

CRE-10N-06 SIZE SELECTIVE FISHING FINAL REPORT

FINAL

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Prepared for:

The Yukon River Panel



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I would like to thank Jake Duncan, Gerry Couture, Cor Guimond and “Caveman” Bill MacDonald. They were responsible for building the wheels and operating the project. Pat Milligan was a tireless source of background information on selective fishing.

Without their support and hard work, the successful completion of this project would not have been possible.

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ABSTRACT

This project was about developing a method for local area fishers to fish selectively, to eliminate the taking of the most biologically important fish while allowing for continued viable fisheries.

To achieve this, local fishers built and operated live-catch fish wheels in an attempt to demonstrate that fish wheels are both a viable replacement for gill nets in the chinook fishery and that through this method, selective fishing is achievable. Generally, this was shown to be true, however further barriers to adopting fish wheels, thus a sustainable fishery were identified. Potential projects in the future will need to follow up on identifying locations for wheel fishing, and getting fish wheels to fishers so they can utilize this knowledge to develop a truly sustainable and selective fishery in the Dawson area. The lessons learned can be translated to other communities along the river to have basin wide effects.

INTRODUCTION

The Dawson Community Steward initiated the Size Selective Fishing, Live Catch Fish Wheel project. The Dawson Community Steward is a position created under the Yukon Community Stewardship Program (YCSP), which is a program that Fisheries and Oceans Canada (DFO), the Yukon Fish and Wildlife Management Board (YFWMB), Ducks Unlimited (DU) and several other partners have jointly developed and administered. The YCSP program seeks the protection and conservation of fish and wildlife and their habitat through community driven, hands on initiatives. Integral to this broader community-based initiative, is the provision of assistance to individuals and groups with “building community capacity” in respect to these goals.

This Size Selective Fishing Project has been funded and sponsored by the Yukon River Panel (YRP). The YRP is a Panel formed as a result of the international Yukon River Salmon Agreement between Canada and the United States. An important part of this Agreement involves the Panel’s Restoration and Enhancement Program. Under the Restoration and Enhancement Fund (R&E Fund), projects and programs are funded in keeping with the principles and guidelines contained in this Agreement.

Part of the work of the Community Steward is to listen to community concerns about the conservation of fish and wildlife and assist individuals and groups with developing projects to address these concerns. One issue that the Dawson Steward heard was that the occurrence of large Chinook salmon (>900mm fork length) had become increasingly rare (Tim Gerberding, Peggy Kormendy et al, pers com.). Over the years, salmon runs on the Yukon River have suffered several problems including overfishing, ocean changes and diseases (Various JTC reports, Yukon River Panel). We are gradually getting a handle on overfishing (Fishing elevates variability in the abundance of exploited species Chih-hao Hsieh, Christian S. Reiss, John R. Hunter, John R. Beddington, Robert M. May and George Sugihara Nature 443, 859-862(19 October 2006))

through instruments such as the Yukon River Salmon Agreement, an autonomous annex to the Pacific Salmon Treaty; the ocean is presently in a more productive regime and the incidence of diseases such as the infestation of *Icthyophonous* appears to be lower(Yukon Salmon Committee, Yukon River Chinook Salmon update, June 20, 2006). All good news, but as the salmon runs came back, people noticed something amiss: Yukon River Chinook are justly famous for their size, although averaging about 16-20 lbs(JTC 2004), fish of over 50lbs were caught regularly(Local fishers, pers com, “local and traditional knowledge”) and fish up 60, 70 even 80 or 90 lbs were known but fish of this size seem to have almost disappeared in the Dawson area.

Aside from the pure glory of seeing these magnificent creatures, they have very real biological importance too: the amount of roe or milt in a fish increases with size- a fish twice as long can have three times as many eggs(*New Zealand Journal of Marine and Freshwater Research, 1992, Vol. 26:429-434* The Royal Society of New Zealand 1992). In addition, because this area of the north, known as Beringia, has not been glaciated for a very long time, the beds of the spawning streams consist of relatively large cobbles, which select for the larger salmon needed to dig redds in the coarser substrates(*Habitat Requirements of Anadromous Salmonids* (Reiser and Bjornn, 1979).

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The reason the large fish are gone seems to be that humans are selectively fishing the larger fish as they migrate up the river each year. Our fisheries are managed to a number of fish; for example in 2006, preliminary data indicates about 46,000 fish came across the Canadian border, according to the 2006 Integrated Fisheries Management Plan, at least 28,000 were allocated for spawning, 7000 - 10,000 for the First Nation fisheries, the remainder to other fishers and also for spawning. The Yukon River Panel sets the spawning target each year and the other figures derive from this. However, there has been little regard to the *quality* of the fish that get to spawn- a fish that weighs 4lbs counts just as much as a fish that weighs 40lbs. It is for this reason that the Size Selective Fishing project was conceived. Other R&E funded, DFO and ADF&G

projects and studies related to Selective Fishing are underway on the Yukon River. This project intends to help restore the natural balance of age and size to Chinook salmon populations by encouraging the adoption of size selective fishing techniques, specifically live catch fish wheels by Dawson area fishers while allowing for a continued fishery.

Fish wheels have been used in the Dawson area for many years, primarily for chum salmon. They are not, however widely used for Chinook; in recent years only two or three wheels have been used in the commercial and subsistence fisheries. Interviews the proponent conducted with local fishers during the planning leading up to this project showed that the barriers to more widespread adoption of fish wheels include.

1. **Financial investment:** materials for a durable and mobile fish wheel have significantly higher upfront costs than do gill nets. In addition, retrofitting a wheel for live catching adds significant extra costs.
2. **Optimum locations:** fish wheels catch best in very different sites than do nets; while a fair amount of local knowledge is available about good chum wheel locations, less is known about sites for chinook fishing.
3. **Temporal investment:** the time taken to build a fish wheel is significantly longer initially than for gill nets.
4. **Scepticism:** Fishers that had been successful for decades with gill nets showed considerable scepticism that they could be equally successful with wheels as they could by fishing with their nets.
5. **Set up of fishery:** It can easily take several days to find the optimum location for a wheel; in recent years, the commercial fishery has averaged about 10 days and thus, the bulk of a season could be used in setting up the wheels the first time.

This year, the project aimed to address barriers **2, 4** and **5**.

METHODS, MATERIALS, RESULTS AND DISCUSSION

Coordination and communication for this project was provided by the Dawson Community Steward. The Dawson Steward coordinated the project from his office, located in Dawson City, Yukon. The project was broken into five main project phases with specific tasks to be accomplished, and they included: a pre-project stage for planning purposes; a project stage in which the Fish Wheels were built; a main project phase where the fish wheels were operated; a final stage where the data generated was reviewed and a post mortem on the project conducted with the contractors; and, a post-project stage that saw a report prepared.

Project planning was conducted by the Dawson Steward; he gathered evidence that the local reports of size shift in Chinook populations were factual (2005/2006 JTC report, pp 38,94,95); he discussed the project with technical advisors from the YRP and wrote the proposals. When the project was approved, he led the communication with Tr'ondëk Hwëch'in Fish and Wildlife officials regarding their role in the project, as a similar project proposed by them had been rolled into this project .

A call for proposals to build and operate the Fish Wheels was sent out and a Dawson based commercial fisher was contracted to build the wheels, and another local commercial fisher to operate the wheels. The Tr'ondëk Hwëch'in were unable to contribute to the project this year due to capacity constraints. The design and material list for the wheels was provided by the Steward and were similar to those built for the chum test wheels built in 2002, CRE-09-02. That is, a combination of traditional and modern materials was used; the pontoons being lumber, Styrofoam and plastic while the baskets were built from bent spruce saplings and snow fencing.

It took two people 10 days to build the two wheels.

In accordance with the proposal, the wheels were towed to the vicinity of the operators fish camp and were run for a total of 11 days during commercial openings. All fish caught were sexed, measured for length and girth, marked with

a caudal punch, and released. Some difficulties were encountered in moving the fish wheels upstream to their destinations. This was not anticipated and modifications to the design of the wheels so they are more mobile will need to be part of future projects.

The wheels were operated for three openings, respectively 3, 4 and 4 days long. In the first opening, the wheels performed broadly as well as the nearby nets and in the 2nd and 3rd openings, the wheels outperformed the nets. This was ascribed to repositioning and tuning of the wheels.

For licensing purposes, DFO considers a fish wheel to be equivalent to 20 metres (60 feet) of net (Yukon Territory Fishing Regulations, section 17). The performance of the wheels was compared to the nets by use of a “fish per fish wheel equivalent”. This was obtained by measuring the amount of net used and dividing it by the number of fish caught in a day; this is the fish per foot, for example, if 200 feet of net caught 50 fish in 1 day, this produces 0.25 fish per foot per day. Then each wheel was converted to net equivalents and the amount of fish that the wheels caught was divided into this. In this case, 2 wheels equals 120 feet of net, thus if they caught 40 fish in a day, this would equal 0.333 fish per foot equivalent per day, and the wheels can be considered to be outperforming the nets. In this particular project, the sex ratios of both fish wheels and nets were similar, although the sex ratio of this net catch appears to be atypical; local knowledge holds that fish wheels catch a higher proportion of females than do nets. The wheels were checked at intervals not exceeding 12 hours, and there were never more than five fish in the live pens at a time. This regime was intended to reduce physical damage to the fish. Each fish was examined as to condition upon release. All fish were measured at fork lengths and girth. They were not weighed. The results are contained in appendix B.

As a result of this project, it was demonstrated that:

1. Fish wheels can catch as many fish as nets in at least this location (barrier # 2).
2. The scepticism previously apparent had diminished when fishers in other locations who were previously uninterested in the project requested that the project take place in their location in a following year (barrier # 4).
3. In this location, the set up of the wheels has been addressed and it is possible that as the local experience of fishers with wheels increases, the set up time issue will be solved (barrier # 5).

Conclusions

The project was successful inasmuch as it demonstrated the viability of converting to a wheel based fishery in this location, it trained two local fishers in a wheel based Chinook fishery and it went some distance to overcoming scepticism of the local fishers. However other issues arose:

1. The fishers who participated this year were not high production fishers; the higher production fishers are the most valuable fishers to convert.
2. The fish wheels were harder to move to fishing locations than anticipated.
3. The fishers who participated this year, while keen to adopt live catch fish wheels, still face financial and time barriers to building wheels.
4. The Tr'ondëk Hwëch'in were unable to participate as they wished because their similar proposed project had been rolled into this project with no extra resources allocated for construction, training or operation and capacity constraints within their Fish and Wildlife department precluded unfunded involvement.

Ultimately, if this project fully succeeds in the long run, it stands a very real chance of becoming a useful tool for management of the fisheries.

RECOMMENDATIONS

1. Next year the project should continue in different areas and aim to catch more fish.
2. The prow and sterns of the pontoons should be raised to present a more hydrodynamic profile.
3. The project should expand into finding ways to get fish wheels to fishers and ensuring they are used for selective fishing.
4. Additional resources should be made available to train a Tr'ondëk citizen in building and operating a wheel.

REFERENCES

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LIST OF PHOTOS

- Photo 1. Detail of pontoon construction
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- Photo 3. Baskets
- Photo 4. Wheel operating
- Photo 5. Wheel stored for winter
- Photo 6. Detail of live box

All photographs courtesy of Sebastian Jones, YFWMB

Photo 1. Detail of pontoon



Photo 2. Preparing completed raft for baskets



Photo 3 Baskets



Photo 4 Wheel operating



Photo 5 Wheel stored for winter



Photo 6 Detail of live box



APPENDICIES

Appendix A CALL FOR PROPOSALS CRE-10N-06

The Yukon River Commercial Fishing Association is operating a Selective fishing project during the 2006 Chinook season.

This project is about demonstrating to fishers the feasibility of changing from a net based fishery to a wheel based fishery.

This will be accomplished by operating wheels in the vicinity of fish camps during the fishing season and through demonstrating that live catch wheels can provide fishers with the fish they need while allowing the largest male fish and all females to proceed upriver.

We are looking for expressions of interest in the following aspects of the project:

1. Construction of a fish wheel, including the raft, baskets and live box.
2. Deploying and operating two fish wheels near Cliff creek for 3 weeks during the peak of the season.

1. **Fish Wheel Construction:**

- a. Raft: This will be constructed of two pontoons, 24 ft long and 3 ft wide. The sides will be 2X10s, the hulls 3/16th UHMW, the deck PWF 2X6 and ½ in plywood. The pontoons will be filled with billets of raft Styrofoam.
- b. The baskets will be 8X8, 3 basket wheels, with single chutes lined with EVA foam.
- c. The live boxes will be 4 ft deep and 2 ft wide and 8 ft long with a prow. The frame will be angle iron and the material white painted ½ in plywood.
- d. Proponent will not be responsible for assembling materials for fish wheel, construction advice will be available.

2. **Fish wheel operation:**

- a. One wheel will be towed from Dawson to Cliff Creek, the other from Forty Mile to Cliff Creek.
- b. The wheels will be deployed in likely places near Cliff Creek, their performance will be compared with the catch of the nearby commercial fisher, Tim Gerberding, and, if needed, the wheels will be moved and adjusted until an optimum catch is achieved.
- c. Good records will be kept of operations and data collected in a form supplied to the proponent.
- d. At the end of the project- anticipated 3 weeks- the wheels will be returned to Forty Mile and made ready for winter.

Expressions of interest and proposals can be sent to: and,

Details regarding finances and construction specs are available from:

Sebastian Jones

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993 4401

Appendix B

Appendix B - Project Financial Statements

Financial Statement	CRE-10N-06			
Revenue:	Source:	\$35,000.00		
	Yukon River Panel			
Expense:				
Category	Description	<i>Budgeted</i>	<i>Actual</i>	<i>Difference</i>
<i>Coordination</i>				
	Labour	\$ 1,000.00	\$ 1,000.00	\$ -
Construction	Labour	7,000.00	7,000.00	-
	Materials	12,235.00	7,990.28	4,244.72
Operations	Labour	10,200.00	13,067.96	- 2,867.96
	Expenses	fuel and equipment	part of above	
<i>Administration</i>		\$ 4,565.25	\$ 4,358.74	\$ 206.51
Total expenses		\$ 35,000.25	\$ 33,416.98	\$1,583.27
Surplus, return to R&E Fund:			\$ 1,583.27	

Appendix C

Data

CRE-10N-06 SIZE SELECTIVE FISHING - LIVE CATCH FISH WHEELS

Fish #	Date	Time	Wheel #	Sex M/F	Length cm	Girth cm	Tag #	Clip Y/N	Recapture Y/N	Condition
1	21-Jul-06	22:00	2	M	620			N	N	GOOD
2	21-Jul-06	22:00	2	M	480			N	N	GOOD
3	21-Jul-06	22:00	2	M	615	270		N	N	GOOD
4	22-Jul-06	10:30	2	M	660	370		N	N	GOOD
5	22-Jul-06	10:30	2	M	590	265		N	N	GOOD
6	22-Jul-06	10:30	2	M	690	310		N	N	GOOD
7	22-Jul-06	10:30	2	M	810	365		N	N	GOOD
8	22-Jul-06	10:30	2	M	635	275		N	N	GOOD
9	22-Jul-06	12:00	1	M	820	390		N	N	GOOD
10	22-Jul-06	12:00	1	M	740	350		N	N	GOOD
11	22-Jul-06	16:00	2	M	545	270		N	N	GOOD
12	22-Jul-06	17:00	1	M	725	360		N	N	GOOD
13	22-Jul-06	17:00	1	M	770	370		N	N	GOOD
14	22-Jul-06	21:00	2	M	820	350	206	N	N	GOOD
15	23-Jul-06	8:00	2	M	810	340		N	N	GOOD
16	23-Jul-06	8:00	2	M	900	380		N	N	GOOD
17	23-Jul-06	8:00	2	M	595	280		N	N	GOOD
18	23-Jul-06	8:00	2	M	570	240		N	N	GOOD
19	23-Jul-06	8:00	1	M	775	325		N	N	GOOD
20	23-Jul-06	8:00	1	M	735	380		N	N	GOOD
21	23-Jul-06	8:00	1	M	965	440		N	N	GOOD
22	23-Jul-06	8:00	1	M	740	360		N	N	GOOD
23	23-Jul-06	12:00	2	M	460	230		N	N	GOOD
24	23-Jul-06	12:00	2	M	610	270		N	N	GOOD
25	23-Jul-06	18:00	2	M	500	260		N	N	GOOD
26	23-Jul-06	18:00	1	M	870	390		N	N	GOOD
27	23-Jul-06	18:00	1	M	650	300		N	N	GOOD
28	23-Jul-06	23:00	1	M	620	290		N	N	GOOD
29	23-Jul-06	23:00	1	M	755	340		N	N	GOOD
30	24-Jul-06	9:00	2	M	640	300		N	N	GOOD

31	24-Jul-06	9:00	2	M	670	300	N	N	GOOD	
32	24-Jul-06	9:00	2	F	840	390	N	N	GOOD	
33	24-Jul-06	9:00	2	M	530	220	N	N	GOOD	
34	24-Jul-06	12:00	1	M	700	300	N	N	GOOD	
35	24-Jul-06	12:00	1	F	900	440	223	N	N	GOOD
<hr/>										
1ST OPENING										
Day of Fishery										
		Net Footage	NET # of Males	CATCH # of Females	FOR Total	COMPARISON # recaptures				
1		150	15	0	15	0				
2		225	23	0	23	0				
3		225	15	4	19	0				
<hr/>										
Av footage		200	0.265	0.02	0.285					
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FW EQUIV:		3.333	15.9	1.2	17.1					
<hr/>										
FW ACTUAL		2	26.5	2	28.5					
<hr/>										
36	28-Jul-06	17:00	2	M	770	385	N	N	GOOD	
37	28-Jul-06	17:30	1	F	800	395	N	N	GOOD	
38	28-Jul-06	17:30	1	M	690	315	N	N	GOOD	
39	28-Jul-06	17:30	1	M	630	285	N	N	GOOD	
40	28-Jul-06	17:30	1	M	660	310	N	N	GOOD	
41	28-Jul-06	22:00	2	M	520	220	N	N	GOOD	
42	28-Jul-06	22:00	1	M	800	380	N	N	GOOD	
43	29-Jul-06	9:00	2	M	700	330	N	N	GOOD	
44	29-Jul-06	9:00	2	M	570	260	N	N	GOOD	
45	29-Jul-06	9:00	2	M	510	245	N	N	GOOD	
46	29-Jul-06	9:30	1	M	710	335	N	N	GOOD	
47	29-Jul-06	9:30	1	M	815	365	N	N	GOOD	
48	29-Jul-06	9:30	1	M	950	450	N	N	GOOD	
49	29-Jul-06	9:30	1	M	580	365	N	N	GOOD	
50	29-Jul-06	9:30	1	M	850	380	N	N	GOOD	
51	29-Jul-06	9:30	1	F	900	425	N	N	GOOD	
52	29-Jul-06	15:00	2	M	560	240	N	N	GOOD	
53	29-Jul-06	15:00	2	M	620	290	N	N	GOOD	
54	29-Jul-06	15:30	1	M	810	395	N	N	GOOD	
55	29-Jul-06	15:30	1	M	630	285	N	N	GOOD	
56	29-Jul-06	20:00	2	M	665	290	N	N	GOOD	
57	29-Jul-06	20:00	2	M	705	330	N	N	GOOD	
58	29-Jul-06	20:00	2	M	405	195	N	N	GOOD	
59	29-Jul-06	20:00	1	M	810	385	N	N	GOOD	
60	29-Jul-06	20:00	1	M	735	335	N	N	GOOD	
61	30-Jul-06	9:00	1	M	720	330	N	N	GOOD	
62	30-Jul-06	9:00	1	M	820	390	N	N	GOOD	
63	30-Jul-06	9:00	1	M	405	200	N	N	GOOD	
64	30-Jul-06	9:00	1	M	730	345	N	N	GOOD	
65	30-Jul-06	9:00	1	M	660	285	N	N	GOOD	
66	30-Jul-06	9:30	2	M	655	285	N	N	GOOD	
67	30-Jul-06	9:30	2	F	855	415	N	N	GOOD	
68	30-Jul-06	9:30	2	M	620	285	N	N	GOOD	
69	30-Jul-06	9:30	2	M	555	240	N	N	GOOD	
70	30-Jul-06	15:00	1	M	645	270	N	N	GOOD	
71	30-Jul-06	15:00	1	M	540	235	N	N	GOOD	
72	30-Jul-06	15:30	2	M	875	430	N	N	GOOD	

73	30-Jul-06	20:00	1	F	525	215	N	N	GOOD
74	30-Jul-06	20:00	1	M	545	235	N	N	GOOD
75	30-Jul-06	20:00	1	M	935	465	N	N	GOOD
76	30-Jul-06	20:00	1	M	500	205	N	N	GOOD
77	30-Jul-06	20:00	2	M	685	275	N	N	GOOD
78	30-Jul-06	20:00	2	M	755	315	N	N	GOOD
79	30-Jul-06	20:00	2	M	630	295	N	N	GOOD
80	30-Jul-06	20:00	2	M	485	215	N	N	GOOD
81	31-Jul-06	9:00	1	M	860	415	N	N	GOOD
82	31-Jul-06	9:00	1	M	545	300	N	N	GOOD
83	31-Jul-06	9:00	1	F	825	395	N	N	GOOD
84	31-Jul-06	9:00	2	M	580	290	N	N	GOOD
85	31-Jul-06	15:00	1	M	515	240	N	N	GOOD
86	31-Jul-06	15:00	1	M	720	305	N	N	GOOD
87	31-Jul-06	15:00	1	M	635	290	N	N	GOOD
88	31-Jul-06	15:30	2	F	780	310	N	N	GOOD
89	31-Jul-06	15:30	2	M	695	295	N	N	GOOD
90	31-Jul-06	20:00	1	M	510	215	N	N	GOOD
91	31-Jul-06	20:00	2	M	740	315	N	N	GOOD
92	31-Jul-06	20:00	2	M	655	285	N	N	GOOD
93	1-Aug-06	9:00	2	M	660	300	N	N	GOOD

2nd Opening Day of Fishery	Net Footage	NET # of Males	CATCH # of Females	FOR Total	COMPARISON # recaptures
1	225	11	4	15	0
2	225	15	3	18	0
3	225	14	4	18	0
4	225	NA	NA		0
Av footage	225	0.177778	0.0488889	0.2266667	
FW EQUIV:	3.75	10.66667	2.9333333	13.6	
FW ACTUAL	2	13.5	3	16.5	

93	4-Aug-06	19:00	2	M	595	255	N	N.	GOOD	
94	4-Aug-06	19:30	1	F	940	460	N	N.	FAIR	
95	5-Aug-06	9:00	2	M	600	275	N	N.	GOOD	
96	5-Aug-06	9:30	1	M	575	250	N	N.	GOOD	
97	5-Aug-06	9:30	1	M	825	345	N	N.	GOOD	
98	5-Aug-06	9:30	1	F	620	275	N	N.	GOOD	
99	5-Aug-06	13:00	2	M	560	250	N	N.	GOOD	
100	5-Aug-06	13:00	2	M	530	230	N	N.	GOOD	
101	5-Aug-06	13:00	2	M	545	225	N	N.	GOOD	
102	5-Aug-06	13:00	2	M	560	250	N	N.	GOOD	
103	5-Aug-06	13:00	1	M	700	330	N	N.	GOOD	
104	5-Aug-06	13:00	1	M	545	230	N	N.	GOOD	
105	5-Aug-06	13:00	1	M	795	365	725	N	N.	GOOD
106	5-Aug-06	13:00	1	M	735	350	N	N.	GOOD	
107	5-Aug-06	13:00	1	M	655	290	N	N.	GOOD	
108	5-Aug-06	20:00	2	M	755	340	N	N.	GOOD	
109	5-Aug-06	20:00	2	M	470	215	N	N.	GOOD	
110	5-Aug-06	20:00	1	F	1025	495	830	N	N.	GOOD
111	5-Aug-06	20:00	1	F	845	400	N	N.	GOOD	
112	6-Aug-06	8:00	2	M	560	245	N	N.	GOOD	
113	6-Aug-06	8:00	2	M	490	210	N	N.	POOR	

114	6-Aug-06	8:00	2	M	575	255		N	N.	GOOD
115	6-Aug-06	8:00	2	M	505	235		N	N.	GOOD
116	6-Aug-06	14:00	2	M	705	305		N	N.	GOOD
117	6-Aug-06	14:00	1	M	640	295	912	N	N.	GOOD
118	6-Aug-06	21:00	2	M	510	215		N	N.	GOOD
119	6-Aug-06	21:00	2	M	660	260		N	N.	POOR
120	6-Aug-06	21:00	1	F	850	395		N	N.	GOOD
121	6-Aug-06	21:00	1	F	865	370		N	N.	GOOD
122	6-Aug-06	21:00	1	M	585	220		N	N.	GOOD
123	6-Aug-06	21:00	1	M	600	235		N	N.	GOOD
124	7-Aug-06	8:00	2	M	680	305		N	N.	GOOD
125	7-Aug-06	8:00	2	M	515	245		N	N.	GOOD
126	7-Aug-06	8:00	2	M	460	195		N	N.	GOOD
127	7-Aug-06	8:00	2	M	700	305		N	N.	GOOD
128	7-Aug-06	8:00	2	M	650	250		N	N.	GOOD
129	7-Aug-06	8:00	1	F	?	?	889	N	N.	GOOD
130	7-Aug-06	8:00	1	M	?	?	923	N	N.	GOOD
131	7-Aug-06	8:00	1	M	?	?		N	N.	GOOD
132	7-Aug-06	8:00	1	M	?	?		N	N.	GOOD
133	7-Aug-06	8:00	1	M	?	?		N	N	GOOD
134	7-Aug-06	8:00	1	M	?	?		N	N.	GOOD
135	7-Aug-06	8:00	1	M	?	?		N	N.	GOOD

3rd Opening Day of Fishery	Net Footage	NET # of Males	CATCH # of Females	FOR Total	COMPARISON # recaptures
1	225	12	3	15	0
2	225	23	3	26	0
3	225	15	3	18	0
Av footage	225	0.222222	0.04	0.2622222	
FW EQUIV:	3.75	13.333333	2.4	15.733333	
FW ACTUAL	2	23.5	2.5	26	