	0	0	0	0	0
06/26/03	34	77	PM	0	0	0	0	0	0	0
06/27/03	49	129	AM	0	0	0	0	0	0	0
06/28/03	91	327	PM	1	1	0	0	0	0	2
06/29/03	154	430	AM	2	6	0	0	0	0	8
06/30/03	159	801	PM	7	12	1	0	0	0	20
07/01/03	160	918	PM	8	18	1	3	3	0	33
07/02/03	233	1,365	PM	24	28	1	2	3	0	58
07/03/03	232	961	AM	36	53	1	3	8	0	101
07/04/03	374	2,049	PM	50	77	3	10	14	0	154
07/05/03	298	1,341	AM	50	90	12	7	6	0	165
07/06/03	427	2,468	PM	65	103	11	5	7	0	191
07/07/03	138	617	AM	24	47	10	0	3	0	84
07/08/03	391	2,421	PM	61	101	9	4	7	0	182
07/09/03	396	2,614	PM	44	87	21	8	14	0	174
07/10/03	418	2,555	PM	42	88	13	9	18	1	171
07/11/03	451	2,924	PM	50	91	9	9	9	1	169
07/12/03	588	4,093	PM	59	135	16	10	24	1	245
07/13/03	554	3,693	PM	64	155	24	7	18	2	270
07/14/03	400	2,705	PM	70	82	11	2	1	1	167
07/15/03	315	2,035	PM	24	49	18	2	5	1	99
07/16/03	720	4,308	PM	55	120	36	14	16	2	243
<b>TOTALS</b>	<b>6,862</b>	<b>39,585</b>		<b>736</b>	<b>1,343</b>	<b>197</b>	<b>95</b>	<b>156</b>	<b>9</b>	<b>2,536</b>

South Fork Salmon River Chinook Fishery 2003 -- Raw Data from Knox Check Station, continued								
Date	Fish Released on day of Interview Only				Harvest of ESA-listed fish			Comments
	Adipose Clipped		Unmarked		Age 5	Age 4	Jack	
	Adult	Jack	Adult	Jack				
06/18/03	0	0	0	0	0	0	0	
06/19/03	0	0	0	0	0	0	0	
06/20/03	0	0	0	0	0	0	0	
06/21/03	0	0	0	0	0	0	0	
06/22/03	0	0	0	0	0	0	0	
06/23/03	0	0	0	0	0	0	0	
06/24/03	0	0	0	0	0	0	0	
06/25/03	0	0	0	0	0	0	0	
06/26/03	0	0	0	0	0	0	0	
06/27/03	0	0	0	0	0	0	0	
06/28/03	0	1	0	0	0	0	0	
06/29/03	0	0	3	0	0	0	0	
06/30/03	1	2	9	0	0	0	0	
07/01/03	1	1	21	0	0	0	0	
07/02/03	18	0	24	1	0	0	0	
07/03/03	29	2	18	0	2	3	0	five listed fish found filleted in dumpster
07/04/03	64	12	112	9	0	0	0	
07/05/03	67	20	74	2	0	0	0	
07/06/03	123	20	172	3	0	2	0	confiscated at ck stn, citations issued by 317,316; 1 ventral clip, 1 no mark
07/07/03	31	14	20	0	0	0	0	
07/08/03	73	9	149	3	0	1	0	ventral clip, warning issued by Vidergar
07/09/03	156	33	192	16	0	0	0	
07/10/03	128	16	106	3	1	0	0	ISS, RV AD area damaged
07/11/03	72	12	184	3	0	0	0	
07/12/03	169	13	284	1	0	0	0	
07/13/03	145	37	268	3	0	0	0	
07/14/03	72	18	143	3	0	0	0	
07/15/03	81	16	162	0	0	0	0	
07/16/03	99	4	166	6	0	0	0	used harvest data from a.m and p.m. shifts, and a.m. shift on 7/17; did not expand raw harvest for today due to total census; proportioned age and recycle status from season proportions
<b>TOTALS</b>	<b>1,329</b>	<b>230</b>	<b>2,107</b>	<b>53</b>	<b>3</b>	<b>6</b>	<b>0</b>	

South Fork Salmon River Chinook Fishery 2003 -- Raw Data from Remote Check Stations											
Date	Station	Surveyed Hours (early AM=0700-1100; late AM=1100-1500; early PM=1500-1900; late PM=1900-2300)	Number of Anglers	Total Effort	Reserve Fish Harvested						Total for all Fish Through Station
					New			Recycled			
					Age 5	Age 4	Jack	Age 5	Age 4	Jack	
06/18/03	Goat Cr	early PM	5	14	0	0	0	0	0	0	0
06/19/03 <sup>a</sup>											
06/20/03											
06/21/03	Goat Cr	late AM	8	22	0	0	0	0	0	0	0
06/22/03	Goat Cr	late PM	0	0	0	0	0	0	0	0	0
06/23/03											
06/24/03	Two-Bit	early PM	2	12	0	0	0	0	0	0	0
06/25/03	Two-Bit	early AM	6	5	0	0	0	0	0	0	0
06/26/03											
06/27/03											
06/28/03	Goat Cr	early PM	21	75	0	0	0	0	0	0	0
06/29/03	Two-Bit	late AM	10	36	0	1	0	0	0	0	1
06/30/03											
07/01/03											
07/02/03	Two-Bit	early PM	19	84	1	1	1	0	0	0	3
07/03/03											
07/04/03	Two-Bit	late PM	37	128	2	1	0	0	0	0	3
07/05/03	Two-Bit	late AM	31	114	2	1	0	0	0	0	3
07/06/03	Two-Bit	late PM	30	175	5	3	0	0	0	0	8
07/07/03											
07/08/03	Goat Cr	early PM	24	132	0	6	1	0	0	0	7
07/09/03											
07/10/03	Two-Bit	early PM	26	198	6	10	0	1	0	0	17
07/11/03											
07/12/03	Goat Cr	late AM	28	131	3	4	1	0	1	0	9
07/13/03	Goat Cr	late PM	48	321	6	17	1	0	0	0	24
07/14/03											
07/15/03	Goat Cr	late AM	19	91	4	9	3	0	0	0	16
07/16/03	Two-Bit	late PM	30	216	3	7	0	0	0	0	10
<b>TOTALS</b>			<b>295</b>	<b>1,444</b>	<b>32</b>	<b>60</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>101</b>

<sup>a</sup> All grey rows in every spreadsheet indicate days when a remote check station was not in operation

South Fork Salmon River Chinook Fishery 2003 -- Raw Data from Remote Check Stations, continued							
Date	Fish Released on Day of Interview Only				Illegal Harvest of Listed Fish		Comments
	Adipose Clipped		Unmarked		Adult	Jack	
	Adult	Jack	Adult	Jack			
06/18/03	0	0	0	0	0	0	
06/19/03							
06/20/03							
06/21/03	0	0	0	0	0	0	
06/22/03	0	0	0	0	0	0	Due to slow angler activity the remote station was not operated on this day.
06/23/03							
06/24/03	0	0	0	0	0	0	
06/25/03	0	0	0	0	0	0	
06/26/03							
06/27/03							
06/28/03	0	1	0	0	0	0	
06/29/03	0	0	0	0	0	0	
06/30/03							
07/01/03							
07/02/03	1	0	0	0	0	0	
07/03/03							
07/04/03	5	1	6	0	0	0	
07/05/03	0	0	2	0	0	0	
07/06/03	4	0	20	0	0	0	
07/07/03							
07/08/03	11	4	8	0	0	0	
07/09/03							
07/10/03	8	0	7	0	0	0	station operated only 2 hrs due to need of clerk at Knox station, so doubled data expansion for today
07/11/03							
07/12/03	4	2	9	0	0	0	
07/13/03	12	0	12	0	0	0	
07/14/03							
07/15/03	2	1	3	0	0	0	
07/16/03	23	3	39	0	0	0	
<b>TOTALS</b>	<b>45</b>	<b>8</b>	<b>64</b>	<b>0</b>	<b>0</b>	<b>0</b>	

<b>South Fork Salmon River Chinook Fishery 2003 -- Daily Fishery Estimates at Knox Check Station</b>											
<b>Date</b>	<b>Expan -sion Factor</b>	<b>Number of Anglers</b>	<b>Total Effort</b>	<b>Reserve Fish Harvested</b>						<b>Total Harvest</b>	
				<b>New</b>			<b>Recycled</b>				
				<b>Age 5</b>	<b>Age 4</b>	<b>Jack</b>	<b>Age 5</b>	<b>Age 4</b>	<b>Jack</b>		
06/18/03	0.67	89.55	307.46	0	0.00	0.00	0.00	0.00	0.00	0.00	
06/19/03	0.67	32.84	42.91	0	0.00	0.00	0.00	0.00	0.00	0.00	
06/20/03	0.67	74.63	204.48	0	0.00	0.00	0.00	0.00	0.00	0.00	
06/21/03	0.67	91.04	249.25	0	0.00	0.00	0.00	0.00	0.00	0.00	
06/22/03	0.33	96.97	196.97	0	0.00	0.00	0.00	0.00	0.00	0.00	
06/23/03	0.67	14.93	53.36	0	0.00	0.00	0.00	0.00	0.00	0.00	
06/24/03	0.33	78.79	245.45	0	0.00	0.00	0.00	0.00	0.00	0.00	
06/25/03	0.67	28.36	50.75	0	0.00	0.00	0.00	0.00	0.00	0.00	
06/26/03	0.67	50.75	114.55	0	0.00	0.00	0.00	0.00	0.00	0.00	
06/27/03	0.33	148.48	389.39	0	0.00	0.00	0.00	0.00	0.00	0.00	
06/28/03	0.67	135.82	488.06	1	1.49	0.00	0.00	0.00	0.00	2.99	
06/29/03	0.33	466.67	1303.03	6	18.18	0.00	0.00	0.00	0.00	24.24	
06/30/03	0.67	237.31	1195.52	10	17.91	1.49	0.00	0.00	0.00	29.85	
07/01/03	0.67	238.81	1370.15	12	26.87	1.49	4.48	4.48	0.00	49.25	
07/02/03	0.67	347.76	2037.31	36	41.79	1.49	2.99	4.48	0.00	86.57	
07/03/03	0.33	703.03	2912.12	109	160.61	3.03	9.09	24.24	0.00	306.06	
07/04/03	0.67	558.21	3058.21	75	114.93	4.48	14.93	20.90	0.00	229.85	
07/05/03	0.33	903.03	4063.64	152	272.73	36.36	21.21	18.18	0.00	500.00	
07/06/03	0.67	637.31	3683.58	97	153.73	16.42	7.46	10.45	0.00	285.07	
07/07/03	0.33	418.18	1869.70	73	142.42	30.30	0.00	9.09	0.00	254.55	
07/08/03	0.67	583.58	3613.43	91	150.75	13.43	5.97	10.45	0.00	271.64	
07/09/03	0.67	591.04	3901.49	66	129.85	31.34	11.94	20.90	0.00	259.70	
07/10/03	0.67	623.88	3813.43	63	131.34	19.40	13.43	26.87	1.49	255.22	
07/11/03	0.67	673.13	4364.18	75	135.82	13.43	13.43	13.43	1.49	252.24	
07/12/03	0.67	877.61	6108.96	88	201.49	23.88	14.93	35.82	1.49	365.67	
07/13/03	0.67	826.87	5511.94	96	231.34	35.82	10.45	26.87	2.99	402.99	
07/14/03	0.67	597.01	4037.31	104	122.39	16.42	2.99	1.49	1.49	249.25	
07/15/03	0.67	470.15	3037.31	36	73.13	26.87	2.99	7.46	1.49	147.76	
07/16/03	1.00	720.00	4308.00	55	120.00	36.00	14.00	16.00	2.00	243.00	
<b>TOTALS</b>		<b>11,315.75</b>	<b>62,531.96</b>	<b>1,243.65</b>	<b>2,246.78</b>	<b>311.67</b>	<b>150.27</b>	<b>251.10</b>	<b>12.45</b>	<b>4,215.91</b>	

South Fork Salmon River Chinook Fishery 2003 -- Daily Fishery Estimates at Knox Check Station, continued										
Date	Fish Released on Day of Interview Only				Total Fish Released	Illegal Harvest of Listed Fish			0.71 x 0.90 x Unmarked adults reported released x 0.1 mortality rate	Total Estimated Lethal Take of Adults
	Adipose Clipped		Unmarked			Harvest x 0.71 x 0.90		Jack		
	Adult	Jack	Adult	Jack		Age 5	Age 4			
06/18/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
06/19/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
06/20/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
06/21/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
06/22/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
06/23/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
06/24/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
06/25/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
06/26/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
06/27/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
06/28/03	0.00	1.49	0.00	0.00	1.49	0.00	0.00	0	0.00	0.00
06/29/03	0.00	0.00	9.09	0.00	9.09	0.00	0.00	0	0.58	0.58
06/30/03	1.49	2.99	13.43	0.00	17.91	0.00	0.00	0	0.86	0.86
07/01/03	1.49	1.49	31.34	0.00	34.33	0.00	0.00	0	2.00	2.00
07/02/03	26.87	0.00	35.82	1.49	64.18	0.00	0.00	0	2.29	2.29
07/03/03	87.88	6.06	54.55	0.00	148.48	1.28	1.92	0	3.49	6.68
07/04/03	95.52	17.91	167.16	13.43	294.03	0.00	0.00	0	10.68	10.68
07/05/03	203.03	60.61	224.24	6.06	493.94	0.00	0.00	0	14.33	14.33
07/06/03	183.58	29.85	256.72	4.48	474.63	0.00	1.28	0	16.40	17.68
07/07/03	93.94	42.42	60.61	0.00	196.97	0.00	0.00	0	3.87	3.87
07/08/03	108.96	13.43	222.39	4.48	349.25	0.00	0.64	0	14.21	14.85
07/09/03	232.84	49.25	286.57	23.88	592.54	0.00	0.00	0	18.31	18.31
07/10/03	191.04	23.88	158.21	4.48	377.61	0.64	0.64	0	10.11	11.39
07/11/03	107.46	17.91	274.63	4.48	404.48	0.00	0.00	0	17.55	17.55
07/12/03	252.24	19.40	423.88	1.49	697.01	0.00	0.00	0	27.09	27.09
07/13/03	216.42	55.22	400.00	4.48	676.12	0.00	0.00	0	25.56	25.56
07/14/03	107.46	26.87	213.43	4.48	352.24	0.00	0.00	0	13.64	13.64
07/15/03	120.90	23.88	241.79	0.00	386.57	0.00	0.00	0	15.45	15.45
07/16/03 <sup>a</sup>	99.00	4.00	166.00	6.00	275.00	0.00	0.00	0	10.61	10.61
<b>TOTALS</b>	<b>2,130.12</b>	<b>396.67</b>	<b>3,239.86</b>	<b>79.22</b>	<b>5,845.87</b>	<b>1.92</b>	<b>4.47</b>	<b>0.00</b>	<b>207.03</b>	<b>213.42</b>

<sup>a</sup> combined harvest data from a.m. and p.m. shifts on 7/16 and a.m. shift on 7/17; did not expand raw harvest for today due to total census; proportioned age and recycle status from season proportions

South Fork Salmon River Chinook Fishery 2003 -- Daily Fishery Estimates from Remote Check Stations										
Date	Expansion Factor	Number of Anglers	Total Effort	Reserve Fish Harvested						Total Harvest
				New			Recycled			
				Age 5	Age 4	Jack	Age 5	Age 4	Jack	
06/18/03	0.31	32.26	87.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/19/03 <sup>a</sup>				0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/20/03				0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/21/03	0.24	66.67	183.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/22/03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/23/03				0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/24/03	0.31	12.90	77.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/25/03	0.06	200.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/26/03				0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/27/03				0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/28/03	0.31	135.48	480.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/29/03	0.24	83.33	300.00	0.00	8.33	0.00	0.00	0.00	0.00	8.33
06/30/03		83.33	300.00	0.00	8.33	0.00	0.00	0.00	0.00	8.33
07/01/03		122.58	541.94	6.45	6.45	6.45	0.00	0.00	0.00	19.35
07/02/03	0.31	122.58	541.94	6.45	6.45	6.45	0.00	0.00	0.00	19.35
07/03/03		122.58	580.65	6.45	6.45	6.45	0.00	0.00	0.00	19.35
07/04/03	0.40	185.00	641.25	10.00	5.00	0.00	0.00	0.00	0.00	15.00
07/05/03	0.24	258.33	945.83	16.67	8.33	0.00	0.00	0.00	0.00	25.00
07/06/03	0.40	150.00	875.00	25.00	15.00	0.00	0.00	0.00	0.00	40.00
07/07/03		154.84	845.16	0.00	38.71	6.45	0.00	0.00	0.00	45.16
07/08/03	0.31	154.84	851.61	0.00	38.71	6.45	0.00	0.00	0.00	45.16
07/09/03		154.84	845.16	0.00	38.71	6.45	0.00	0.00	0.00	45.16
07/10/03	0.31	335.48	2554.84	77.42	129.03	0.00	12.90	0.00	0.00	219.35
07/11/03		335.48	2335.48	77.42	129.03	0.00	12.90	0.00	0.00	219.35
07/12/03	0.24	233.33	1087.50	25.00	33.33	8.33	0.00	8.33	0.00	75.00
07/13/03	0.40	240.00	1602.50	30.00	85.00	5.00	0.00	0.00	0.00	120.00
07/14/03		158.33	754.17	33.33	75.00	25.00	0.00	0.00	0.00	133.33
07/15/03	0.24	158.33	754.17	33.33	75.00	25.00	0.00	0.00	0.00	133.33
07/16/03	0.40	150.00	1080.00	15.00	35.00	0.00	0.00	0.00	0.00	50.00
<b>TOTALS</b>		<b>3650.53</b>	<b>18415.69</b>	<b>362.52</b>	<b>741.87</b>	<b>102.04</b>	<b>25.80</b>	<b>8.33</b>	<b>0.00</b>	<b>1240.57</b>

<sup>a</sup> Total anglers and effort were not expanded to days not sampled at the remote stations until 6/28 due to the erratic flow of anglers through these remote stations during the first week of the season, prior to detection of any harvest.

South Fork Salmon River Chinook Fishery 2003 -- Daily Fishery Estimates from Remote Check Stations, continued											
Date	Fish Released on Day of Interview Only				Total Fish Released	Illegal harvest of Listed Fish			0.71 x 0.90 x Unmarked adults reported released x 0.1 mortality rate	Total Estimated Lethal Take of Adults	Comments
	Adipose Clipped		Unmarked			Harvest x 0.71 x 0.90	Jack				
	Adult	Jack	Adult	Jack				Age 5			
06/18/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
06/19/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
06/20/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
06/21/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
06/22/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
06/23/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
06/24/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
06/25/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
06/26/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
06/27/03	0.00	6.45	0.00	0.00	6.45	0.00	0.00	0.00	0.00	0.00	applied 6/28 data for expansion
06/28/03	0.00	6.45	0.00	0.00	6.45	0.00	0.00	0.00	0.00	0.00	
06/29/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
06/30/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	applied 6/29 data for expansion
07/01/03	6.45	0.00	0.00	0.00	6.45	0.00	0.00	0.00	0.00	0.00	applied 7/2 data for expansion
07/02/03	6.45	0.00	0.00	0.00	6.45	0.00	0.00	0.00	0.00	0.00	
07/03/03	6.45	0.00	0.00	0.00	6.45	0.00	0.00	0.00	0.00	0.00	applied 7/2 data for expansion
07/04/03	25.00	5.00	30.00	0.00	60.00	0.00	0.00	0.00	1.92	1.92	
07/05/03	0.00	0.00	16.67	0.00	16.67	0.00	0.00	0.00	1.07	1.07	
07/06/03	20.00	0.00	100.00	0.00	120.00	0.00	0.00	0.00	6.39	6.39	
07/07/03	70.97	25.81	51.61	0.00	148.39	0.00	0.00	0.00	3.30	3.30	applied 7/8 data for expansion
07/08/03	70.97	25.81	51.61	0.00	148.39	0.00	0.00	0.00	3.30	3.30	
07/09/03	70.97	25.81	51.61	0.00	148.39	0.00	0.00	0.00	3.30	3.30	applied 7/8 data for expansion
07/10/03	103.23	0.00	90.32	0.00	193.55	0.00	0.00	0.00	5.77	5.77	station operated only 2 hrs due to need of clerk at Knox station, so doubled data expansion for today
07/11/03	103.23	0.00	90.32	0.00	193.55	0.00	0.00	0.00	5.77	5.77	applied 7/10 data for expansion
07/12/03	33.33	16.67	75.00	0.00	125.00	0.00	0.00	0.00	4.79	4.79	
07/13/03	60.00	0.00	60.00	0.00	120.00	0.00	0.00	0.00	3.83	3.83	
07/14/03	60.00	0.00	60.00	0.00	120.00	0.00	0.00	0.00	3.83	3.83	applied 7/13 data for expansion
07/15/03	16.67	8.33	25.00	0.00	50.00	0.00	0.00	0.00	1.60	1.60	
07/16/03	115.00	15.00	195.00	0.00	325.00	0.00	0.00	0.00	12.46	12.46	
<b>TOTALS</b>	<b>768.72</b>	<b>135.33</b>	<b>897.14</b>	<b>0.00</b>	<b>1801.19</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>57.33</b>	<b>57.33</b>	

South Fork Salmon River-Total daily fishery estimate									
Date	Total Number of Anglers	Total Hours Fished	Reserve Fish Harvested						Total Harvest
			New			Recycled			
			Age 5	Age 4	Jack	Age 5	Age 4	Jack	
06/18/03	121.81	394.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/19/03	32.84	42.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/20/03	74.63	204.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/21/03	157.71	432.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/22/03	96.97	196.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/23/03	14.93	53.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/24/03	91.69	322.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/25/03	228.36	200.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/26/03	50.75	114.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/27/03	148.48	389.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/28/03	271.30	968.70	1.49	1.49	0.00	0.00	0.00	0.00	2.99
06/29/03	550.00	1603.03	6.06	26.52	0.00	0.00	0.00	0.00	32.58
06/30/03	320.64	1495.52	10.45	26.24	1.49	0.00	0.00	0.00	38.18
07/01/03	361.39	1912.09	18.39	33.32	7.94	4.48	4.48	0.00	68.60
07/02/03	470.34	2579.25	42.27	48.24	7.94	2.99	4.48	0.00	105.92
07/03/03	825.61	3492.77	115.54	167.06	9.48	9.09	24.24	0.00	325.41
07/04/03	743.21	3699.46	84.63	119.93	4.48	14.93	20.90	0.00	244.85
07/05/03	1161.36	5009.47	168.18	281.06	36.36	21.21	18.18	0.00	525.00
07/06/03	787.31	4558.58	122.01	168.73	16.42	7.46	10.45	0.00	325.07
07/07/03	573.02	2714.86	72.73	181.13	36.75	0.00	9.09	0.00	299.71
07/08/03	738.42	4465.05	91.04	189.46	19.88	5.97	10.45	0.00	316.80
07/09/03	745.88	4746.65	65.67	168.56	37.79	11.94	20.90	0.00	304.86
07/10/03	959.36	6368.27	140.11	260.38	19.40	26.34	26.87	1.49	474.58
07/11/03	1008.61	6699.66	152.05	264.85	13.43	26.33	13.43	1.49	471.59
07/12/03	1110.95	7196.46	113.06	234.83	32.21	14.93	44.15	1.49	440.67
07/13/03	1066.87	7114.44	125.52	316.34	40.82	10.45	26.87	2.99	522.99
07/14/03	755.34	4791.48	137.81	197.39	41.42	2.99	1.49	1.49	382.58
07/15/03	628.48	3791.48	69.15	148.13	51.87	2.99	7.46	1.49	281.09
07/16/03	870.00	5388.00	70.00	155.00	36.00	14.00	16.00	2.00	293.00
<b>TOTALS</b>	<b>14,966.28</b>	<b>80,947.65</b>	<b>1,606.17</b>	<b>2,988.65</b>	<b>413.70</b>	<b>176.08</b>	<b>259.43</b>	<b>12.45</b>	<b>5,456.48</b>
<b>Averages<sup>a</sup></b>	<b>1,383.95</b>	<b>7,615.82</b>	<b>152.97</b>	<b>284.63</b>	<b>39.40</b>	<b>16.77</b>	<b>24.71</b>	<b>1.19</b>	<b>519.66</b>
VAR <sup>a</sup>	83,273	4,214,940	2,885	9,642	285	74	140	1	30,875
SE	289	2,053	54	98	17	9	12	1	176
B	577	4,106	107	196	34	17	24	2	351
lower B	14,389	76,842	1,499	2,792	380	159	236	11	5,105
upper B	15,543	85,054	1,714	3,185	447	193	283	14	5,808

<sup>a</sup> Calculated for 6/27 – 7/16 only

South Fork Salmon River-Total Daily Fishery Estimate, continued											
Date	Fish Released on Day of Interview Only					Harvest Rate (hours / fish)	Illegal Harvest of Listed Fish			0.71 x 0.90 x Unmarked adults reported released x 0.1 mortality rate	Total Estimated Lethal Take of Adults
	Adipose Clipped		Unmarked		Total Fish Released		Harvest x 0.71 x 0.90		Jack		
	Adult	Jack	Adult	Jack			Age 5	Age 4			
06/18/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/19/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/20/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/21/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/22/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/23/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/24/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/25/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/26/03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/27/03	0.00	6.45	0.00	0.00	6.45	60.37	0.00	0.00	0.00	0.00	0.00
06/28/03	0.00	7.94	0.00	0.00	7.94	88.63	0.00	0.00	0.00	0.00	0.00
06/29/03	0.00	0.00	9.09	0.00	9.09	38.47	0.00	0.00	0.00	0.58	0.58
06/30/03	1.49	2.99	13.43	0.00	17.91	26.66	0.00	0.00	0.00	0.86	0.86
07/01/03	7.94	1.49	31.34	0.00	40.78	17.48	0.00	0.00	0.00	2.00	2.00
07/02/03	33.32	0.00	35.82	1.49	70.63	14.61	0.00	0.00	0.00	2.29	2.29
07/03/03	94.33	6.06	54.55	0.00	154.93	7.27	1.28	1.92	0.00	3.49	6.68
07/04/03	120.52	22.91	197.16	13.43	354.03	6.18	0.00	0.00	0.00	12.60	12.60
07/05/03	203.03	60.61	240.91	6.06	510.61	4.84	0.00	0.00	0.00	15.39	15.39
07/06/03	203.58	29.85	356.72	4.48	594.63	4.96	0.00	1.28	0.00	22.79	22.79
07/07/03	164.91	68.23	112.22	0.00	345.36	4.21	0.00	0.00	0.00	7.17	7.17
07/08/03	179.92	39.24	274.00	4.48	497.64	5.48	0.00	0.64	0.00	17.51	18.15
07/09/03	303.81	75.06	338.18	23.88	740.93	4.54	0.00	0.00	0.00	21.61	21.61
07/10/03	294.27	23.88	248.53	4.48	571.16	6.09	0.64	0.64	0.00	15.88	17.16
07/11/03	210.69	17.91	364.95	4.48	598.03	6.26	0.00	0.00	0.00	23.32	23.32
07/12/03	285.57	36.07	498.88	1.49	822.01	5.70	0.00	0.00	0.00	31.88	31.88
07/13/03	276.42	55.22	460.00	4.48	796.12	5.39	0.00	0.00	0.00	29.39	29.39
07/14/03	167.46	26.87	273.43	4.48	472.24	5.61	0.00	0.00	0.00	17.47	17.47
07/15/03	137.56	32.21	266.79	0.00	436.57	5.28	0.00	0.00	0.00	17.05	17.05
07/16/03	214.00	19.00	361.00	6.00	600.00	6.03	0.00	0.00	0.00	23.07	23.07
<b>Totals</b>	<b>2,898.83</b>	<b>532.00</b>	<b>4,137.00</b>	<b>79.22</b>	<b>7,647.06</b>	<b>--</b>	<b>1.92</b>	<b>4.47</b>	<b>0.00</b>	<b>264.35</b>	<b>270.74</b>
<b>Averages<sup>a</sup></b>	<b>276.08</b>	<b>50.67</b>	<b>394.00</b>	<b>7.55</b>	<b>728.29</b>	<b>15.73</b>	<b>0.18</b>	<b>0.43</b>	<b>0.00</b>	<b>25.18</b>	<b>25.79</b>
VAR <sup>a</sup>	11,615	541	26,719	33	80,516	--	0	0	--	109	108
SE	108	23	163	6	284	--	0	1	--	10	10
B	216	47	327	12	568	--	1	1	--	21	21
lower B	2,683	485	3,810	68	7,080	--	1	4	--	243	250
upper B	3,114	579	4,464	91	8,215	--	3	6	--	285	292

<sup>a</sup> Calculated for 6/27 – 7/16 only

Submitted by:

Approved by:

IDAHO DEPARTMENT OF FISH AND GAME

Nicole Warburton Dyson  
Fishery Technician

---

Virgil K. Moore, Chief  
Bureau of Fisheries

Kimberly A. Apperson  
Regional Anadromous Fishery Biologist

---

William D. Horton  
Anadromous Fishery Coordinator