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# **Cooperative Salmon Drift Gillnet Test Fishing in the Lower Yukon River, 2004**

**Annual Report for Project 04-229**

**USFWS Office of Subsistence Management**

**Fisheries Information Services Division**

**by**

**Matt Fox**

**and**

**Steve J. Hayes**

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October 2006

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries





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LOWER YUKON RIVER, FALL 2004**

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October 2006

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## **ABSTRACT**

The Lower Yukon River drift gillnet test fish program is designed to assess the run timing and relative abundance of fall chum *Oncorhynchus keta* and coho *O. kisutch* salmon. This project was operated to obtain information inseason for fisheries managers to use in assessing relative abundance and run timing of salmon returning to the Yukon River drainage. Fall trends from drift gillnet test fishing in the Lower Yukon River were similar to trends observed in the sonar passage estimates obtained at Pilot Station. Age, sex, and length measurements were taken; run timing was recorded and catch per unit effort was calculated for each species.

Key Words: Yukon River, chum salmon, *Oncorhynchus keta*, and coho salmon, *O. kisutch*, fall chum, gillnet test fishery, run assessment, catch per unit effort.

## **INTRODUCTION**

The Lower Yukon River drift gillnet test fish program is designed to assess run timing and relative abundance of chum *Oncorhynchus keta* and coho *O. kisutch* salmon. The goal of this project is to determine the feasibility of using drift gillnets to obtain information inseason for fisheries managers to use for assessing relative abundance and run timing of salmon returning to the Yukon River drainage. Beginning in 2001, the fall chum salmon set gillnets were replaced by drift gillnets. There was uncertainty that the set gillnets were providing representative samples of the fall chum and coho salmon runs at the Middle Mouth and Big Eddy test fishing sites (Figure 1). Deviation of the drift gillnet data from the set gillnet data may be explained by changes in riverbanks, channels, and sandbar migrations. In addition, the incidence of mortalities is considerably less using drift gillnets. These data may be used in conjunction with other information to help ensure that sufficient numbers of salmon pass the Lower Yukon River to provide for escapement, treaty commitments, and subsistence uses.

The total number of fall chum salmon returning to the Yukon River has been depressed in recent years. In the fall of 2001, the Alaska Department of Fish and Game (ADF&G) expanded an existing summer drift gillnet test fishery located at Big Eddy to include drift locations at Middle Mouth. With the addition of the Middle Mouth drift sites to the Big Eddy drift sites, assessment is possible for fall chum salmon transiting the North, Middle, and South mouths of the Yukon River Delta, downstream from major subsistence and commercial fisheries.

## **OBJECTIVES**

The objectives for the Lower Yukon drift gillnet test fisheries are to:

1. Estimate relative abundance and run timing information on chum (fall) and coho salmon on a daily basis.
2. Maintain an up-to-date log of catches and catch per unit effort (CPUE) index by species.
3. Compare CPUE and catch trends with other upriver projects.
4. Sample and record age, sex, and length data from salmon.

## METHODS

Two locations were used in 2004 for the Lower Yukon River drift gillnet test fish project. The first test fishing location (Big Eddy) was located in the main channel of the South Mouth of the Yukon River Delta upstream and southeast from the village of Emmonak (Figure 1). One drift station was located on each side of the north and south shore. Station 1 at Big Eddy was located directly south of the confluence of the Kwiguk Mouth and the South Mouth, near the southern shore. Station 2 was located directly east of Station 1 on the opposite shore, approximately 0.25 mile (200 m) downstream and southeast from the starting point of Station 1. The Big Eddy drift gillnet fishing locations were primarily chosen to assess salmon transiting via the South Mouth of the Yukon River Delta. The locations were secondarily chosen because of their proximity to the village of Emmonak.

The second test fishing location, Middle Mouth, was located upstream and south from the confluence of the Kawanak and Kwikpak Passes to assess numbers of salmon entering the North and Middle mouths of the Yukon River Delta (Figure 1). Two drift gillnet stations were utilized in Kwikpak Pass near Hamilton Slough, one on either side of the outlet at approximately 24 river miles (39 km). Station 1 was located on the west side of the river and Station 2 was located upstream about 0.25 mile (200 m) and closer to shore on the opposite bank. The Station 1 drift gillnet starting point was at a place named “Hootch’s Camp,” approximately 3 miles from the Middle Mouth camp by skiff. Station 2 was located on the east bank, approximately 0.25 to 0.50 mile (400–800 m) downstream and north from Hootch’s Camp.

A single mesh size drift gillnet was used in the fall season from July 16 to August 27. The gillnets were 50 fathoms (91.4 m) in length with a cork marker at 25 fathoms (45.7 m). The gillnets used for catching fall chum and coho salmon were constructed with 6-inch (15.2 cm) mesh and were 45 meshes in depth.

All gillnets were fished by drifting from 22 foot (6.7 m) open aluminum skiffs with one end of the net attached to the skiff and the other attached to a buoy. In times of increased salmon abundance, inclement weather, or excess debris the net would be shortened to the 25 fathom cork mark to make the net more manageable. When 25 fathoms of the gillnet was fished, the information was recorded and compensated for in the CPUE calculations. The drift gillnets were fished twice daily during both tidal surges at the Middle Mouth and Big Eddy locations, except during rough weather or commercial openers. Depth profiles at each of the drift stations were made at various times during the season. To take depth profiles, technicians checked depths during the setting and the retrieval of the drift net.

The objective was to retrieve the drift gillnets after 20 minutes of fishing or an estimated 30 fish had been caught. These nets were fished once per station, twice a day, at Big Eddy and Middle Mouth starting with Station 1, followed by Station 2. The species, number caught, number retained, mesh size, station, length of gillnet used, and fishing times were recorded. Captured fish were counted and released unharmed, unless injured by the netting activity. Fish injured by gillnets were distributed locally for subsistence purposes. Lights were installed on the skiffs for night fishing to illuminate the net and skiff deck. Strobe lights were attached to buoys and hand-held spotlights were also used to illuminate the nets during night fishing operations.

Times used for determining tides were based on the Nushagak tide table. For the South Mouth (Kwikluak Pass), 2 hours and 30 minutes were added to the Nushagak high tide to correspond with the high tide at the mouth. For the South Mouth, 4 hours and 30 minutes were added for



travel time to the mouth: so, timing of the tidal surge at Big Eddy was determined to occur 7 hours after the published high tide.

For the Middle Mouth (Kawanak Pass), 3 hours and 9 minutes were added to the Nushagak high tide to correspond with the high tide at the mouth. After extensive experimental drifts, the Middle Mouth travel time was determined to be 3 hours and 30 minutes after the adjusted high tide at the mouth, so drifting at Middle Mouth occurs 6 hours and 39 minutes after the posted high tide.

The deployment, fishing, and retrieval of the drift gillnets were recorded for each sampling event. CPUE was calculated using fish per 100-fathom hours:

$$CPUE = [(100 \text{ fathom} \times 60 \text{ minutes}) \times (n)] / (L \times T) \quad (1)$$

where:

$n$  = number of fish caught,

$L$  = length of net in fathoms

$T$  = the time the net fished

The time the net fished was calculated using:

$$T = ((\text{set time} + \text{retrieval time}) / 2) + \text{soak time} \quad (2)$$

The amount of time the gillnet was soaked varied. An independent CPUE calculation was made for each drift fished. This value was summed with CPUE calculations from the same day and gear type and then averaged to obtain a CPUE for the day and gear type:

$$\text{Daily CPUE} = ((\sum \text{CPUE}) / n) \quad (3)$$

where:

$$n = \text{number of sets for the given day and gear type.} \quad (4)$$

Retained salmon were sampled for age, sex, and length (ASL) information. All salmon lengths were measured from mideye to tail fork and rounded off to the nearest five millimeters. One scale was collected from each fall chum salmon sampled. Three scales were taken from each coho salmon sampled. The sex of each salmon was verified by visual examination of the gonads through a small ventral incision.

## RESULTS

### FALL CHUM SALMON

A combined total of 939 fall chum salmon were captured at the Big Eddy and Middle Mouth drift gillnet test fishery locations with a corresponding cumulative CPUE of 755.56 (Table 1). Of the fall chum salmon, 304 were released unharmed, none were discarded, and 635 were distributed to local residents (Appendix A2).

The mean drift time in the Big Eddy location was 20.1 minutes per set, per day, using 6-inch mesh gillnets (Appendix B1). The Big Eddy drift gillnet test fishery captured 365 fall chum salmon with a corresponding cumulative CPUE of 521.6 (Table 1). Females comprised 53.7%

of the 188 fall chum salmon sampled for ASL data. Age-0.2 fall chum comprised 12.8% of the total sampled, age-0.3 fall chum salmon made up 52.7%, and age-0.4 fall chum salmon made up 34.6% of the total sampled, respectively. Mean lengths for male fall chum salmon were 579 mm for age-0.2 fish ( $n=9$ ), 601 mm for age-0.3 fish ( $n=46$ ), and 618 mm for age-0.4 fish ( $n=32$ ). Female fall chum salmon had mean lengths of 580 mm for age-0.2 fish ( $n=15$ ), 594 mm for age-0.3 fish ( $n=53$ ), and 607 mm for age-0.4 fish ( $n=33$ ) (Table 2). The midpoint of the fall chum salmon run at the Big Eddy location was August 2 (Table 1).

Middle Mouth drift gillnet test fishing had a mean fishing time of 19.5 minutes per set, per day, (Appendix B2). There were 574 fall chum captured with a corresponding cumulative CPUE of 989.5 (Table 1). Females comprised 66% of the 194 fall chum salmon sampled for ASL data. Age-0.3 fall chum salmon made up 47.4% of the total sampled and age-0.4 fish made up 27.3%. Age-0.2 chum salmon comprised 24.2% total sampled while age-.5 fish totaled 0.5%, respectively. Mean lengths for male fall chum salmon were 569 mm for age-0.2 fish ( $n=14$ ), 598 mm for age-0.3 fish ( $n=30$ ), 609 mm for age-0.4 fish ( $n=21$ ), and 610 mm for age-0.5 fish ( $n=1$ ). Female fall chum salmon had mean lengths of 570 mm for age-0.2 fish ( $n=33$ ), 576 mm for age-0.3 fish ( $n=62$ ), 595 mm for age-0.4 fish ( $n=32$ ), and 600 mm for age-0.5 fish ( $n=1$ ) (Table 2). The midpoint of the fall chum salmon run at the Middle Mouth location was August 9 (Table 1).

## **COHO SALMON**

In 2004, Pilot Station Sonar recorded a passage estimate of 188,350 coho salmon. A combined total of 332 coho salmon were captured in the Big Eddy and Middle Mouth drift gillnet test fisheries, which resulted in a corresponding cumulative CPUE of 297.45 (Table 3). Of the coho salmon, 180 were released unharmed, none were discarded, and 152 were distributed to local residents (Appendix A2).

The mean drift time in the Big Eddy location was 20.1 minutes per set per day (Appendix B1). There were 72 coho salmon captured with a corresponding cumulative CPUE of 103.84 (Table 3). Females comprised approximately 51.7% of the 29 coho salmon sampled for ASL data. Three age classes comprised the coho salmon ASL data with 89.7% of the sample being age-2.1 fish, 6.9% represented age-1.1 fish, followed by age-3.1 with 3.4%, respectively. Mean lengths for male coho salmon were 600 mm for age-1.1 fish ( $n=1$ ) and 573 mm for age-2.1 fish ( $n=13$ ). Female coho salmon had mean lengths of 405 mm for age-1.1 fish ( $n=1$ ), 585 mm for age-2.1 fish ( $n=13$ ), and 550 mm for age-3.1 fish ( $n=1$ ) (Table 4). The midpoint of the coho salmon run at the Big Eddy drift gillnet location was August 25 (Table 3).

Middle Mouth drift gillnet test fishing had a mean fishing time of 19.5 minutes per set per day (Appendix B2). There were 260 coho salmon captured with a corresponding cumulative CPUE of 491.05 (Table 3). Female coho salmon made up approximately 35% of the 100 coho salmon sampled for ASL data. Most coho salmon were age-2.1 fish (74%), followed by age-1.1 fish (22%) and age-3.1 fish (4%). Male coho salmon had mean length measurements of 564 mm for age-1.1 fish ( $n=14$ ), 565 mm for age-2.1 fish ( $n=49$ ), and 535 mm for age-3.1 fish ( $n=2$ ). Female coho salmon had mean lengths of 569 mm for age-1.1 fish ( $n=8$ ), 570 mm for age-2.1 fish ( $n=25$ ), and 590 mm for age-3.1 fish ( $n=2$ ) (Table 4). The midpoint of the coho salmon run at the Middle Mouth drift gillnet location was August 20 (Table 3).

## **DISCUSSION**

### **FALL CHUM SALMON**

Timing of fall chum salmon caught in the 2004 Lower Yukon drift gillnet test fishery was later than both 2003 (4 days) and 2001 (7 days), but 5 days earlier than 2002 (Table 6 and Figure 2). Pulses of fall chum salmon observed in the combined CPUE for Big Eddy and Middle Mouth were also observed in the Pilot Station sonar passage estimates (Figures 3–5). The midpoint for the fall chum salmon run occurred on August 9 at the Middle Mouth drift gillnet test fishery and on August 2 at Big Eddy. The combined results from Middle Mouth and Big Eddy show that the midpoint of the fall chum salmon run occurred on August 8 (Table 1). The midpoint of the fall chum salmon run occurred on August 11 at the Pilot Station sonar site (Table 5). Assuming a typical lag of 3 days travel time between the Lower Yukon River test fisheries and Pilot Station for fall chum salmon traveling 35 miles per day, the Middle Mouth midpoint occurred on the expected date, when compared to the Pilot Station midpoint. The Big Eddy midpoint was 3 or 4 days earlier than expected when compared to the Pilot Station midpoint.

Fall chum salmon captured in the Big Eddy 6-inch drift gillnet test fishery compared well in size to those captured in the Middle Mouth drift gillnet test fishery. Male fall chum salmon at the Big Eddy site were 9 mm larger for age-0.4 fish, 3 mm larger for age-0.3 fish, and 10 mm larger for age-0.2 fish. Female fall chum salmon captured in Big Eddy were 12 mm larger for age-0.4 fish, 18 mm larger for age-0.3 fish and 10 mm larger for age-0.2 fish (Table 2). The proportion of age-0.4 fall chum salmon (30.9%) compared favorably to the ten year average of 31.3%.

Relative abundance information cannot be calculated from the data collected for fall chum salmon at the Big Eddy and Middle Mouth drift gillnet test fishery locations at this time. However, the correlation of the 2001–2004 CPUE data calculated for the Lower Yukon River drift gillnet test fisheries and sonar passage estimates at Pilot Station indicate a relationship may be developed in the future (Table 5; Figures 6 and 7).

### **COHO SALMON**

Timing of coho salmon caught in the 2004 Lower Yukon River drift gillnet test fishery was 6 days later than 2003, 5 days later than 2002, and 9 days later than 2002 (Table 7; Figure 8). The pulses of coho salmon caught in the Middle Mouth and Big Eddy drift gillnet test fisheries followed the trends observed in the Pilot Station sonar estimates (Figures 9–11). The midpoint for the coho salmon run in the Middle Mouth and Big Eddy drift gillnet test fisheries occurred on August 21 (Table 3). The midpoint of the coho salmon run as estimated by the Pilot Station sonar occurred on the expected date, August 23 (Table 5).

Coho salmon captured in the Big Eddy drift gillnet test fishery compared well in size to those captured in the Middle Mouth drift gillnet test fishery. Female coho salmon at the Big Eddy site were 15 mm larger for age–2.1 fish and 40 mm smaller for age–3.1 fish. Female coho salmon captured in Middle Mouth were 164 mm larger for age–1.1 fish (Table 4).

## **RECOMMENDATIONS**

The Lower Yukon River drift gillnet project completed 4 years of full operation in 2004, with drifts being performed in both Middle Mouth and Big Eddy. Since the years 2001–2003, the drift gillnet project operated on a tidal schedule with no determination made of the effect of tidal

surge on fish entering the river. Inconsistencies seen when comparing the catches of the drift gillnet project to other run assessment projects are most likely caused by the short duration (4 years) of the project. We recommend continued use of the drift gillnet test fishing utilizing a set drift schedule to determine run timing and relative abundance for fall chum and coho salmon.

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## **TABLES AND FIGURES**

**Table 1.**—Catch data for the Lower Yukon River fall chum salmon drift gillnet test fisheries, 2004.

Date	Middle Mouth Test Fishery				Big Eddy Test Fishery				M.M and B.E. Combined			
	Daily Catch	Daily CPUE	Prop.	Cum. CPUE	Daily Catch	Daily CPUE	Prop.	Cum. CPUE	Daily Catch	Daily CPUE	Prop.	Cum. CPUE
7/16	0	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00	0.00
7/17	0	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00	0.00
7/18	1	1.43	0.00	1.43	0	0.00	0.00	0	1	0.72	0.00	0.72
7/19	24	33.41	0.04	34.84	23	62.73	0.12	62.73	47	48.07	0.06	48.79
7/20	8	24	0.06	58.84	5	7.91	0.14	70.64	13	15.96	0.09	64.74
7/21	15	23.15	0.08	81.99	11	16.62	0.17	87.26	26	19.89	0.11	84.63
7/22	6	8.97	0.09	90.96	1	1.58	0.17	88.84	7	5.28	0.12	89.90
7/23	1	1.62	0.09	92.58	1	1.58	0.17	90.42	2	1.60	0.12	91.50
7/24	0	0	0.09	92.58	1	1.54	0.18	91.96	1	0.77	0.12	92.27
7/25	0	0	0.09	92.58	1	1.50	0.18	93.46	1	0.75	0.12	93.02
7/26	2	3.08	0.10	95.66	5	7.14	0.19	100.6	7	5.11	0.13	98.13
7/27	2	3.09	0.10	98.75	0	0.00	0.19	100.6	2	1.55	0.13	99.68
7/28	0	0	0.10	98.75	0	0.00	0.19	100.6	0	0.00	0.13	99.68
7/29	1	1.46	0.10	100.21	0	0.00	0.19	100.6	1	0.73	0.13	100.41
7/30	0	0	0.10	100.21	0	0.00	0.19	100.6	0	0.00	0.13	100.41
7/31	0	0	0.10	100.21	10	13.77	0.22	114.37	10	6.89	0.14	107.29
8/01	114	161.8	0.26	262.01	105	131.6	0.47	246.03	219	146.73	0.34	254.02
8/02	55	89.39	0.36	351.40	39	59.61	0.59	305.64	94	74.50	0.43	328.52
8/03	12	36.19	0.39	387.59	0	0.00	0.59	305.64	12	18.10	0.46	346.62
8/04	16	24.12	0.42	411.71	0	0.00	0.59	305.64	16	12.06	0.47	358.68
8/05	3	4.43	0.42	416.14	0	0.00	0.59	305.64	3	2.22	0.48	360.89
8/06	5	7.58	0.43	423.72	0	0.00	0.59	305.64	5	3.79	0.48	364.68
8/07	2	3.08	0.43	426.80	1	1.46	0.59	307.1	3	2.27	0.49	366.95
8/08	12	16.93	0.45	443.73	82	102.3	0.78	409.41	93	59.62	0.56	426.57
8/09	39	52.56	0.50	496.29	36	50.06	0.88	459.47	75	51.31	0.63	477.88
8/10	18	25.85	0.53	522.14	5	7.43	0.90	466.9	23	16.64	0.65	494.52
8/11	2	3.08	0.53	525.22	0	0.00	0.90	466.9	2	1.54	0.66	496.06
8/12	0	0	0.53	525.22	0	0.00	0.90	466.9	0	0.00	0.66	496.06
8/13	1	1.5	0.53	526.72	2	3.54	0.90	470.44	3	2.52	0.66	498.58
8/14	30	46.48	0.58	573.20	2	2.74	0.91	473.18	32	24.61	0.69	523.19
8/15	15	20.87	0.60	594.07	0	0.00	0.91	473.18	14	10.44	0.71	533.63
8/16	0	0	0.60	594.07	0	0.00	0.91	473.18	0	0.00	0.71	533.63
8/17	2	2.96	0.60	597.03	1	1.28	0.91	474.46	3	2.12	0.71	535.75
8/18	1	2.93	0.61	599.96	0	0.00	0.91	474.46	1	1.47	0.71	537.21
8/19	0	0	0.61	599.96	0	0.00	0.91	474.46	0	0.00	0.71	537.21
8/20	109	232.5	0.84	832.49	4	5.55	0.92	480.01	113	119.04	0.87	656.25
8/21	11	39.2	0.88	871.69	1	1.50	0.92	481.51	12	20.35	0.90	676.60
8/22	0	0	0.88	871.69	1	1.54	0.93	483.05	1	0.77	0.90	677.37
8/23	0	0	0.88	871.69	0	0.00	0.93	483.05	0	0.00	0.90	677.37
8/24	0	0	0.88	871.69	8	11.61	0.95	494.66	8	5.81	0.90	683.18
8/25	7	20.64	0.90	892.33	0	0.00	0.95	494.66	7	10.32	0.92	693.50
8/26	12	17.61	0.92	909.94	13	18.01	0.98	512.67	25	17.81	0.94	711.31
8/27	48	79.57	1.00	989.51	7	8.94	1.00	521.61	55	44.26	1.00	755.56
8/28 <sup>a</sup>												
Total	574	989.5			365	521.6			939	755.56		

Note: Second and third quartiles in boxes with midpoint in bold.

<sup>a</sup> Project operations ceased on 8/27, resulting in no data for 8/28.

**Table 2.**—Fall chum salmon age, sex, and length data for the Lower Yukon drift gillnet test fisheries, 2004.

Big Eddy fall chum salmon 6-inch drift gillnet test fishing catch age and sex composition, and mean length (mm), 2004.

Sample Size		Brood Year and (Age Group)										Total		
		2001		2000		1999		1998		1997				
		(0.2)		(0.3)		(0.4)		(0.5)		(0.6)				
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Season Total	188	Males	9	4.8	46	24.5	32	17.0	0	0.0	0	0.0	87	46.3
		Females	15	8.0	53	28.2	33	17.6	0	0.0	0	0.0	101	53.7
		Total	24	12.8	99	52.7	65	34.6	0	0.0	0	0.0	188	100.0
Mean Length		Males	579		601		618		0		0			
Std. Error			9		4		4		0		0			
Mean Length		Females	580		594		607		0		0			
Std. Error			5		3		6		0		0			

Middle Mouth fall chum salmon 6-inch drift gillnet test fishing catch age and sex composition by stratum and mean length (mm), 2004.

Sample Size		Brood Year and (Age Group)										Total		
		2001		2000		1999		1998		1997				
		(0.2)		(0.3)		(0.4)		(0.5)		(0.6)				
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Season Total	194	Males	14	7.2	30	15.5	21	10.8	1	0.5	0	0.0	66	34.0
		Females	33	17.2	62	32.0	32	16.5	1	0.5	0	0.0	128	66.0
		Total	47	24.2	92	47.4	53	27.3	2	1.0	0	0.0	194	100.0
Mean Length		Males	569		598		609		610		0			
Std. Error			6		5		5		-		0			
Mean Length		Females	570		576		595		600		0			
Std. Error			3		3		5		-		0			

Middle Mouth and Big Eddy fall chum salmon 6-inch drift gillnet test fishing catch age and sex composition combined, 2004.

Sample Size		Brood Year and (Age Group)										Total		
		2001		2000		1999		1998		1997				
		(0.2)		(0.3)		(0.4)		(0.6)		(0.7)				
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Season Total	382	Males	23	6.0	76	19.9	53	13.9	1	0.3	0	0.0	153	40.1
		Females	48	12.6	115	30.1	65	17.0	1	0.3	0	0.0	229	59.9
		Total	71	18.6	191	50.0	118	30.9	2	0.5	0	0.0	382	100.0

**Table 3.**—Catch data for the Lower Yukon River coho salmon drift gillnet test fisheries, 2004.

Date	Middle Mouth Test Fishery			Big Eddy Test Fishery			M.M. and B.E. Combined		
	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE
7/16	0	0.0	0.00	0	0.00	0.00	0	0.00	0.00
7/17	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/18	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/19	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/20	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/21	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/22	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/23	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/24	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/25	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/26	0	0.00	0.00	1	1.43	1.43	1	0.72	0.72
7/27	0	0.00	0.00	0	0.00	1.43	0	0.00	0.72
7/28	0	0.00	0.00	0	0.00	1.43	0	0.00	0.72
7/29	0	0.00	0.00	0	0.00	1.43	0	0.00	0.72
7/30	0	0.00	0.00	0	0.00	1.43	0	0.00	0.72
7/31	0	0.00	0.00	0	0.00	1.43	0	0.00	0.72
8/01	0	0.00	0.00	2	2.69	4.12	2	1.35	2.06
8/02	1	3.33	3.33	7	12.67	16.79	8	8.00	10.06
8/03	4	13.33	16.66	0	0.00	16.79	4	6.67	16.73
8/04	0	0.00	16.66	0	0.00	16.79	0	0.00	16.73
8/05	1	1.54	18.20	0	0.00	16.79	1	0.77	17.50
8/06	0	0.00	18.20	0	0.00	16.79	0	0.00	17.50
8/07	0	0.00	18.20	0	0.00	16.79	0	0.00	17.50
8/08	0	0.00	18.20	7	9.35	26.14	7	4.68	22.17
8/09	29	38.44	56.64	1	1.50	27.64	30	19.97	42.14
8/10	19	27.29	83.93	1	1.46	29.10	20	14.38	56.52
8/11	7	10.77	94.70	0	0.00	29.10	7	5.39	61.90
8/12	1	1.50	96.20	1	1.28	30.38	2	1.39	63.29
8/13	2	2.96	99.16	3	5.08	35.46	5	4.02	67.31
8/14	32	51.37	150.53	0	0.00	35.46	32	25.69	93.00
8/15	7	10.51	161.04	0	0.00	35.46	7	5.26	98.25
8/16	3	4.79	165.83	0	0.00	35.46	3	2.40	100.65
8/17	8	11.93	177.76	1	1.28	36.74	9	6.61	107.25
8/18	6	18.02	195.78	0	0.00	36.74	6	9.01	116.26
8/19	3	4.72	200.50	0	0.00	36.74	3	2.36	118.62
8/20	19	28.28	228.78	7	9.16	45.90	26	18.72	137.34
8/21	27	117.49	346.27	0	0.00	45.90	27	58.75	196.09
8/22	2	3.04	349.31	0	0.00	45.90	2	1.52	197.61
8/23	1	1.50	350.81	1	1.46	47.36	2	1.48	199.09
8/24	0	0.00	350.81	2	3.00	50.36	2	1.50	200.59
8/25	7	20.49	371.30	1	3.00	53.36	8	11.75	212.33
8/26	11	15.72	387.02	5	6.85	60.21	16	11.29	223.62
8/27	70	104.03	491.05	32	43.63	103.84	102	73.83	297.45
8/28 <sup>a</sup>									
<b>Total</b>	<b>260</b>	<b>491.05</b>		<b>72</b>	<b>103.84</b>		<b>332</b>	<b>297.45</b>	

Note: Second and third quartiles in boxes with midpoint in bold.

<sup>a</sup> Project operations ceased on 8/27, resulting in no data for 8/28.



**Table 4.**—Big Eddy coho salmon 6-inch drift gillnet test fishing catch age and sex composition, and mean length (mm), 2004.

Big Eddy coho salmon 6-inch drift gillnet test fishing catch age and sex composition, and mean length (mm), 2004.										
		Brood Year and (Age Group)								
		2001		2000		1999		Total		
Sample		(1.1)		(2.1)		(3.1)		Total		
Size		No.	%	No.	%	No.	%	No.	%	
Season Total	29	Males	1	3.4	13	44.8	0	0.0	14	48.3
		Females	1	3.4	13	44.8	1	3.4	15	51.7
		Total	2	6.9	26	89.7	1	3.4	29	100.0
Mean Length		Males	600		573		-			
Std. Error			-		8		-			
Mean Length		Females	405		585		550			
Std. Error			-		5		-			

Middle Mouth coho salmon 6-inch drift gillnet test fishing age and sex composition by stratum, and length (mm), 2004.

Middle Mouth coho salmon 6-inch drift gillnet test fishing age and sex composition by stratum, and length (mm), 2004.										
		Brood Year and (Age Group)								
		2001		2000		1999		Total		
Sample		(1.1)		(2.1)		(3.1)		Total		
Size		No.	%	No.	%	No.	%	No.	%	
Season Total	100	Males	14	14.0	49	49.0	2	2.0	65	65.0
		Females	8	8.0	25	25.0	2	2.0	35	35.0
		Total	22	22.0	74	74.0	4	4.0	100	100.0
Mean Length		Males	564		565		535			
Std. Error			6		4		0			
Mean Length		Females	569		570		590			
Std. Error			7		5		30			

Big Eddy and Middle Mouth coho salmon 6-inch drift gillnet test fishing age and sex composition combined, 2004.

Big Eddy and Middle Mouth coho salmon 6-inch drift gillnet test fishing age and sex composition combined, 2004.										
		Brood Year and (Age Group)								
		2001		2000		1999		Total		
Sample		(1.1)		(2.1)		(3.1)		Total		
Size		No.	%	No.	%	No.	%	No.	%	
Season Total	129	Males	15	11.6	62	48.1	2	1.6	79	61.2
		Females	9	7.0	38	29.5	3	2.3	50	38.8
		Total	24	18.6	100	77.5	5	3.9	129	100.0

**Table 5.**–Pilot Station fall season sonar passage estimates, 2004.

Date	Fall Chum		Coho	
	Daily	Cum.	Daily	Cum.
7/16				
7/17				
7/18				
7/19	484	484	0	0
7/20	1,269	1,753	0	0
7/21	5,261	7,014	0	0
7/22	28,352	35,366	0	0
7/23	18,856	54,222	0	0
7/24	5,379	59,601	135	135
7/25	2,041	61,642	0	135
7/26	3,249	64,891	0	135
7/27	3,646	68,537	0	135
7/28	2,822	71,359	0	135
7/29	3,914	75,273	80	215
7/30	915	76,188	170	385
7/31	1,754	77,942	46	431
8/01	2,100	80,042	0	431
8/02	3,755	83,797	116	547
8/03	30,383	114,180	82	629
8/04	68,687	182,867	0	629
8/05	21,179	204,046	1,519	2,148
8/06	8,232	212,278	2,818	4,966
8/07	4,709	216,987	2,844	7,810
8/08	3,837	220,824	2,898	10,708
8/09	2,864	223,688	1,865	12,573
8/10	37,201	260,889	2,103	14,676
8/11	51,238	<b>312,127</b>	5,943	20,619
8/12	20,242	332,369	6,112	26,731
8/13	5,717	338,086	9,244	35,975
8/14	2,651	340,737	5,308	41,283
8/15	2,819	343,556	5,288	46,571
8/16	9,862	353,418	5,197	51,768
8/17	11,878	365,296	4,605	56,373
8/18	8,432	373,728	9,738	66,111
8/19	2,214	375,942	6,896	73,007
8/20	1,641	377,583	6,660	79,667
8/21	146	377,729	7,795	87,462
8/22	30,334	408,063	5,178	92,640
8/23	30,096	438,159	10,587	<b>103,227</b>
8/24	6,241	444,400	20,708	123,935
8/25	7,050	451,450	11,611	135,546
8/26	5,732	457,182	5,244	140,790
8/27	10,887	468,069	8,106	148,896
8/28	22,611	490,680	8,021	156,917
8/29	67,869	558,549	9,368	166,285
8/30	34,095	592,644	13,976	180,261
8/31	1,416	594,060	8,089	188,350
<b>Total</b>	<b>594,060</b>		<b>188,350</b>	

Note: Second and third quartiles in boxes with midpoint in bold.

**Table 6.**—Catch data for the Lower Yukon fall chum salmon drift gillnet test fisheries, 2001–2004.

Date	2001 <sup>a</sup>			2002 <sup>a</sup>			2003 <sup>a</sup>			2004 <sup>a</sup>		
	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE
7/16	29	21.28	21.28	1	0.79	0.79	42	25.78	25.78	0	0.00	0.00
7/17	192	149.66	170.94	19	11.03	11.82	29	20.68	46.46	0	0.00	0.00
7/18	183	139.21	310.14	0	0.00	11.82	2	1.50	47.96	1	0.72	0.72
7/19	38	27.38	337.52	4	3.01	14.82	3	1.84	49.79	47	48.07	48.79
7/20	2	1.50	339.02	0	0.00	14.82	2	1.58	51.37	13	15.96	64.74
7/21	4	3.00	342.02	1	0.73	15.55	33	24.23	75.60	26	19.89	84.63
7/22	8	6.31	348.32	0	0.00	15.55	63	41.50	117.10	7	5.28	89.90
7/23	35	50.64	398.96	0	0.00	15.55	21	15.10	132.19	2	1.60	91.50
7/24	83	64.87	463.83	0	0.00	15.55	13	9.75	141.94	1	0.77	92.27
7/25	38	31.44	495.27	81	54.30	69.85	3	2.29	144.23	1	0.75	93.02
7/26	6	4.25	499.52	3	3.27	73.12	8	6.61	150.84	7	5.11	98.13
7/27	15	11.33	510.85	12	9.29	82.41	70	84.82	235.66	2	1.55	99.68
7/28	6	4.62	515.46	45	35.28	117.69	40	25.61	261.27	0	0.00	99.68
7/29	1	0.77	516.23	50	32.18	149.86	29	17.68	278.94	1	0.73	100.41
7/30	10	7.54	523.77	2	1.54	151.40	2	1.59	280.53	0	0.00	100.41
7/31	119	95.32	619.09	0	0.00	151.40	1	0.84	281.36	10	6.89	107.29
8/01	55	43.12	662.20	23	15.57	166.97	6	4.83	286.19	219	146.73	254.02
8/02	166	114.07	776.27	2	1.54	168.51	1	0.75	286.94	94	74.50	328.52
8/03	149	101.86	878.13	8	5.84	174.35	279	203.48	490.42	12	18.10	346.62
8/04	30	22.58	900.71	1	0.77	175.12	259	179.98	670.40	16	12.06	358.68
8/05	10	7.00	907.70	1	0.79	175.91	21	15.99	686.38	3	2.22	360.89
8/06	87	100.73	1008.43	0	0.00	175.91	2	1.54	687.92	5	3.79	364.68
8/07	225	136.78	1145.20	27	18.10	194.01	0	0.00	687.92	3	2.27	366.95
8/08	42	32.57	1177.77	25	16.55	210.55	0	0.00	687.92	93	59.62	426.57
8/09	28	19.44	1197.21	132	95.72	306.27	4	2.85	690.77	75	51.31	477.88
8/10	20	16.23	1213.43	78	49.88	356.15	37	25.26	716.03	23	16.64	494.52
8/11	4	2.91	1216.34	17	19.38	375.52	4	3.09	719.11	2	1.54	496.06
8/12	35	26.21	1242.55	31	23.14	398.66	84	65.33	784.44	0	0.00	496.06
8/13	39	27.06	1269.61	21	20.94	419.60	0	0.00	784.44	3	2.52	498.58
8/14	24	17.26	1286.87	9	7.08	426.67	70	55.12	839.56	32	24.61	523.19
8/15	15	11.23	1298.10	26	18.65	445.32	134	259.41	1098.97	14	10.44	533.63
8/16	5	3.76	1301.86	273	284.72	730.03	38	48.76	1147.73	0	0.00	533.63
8/17	2	1.56	1303.42	57	38.44	768.47	14	12.61	1160.34	3	2.12	535.75
8/18	3	2.29	1305.71	16	12.06	780.53	6	4.72	1165.06	1	1.47	537.21
8/19	0	0.00	1305.71	9	6.68	787.20	0	0.00	1165.06	0	0.00	537.21
8/20	2	2.33	1308.04	3	2.85	790.05	3	2.33	1167.39	113	119.04	656.25
8/21	19	13.83	1321.87	6	5.66	795.71	5	3.92	1171.31	12	20.35	676.60
8/22	5	3.75	1325.62	17	13.04	808.75	27	21.23	1192.53	1	0.77	677.37
8/23	0	0.00	1325.62	3	3.95	812.70	53	34.13	1226.66	0	0.00	677.37
8/24	1	0.77	1326.39	0	0.00	812.70	23	17.16	1243.82	8	5.81	683.18
8/25	0	0.00	1326.39	0	0.00	812.70	2	3.00	1246.82	7	10.32	693.50
8/26	0	0.00	1326.39	0	0.00	812.70	3	2.33	1249.15	25	17.81	711.31
8/27	0	0.00	1326.39	1	0.79	813.49	0	0.00	1249.15	55	44.26	755.56
8/28 <sup>b</sup>	0	0.00	1326.39	4	3.08	816.57	0	0.00	1249.15			
Total	1,735	1,326.39		1,008	816.57		1,436	1,249.10		937	755.56	

Note: Second and third quartiles in boxes with midpoint in bold.

<sup>a</sup> Year represents Middle Mouth and Big Eddy combined data.

<sup>b</sup> Project operations ceased on 8/27, resulting in no data for 8/28.

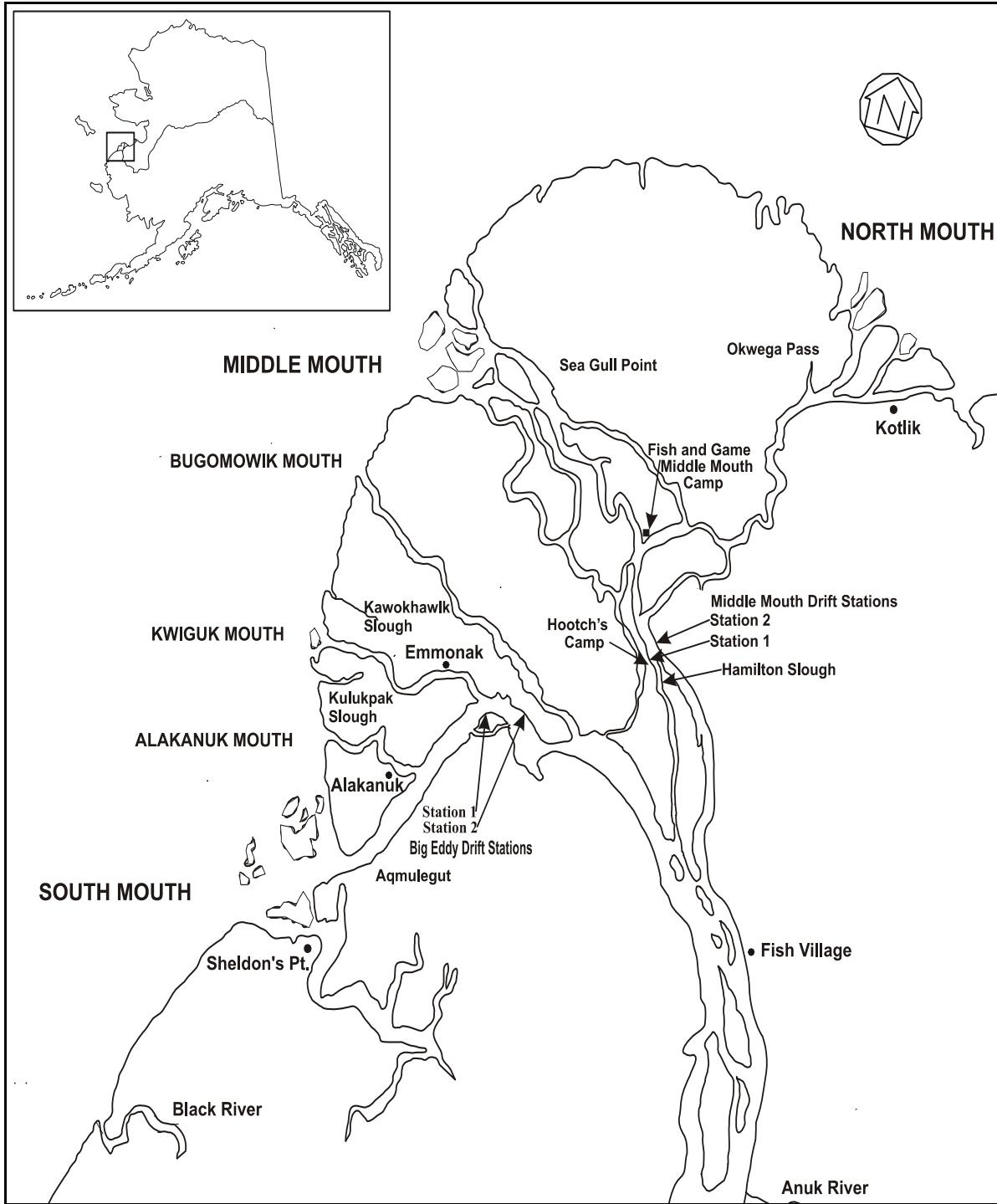
**Table 7.**—Catch data for the Lower Yukon coho salmon drift gillnet test fisheries, 2001–2004.

Date	2001 <sup>a</sup>			2002 <sup>a</sup>			2003 <sup>a</sup>			2004 <sup>a</sup>		
	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE
7/16	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/17	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/18	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/19	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/20	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/21	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
7/22	0	0.00	0.00	0	0.00	0.00	1	0.79	0.79	0	0.00	0.00
7/23	1	1.50	1.50	0	0.00	0.00	1	0.84	1.63	0	0.00	0.00
7/24	1	0.88	2.38	0	0.00	0.00	0	0.00	1.63	0	0.00	0.00
7/25	0	0.00	2.38	0	0.00	0.00	0	0.00	1.63	0	0.00	0.00
7/26	0	0.00	2.38	0	0.00	0.00	0	0.00	1.63	1	0.72	0.72
7/27	1	0.75	3.13	0	0.00	0.00	9	11.95	13.57	0	0.00	0.72
7/28	0	0.00	3.13	0	0.00	0.00	5	3.08	16.65	0	0.00	0.72
7/29	0	0.00	3.13	0	0.00	0.00	7	5.27	21.91	0	0.00	0.72
7/30	1	0.75	3.88	0	0.00	0.00	0	0.00	21.91	0	0.00	0.72
7/31	4	3.05	6.93	0	0.00	0.00	1	0.79	22.70	0	0.00	0.72
8/01	0	0.00	6.93	3	2.04	2.04	3	2.39	25.09	2	1.35	2.06
8/02	7	4.86	11.79	0	0.00	2.04	0	0.00	25.09	8	8.00	10.06
8/03	19	13.29	25.07	3	2.20	4.24	88	55.61	80.70	4	6.67	16.73
8/04	13	9.85	34.92	0	0.00	4.24	89	67.84	148.54	0	0.00	16.73
8/05	8	5.70	40.62	1	0.72	4.95	14	10.94	159.47	1	0.77	17.50
8/06	10	18.03	58.65	0	0.00	4.95	0	0.00	159.47	0	0.00	17.50
8/07	70	50.38	109.02	8	5.53	10.48	1	0.77	160.24	0	0.00	17.50
8/08	26	21.82	130.84	8	5.18	15.66	0	0.00	160.24	7	4.68	22.17
8/09	15	14.08	144.92	22	16.70	32.35	7	5.15	165.39	30	19.97	42.14
8/10	46	27.75	172.67	15	9.56	41.91	18	12.64	178.03	20	14.38	56.52
8/11	21	15.41	188.07	30	26.15	68.06	10	7.62	185.65	7	5.39	61.90
8/12	38	28.61	216.68	20	15.58	83.63	44	33.53	219.17	2	1.39	63.29
8/13	43	31.52	248.20	20	21.92	105.55	2	3.08	222.25	5	4.02	67.31
8/14	39	28.23	276.42	7	5.34	110.89	73	53.68	275.93	32	25.69	93.00
8/15	46	34.28	310.70	28	20.02	130.90	138	261.64	537.56	7	5.26	98.25
8/16	18	13.58	324.28	74	102.86	233.76	29	41.42	578.98	3	2.40	100.65
8/17	14	11.14	335.41	63	45.98	279.74	17	10.91	589.89	9	6.61	107.25
8/18	12	9.23	344.64	41	34.05	313.79	18	13.87	603.76	6	9.01	116.26
8/19	18	15.60	360.24	30	22.75	336.54	3	2.37	606.13	3	2.36	118.62
8/20	3	2.35	362.59	10	10.59	347.12	3	2.37	608.50	26	18.72	137.34
8/21	16	11.27	373.86	5	3.81	350.93	13	10.14	618.63	27	58.75	196.09
8/22	19	14.50	388.36	24	17.87	368.80	56	44.84	663.47	2	1.52	197.61
8/23	2	1.54	389.90	4	3.04	371.84	38	24.76	688.23	2	1.48	199.09
8/24	3	2.29	392.19	3	3.12	374.96	18	13.18	701.41	2	1.50	200.59
8/25	0	0.00	392.19	1	0.77	375.73	3	3.79	705.20	8	11.75	212.33
8/26	2	1.47	393.65	1	1.03	376.76	4	3.17	708.36	16	11.29	223.62
8/27	0	0.00	393.65	1	0.79	377.55	0	0.00	708.36	102	73.83	297.45
8/28	3	0.81	394.46	3	4.62	382.16	2	3.16	711.52			
Total	519	394.46		425	382.16		715	711.52		332	297.45	

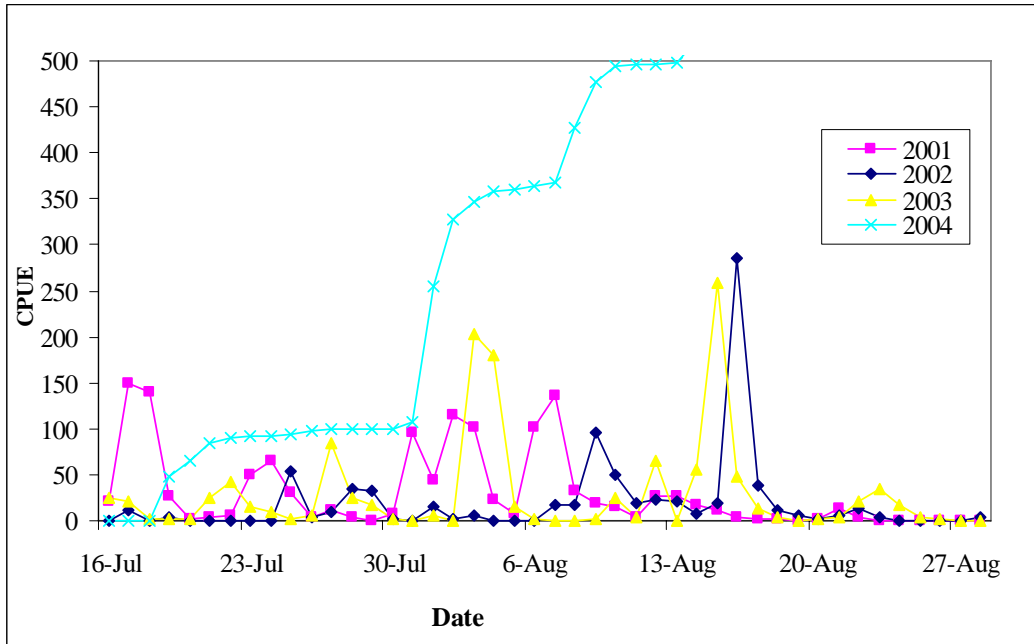
Note: Second and third quartiles in boxes with midpoint in bold.

<sup>a</sup> Year represents Middle Mouth and Big Eddy combined data.

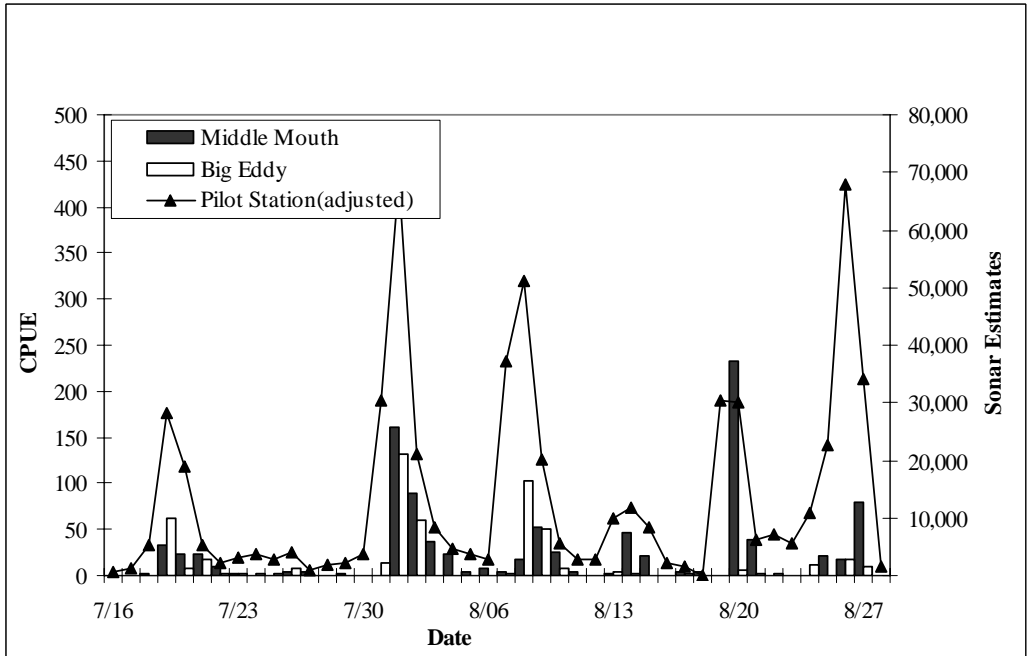
<sup>b</sup> Project operations ceased on 8/27, resulting in no data for 8/28.



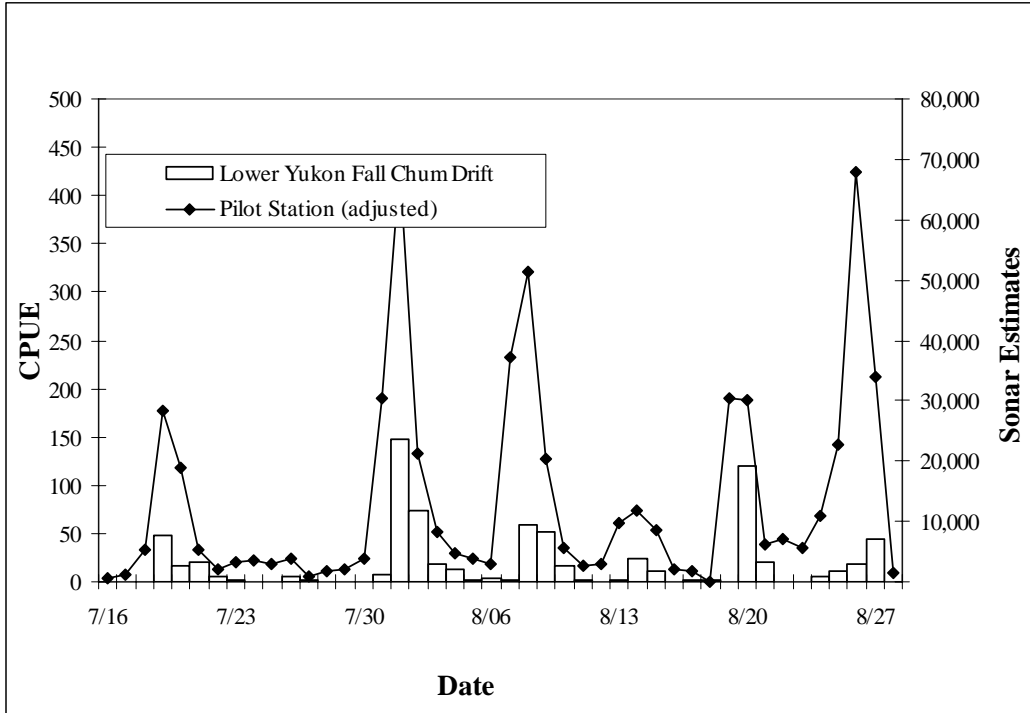
**Figure 1.**—Drift stations for the cooperative Lower Yukon drift gillnet test fishery, 2004.



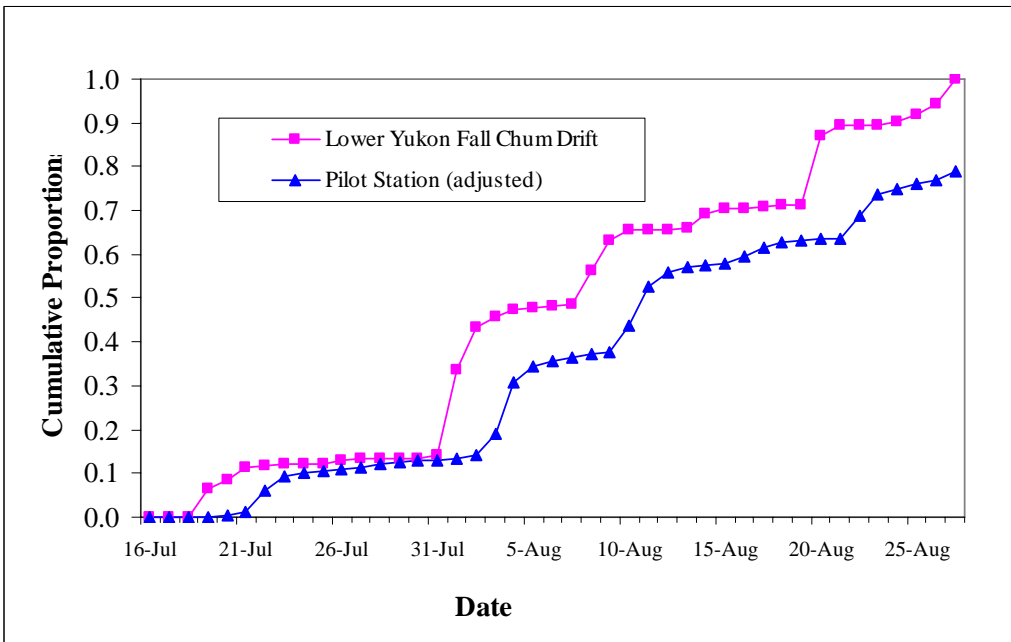
**Figure 2.**—Daily CPUE for Big Eddy and Middle Mouth combined 6-inch fall chum salmon drift gillnet test fishery, 2001–2004.



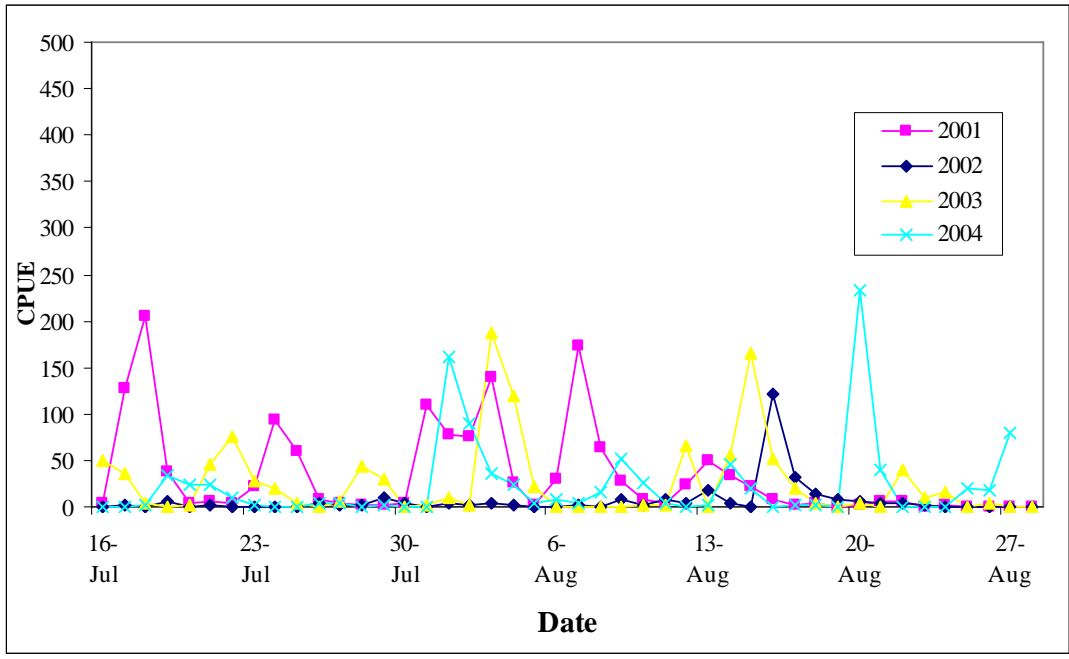
**Figure 3.**—Daily CPUE for the Big Eddy and Middle Mouth 6-inch fall chum salmon drift gillnet test fishery compared to Pilot Station sonar passage estimates, 2004.



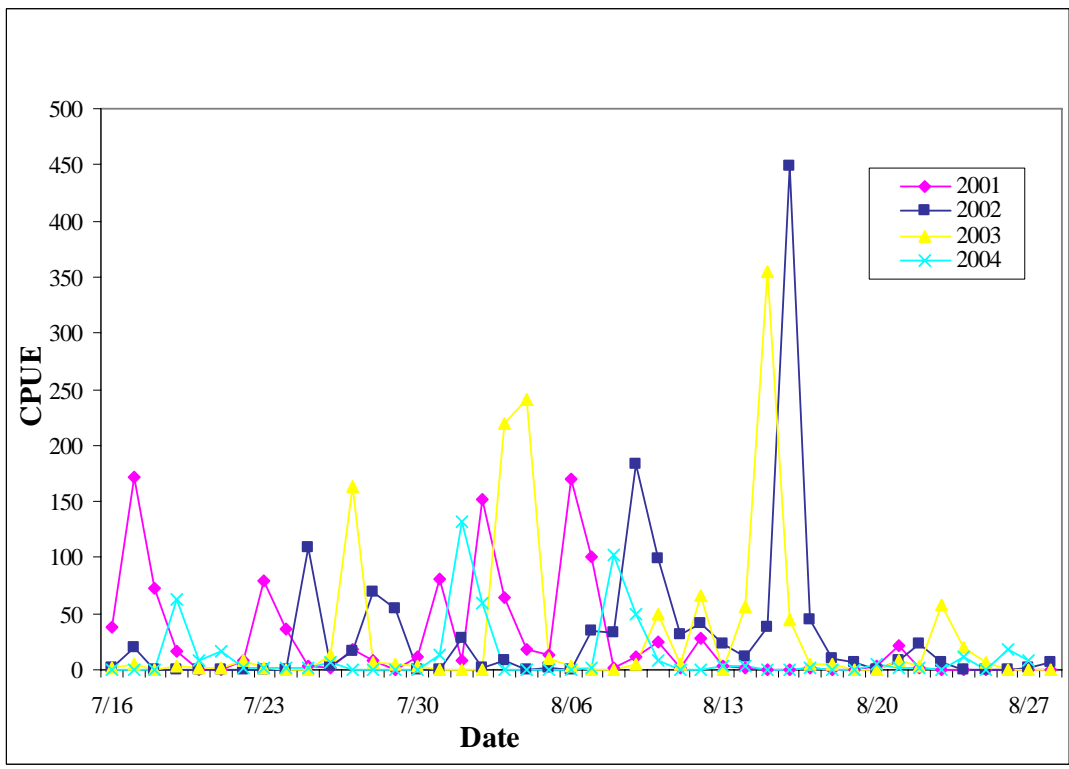
**Figure 4.**—Big Eddy and Middle Mouth fall chum salmon drift gillnet test fisheries combined daily CPUE compared to Pilot Station sonar passage estimates adjusted for transit time, 2004.



**Figure 5.**—Big Eddy and Middle Mouth combined 6-inch fall chum salmon drift gillnet test fishery proportions compared to Pilot Station fall chum proportions adjusted for transit time, 2004.

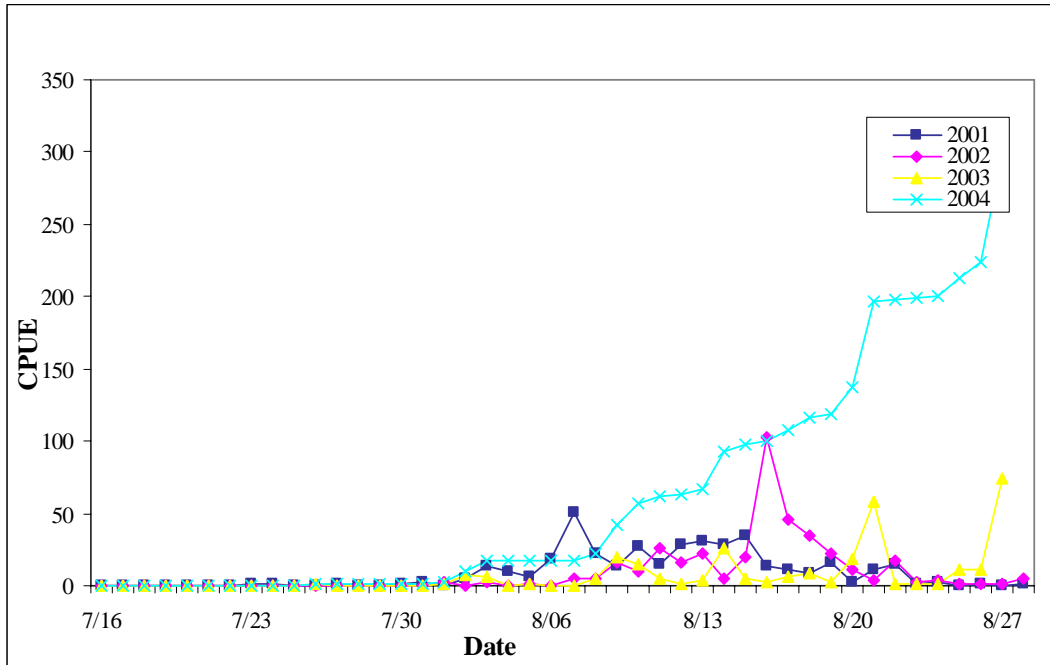


**Figure 6.**—Middle Mouth 6-inch fall chum salmon drift gillnet test fishery daily CPUE, 2001–2004.

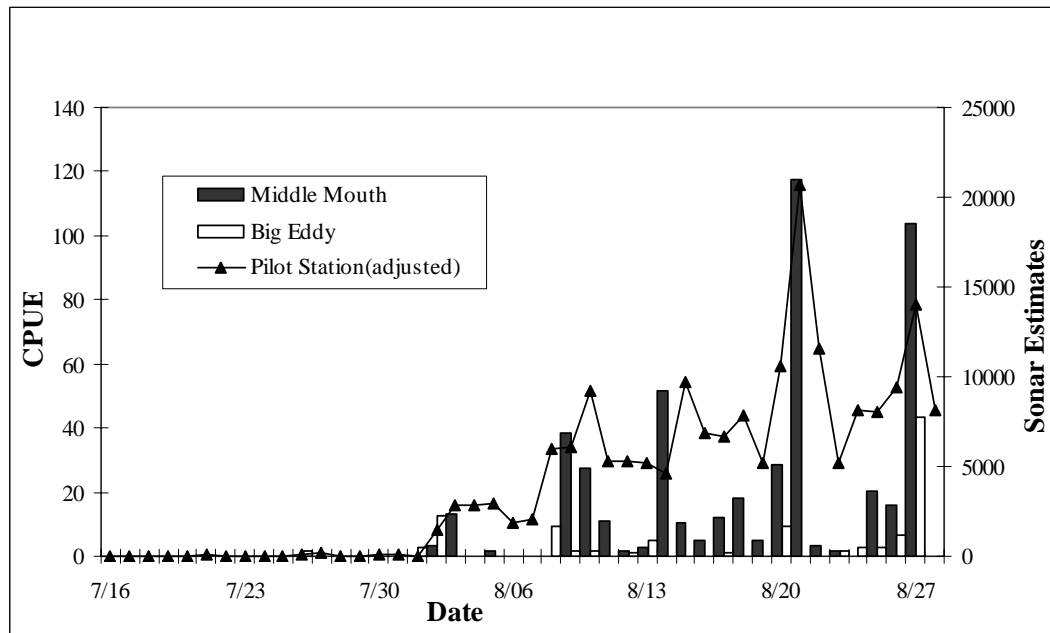


**Figure 7.**—Big Eddy 6-inch fall chum salmon drift gillnet test fishery daily CPUE, 2001–2004.

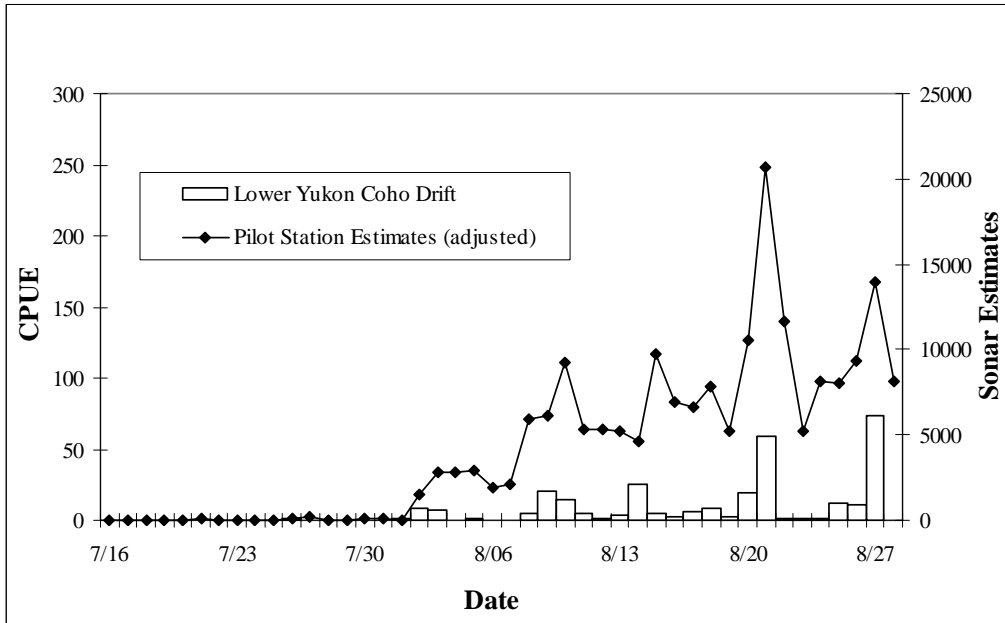




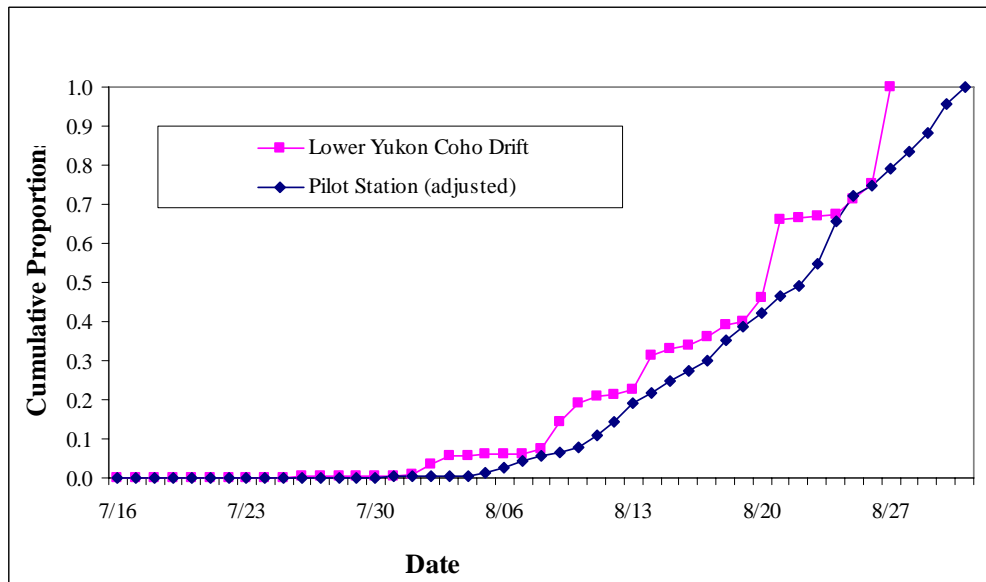
**Figure 8.**—Big Eddy and Middle Mouth combined 6-inch coho salmon drift gillnet test fishery, 2001–2004.



**Figure 9.**—Daily CPUE for coho salmon from Middle Mouth and Big Eddy 6-inch fall drift gillnet test fishery compared to Pilot Station sonar passage estimates, 2004.



**Figure 10.**—Big Eddy and Middle Mouth combined daily CPUE for the 6-inch drift gillnet test fishery compared to sonar passage estimates from Pilot Station adjusted for transit time, 2004.



**Figure 11.**—Big Eddy and Middle Mouth combined 6-inch coho salmon drift gillnet test fishery proportions compared to Pilot Station coho proportions adjusted for transit time, 2004.

**APPENDIX A: LOWER YUKON GILLNET TEST FISHERY CATCH  
DISTRIBUTION, 2004**

**Appendix A1.**—Species captured, retained, and released during the Lower Yukon setnet test fishery, 2004.

<b>Summer Season, 2004</b>							
<b>Species</b>	<b>Big Eddy</b>		<b>Middle Mouth</b>		<b>Total</b>		
	<b>Chinook</b>	<b>S. Chum</b>	<b>Chinook</b>	<b>S. Chum</b>	<b>Chinook</b>	<b>S. Chum</b>	
Fish released unharmed	70	14	224	65	294	79	
Test fish sales	84	2	638	215	722	217	
Contract Commercial Fisherman Sales	0	0	63	20	63	20	
Fish discarded	0	0	0	0	0	0	
Test fish donated locally	362	430	796	438	1,158	868	
<b>Total catch</b>	<b>516<sup>a</sup></b>	<b>446</b>	<b>1721<sup>b</sup></b>	<b>738</b>	<b>2,237</b>	<b>1,184</b>	

*Note:* Chinook and summer chum salmon catches include fish caught in both 5.5" and 8.5" gear.

<sup>a</sup> One Chinook was caught in the fall season and was donated locally.

<sup>b</sup> Six Chinook were caught in the fall season; 4 were released and 2 were donated locally.

**Appendix A2.**—Species captured, retained, and released during the Lower Yukon drift gillnet test fishery, 2004.

<b>Fall Season, 2004</b>							
<b>Species</b>	<b>Big Eddy</b>		<b>Middle Mouth</b>		<b>Total</b>		
	<b>F. Chum</b>	<b>Coho</b>	<b>F. Chum</b>	<b>Coho</b>	<b>F. Chum</b>	<b>Coho</b>	
Fish released unharmed	63	39	241	141	304	180	
Test fish sales	0	0	0	0	0	0	
Fish discarded	0	0	0	0	0	0	
Test fish donated locally	301	33	334	119	635	152	
<b>Total catch</b>	<b>365</b>	<b>72</b>	<b>574<sup>a</sup></b>	<b>260</b>	<b>939</b>	<b>332</b>	

<sup>a</sup> Three chum salmon caught in experimental drift, 1 released; 2 donated locally.

**APPENDIX B: LOWER YUKON DRIFT GILLNET TEST FISHERY  
MEAN FISHING TIMES, 2004.**

**Appendix B1.**–Big Eddy 6-inch drift gillnet fall test fishery mean times and catch, 2004.

Date	Time 1	Time 2	Time 3	Time 4	Total	Catch	
						Fall Chum	Coho
7/16	17.0	18.5	20.0	17.0	72.5	0	0
7/17	18.0	18.0	18.5	18.5	73.0	0	0
7/18	18.0	19.5	19.0	20.0	76.5	0	0
7/19 <sup>a</sup>	19.0	22.0			41.0	23	0
7/20	15.0	23.0	19.0	20.0	77.0	5	0
7/21	20.0	20.0	18.5	20.0	78.5	11	0
7/22	19.5	20.5	18.5	19.0	77.5	1	0
7/23	19.0	19.5	19.0	19.5	77.0	1	0
7/24	18.5	18.5	19.0	19.5	75.5	1	0
7/25	19.5	20.0	19.0	20.0	78.5	1	0
7/26	19.5	21.0	20.0	21.0	81.5	5	1
7/27	20.0	20.0	18.5	18.5	77.0	0	0
7/28	19.5	19.5	19.5	19.5	78.0	0	0
7/29	18.5	20.0	19.5	22.5	80.5	0	0
7/30	20.5	20.0	22.0	21.5	84.0	0	0
7/31	19.5	19.5	20.0	22.0	81.0	10	0
8/01	20.5	19.0	24.5	24.5	88.5	105	2
8/02	20.5	22.0	19.5	19.5	81.5	39	7
8/03 <sup>a</sup>	19.5	19.5			39.0	0	0
8/04	20.0	20.0	20.0	19.5	79.5	0	0
8/05	19.5	19.5	20.0	19.0	78.0	0	0
8/06	19.5	19.0	19.0	19.0	76.5	0	0
8/07	20.5	19.5	19.5	19.5	79.0	1	0
8/08	25.0	22.5	18.5	25.0	91.0	82	7
8/09	21.0	22.5	19.0	20.0	82.5	36	1
8/10	19.0	20.5	19.0	19.5	78.0	5	1
8/11	19.5	19.5	19.0	19.5	77.5	0	0
8/12	19.5	20.0	23.5	23.5	86.5	0	1
8/13	15.0	19.5	19.5	20.0	74.0	2	3
8/14	20.5	20.0	23.5	23.5	87.5	2	0
8/15	19.5	20.0	18.0	26.5	84.0	0	0
8/16	21.0	20.0	18.5	19.5	79.0	0	0
8/17	19.0	20.5	23.5	23.5	86.5	1	1
8/18 <sup>a</sup>	23.5	23.5			47.0	0	0
8/19	19.0	18.5	20.0	19.5	77.0	0	0
8/20	20.0	19.5	23.5	23.5	86.5	4	7
8/21	20.0	19.5	20.5	20.0	80.0	1	0
8/22	19.0	19.5	19.5	19.5	77.5	1	0
8/23	20.5	20.5	20.5	20.5	82.0	0	1
8/24	20.5	20.5	20.0	21.0	82.0	8	2
8/25 <sup>b</sup>			20.0	21.0	41.0	0	1
8/26	20.5	20.5	22.0	21.5	84.5	13	5
8/27	23.0	23.5	18.5	19.5	84.5	7	32
Daily Average					76.7		
Drift Average			20.1				
Season Total						365	72

<sup>a</sup> Only two drifts scheduled.

<sup>b</sup> Missed due to weather.

**Appendix B2.**—Middle Mouth 6-inch drift gillnet fall test fishery mean times and catch, 2004.

Date	Time 1	Time 2	Time 3	Time 4	Total	Catch	
						Fall Chum	Coho
7/16	20.5	21.0	19.5	19.5	80.5	0	0
7/17	19.0	20.5	19.5	21.0	80.0	0	0
7/18	19.5	20.0	20.5	21.0	81.0	1	0
7/19	22.0	18.5	22.0	20.0	82.5	24	0
7/20 <sup>a</sup>	20.0	21.0			41.0	8	0
7/21	18.5	20.0	20.0	19.5	78.0	15	0
7/22	18.0	22.0	19.0	20.0	79.0	6	0
7/23	19.5	18.5	18.5	20.5	77.0	1	0
7/24	18.5	19.0	18.5	20.0	76.0	0	0
7/25	18.5	20.5	19.0	19.5	77.5	0	0
7/26	19.0	20.0	19.0	19.5	77.5	2	0
7/27	19.5	20.5	18.5	18.5	77.0	2	0
7/28	18.0	19.0	19.0	20.0	76.0	0	0
7/29	19.0	20.5	18.5	18.5	76.5	1	0
7/30	18.0	20.0	19.5	20.0	77.5	0	0
7/31	19.0	20.0	20.5	19.0	78.5	0	0
8/01	19.0	20.5	21.5	15.5	76.5	114	0
8/02	18.0	19.5	18.5	20.5	76.5	55	1
8/03 <sup>a</sup>	18.0	21.0			39.0	12	4
8/04	20.0	20.0	19.0	19.5	78.5	16	0
8/05	19.0	20.5	20.0	19.5	79.0	3	1
8/06	19.0	19.0	20.0	20.0	78.0	5	0
8/07	19.0	19.5	20.0	20.5	79.0	2	0
8/08	19.0	18.5	20.0	19.5	77.0	12	0
8/09	20.0	21.5	24.0	21.0	86.5	39	29
8/10	20.5	19.5	21.0	21.0	82.0	18	19
8/11	19.5	19.5	19.5	19.5	78.0	2	7
8/12	20.0	20.0	19.5	20.5	80.0	0	1
8/13	19.5	20.0	20.0	20.5	80.0	1	2
8/14	19.5	21.0	18.0	19.5	78.0	30	32
8/15	19.5	20.5	19.0	19.5	78.5	15	7
8/16	20.0	19.0	17.5	19.0	75.5	0	3
8/17	20.0	20.0	19.0	20.5	79.5	2	8
8/18 <sup>a</sup>	19.0	20.5			39.5	1	6
8/19	19.5	19.0	17.5	20.5	76.5	0	3
8/20	19.0	20.0	25.5	14.5	79.0	109	19
8/21	16.5	18.5	12.5	19.0	66.5	11	27
8/22	20.0	19.5	18.0	19.5	77.0	0	2
8/23	19.0	19.0	20.0	19.0	77.0	0	1
8/24	19.5	19.5	19.5	19.0	77.5	0	0
8/25 <sup>b</sup>			20.5	19.5	40.0	7	7
8/26	19.0	19.5	21.5	18.5	78.5	12	11
8/27	21.0	19.5	20.5	16.0	77.0	48	70
Daily Average					74.5		
Drift Average			19.5				
Season Total						574	260

<sup>a</sup> Only two drifts scheduled.

<sup>b</sup> Missed due to weather.