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Fall Season Cooperative Salmon Drift Gillnet Test Fishing in the Lower Yukon River, 2005

**Annual Report for Project 04-229
USFWS Office of Subsistence Management
Fisheries Information Services Division**

by

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and

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May 2007

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



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by

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ABSTRACT

The Lower Yukon River drift gillnet test fishery program was used to estimate the run timing and to a lesser extent relative abundance of fall chum *Oncorhynchus keta*, and coho *O. kisutch* salmon entering the drainage. The project was operated from 16 July through 29 August 2005 on the Lower Yukon River near the village of Emmonak, Alaska. Catch per unit effort (CPUE), age, sex, and size composition were derived from drift gillnet catches from the Big Eddy test fishery operated on the Kwiluak Pass (South Mouth) and the Middle Mouth test fishery operated on the Kawanak Pass (Middle Mouth). The test fishery recorded a cumulative CPUE of 2,337.21 for fall chum salmon with the midpoint occurring on 5 August. Fall chum salmon were predominantly age 0.3, comprising 94.8% of the unweighted age, sex, and length (ASL) sample. The cumulative CPUE for coho salmon was 300.73 with the corresponding midpoint occurring on 18 August. Age-2.1 coho salmon were the most abundant, making up 80.2% of the unweighted ASL sample. The Pilot Station sonar project recorded the passage of 1,813,589 fall chum salmon with the midpoint occurring on 9 August and 184,718 coho salmon with the midpoint observed 19 August. The drift gillnet test fishery provided supplemental information that was used to evaluate data provided by other assessment projects in the Lower Yukon River. Comparing trends observed from the Lower Yukon drift gillnet test fishery to Pilot Station sonar passage estimates provided critical information to fishery management staff regarding run timing.

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

INTRODUCTION

The Lower Yukon drift gillnet test fish program is designed to estimate the run timing and relative abundance of fall chum *Oncorhynchus keta* and coho salmon *O. kisutch* returning to the Yukon River drainage. Test fishery data is used in conjunction with data provided by other projects, including the Pilot Station sonar daily run strength estimates, to ensure sufficient numbers of salmon pass through the Lower Yukon River to provide for escapement, treaty commitments and subsistence uses.

PROJECT HISTORY

The return of fall chum salmon to the Yukon River has been depressed in recent years. In 2000, the Pilot Station sonar estimated passage was approximately 248,000 fall chum salmon (McIntosh *In prep*). In both 2000 and 2001, no harvestable surplus was available and no commercial fishing was conducted on the Yukon River during the fall season (Bue et al. *In prep*). The below average return in 2000 combined with a dramatic increase in the efficiency of some set net sites prompted the Alaska Department of Fish and Game (ADF&G) to reevaluate the use of 6.0 inch mesh fall chum set gillnet gear. It was uncertain whether the set gillnets were adequately reflecting the relative abundance of the runs. Additionally, the large set net test fishery harvests saturated the local subsistence users' needs, making it difficult to distribute the surplus. Selling the surplus was not feasible during years of fishery restrictions. Employing drift gillnets to assess the runs was considered as an alternative to the chum salmon set net project to reduce the overall fishing time and the incidence of salmon mortality.

With cooperative assistance and funding from the U.S. Fish and Wildlife Service, Office of Subsistence Management (OSM), the Lower Yukon drift gillnet test fishery began operations in 2001. Drift gillnet fishing stations were established for both the Big Eddy and the Middle Mouth test fishery locations. The 6.0-inch mesh set gillnets were replaced by 6.0-inch mesh drift gillnets to target fall chum and coho salmon. Assessment was possible for fall chum and coho salmon transiting the North, Middle, and South Mouths of the Yukon River delta downstream from major subsistence and commercial fisheries. Moreover, the test fishery provided

indications as to when and where salmon were entering the river. This was particularly important due to sporadic entry patterns of fall chum.

The project originally operated with a summer season component assessing summer chum and Chinook salmon. The project was operated for both the summer and fall seasons through 2003 with continued support from OSM. In 2004, funding was only available from OSM for the fall season component.

In 2005, the fall season Lower Yukon drift gillnet test fishing project completed its fifth year of operation with funding from OSM. A significant operation change was to conduct drifts at two set times each day rather than at twice daily tidal peaks as had been done in previous seasons (Newland and Hayes *In prep*).

OBJECTIVES

Project objectives in 2005 were to:

- 1.) Monitor daily relative abundance and run timing information regarding fall chum and coho salmon entering the Yukon River.
- 2.) Calculate catch per unit of effort (CPUE) index by species.
- 3.) Compare CPUE index with other assessment projects upriver.
- 4.) Sample age, sex, and size data of fall chum and coho salmon.

METHODS

STUDY SITE

As in previous years, two separate test fishery locations were used including Big Eddy and Middle Mouth. The locations were chosen for logistical reasons including their close proximity to ADF&G Lower Yukon area field office in the village of Emmonak, which is situated approximately 24 river miles upstream of the South Mouth at the head of Kwiguk Pass, and approximately 90 river miles downstream from the Pilot Station Sonar project (Figures 1 and 2).

The Big Eddy test fishery 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). Station 1 at Big Eddy was located directly south of the confluence of the Kwiguk Mouth and 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 Middle Mouth test fishery 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 river mile 24 (39 km). Station 1 drift gillnet starting point was at a place named “Hootch’s Camp” on the west side of the river 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.

PROJECT DATE

In 2005, drift gillnet fishing at both test fishery locations began 16 July and continued through 29 August. Project operation dates have varied little over the years. From 2001–2005, operation dates extended from 16 July to late August each season.

DRIFT TEST FISHING

The test fishery employed gillnets to specifically target fall chum and coho salmon. Gillnets were constructed of 6.0-inch (15.2 cm) mesh, 45 meshes in depth, and 50 fathoms (91.4 m) in length with a cork marking at 25 fathoms (45.7 m).

The Big Eddy and Middle Mouth locations were fished using similar methods. All gillnets were fished by drifting from open aluminum skiffs with one end of the net attached to the skiff and the other attached to a buoy. The drift gillnets were fished once per station and twice daily, except during periods of hazardous weather and during commercial periods. The first drift was conducted at Station 1, followed by Station 2.

During normal operations, the net was retrieved after 20 minutes of fishing time or an estimated 30 fish had been captured. In times of high salmon abundance, inclement weather, or excessive debris, the net was shortened to the 25 fathom midpoint to make it more manageable and avoid saturation. The calculation of CPUE compensates for times when only 25 fathoms of gillnet was fished. The species, number caught, number retained, number released, mesh size, station, fishing times, and weather observations were recorded. The fish captured were counted and released unharmed, unless injured by the netting activity. Fish injured by gillnets were retained and sampled for age, sex, and length (ASL) information. All sampled and remaining fish were distributed locally for subsistence purposes. The retained fish that were sold commercially were not sampled.

Depth measurements at each of the drift stations were made at various times during the season. Depth readings were obtained using a Hawkeye Handheld Sonar¹ device. Depth readings were taken and recorded at the near shore and offshore buoy while setting the net and additional readings were recorded at the near shore and offshore buoys when the net was being retrieved.

Drift Schedule

In 2005, during normal operations drifts were conducted at 0800 hrs and 2000 hrs regardless of tide stage. This drift schedule was occasionally altered. Drifts were adjusted or cancelled to avoid test fishing during the commercial periods or when periods of inclement weather prohibited drifting effectively and safely. In previous years, the drift gillnets were fished twice daily during both tidal surges at the Middle Mouth and Big Eddy locations (Hayes and Sollee 2003). The tidally based schedule was discontinued on 16 June during the summer season and drifts were conducted at two fixed times per day (Newland and Hayes *In prep*).

CPUE Calculations

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

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

¹ Product names used in this report are included for scientific completeness, but do not constitute a product endorsement.

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 fished varied. An independent CPUE calculation was made for each drift. 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 = number of sets for the given day and gear type (Molyneaux 1999).

Age, Sex, and Length Sampling

ASL data were collected from retained fall chum and coho salmon. A maximum of 30 fall chum and 30 coho salmon were sampled each day at each of the test fishery locations. All salmon lengths were measured from mid-eye to tail fork and rounded off to the nearest 5 mm. Age was determined by examining scales (Mosher 1968). Scales were collected from the left side of the fish approximately two rows above the lateral line in an area crossed by a diagonal from the posterior insertion of the dorsal fin to the anterior insertion of the anal fin (INPFC 1963). Because of the high rate of scale regeneration among coho salmon, three scales were collected from each fish. Only one scale per fish was collected from chum salmon. Scales were mounted on gummed cards and impressions were made in cellulose acetate (Clutter and Whitesel 1956). European notation was used to record ages. Numerals preceding the decimal refer to the number of freshwater annuli and numerals following the decimal refer to the number of marine annuli (Koo 1962). Total age from time of egg deposition, or brood year, is the sum of these two numbers plus one to account for incubation time. The sex of each salmon was verified by visual examination of the gonads through a small ventral incision.

RESULTS

FALL CHUM SALMON

In 2005, a total of 1,857 fall chum salmon were caught at the Big Eddy and Middle Mouth drift gillnet test fishery locations, with a corresponding cumulative CPUE of 2,337.21 (Table 1). This value was the highest recorded in the history of the project (Table 2; Figure 3). The combined midpoint of the fall chum salmon run at the Big Eddy and Middle Mouth locations occurred on 5 August (Table 1). Age-0.3 was the predominant fall chum salmon age class observed in the test fishery, comprising 94.8% while ages 0.4 and 0.5 were minor occurrences representing 4.5%

and 0.34% respectively of the unweighted ASL sample. In 2005, 57.7% of the total fall chum salmon sampled were females (Table 3).

At the Big Eddy drift location 1,308 fall chum salmon were captured with a corresponding cumulative CPUE of 3,530.31. The midpoint of the fall chum salmon run at the Big Eddy location was 31 July (Table 1). The mean drift time at Big Eddy was 19.6 minutes per set per day (Appendix A1). Females comprised 61.0% of the 493 fall chum salmon sampled for ASL data. Age-0.3 fall chum predominated, comprising 94.3% of the unweighted sample with age 0.4 at 5.2% and age 0.5 comprising 0.4% of the total sampled. Mean lengths for males were 599 mm for age 0.3 ($n=180$), 622 mm for age 0.4 ($n=11$), and 565 mm for age 0.5 ($n=1$). Females had mean lengths of 593 mm for age 0.3 ($n=285$), 610 mm for age 0.4 ($n=15$), and 650 mm for age 0.5 ($n=1$) (Table 3).

At the Middle Mouth drift location 549 fall chum were captured with a corresponding cumulative CPUE of 1,144.09. The midpoint of the run at Middle Mouth was 21 August (Table 1). The mean drift time at Middle Mouth was 19.5 minutes per set per day (Appendix A1). Females comprised 57.6% of the 85 fall chum sampled for ASL data. Age-0.3 fall chum salmon predominated comprising 98.7% and age 0.4 made up 1.2% of the sample. Mean lengths for male fall chum salmon were 607 mm for age 0.3 ($n=35$) and 670 mm for age 0.4 ($n=1$). Females had mean lengths of 586 mm for age 0.3 ($n=49$) (Table 3).

An estimated 1,813,589 fall chum were reported to have passed the Pilot Station sonar project in 2005 during the same time period when adjusted for travel from the test fishery project to the sonar site (Table 4).

COHO SALMON

Coho salmon were captured during the same drift times as the fall chum salmon as the two species often enter and migrate together with greater overlaps in abundance later in the season. A combined total of 290 coho were caught at the Big Eddy and Middle Mouth locations with a corresponding cumulative CPUE of 300.73. The midpoint occurred on 18 August (Table 5). Age-2.1 fish predominated, making up 80.2% with age 1.1 and 3.1 representing 12.5% and 7.3% of the unweighted ASL sample respectively. In 2005, 60.4% of sampled coho were males (Table 6).

There were 145 coho salmon captured at the Big Eddy location with a corresponding cumulative CPUE of 302.02. The midpoint of the run at the Big Eddy drift gillnet location was 11 August (Table 5). The mean drift time at the Big Eddy location was 19.6 minutes per set per day (Appendix A1). Females comprised approximately 50.7% of the 75 fish sampled for ASL data. Age 2.1 comprised 82.7%, age 1.1 represented 9.3%, followed by age 3.1 with 8.0%, of the sample respectively. Mean lengths for males were 572 mm for age 1.1 ($n=5$), 583 mm for age 2.1 ($n=30$), and 588 mm for age 3.1 ($n=2$). Females had mean lengths of 583 mm for age 1.1 ($n=2$), 581 mm for age 2.1 ($n=32$), and 585 mm for age 3.1 ($n=4$) (Table 6).

There were 145 coho salmon captured at the Middle Mouth location with a corresponding cumulative CPUE of 299.44. The midpoint of the run at the Middle Mouth site was 23 August (Table 5). The mean drift time at Middle Mouth was 19.5 minutes per set per day (Appendix A1). Males made up 100% of the 21 coho salmon sampled for ASL data. Age 2.1 comprised 71.4%, age 1.1 represented 23.8%, and age 3.1 represented 4.8% of the unweighted

sample. Males had mean length measurements of 586 mm for age 1.1 ($n=5$), 572 mm for age 2.1 ($n=15$), and 520 mm for age 3.1 ($n=1$) (Table 6). The coho salmon passage estimate provided by Pilot Station sonar for 2005 was 184,718 (Table 4).

DISCUSSION

FALL CHUM SALMON

Based on the 5 August midpoint of the Big Eddy and Middle Mouth sites combined (Table 1), timing of fall chum salmon caught in the 2005 was only slightly earlier than the average of August 6 based on 2001 to 2004 operations (Table 2; Figure 3). Additionally, the long term average (1980–2000) midpoint based on the set gillnet project was August 6 (Stack *Unpublished*). The midpoint of the fall chum salmon run occurred on August 9 at the Pilot Station sonar site (Table 4).

Rigorous analysis of test fishery CPUE data to assess abundance directly has not been conducted. However, the test fishery did provide information that was useful in evaluating abundance estimates provided by the Pilot Station sonar project. Pulses of fall chum are tracked as they migrate upstream from the Lower Yukon River test fishery project near Emmonak, past the Mountain Village test fishery project and on through to the Pilot Station sonar project. On average, pulses of fall chum take approximately 2.8 days to travel between the Lower Yukon River test fisheries and the Pilot Station sonar project, equating to an average swimming speed of 35 miles per day. In 2005, fall chum salmon detected at Emmonak were reflected in increases in fish passage estimates at Pilot Station for each corresponding pulse when using a lag time of 3 days (Figures 4–6). However, the relative magnitude of the pulses measured with CPUE at Emmonak did not appear to have a close relationship with passage rate at Pilot Station such as the corresponding pulse observed on 30 July at Emmonak (Figure 4). The Pilot Station sonar passage estimate is believed to be a better index of abundance because it is operated 24 hours a day whereas the test fishery collects samples from a much shorter time frame each day and may be influenced by clumped distribution and fishing conditions.

Variations in entrance patterns between the different mouths of the river were observed. Pulses of fall chum detected entering the South mouth occurred much earlier and appeared to be much larger than the pulses entering the North and Middle Mouths. The midpoint for the fall chum salmon run occurred on 31 July at the Big Eddy drift gillnet test location and on 21 August, 3 weeks later, at Middle Mouth location (Figures 7 and 8).

The 2005 unweighted ASL samples included a high proportion (94.8%) of age-0.3 fish. Historically, the test fishery ASL samples have been weighted against the CPUE data to provide for annual age composition estimates. The age-0.3 fall chum salmon comprised 94.3% of the weighted ASL sample and was a record high. The 1977–2004 all years average shows that the age-0.4 fall chum salmon comprise 68.5% of the run (Stack *Unpublished*).

In 2005, the drift fishing schedule was changed from a fishing pattern based on tidal surges to a fixed schedule. The effect the tidal surge has on fish after entering the river is undetermined, and implementing a drift schedule that appropriately assesses run timing has been problematic in the past (Hayes and Sollee 2003). A change in the drift test fishing schedule was made during the summer season in response to the drift test nets not initially corresponding well with the test set gillnets, subsistence harvest reports, or passage estimates provided by Pilot Station sonar.

Implementing a fixed drift schedule was continued for the fall season. However, altering the drift schedule may have compromised the ability to compare this year's test fishery results to previous years. The Lower Yukon drift gillnet test fishery has not been an effective tool for assessing relative abundance of fall chum and coho salmon. With increased experience and consistent use of a fixed schedule, drift gillnet test fishing in Middle Mouth and Big Eddy may result in data that are indicative of the relative fall chum salmon abundance.

ADF&G worked in cooperation with the U. S. Fish and Wildlife Service (USFWS) to distribute the fall chum salmon retained by the drift gillnet test fisheries to the residents in the local communities of Emmonak, Alakanuk, and Kotlik for subsistence use. Of the 1,857 fall chum salmon captured in the test fishery 652 were released unharmed, 1,118 were given away for subsistence uses, and 87 were sold (Appendix A2). The Big Eddy test fishery crew experienced more frequent large catches of fish and subsequently released a lower proportion of their catch. When a large school was encountered, the net was retrieved as quickly as possible to reduce harvest, and very few fish were picked from the net and released unharmed.

COHO SALMON

Based on the August 18 midpoint of the Big Eddy and Middle Mouth sites combined, timing of coho salmon caught in the 2005 Lower Yukon River drift gillnet test fishery was 2 days later than the average of August 16 based on 2001 to 2004 operations (Table 7; Figure 9). The long term average (1980–2000) midpoint based on the set gillnet project was 18 August (Stack *Unpublished*). 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 10–12). Coho entry followed a similar pattern to the fall chum salmon with larger pulses entering the South mouth much earlier than the pulses entering the North and Middle Mouths (Figure 10). The midpoint for the coho salmon run occurred on August 11 at the Big Eddy drift gillnet test fishery and on August 22. The midpoint of the coho salmon run as estimated by passage at Pilot Station sonar occurred the near the expected date, August 19 based on travel time of 30 miles per day (Table 2).

Of the 290 coho salmon captured in the test fishery, 178 coho salmon were released unharmed, none were sold or discarded, and 112 were distributed to local residents for subsistence uses with the assistance of the USFWS (Appendix A2).

RECOMMENDATIONS

The Lower Yukon drift gillnet test fishing project in 2005 provided useful information concerning the entry of each pulse of salmon into the river. Moreover, the timing information is utilized to track the pulses as they pass through the various fisheries and other assessment projects. The Lower Yukon drift test fishery project should continue operating for the purposes of fall run assessment in the lowest portion of the river, 3 days prior to the assessment by the Pilot Station Sonar project which is upstream of significant fishing activity. The fall test fishery aids in the management of both the largest commercial fishery in the Lower Yukon and provides run strength information to subsistence users to maximize their fishing effort when fish are most abundant. We also recommended that the project continue with a fixed drift schedule in future years so that a comparable data set can be constructed.

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TABLES AND FIGURES

Table 1.—Catch and CPUE data for fall chum salmon in the Lower Yukon drift gillnet test fishery, 2005.

Date	Big Eddy			Middle Mouth			Combined		
	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE
16-Jul	5	7.46	7.46	10	14.98	14.98	15	11.22	11.22
17-Jul	15	23.47	30.93	3	4.74	19.72	18	14.11	25.33
18-Jul	185	460.35	491.28	2	3.08	22.80	187	231.72	257.04
19-Jul	90	185.00	676.28	9	13.62	36.42	99	99.31	356.35
20-Jul	23	25.69	701.97	12	19.38	55.80	35	22.54	378.89
21-Jul	1	1.43	703.40	2	3.04	58.84	3	2.24	381.12
22-Jul	1	1.71	705.11	0	0.00	58.84	1	0.86	381.98
23-Jul	0	0.00	705.11	1	1.43	60.27	1	0.72	382.69
24-Jul	2	2.79	707.90	0	0.00	60.27	2	1.40	384.09
25-Jul	1	1.54	709.44	0	0.00	60.27	1	0.77	384.86
26-Jul	5	7.58	717.02	0	0.00	60.27	5	3.79	388.65
27-Jul	2	3.00	720.02	1	1.43	61.70	3	2.22	390.86
28-Jul	7	10.77	730.79	0	0.00	61.70	7	5.39	396.25
29-Jul	82	207.55	938.34	27	40.43	102.13	109	123.99	520.24
30-Jul	38	66.94	1,005.28	12	17.50	119.63	50	42.22	562.46
31-Jul	275	933.14	1,938.42	10	13.94	133.57	285	473.54	1,036.00
1-Aug	27	66.43	2,004.85	2	3.04	136.61	29	34.74	1,070.73
2-Aug	1	1.50	2,006.35	0	0.00	136.61	1	0.75	1,071.48
3-Aug	2	2.93	2,009.28	2	2.96	139.57	4	2.95	1,074.43
4-Aug	0	0.00	2,009.28	1	1.50	141.07	1	0.75	1,075.18
5-Aug	92	246.35	2,255.63	2	3.00	144.07	94	124.68	1,199.85
6-Aug	64	513.51	2,769.14	0	0.00	144.07	64	256.76	1,456.61
7-Aug	27	93.04	2,862.18	71	117.59	261.66	98	105.32	1,561.92
8-Aug	18	36.93	2,899.11	49	67.15	328.81	67	52.04	1,613.96
9-Aug	7	11.29	2,910.40	18	27.65	356.46	25	19.47	1,633.43
10-Aug	16	23.41	2,933.81	1	1.50	357.96	17	12.46	1,645.89
11-Aug	22	32.80	2,966.61	6	9.00	366.96	28	20.90	1,666.79
12-Aug	3	5.00	2,971.61	7	10.94	377.90	10	7.97	1,674.76
13-Aug	2	2.93	2,974.54	2	3.12	381.02	4	3.03	1,677.78
14-Aug	12	18.82	2,993.36	24	41.23	422.25	36	30.03	1,707.81
15-Aug	20	31.26	3,024.62	3	4.62	426.87	23	17.94	1,725.75
16-Aug	9	11.75	3,036.37	1	1.50	428.37	10	6.63	1,732.37
17-Aug	19	26.07	3,062.44	0	0.00	428.37	19	13.04	1,745.41
18-Aug	58	132.60	3,195.04	7	10.47	438.84	65	71.54	1,816.94
19-Aug	39	124.97	3,320.01	10	15.00	453.84	49	69.99	1,886.93
20-Aug	17	26.61	3,346.62	43	73.44	527.28	60	50.03	1,936.95
21-Aug	9	12.70	3,359.32	57	73.84	601.12	66	43.27	1,980.22
22-Aug	8	11.16	3,370.48	66	118.69	719.81	74	64.93	2,045.15
23-Aug	11	16.92	3,387.40	28	240.29	960.10	39	128.61	2,173.75
24-Aug	20	35.67	3,423.07	15	80.67	1,040.77	35	58.17	2,231.92
25-Aug	24	32.12	3,455.19	9	28.32	1,069.09	33	30.22	2,262.14
26-Aug	9	13.62	3,468.81	16	22.87	1,091.96	25	18.25	2,280.39
27-Aug	14	22.90	3,491.71	0	0.00	1,091.96	14	11.45	2,291.84
28-Aug	13	19.10	3,510.81	3	4.46	1,096.42	16	11.78	2,303.62
29-Aug	13	19.50	3,530.31	17	47.67	1,144.09	30	33.59	2,337.21
Total	1,308	3,530.31		549	1,144.09		1,857	2,337.21	

Note: The large box indicates the first to the third quartile of the cumulative index. The small box indicates the median date of the cumulative index.

Table 2.—Historical CPUE data for fall chum salmon in Lower Yukon drift gillnet test fishery, 2001–2005.

Date	2001		2002		2003		2004		2005		2001–2004 Average	
	Daily CPUE	Cum. CPUE	Daily CPUE	Cum. CPUE								
16-Jul	21.28	21.28	0.79	0.79	25.78	25.78	0.00	0.00	11.22	11.22	11.96	11.96
17-Jul	149.66	170.94	11.03	11.82	20.68	46.46		0.00	14.11	25.33	45.34	57.30
18-Jul	139.21	310.14	0.00	11.82	1.50	47.96		0.72	231.72	257.04	35.36	92.66
19-Jul	27.38	337.52	3.01	14.82	1.84	49.79		48.79	99.31	356.35	20.07	112.73
20-Jul	1.50	339.02	0.00	14.82	1.58	51.37	0.00	64.74	22.54	378.89	4.76	117.49
21-Jul	3.00	342.02	0.73	15.55	24.23	75.60	0.72	84.63	2.24	381.12	11.96	129.45
22-Jul	6.31	348.32	0.00	15.55	41.50	117.10	15.96	89.90	0.86	381.98	13.27	142.72
23-Jul	50.64	398.96	0.00	15.55	15.10	132.19	19.89	91.50	0.72	382.69	16.83	159.55
24-Jul	64.87	463.83	0.00	15.55	9.75	141.94		92.27	1.40	384.09	18.85	178.40
25-Jul	31.44	495.27	54.30	69.85	2.29	144.23	5.28	93.02	0.77	384.86	22.19	200.59
26-Jul	4.25	499.52	3.27	73.12	6.61	150.84	1.60	98.13	3.79	388.65	4.81	205.40
27-Jul	11.33	510.85	9.29	82.41	84.82	235.66	0.77	99.68	2.22	390.86	26.75	232.15
28-Jul	4.62	515.46	35.28	117.69	25.61	261.27	0.75	99.68	5.39	396.25	16.38	248.52
29-Jul	0.77	516.23	32.18	149.86	17.68	278.94	5.11	100.41	123.99	520.24	12.84	261.36
30-Jul	7.54	523.77	1.54	151.40	1.59	280.53	1.55	100.41	42.22	562.46	2.67	264.03
31-Jul	95.32	619.09	0.00	151.40	0.84	281.36	0.00	107.29	473.54	1,036.00	25.76	289.78
1-Aug	43.12	662.20	15.57	166.97	4.83	286.19	0.73	146.73	34.74	1,070.73	52.56	342.34
2-Aug	114.07	776.27	1.54	168.51	0.75	286.94		74.50	0.75	1,071.48	47.72	390.06
3-Aug	101.86	878.13	5.84	174.35	203.48	490.42		18.10	2.95	1,074.43	82.32	472.38
4-Aug	22.58	900.71	0.77	175.12	179.98	670.40		12.06	0.75	1,075.18	53.85	526.22
5-Aug	7.00	907.70	0.79	175.91	15.99	686.38		2.22	360.89	1,199.85	6.50	532.72
6-Aug	100.73	1,008.43	0.00	175.91	1.54	687.92		3.79	364.68	1,456.61	26.51	559.23
7-Aug	136.78	1,145.20	18.10	194.01	0.00	687.92		2.27	366.95	1,561.92	39.29	598.52
8-Aug	32.57	1,177.77	16.55	210.55	0.00	687.92		59.62	52.04	1,613.96	27.18	625.70
9-Aug	19.44	1,197.21	95.72	306.27	2.85	690.77		51.31	19.47	1,633.43	42.33	668.03
10-Aug	16.23	1,213.43	49.88	356.15	25.26	716.03		16.64	12.46	1,645.89	27.00	695.03
11-Aug	2.91	1,216.34	19.38	375.52	3.09	719.11		1.54	20.90	1,666.79	6.73	701.76
12-Aug	26.21	1,242.55	23.14	398.66	65.33	784.44		0.00	7.97	1,674.76	28.67	730.43
13-Aug	27.06	1,269.61	20.94	419.60	0.00	784.44		2.52	3.03	1,677.78	12.63	743.06

Table 2.–Page 2 of 2.

Date	2001		2002		2003		2004		2005		2001–2004 Average	
	Daily CPUE	Cum. CPUE	Daily CPUE	Cum. CPUE								
14-Aug	17.26	1,286.87	7.08	426.67	55.12	839.56	24.61	523.19	30.03	1,707.81	26.02	769.07
15-Aug	11.23	1,298.10	18.65	445.32	259.41	1,098.97	10.44	533.63	17.94	1,725.75	74.93	844.00
16-Aug	3.76	1,301.86	284.72	730.03	48.76	1,147.73	0.00	533.63	6.63	1,732.37	84.31	928.31
17-Aug	1.56	1,303.42	38.44	768.47	12.61	1,160.34	2.12	535.75	13.04	1,745.41	13.68	941.99
18-Aug	2.29	1,305.71	12.06	780.53	4.72	1,165.06	1.47	537.21	71.54	1,816.94	5.13	947.12
19-Aug	0.00	1,305.71	6.68	787.20	0.00	1,165.06	0.00	537.21	69.99	1,886.93	1.67	948.79
20-Aug	2.33	1,308.04	2.85	790.05	2.33	1,167.39	119.04	656.25	50.03	1,936.95	31.64	980.43
21-Aug	13.83	1,321.87	5.66	795.71	3.92	1,171.31	20.35	676.60	43.27	1,980.22	10.94	991.37
22-Aug	3.75	1,325.62	13.04	808.75	21.23	1,192.53	0.77	677.37	64.93	2,045.15	9.70	1,001.07
23-Aug	0.00	1,325.62	3.95	812.70	34.13	1,226.66	0.00	677.37	128.61	2,173.75	9.52	1,010.59
24-Aug	0.77	1,326.39	0.00	812.70	17.16	1,243.82	5.81	683.18	58.17	2,231.92	5.93	1,016.52
25-Aug	0.00	1,326.39	0.00	812.70	3.00	1,246.82	10.32	693.50	30.22	2,262.14	3.33	1,019.85
26-Aug	0.00	1,326.39	0.00	812.70	2.33	1,249.15	17.81	711.31	18.25	2,280.39	5.04	1,024.88
27-Aug	0.00	1,326.39	0.79	813.49	0.00	1,249.15	44.26	755.56	11.45	2,291.84	11.26	1,036.15
28-Aug	0.00	1,326.39	3.08	816.57	0.00	1,249.15			11.78	2,303.62	1.03	1,130.70
29-Aug									33.59	2,337.21		
Totals	1,326.39		816.57		1,249.15		755.56		2,337.21		1,130.70	

Note: The large box indicates the first to the third quartile of the cumulative index. The small box indicates the median date of the cumulative index.

Table 3.—Summary of fall chum salmon age, sex, and length (mm) data for the Lower Yukon drift gillnet test fishery, 2005.

			2001		2000		1999		Total	
			Age 0.3		Age 0.4		Age 0.5			
			No.	%	No.	%	No.	%	No.	%
Big Eddy										
Season Total	493	Males	180	36.5	11	2.2	1	0.2	192	38.9
Sample Size		Females	285	57.8	15	3.0	1	0.2	301	61.0
		Total	465	94.3	26	5.2	2	0.4	493	99.9
Mean Length (mm)		Males	599		622		565			
SE			3		12		-			
Mean Length (mm)		Females	593		610		650			
SE			2		7		-			
Middle Mouth										
Sample Size	85	Males	35	41.1	1	1.2	0	0.0	36	42.3
		Females	49	57.6	0	0.0	0	0.0	49	57.6
		Total	84	98.7	1	1.2	0	0.0	239	99.9
Mean Length (mm)		Males	607		670		-			
SE			5		-		-			
Mean Length (mm)		Females	586		-		-			
SE			4		-		-			
Total										
Sample Size	578	Males	215	37.1	12	2.0	1	0.17		
		Females	334	57.7	15	2.5	1	0.17		
		Total	549	94.8	27	4.5	2	0.34		

Table 4.–Pilot Station fall season sonar passage estimates attributed to fall chum and coho salmon, 2005.

Date	Fall Chum		Coho	
	Daily	Cum.	Daily	Cum.
19-Jul	16,305	16,305	0	0
20-Jul	20,651	36,956	0	0
21-Jul	105,208	142,164	0	0
22-Jul	64,728	206,892	0	0
23-Jul	25,050	231,942	0	0
24-Jul	7,077	239,019	24	24
25-Jul	5,302	244,321	28	52
26-Jul	3,343	247,664	0	52
27-Jul	4,252	251,916	413	465
28-Jul	4,753	256,669	168	633
29-Jul	6,082	262,751		633
30-Jul	2,722	265,473	137	770
31-Jul	13,097	278,570	79	849
1-Aug	41,245	319,815	345	1,194
2-Aug	66,121	385,936	457	1,651
3-Aug	59,275	445,211	749	2,400
4-Aug	14,167	459,378	582	2,982
5-Aug	2,059	461,437	260	3,242
6-Aug	1,676	463,113	246	3,488
7-Aug	94,704	557,817	2,775	6,263
8-Aug	314,186	872,003	7,889	14,152
9-Aug	241,724	1,113,727	19,693	33,845
10-Aug	117,816	1,231,543	7,386	41,231
11-Aug	43,797	1,275,340	10,083	51,314
12-Aug	19,238	1,294,578	4,385	55,699
13-Aug	24,383	1,318,961	7,269	62,968
14-Aug	16,141	1,335,102	6,768	69,736
15-Aug	4,740	1,339,842	6,280	76,016
16-Aug	14,088	1,353,930	3,551	79,567
17-Aug	21,888	1,375,818	4,579	84,146
18-Aug	5,694	1,381,512	3,912	88,058
19-Aug	4,458	1,385,970	5,988	94,046
20-Aug	27,157	1,413,127	5,744	99,790
21-Aug	54,024	1,467,151	7,750	107,540
22-Aug	34,079	1,501,230	4,472	112,012
23-Aug	42,392	1,543,622	5,860	117,872
24-Aug	36,354	1,579,976	13,953	131,825
25-Aug	53,660	1,633,636	6,325	138,150
26-Aug	70,337	1,703,973	8,625	146,775
27-Aug	51,063	1,755,036	9,291	156,066
28-Aug	21,440	1,776,476	11,900	167,966
29-Aug	16,256	1,792,732	8,308	176,274
30-Aug	10,888	1,803,620	3,404	179,678
31-Aug	9,969	1,813,589	5,040	184,718
Total	1,813,589		184,718	

Note: The large box indicates the first to the third quartile of the cumulative index. The small box indicates the median date of the cumulative index.

Table 5.—Catch and CPUE data for coho salmon in the Lower Yukon drift gillnet test fishery, 2005.

Date	Big Eddy			Middle Mouth				Total		
	Daily Catch	Daily CPUE	Cum. CPUE	Daily Catch	Daily CPUE	Prop.	Cum. CPUE	Daily Catch	Daily CPUE	Cum. CPUE
16-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
17-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
18-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
19-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
20-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
21-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
22-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
23-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
24-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
25-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
26-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
27-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
28-Jul	0	0.00	0.00	0	0.00	0.00	0	0	0.00	0.00
29-Jul	2	7.27	7.27	0	0.00	0.00	0	2	3.64	3.64
30-Jul	1	1.82	9.09	3	4.43	0.01	4.43	4	3.13	6.76
31-Jul	3	13.36	22.45	0	0.00	0.01	4.43	3	6.68	13.44
1-Aug	3	6.22	28.67	0	0.00	0.01	4.43	3	3.11	16.55
2-Aug	1	1.46	30.13	0	0.00	0.01	4.43	1	0.73	17.28
3-Aug	1	1.43	31.56	1	1.46	0.02	5.89	2	1.45	18.73
4-Aug	0	0.00	31.56	0	0.00	0.02	5.89	0	0.00	18.73
5-Aug	3	5.30	36.86	0	0.00	0.02	5.89	3	2.65	21.38
6-Aug	6	39.74	76.6	0	0.00	0.02	5.89	6	19.87	41.25
7-Aug	13	33.15	109.75	29	38.93	0.15	44.82	42	36.04	77.29
8-Aug	10	23.93	133.68	7	9.72	0.18	54.54	17	16.83	94.11
9-Aug	5	8.00	141.68	2	3.25	0.19	57.79	7	5.63	99.74
10-Aug	5	7.32	149	1	1.50	0.20	59.29	6	4.41	104.15
11-Aug	6	8.36	157.36	0	0.00	0.20	59.29	6	4.18	108.33
12-Aug	5	8.13	165.49	5	7.78	0.22	67.07	10	7.96	116.28
13-Aug	0	0.00	165.49	5	7.69	0.25	74.76	5	3.85	120.13
14-Aug	9	14.19	179.68	4	6.65	0.27	81.41	13	10.42	130.55
15-Aug	6	9.35	189.03	1	1.62	0.28	83.03	7	5.49	136.03
16-Aug	2	2.82	191.85	2	3.16	0.29	86.19	4	2.99	139.02
17-Aug	9	12.34	204.19	1	4.80	0.30	90.99	10	8.57	147.59
18-Aug	13	20.32	224.51	1	1.46	0.31	92.45	14	10.89	158.48
19-Aug	10	27.58	252.09	2	3.00	0.32	95.45	12	15.29	173.77
20-Aug	3	4.36	256.45	9	13.21	0.36	108.66	12	8.79	182.56
21-Aug	1	1.40	257.85	12	14.87	0.41	123.53	13	8.14	190.69
22-Aug	1	1.50	259.35	20	22.50	0.49	146.03	21	12.00	202.69
23-Aug	3	4.62	263.97	2	45.00	0.64	191.03	5	24.81	227.50
24-Aug	4	7.62	271.59	9	48.00	0.80	239.03	13	27.81	255.31
25-Aug	5	6.79	278.38	3	9.31	0.83	248.34	8	8.05	263.36
26-Aug	5	7.62	286	13	18.41	0.89	266.75	18	13.02	276.38
27-Aug	4	7.06	293.06	1	1.50	0.90	268.25	5	4.28	280.66
28-Aug	1	1.46	294.52	2	2.96	0.91	271.21	3	2.21	282.87
29-Aug	5	7.50	302.02	10	28.23	1.00	299.44	15	17.87	300.73
Total	145	302.02		145	299.44			290	300.73	

Note: The large box indicates the first to the third quartile of the cumulative index. The small box indicates the median date of the cumulative index.

Table 6.—Summary of coho salmon age, sex, and length (mm) data for the Lower Yukon drift gillnet test fishery, 2005.

		Brood Year and Age Class								
		2002		2001		2000		Total		
		Age 1.1		Age 2.1		Age 3.1				
		No.	%	No.	%	No.	%	No.	%	
Big Eddy										
Season Total	75	Males	5	6.7	30	40.0	2	2.7	37	49.3
Sample Size		Females	2	2.7	32	42.7	4	5.3	38	50.7
		Total	7	9.3	62	82.7	6	8.0	75	100.0
Mean Length (mm)		Males	572		583		588			
SE			14		6		3			
Mean Length (mm)		Females	583		581		585			
SE			3		5		11			
Middle Mouth										
Season Total	21	Males	5	23.8	15	71.4	1	4.8	21	100.0
Sample Size		Females	0	0.0	0	0.0	0	0.0	0	0.0
		Total	5	23.8	15	71.4	1	4.8	21	100.0
Mean Length (mm)		Males	586		572		520			
SE			10		9		-			
Mean Length (mm)		Females	-		-		-			
SE			-		-		-			
Total										
Season Total	96	Males	10	10.4	45	46.9	3	3.1	58	60.4
Sample Size		Females	2	2.1	32	33.3	4	4.2	38	39.6
		Total	12	12.5	77	80.2	7	7.3	96	100.0

Table 7.—Historical CPUE data for coho salmon in Lower Yukon drift gillnet test fishery, 2001–2005.

Date	2001		2002		2003		2004		2005		2001–2004	
	Daily CPUE	Cum. CPUE										
16-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21-Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22-Jul	0.00	0.00	0.00	0.00	0.79	0.79	0.00	0.00	0.00	0.00	0.20	0.20
23-Jul	1.50	1.50	0.00	0.00	0.84	1.63	0.00	0.00	0.00	0.00	0.58	0.78
24-Jul	0.88	2.38	0.00	0.00	0.00	1.63	0.00	0.00	0.00	0.00	0.22	1.00
25-Jul	0.00	2.38	0.00	0.00	0.00	1.63	0.00	0.00	0.00	0.00	0.00	1.00
26-Jul	0.00	2.38	0.00	0.00	0.00	1.63	0.72	0.72	0.00	0.00	0.18	1.18
27-Jul	0.75	3.13	0.00	0.00	11.95	13.57	0.00	0.72	0.00	0.00	3.17	4.35
28-Jul	0.00	3.13	0.00	0.00	3.08	16.65	0.00	0.72	0.00	0.00	0.77	5.12
29-Jul	0.00	3.13	0.00	0.00	5.27	21.91	0.00	0.72	3.64	3.64	1.32	6.44
30-Jul	0.75	3.88	0.00	0.00	0.00	21.91	0.00	0.72	3.13	6.76	0.19	6.63
31-Jul	3.05	6.93	0.00	0.00	0.79	22.70	0.00	0.72	6.68	13.44	0.96	7.59
1-Aug	0.00	6.93	2.04	2.04	2.39	25.09	1.35	2.06	3.11	16.55	1.44	9.03
2-Aug	4.86	11.79	0.00	2.04	0.00	25.09	8.00	10.06	0.73	17.28	3.21	12.24
3-Aug	13.29	25.07	2.20	4.24	55.61	80.70	6.67	16.73	1.45	18.73	19.44	31.68
4-Aug	9.85	34.92	0.00	4.24	67.84	148.54	0.00	16.73	0.00	18.73	19.42	51.10
5-Aug	5.70	40.62	0.72	4.95	10.94	159.47	0.77	17.50	2.65	21.38	4.53	55.63
6-Aug	18.03	58.65	0.00	4.95	0.00	159.47	0.00	17.50	19.87	41.25	4.51	60.14
7-Aug	50.38	109.02	5.53	10.48	0.77	160.24	0.00	17.50	36.04	77.29	14.17	74.31
8-Aug	21.82	130.84	5.18	15.66	0.00	160.24	4.68	22.17	16.83	94.11	7.92	82.23
9-Aug	14.08	144.92	16.70	32.35	5.15	165.39	19.97	42.14	5.63	99.74	13.97	96.20
10-Aug	27.75	172.67	9.56	41.91	12.64	178.03	14.38	56.52	4.41	104.15	16.08	112.28
11-Aug	15.41	188.07	26.15	68.06	7.62	185.65	5.39	61.90	4.18	108.33	13.64	125.92
12-Aug	28.61	216.68	15.58	83.63	33.53	219.17	1.39	63.29	7.96	116.28	19.77	145.69
13-Aug	31.52	248.20	21.92	105.55	3.08	222.25	4.02	67.31	3.85	120.13	15.14	160.83
14-Aug	28.23	276.42	5.34	110.89	53.68	275.93	25.69	93.00	10.42	130.55	28.23	189.06

-continued-

Table 7.–Page 2 of 2.

Date	2001		2002		2003		2004		2005		2001–2004	
	Daily CPUE	Cum. CPUE										
15-Aug	34.28	310.70	20.02	130.90	261.64	537.56	5.26	98.25	5.49	136.03	80.30	269.35
16-Aug	13.58	324.28	102.86	233.76	41.42	578.98	2.40	100.65	2.99	139.02	40.06	309.41
17-Aug	11.14	335.41	45.98	279.74	10.91	589.89	6.61	107.25	8.57	147.59	18.66	328.07
18-Aug	9.23	344.64	34.05	313.79	13.87	603.76	9.01	116.26	10.89	158.48	16.54	344.61
19-Aug	15.60	360.24	22.75	336.54	2.37	606.13	2.36	118.62	15.29	173.77	10.77	355.38
20-Aug	2.35	362.59	10.59	347.12	2.37	608.50	18.72	137.34	8.79	182.56	8.51	363.89
21-Aug	11.27	373.86	3.81	350.93	10.14	618.63	58.75	196.09	8.14	190.69	20.99	384.88
22-Aug	14.50	388.36	17.87	368.80	44.84	663.47	1.52	197.61	12.00	202.69	19.68	404.56
23-Aug	1.54	389.90	3.04	371.84	24.76	688.23	1.48	199.09	24.81	227.50	7.71	412.26
24-Aug	2.29	392.19	3.12	374.96	13.18	701.41	1.50	200.59	27.81	255.31	5.02	417.28
25-Aug	0.00	392.19	0.77	375.73	3.79	705.20	11.75	212.33	8.05	263.36	4.08	421.36
26-Aug	1.47	393.65	1.03	376.76	3.17	708.36	11.29	223.62	13.02	276.38	4.24	425.60
27-Aug	0.00	393.65	0.79	377.55	0.00	708.36	73.83	297.45	4.28	280.66	18.66	444.25
28-Aug	0.81	394.46	4.62	382.16	3.16	711.52			2.21	282.87	2.86	496.05
29-Aug									17.87	300.73		
Totals	394.46		382.16		711.52		297.45		300.73			496.05

Note: The large box indicates the first to the third quartile of the cumulative index. The small box indicates the median date of the cumulative index.

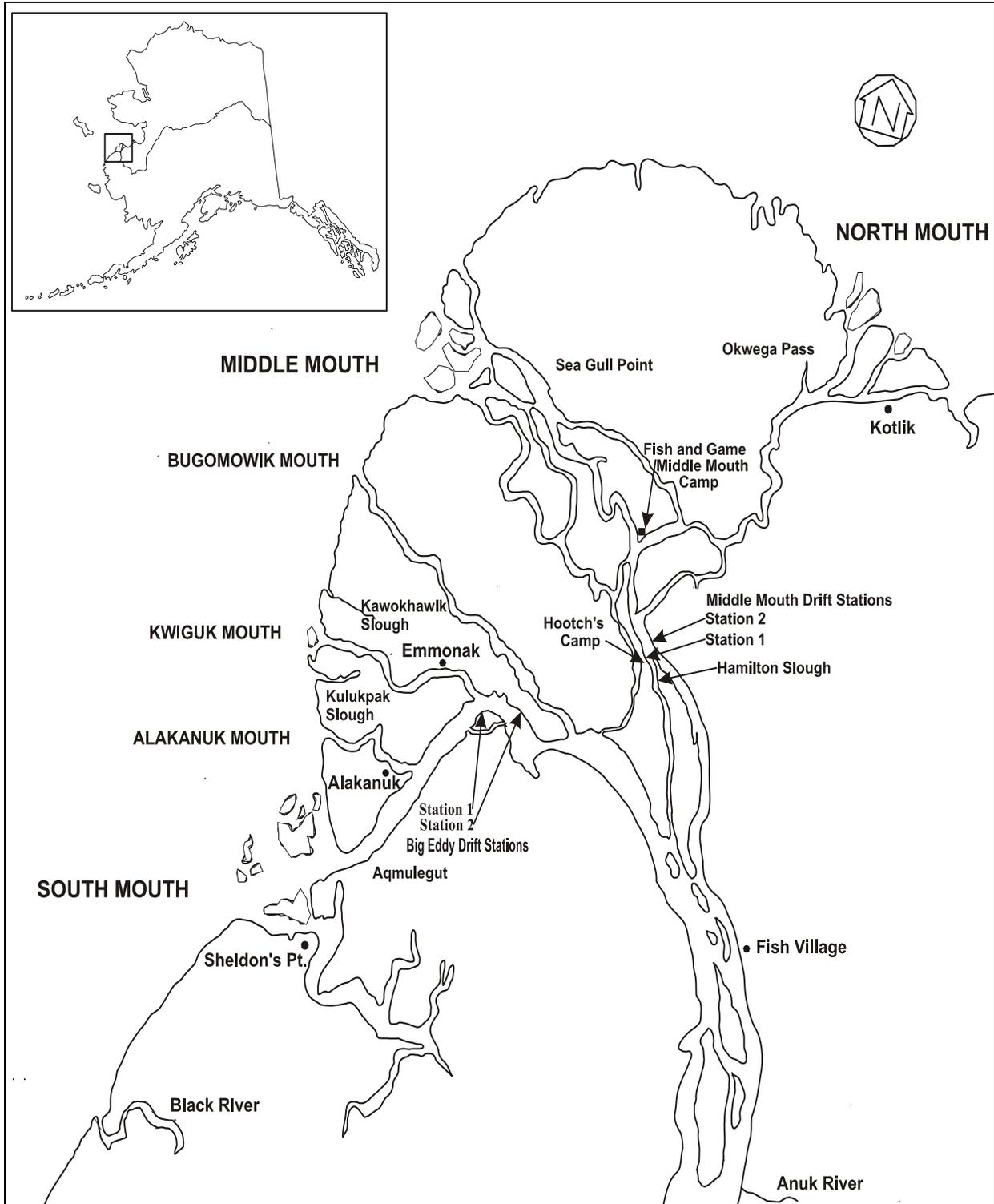


Figure 1.—Drift stations for the cooperative Lower Yukon drift gillnet test fishery, 2005.

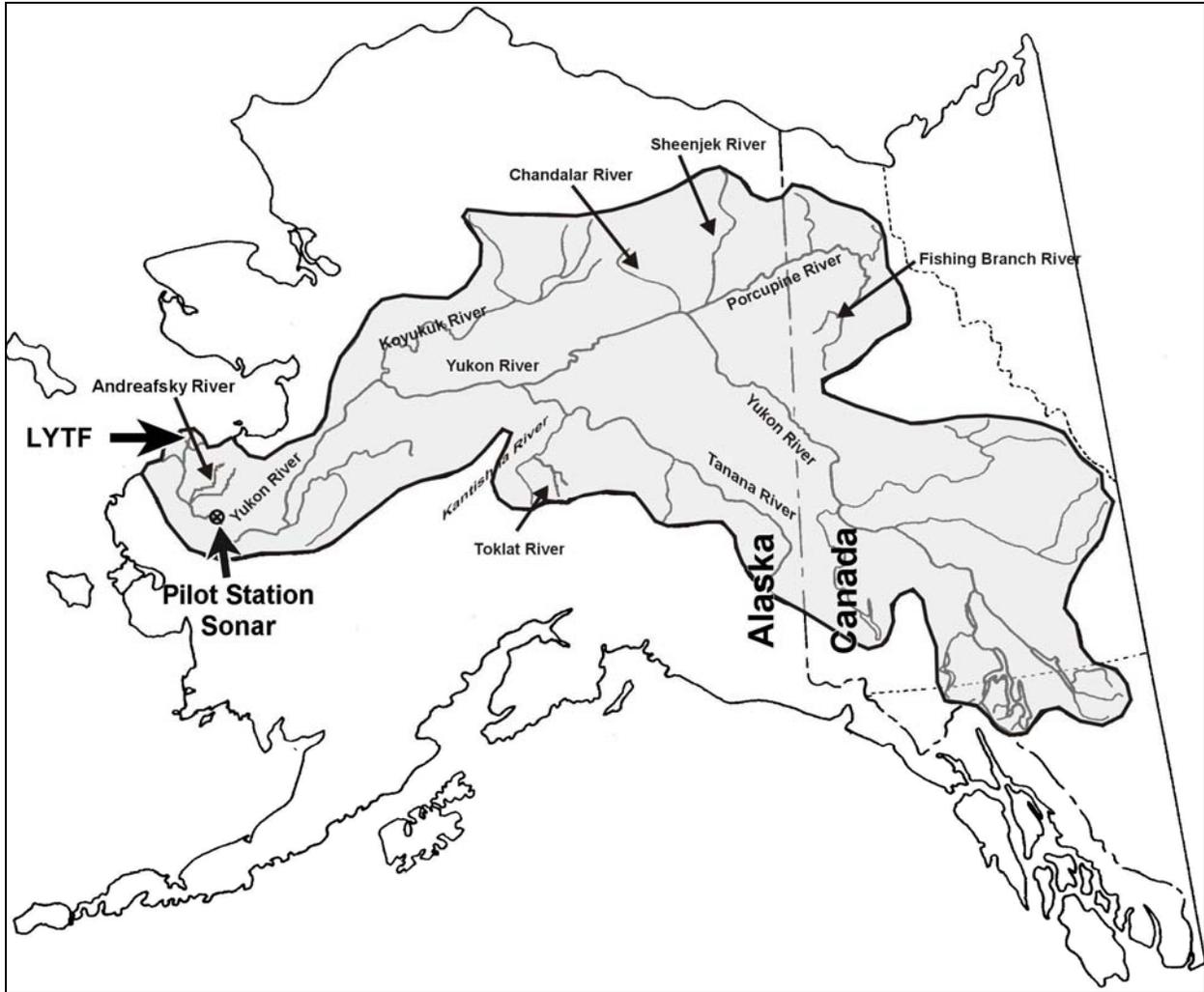


Figure 2.—Project site locations for the Yukon, highlighting the Lower Yukon drift gillnet test fishery and Pilot Station Sonar 2005.

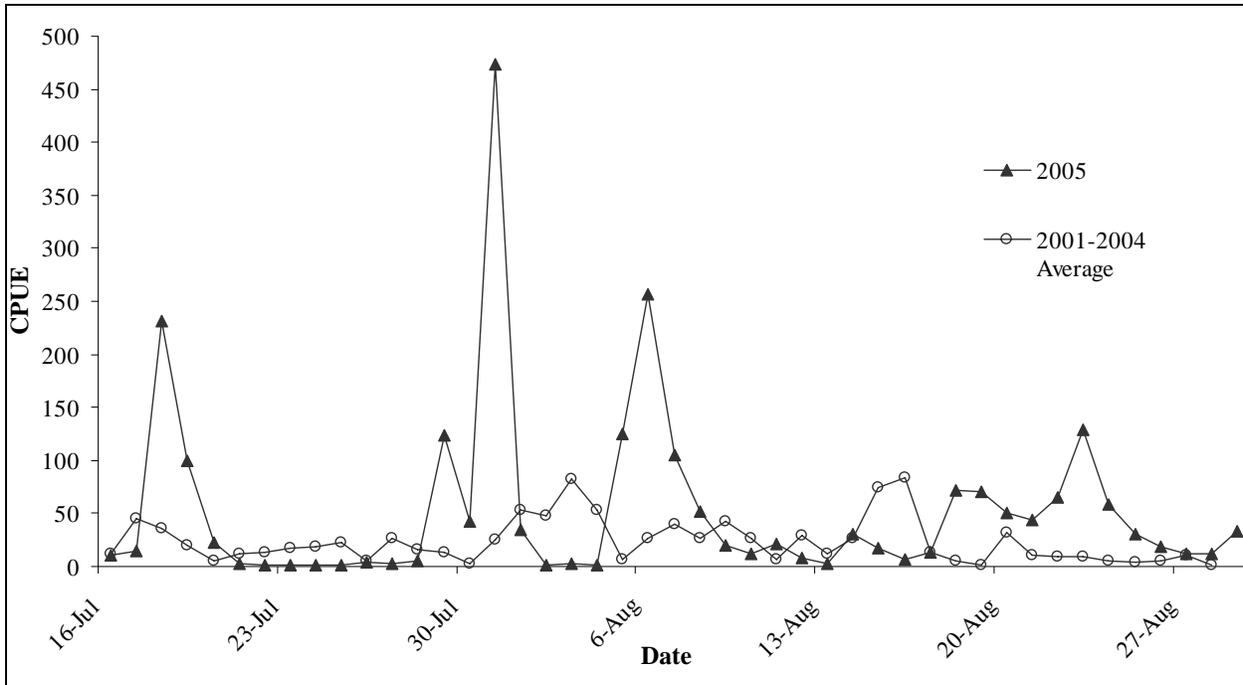


Figure 3.—Daily CPUE for fall chum salmon in the Lower Yukon drift gillnet test fishery, 2005 compared to the 2001–2004 average.

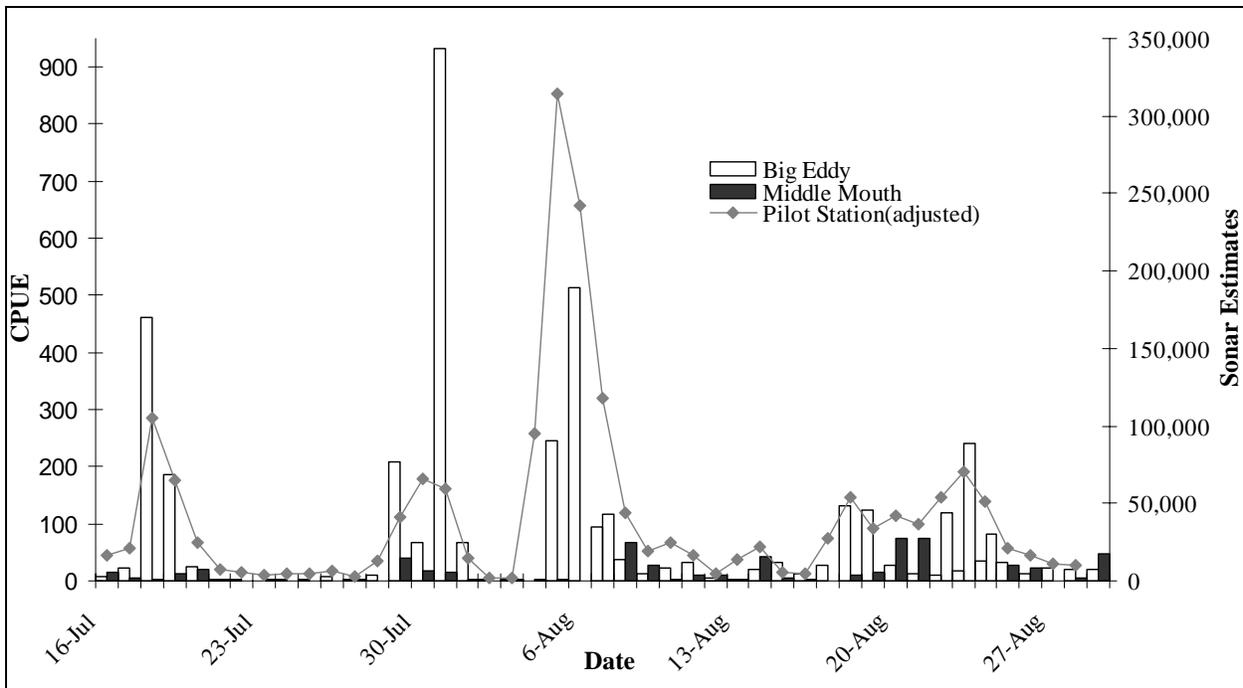


Figure 4.—Daily CPUE for fall chum salmon in the Big Eddy and Middle Mouth drift gillnet test fishery, compared to Pilot Station sonar passage estimates, 2005.

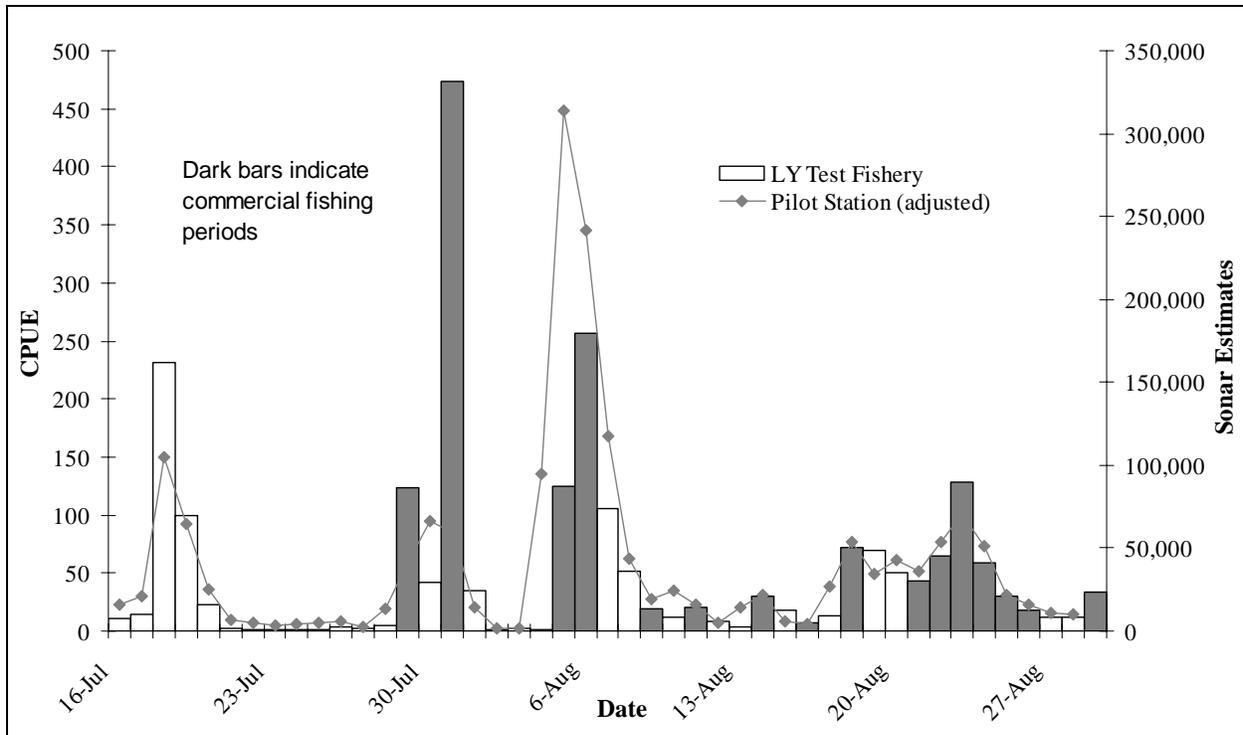


Figure 5.—Daily CPUE for fall chum salmon in the Lower Yukon drift gillnet test fishery compared to Pilot Station sonar passage estimates adjusted for transit time, 2005.

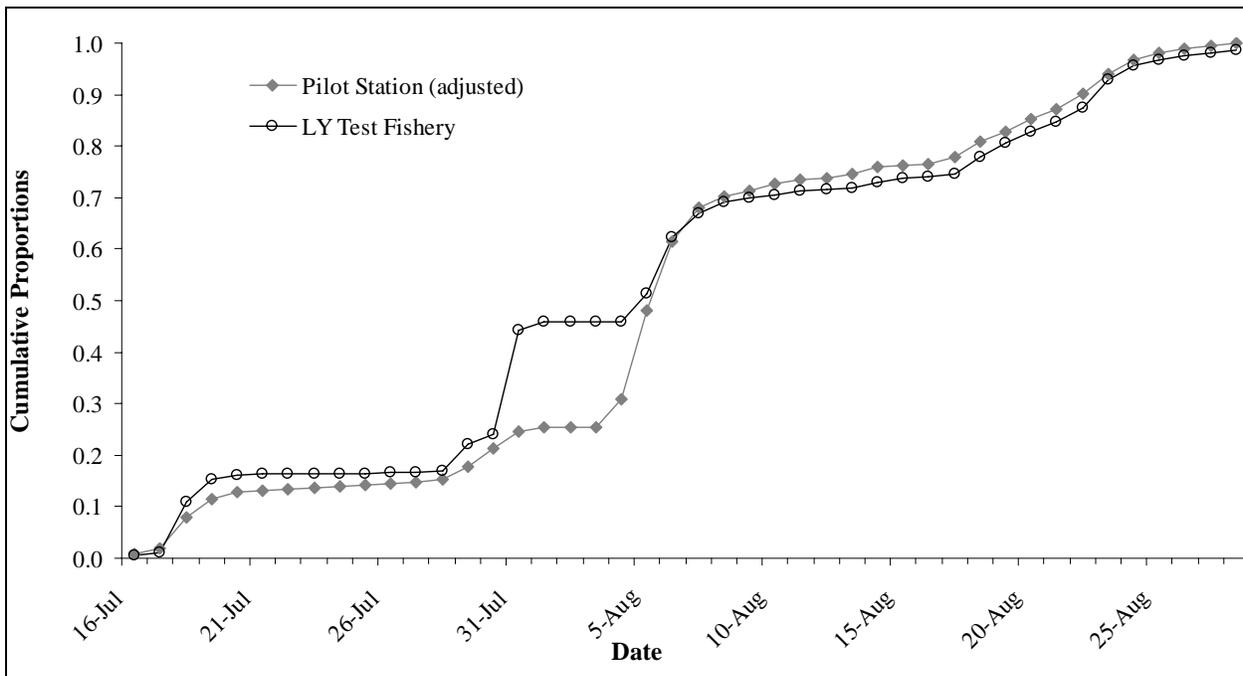


Figure 6.—Cumulative proportions for fall chum salmon from the Lower Yukon drift gillnet test fishery compared to Pilot Station, adjusted for transit time, 2005.

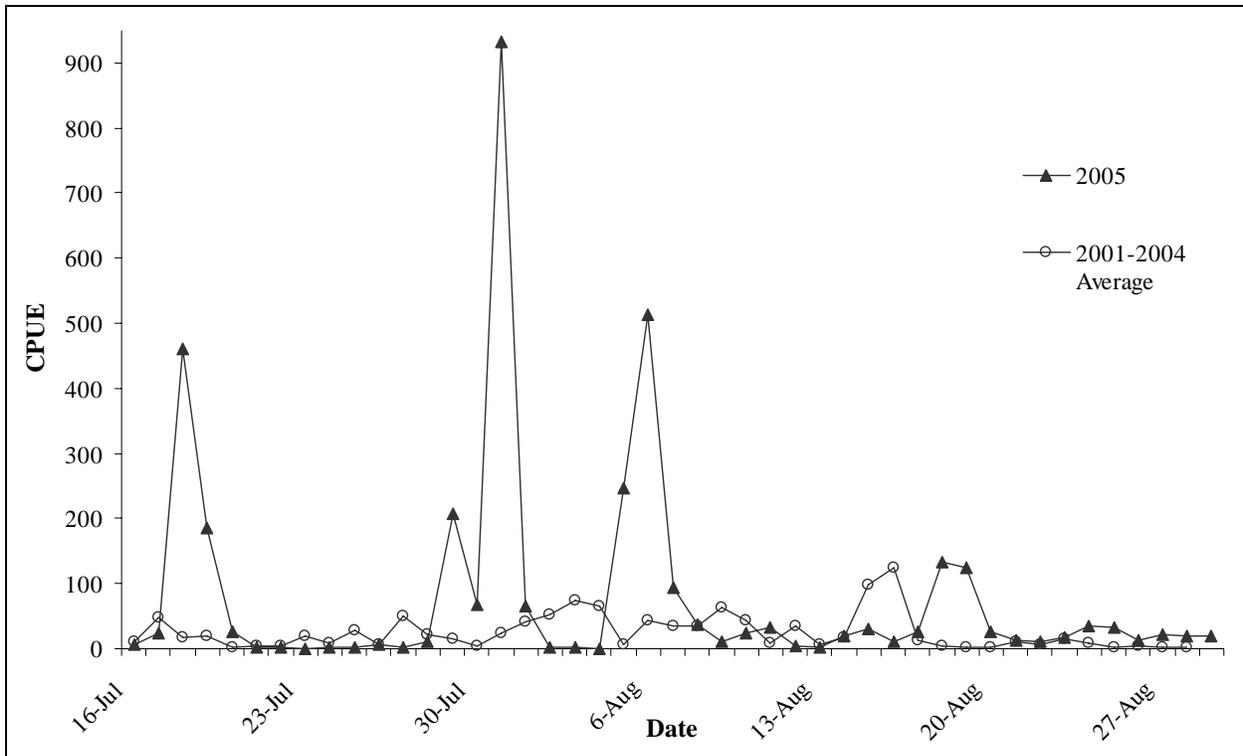


Figure 7.—Daily CPUE for fall chum salmon at Big Eddy, 2005 compared to 2001–2004 average.

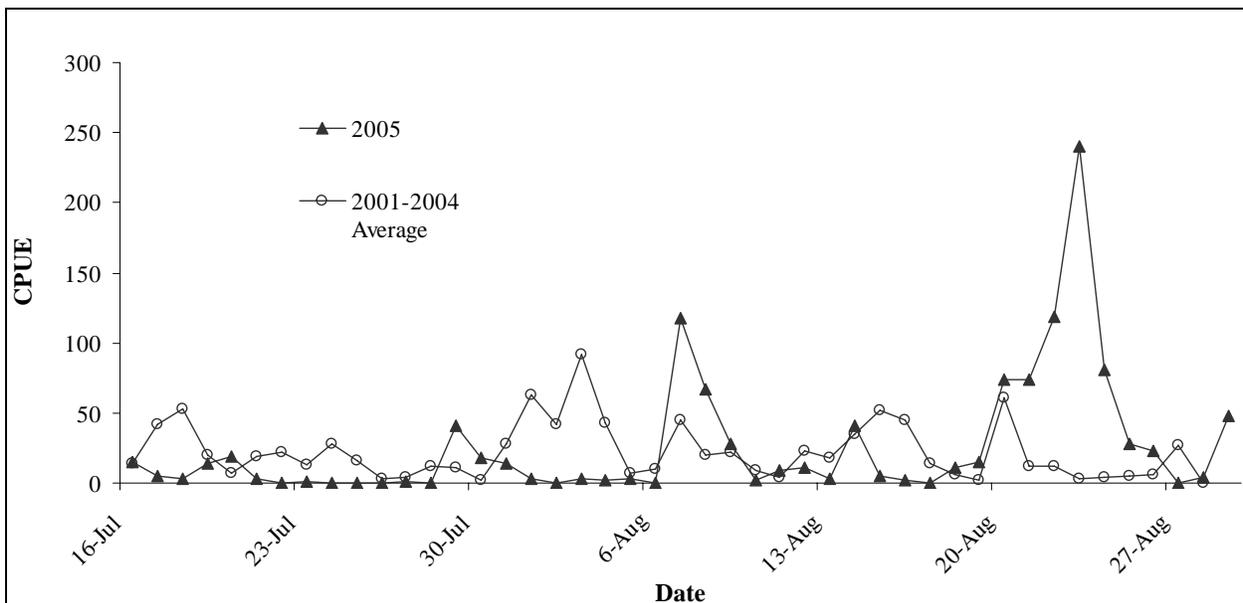


Figure 8.—Daily CPUE for fall chum salmon at Middle Mouth, 2005 compared to the 2001–2004 average.

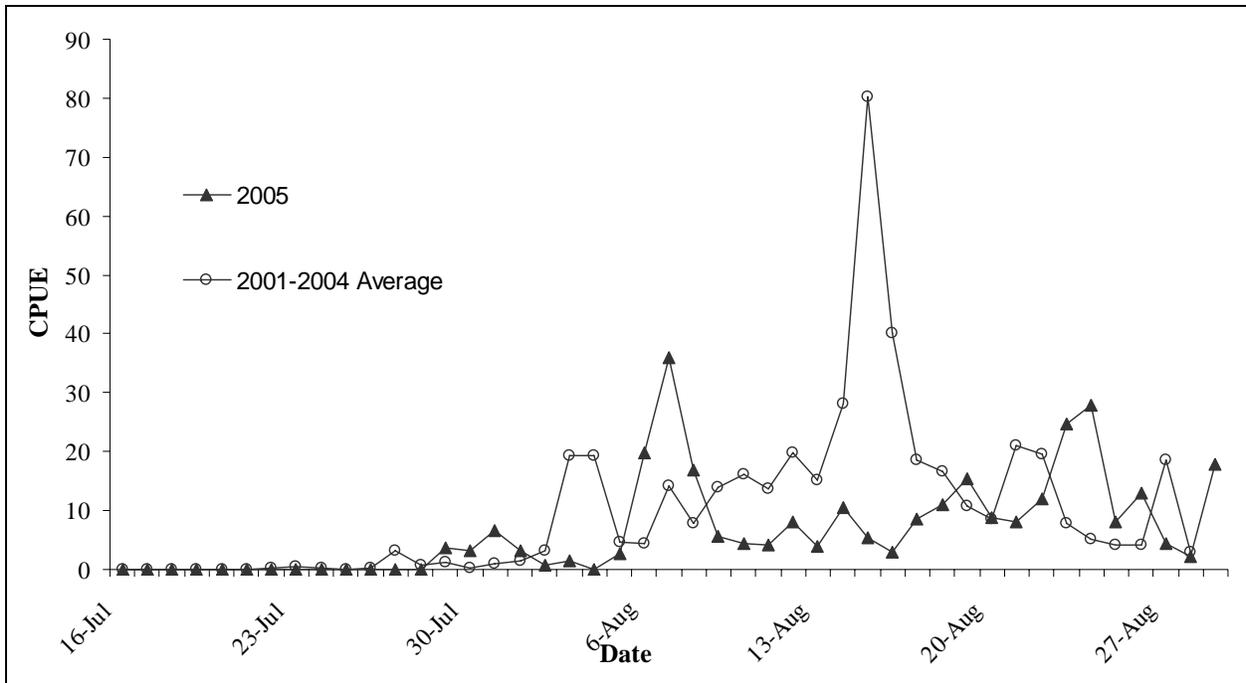


Figure 9.—Daily CPUE for coho salmon in the Lower Yukon drift gillnet test fishery, 2005 compared to the 2001–2004 average.

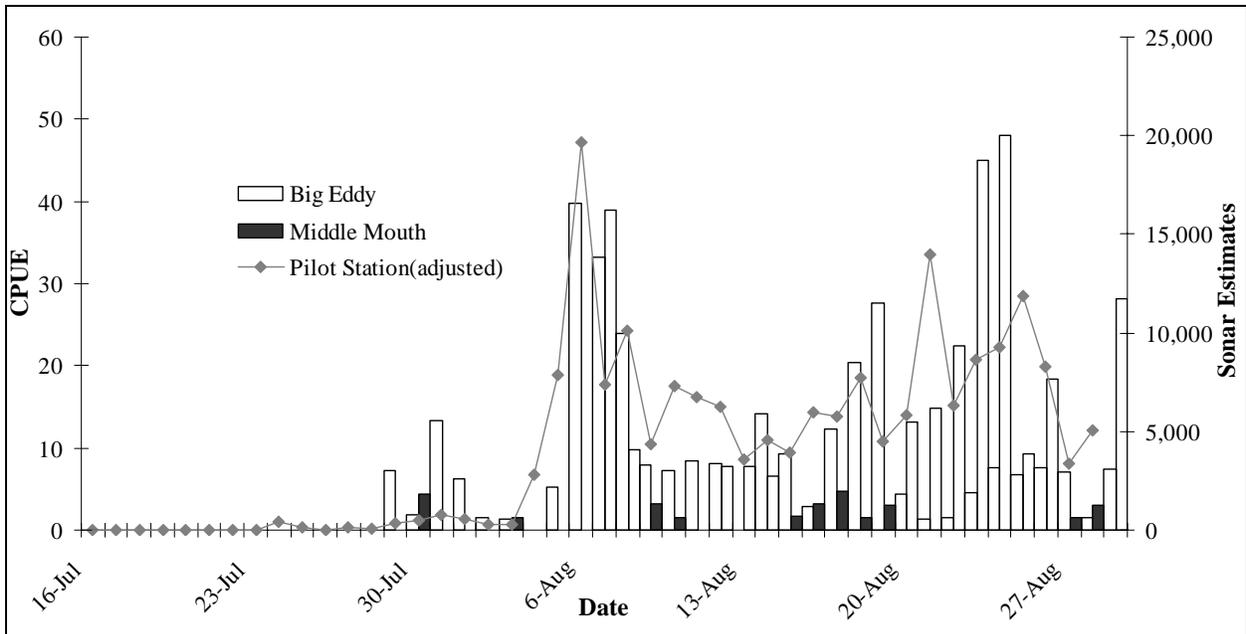


Figure 10.—Daily CPUE for coho salmon from Big Eddy and Middle Mouth drift gillnet test fishery, compared to Pilot Station sonar passage estimates adjusted for transit time, 2005.

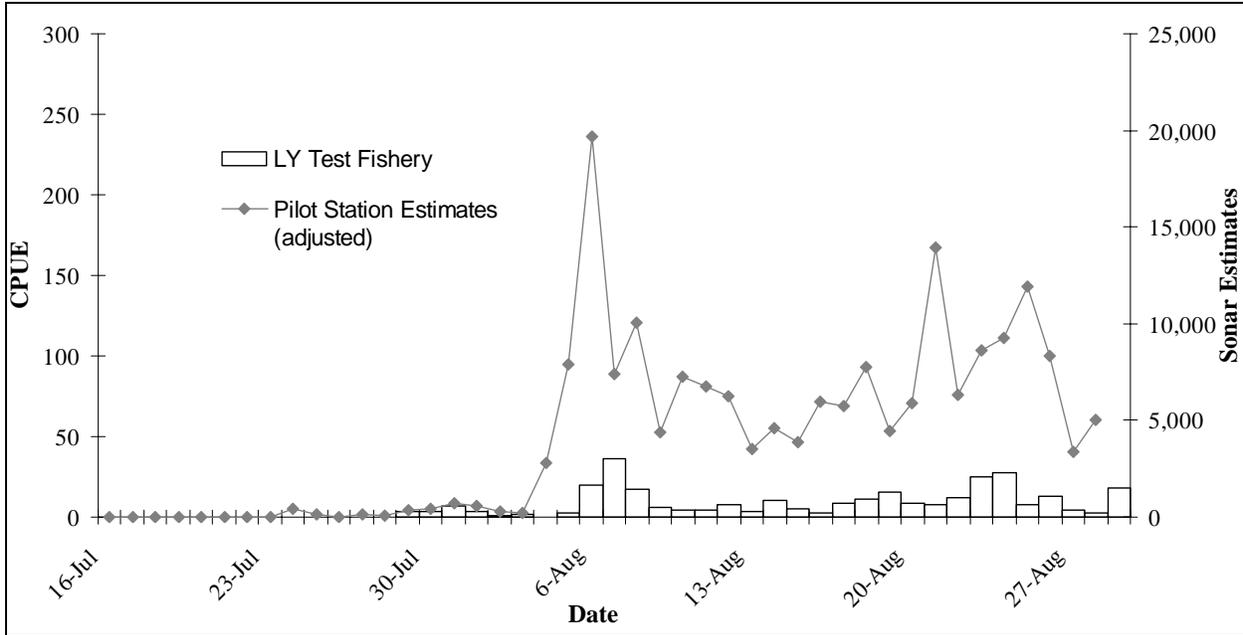


Figure 11.—Daily CPUE for coho salmon from the Lower Yukon drift gillnet test fishery compared to sonar passage estimates from Pilot Station adjusted for transit time, 2005.

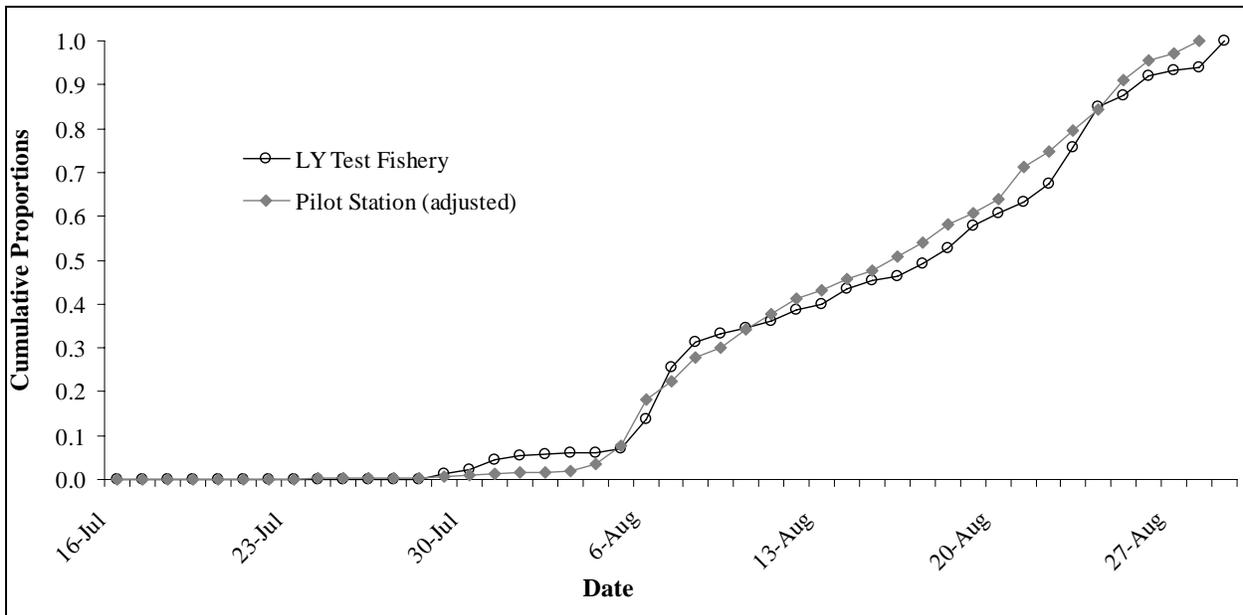


Figure 12.—Cumulative proportions for coho salmon from the Lower Yukon drift gillnet test fishery compared to Pilot Station adjusted for transit time, 2005.

APPENDICES

Appendix A1.—Mean fishing times for the Lower Yukon drift gillnet test fishery, 2005.

Drift Gillnet Test Fishery																
Date	Big Eddy Drift Times (min)					Middle Mouth Drift Times (min)										
	1	2	3	4	Total	Catch			Time 1	Time 2	Time 3	Time 4	Total	Catch		
						Fall	Chum	Coho						Fall	Chum	Coho
16-Jul	19.0	20.5	19.5	20.0	79.0	5	0	19.0	19.0	19.0	20.5	77.5	10	0		
17-Jul	18.0	20.0	18.0	18.5	74.5	15	0	19.0	19.0	19.0	19.5	76.5	3	0		
18-Jul	20.0	20.5	20.5	11.0	72.0	185	0	19.0	19.0	19.0	20.0	77.0	2	0		
19-Jul	22.0	17.5	19.0	17.0	75.5	90	0	19.0	19.5	20.5	19.5	78.5	9	0		
20-Jul	20.5	28.5	19.5	17.5	86.0	23	0	19.5	18.5	19.5	19.5	77.0	12	0		
21-Jul	20.0	21.0	20.5	20.5	82.0	1	0	19.0	20.0	19.5	19.5	78.0	2	0		
22-Jul	15.0	19.5	19.5	17.5	71.5	1	0	20.5	19.5	19.5	19.5	79.0	0	0		
23-Jul	20.0	20.0	20.0	19.5	79.5	0	0	19.5	21.0	19.5	19.0	79.0	1	0		
24-Jul	19.5	21.5	19.5	18.5	79.0	2	0	19.5	19.5	19.5	19.0	77.5	0	0		
25-Jul	19.5	20.0	19.0	19.5	78.0	1	0	19.0	19.5	19.5	19.5	77.5	0	0		
26-Jul	19.5	19.5	19.0	20.0	78.0	5	0	19.5	19.5	19.5	19.5	78.0	0	0		
27-Jul	20.0	20.0	18.5	20.0	78.5	2	0	19.5	19.5	19.5	21.0	79.5	1	0		
28-Jul	19.5	19.5	19.5	19.5	78.0	7	0	20.0	19.5	20.0	20.0	79.5	0	0		
29-Jul	19.5	17.0	20.0	16.5	73.0	82	2	20.5	21.0	16.5	22.0	80.0	27	0		
30-Jul	20.0	16.5	20.0	19.0	75.5	38	1	20.0	21.0	19.5	20.0	80.5	12	3		
31-Jul	19.5	17.5	22.0	10.0	69.0	275	3	22.0	20.5	20.5	19.0	82.0	10	0		
1-Aug	19.5	17.5	20.0	21.5	78.5	27	3	20.0	20.0	19.5	19.5	79.0	2	0		
2-Aug	20.0	20.5	20.0	20.0	80.5	1	1	20.0	19.5	19.5	19.5	78.5	0	0		
3-Aug	19.5	21.0	19.5	20.0	80.0	2	1	20.0	20.0	20.5	17.5	78.0	2	1		
4-Aug	19.5	20.5	19.5	20.0	79.5	0	0	19.5	20.0	19.5	20.0	79.0	1	0		
5-Aug	20.0	15.0	23.0	10.0	68.0	92	3	19.5	19.5	20.0	19.5	78.5	2	0		
6-Aug a			22.0	14.0	36.0	64	6 a					0.0	0	0		
7-Aug	19.5	20.0	19.5	8.0	67.0	27	13	29.5	21.0	18.5	8.0	77.0	71	29		
8-Aug	20.0	20.0	19.5	21.0	80.5	18	10	24.0	20.0	21.5	19.5	85.0	49	7		
9-Aug	19.0	17.5	23.0	21.0	80.5	7	5	20.0	20.0	18.0	19.0	77.0	18	2		
10-Aug	20.0	20.5	18.5	20.5	79.5	16	5	20.0	19.5	19.0	19.5	78.0	1	1		
11-Aug	19.5	19.5	20.0	22.0	81.0	22	6	20.0	20.0	18.0	19.5	77.5	6	0		
12-Aug	19.0	18.0	20.5	20.5	78.0	3	5	19.5	19.0	18.5	19.5	76.5	7	5		
13-Aug	17.5	19.5	20.0	20.5	77.5	2	0	19.5	19.0	19.5	19.0	77.0	2	5		
14-Aug	20.0	20.5	20.0	18.0	78.5	12	9	19.5	18.0	19.0	17.0	73.5	24	4		
15-Aug	19.5	19.0	20.0	19.5	78.0	20	6	19.0	20.0	18.5	19.5	77.0	3	1		
16-Aug	20.0	19.5	19.5	23.5	82.5	9	2	19.0	19.0	19.0	20.0	77.0	1	2		
17-Aug	19.5	21.5	20.0	22.0	83.0	19	9 b			12.5	19.5	32.0	0	1		
18-Aug	19.5	26.0	20.0	20.5	86.0	58	13	20.0	19.5	19.0	20.5	79.0	7	1		
19-Aug	21.5	16.0	20.0	22.0	79.5	39	10	20.0	20.0	20.0	20.0	80.0	10	2		
20-Aug	20.0	19.5	20.0	22.0	81.5	17	3	22.5	20.5	16.0	19.0	78.0	43	9		
21-Aug	19.5	20.0	20.0	21.5	81.0	9	1	26.0	20.0	23.0	22.0	91.0	57	12		
22-Aug	17.5	21.5	20.0	20.0	79.0	8	1	28.0	18.0	18.5	14.0	78.5	66	20		
23-Aug	20.0	19.5	19.5	19.5	78.5	11	3 b	16.0	17.5	2.0		35.5	28	2		
24-Aug b	32.0		20.0	21.0	73.0	20	4 b			22.5	20.0	42.5	15	9		
25-Aug	20.0	23.0	19.5	21.5	84.0	24	5	19.0	20.0	19.5	18.0	76.5	9	3		
26-Aug	20.5	20.5	20.0	19.5	80.5	9	5	20.0	20.5	21.0	21.5	83.0	16	13		
27-Aug	20.0	17.0	12.0	20.5	69.5	14	4	20.0	20.0	20.0	21.0	81.0	0	1		
28-Aug	19.5	20.5	19.5	20.5	80.0	13	1	20.0	20.5	20.0	20.0	80.5	3	2		
29-Aug	19.0	20.0	20.0	20.0	79.0	13	5	20.50	22.5			43.0	17	10		
Daily Average					77.1							74.2				
Drift Average					19.6							19.5				
Total Catch						1,308	145						549	145		

^a Individual drifts were cancelled and not conducted in conjunction with open commercial fishing periods.

^b Individual drifts were not conducted due to poor weather, high water, or high debris load.

Appendix A2.—Catch distribution by species for the Lower Yukon drift gillnet test fishery, 2005.

Species	Big Eddy		Middle Mouth		Total	
	Fall Chum	Coho	Fall Chum	Coho	Fall Chum	Coho
Fish released unharmed	207	57	445	121	652	178
Test fish sales	87	0	0	0	87	0
Fish discarded	0	0	0	0	0	0
Test fish donated locally	1,014	88	104	24	1,118	112
Total catch	1,308	145	549	145	1,857	290