

CHUM TEST FISHERY 2002



PREPARED FOR:
Yukon River Commercial Fishing Association
&
Tr'ondëk Hwëch'in

Table of Contents

| | |
|---------------------------------|--------|
| • Abstract and Acknowledgements | Page 1 |
| • Chum Test Fishery 2002 | Page 2 |
| • Recommendations | Page 3 |
| • Fishwheel Diagram | Page 4 |
| • Data | Page 5 |

ABSTRACT - For Hugh Monaghan

The purpose of this project was to assess the strength of the 2002 Fall Chum Run of Dawson City.

The work was performed by The Yukon River Commercial Fishing Association.

Live catch wheels were used in three locations between 40 Mile and Dawson City.

The project ran for four weeks.

A total of 2,756 chum salmon were caught and 198 of them had been tagged.

The data collected helped to establish sufficient strength in the chum run to permit an aboriginal fishery and a limited commercial fishery.

ACKNOWLEDGEMENTS

This project was funded by The Yukon River Panel through The Restoration and Enhancement Fund.

Jake Duncan was instrumental in steering the proposal successfully through the R&E Fund process.

Mel Besharah and Sebastian Jones oversaw and coordinated the project.

CHUM TEST FISHERY 2002

ABSTRACT

DFO has traditionally relied on the commercial fishery in Dawson area to collect mark-recapture data. Without this information, reliable run abundance and escapement projections cannot be adequately generated from the DFO fish wheel data alone. More often than not since 1997, stock strength has been insufficient to allow for a Canadian commercial chum fishery. In 2001, the total commercial chum catch of 2,198 was 87% below the previous 10 - year average, and managers expected another poor return in 2002 (JTC 2001). Acknowledging this, the Canadian chum salmon management plan for 2002 included the provision that the commercial fishery would be closed unless projections improved.

Recognising that a data shortfall would occur if the commercial fishery could not take place, the Yukon River Panel approved funding from the 2002 Restoration and Enhancement Fund for a live-release test fishery. This fishery would operate in the Dawson City area to obtain tagging data for run size estimates. This project was operated jointly by the Yukon River Commercial Fishing Association and the Tr'ondek Hwech'in First Nation.

METHODS

Commercial fishers of both aboriginal and non-aboriginal descent were hired to conduct the test fishery. Data was collected in a manner that mimicked the 24-hour openings in a commercial fishery. Chum salmon were caught in standardised, locally-constructed fishwheels, sampled, marked (Each wheel marked the fish differently: 40 mile, upper caudal punch, Dawson a lower caudal punch and Sister Island with a dorsal punch.), and live-released (fishwheel plans by proponent).

The wheels were operated 48 hours per week and checked every 12 hours during that time. The wheels began counting fish on September 3rd and ran for 4 weeks.

RESULTS

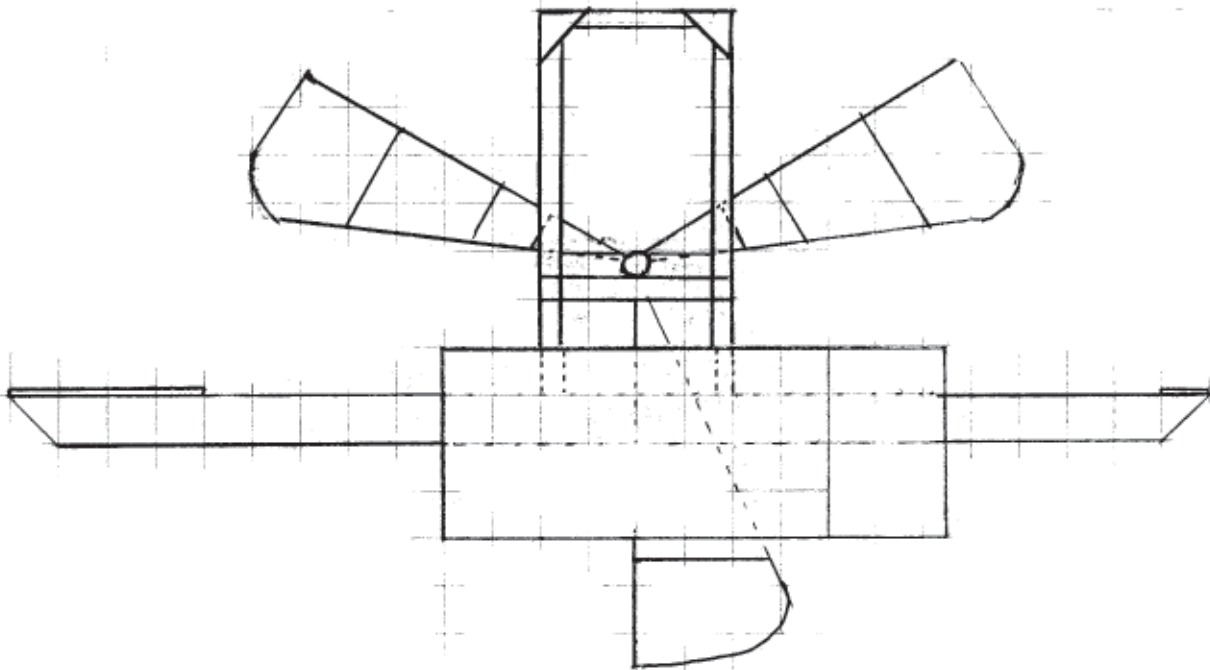
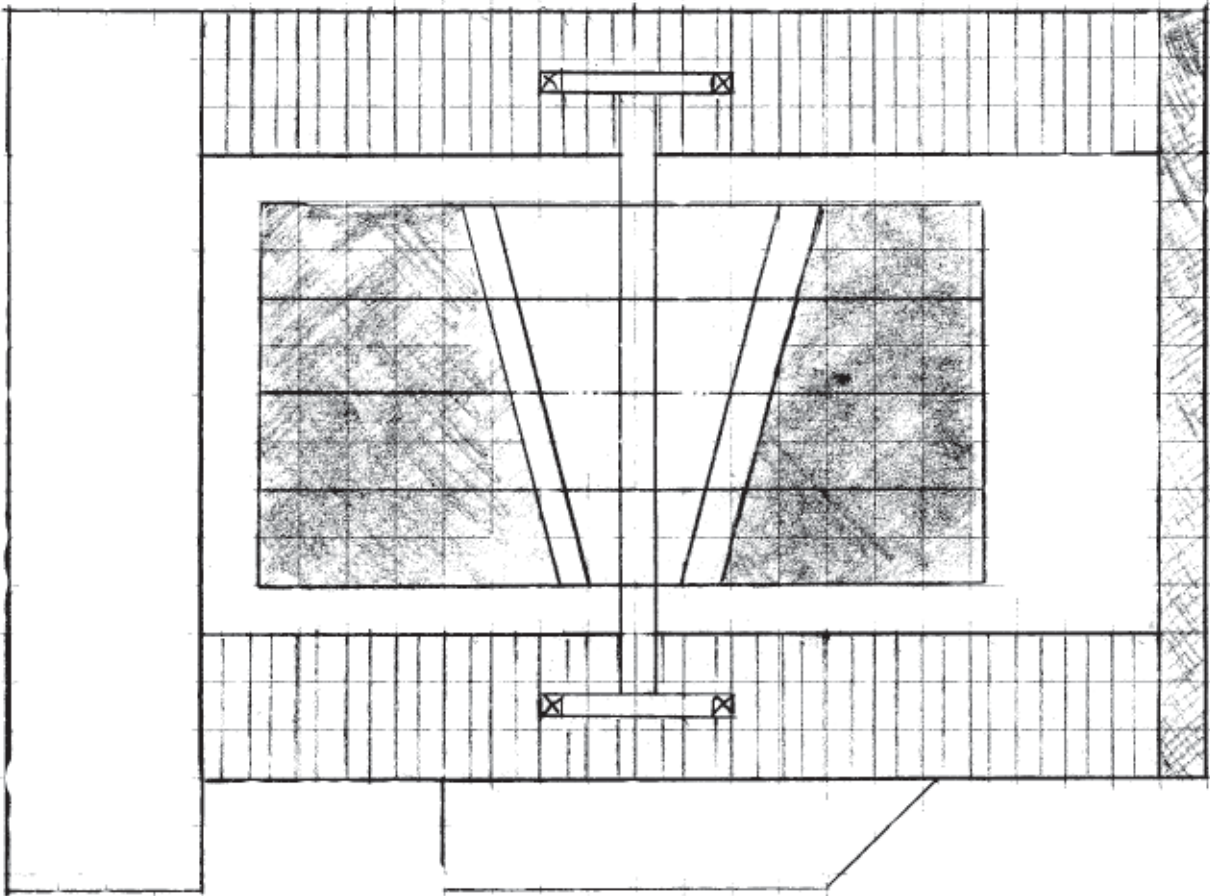
Please refer to Appendix tables for all data.

RECOMMENDATIONS

1. Better mark recapture data would result from operating the test fishery more days a week e.g. 5 days.
2. This is the 2nd time a live catch test fishery has occurred in this fishery and each time there has proven to be adequate fish for an eventual limited commercial fishery. We suggest an early, limited, consumptive test fishery. The format for this being: In the last week of August selected commercial fishers would be asked to set their nets at a specific time and to check the nets continuously until a specified number of fish were caught (e.g. 50 fish). At this point the nets would be pulled and the precise time recorded. Thus, the managers would know how long it took to catch the fish, be it 2 days or 2 hours. This combined with the mark recapture data would help provide an early in season estimate of run size. It would also provide fishers with some good quality, early run fish. In a year such as this with the fishery opening in October, the quality of the fish is such that it is very hard to find fish suitable for human consumption.

LITERATURE CITED

JTC (Joint United States/Canada Yukon River Technical Committee).2001.Yukon River Salmon Season Review for 2001 and Technical Report.



$\frac{1}{4}'' = 1'$

| | | | | TAGS | | | ADIPOSE | | RECAPTURES*** | | |
|---|-------------|---|-------------|-----------|-----------|-----------|----------|-----------|---------------|----------|----------|
| | Males | Females | Totals | DFO | ADF&G | Totals | Clips* | Punches** | Upper | Lower | Pelvic |
| Sept. 4-6 | 24 | 6 | 30 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 |
| Sept. 11-13 | 93 | 74 | 167 | 23 | 0 | 23 | 0 | 2 | 2 | 0 | 0 |
| Sept. 18-20 | 326 | 199 | 525 | 27 | 5 | 32 | 0 | 0 | 0 | 0 | 0 |
| Sept. 25-27 | 356 | 367 | 723 | 17 | 16 | 33 | 0 | 0 | 0 | 0 | 0 |
| Totals | 799 | 646 | 1445 | 71 | 21 | 92 | 0 | 2 | 2 | 0 | 0 |
| * Adipose clips, without tags. | | | | | | | | | | | |
| ** Adipose punches without tags | | | | | | | | | | | |
| ***Dawson wheel marks all fish with an upper caudal punch. | | | | | | | | | | | |
| Sister Island wheel marks all fish with a pelvic fin punch. | | | | | | | | | | | |
| 40-mile wheel marks all fish with a lower caudal punch | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Comments: | Sept.4-6 | Water levels are high. It is felt that the fish go on the south side of the river by Dawson. | | | | | | | | | |
| | Sept. 11-13 | Water level dropping and the river is clearing up. The wheel was moved to the South side of the river and seems to be doing better. | | | | | | | | | |
| | Sept. 18-20 | | | | | | | | | | |
| | Sept. 25-27 | More damage from rockslides. Wheel is not catching well during the daylight hours. The water is very clear for this time of year. | | | | | | | | | |
| Morts | Season | 31 dead fish, all in a.m. checks on days with very high catches. Obviously need midnight checks on these days. | | | | | | | | | |

| | | | | TAGS | | | ADIPOSE | | RECAPTURES*** | | |
|--|------------|------------|------------|-----------|----------|-----------|----------|-----------|---------------|----------|----------|
| | Males | Females | Totals | DFO | ADF&G | Totals | Clips* | Punches** | Upper | Lower | Pelvic |
| Sept. 4 - 6 | 126 | 85 | 211 | 12 | 1 | 13 | 0 | 3 | 0 | 5 | 0 |
| Sept. 11 - 13 | 40 | 31 | 71 | 13 | 0 | 13 | 0 | 0 | 0 | 1 | 0 |
| Sept. 18 - 20 | 43 | 58 | 101 | 5 | 3 | 8 | 0 | 0 | 0 | 0 | 0 |
| Sept. 25 - 27 | 3 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Totals | 212 | 176 | 388 | 30 | 4 | 34 | 0 | 3 | 0 | 6 | 0 |
| * Adipose clips, without tags. | | | | | | | | | | | |
| ** Adipose punches without tags | | | | | | | | | | | |
| ***Dawson wheel marks all fish with an upper caudal punch. | | | | | | | | | | | |
| Sister Island wheel marks all fish with a pelvic fin punch. | | | | | | | | | | | |
| 40-mile wheel marks all fish with a lower caudal punch | | | | | | | | | | | |
| Comments: Sept. 11 - 13 Water levels are dropping. Water is clear and makes fish hard to catch during the day. | | | | | | | | | | | |
| Sept. 25 - 27 Broken paddle on Sept. 25. | | | | | | | | | | | |

Summary of the Chum Salmon Caught

| | Males | Females | Totals | TAGS | | | ADIPOSE | | RECAPTURES*** | | |
|---|--------------|--------------|--------------|------|-------|------------|---------|-----------|---------------|-------|--------|
| | | | | DFO | ADF&G | Totals | Clips* | Punches** | Upper | Lower | Pelvic |
| Sept. 4-6 | 356 | 274 | 630 | 40 | 4 | 44 | 0 | 3 | 0 | 13 | 0 |
| Sept. 11-13 | 280 | 229 | 509 | 75 | 4 | 79 | 0 | 2 | 2 | 3 | 0 |
| Sept. 18-20 | 465 | 372 | 837 | 34 | 8 | 42 | 0 | 0 | 0 | 0 | 0 |
| Sept. 25-27 | 380 | 400 | 780 | 17 | 16 | 33 | 0 | 0 | 0 | 0 | 0 |
| Totals | 1,481 | 1,275 | 2,756 | 166 | 32 | 198 | 0 | 5 | 2 | 16 | 0 |
| Morts | | | 35 | | | | | | | | |
| * Adipose clips, without tags. | | | | | | | | | | | |
| ** Adipose punches without tags | | | | | | | | | | | |
| ***Dawson wheel marks all fish with an upper caudal punch. | | | | | | | | | | | |
| Sister Island wheel marks all fish with a pelvic fin punch. | | | | | | | | | | | |
| 40-mile wheel marks all fish with a lower caudal punch | | | | | | | | | | | |