

Sport Fishing in Yukon 1995

Summary Report of the Fifth Survey of Recreational Fishing in Canada

1996
Fisheries Section
Fish and Wildlife Branch



Introduction

Preface

This report summarises the results of a survey of sport fishing in Yukon in 1995. The Yukon survey is part of a national survey that takes place in each province and territory across Canada: the National Survey of Recreational Fishing in Canada. The 1995 edition is the fifth in a series carried out every five years.

The survey collects information about the recreational fishery from both resident and non-resident anglers. Information on a broad array of topics is collected, including the origin of anglers, expenditures and investments related to angling, the kind and number of fish harvested, the amount of time spent fishing, and the quality of fishing in Yukon. These data are used to evaluate the importance of recreational fishing to the public, anglers, the sport fishing industry, and fisheries management agencies. Because of the long times series no available, survey data also provide information on trends in recreational fishing across Canada. These data are used by provincial and territorial fisheries management agencies to make informed management decisions.

The survey was conducted in 1996 by the Fisheries Section of the Fish and Wildlife Branch of the Yukon Department of Environment in co-operation with the Surveys Unit, Economic and Commercial Analysis Directorate, of Canada's Department of Fisheries and Oceans (DFO).

Survey Background

In 1970, recreational fisheries managers from across Canada met to discuss matters of common interest and concern. Participants realised that effective management of the recreational fisheries required a national dataset of basic information on the size, value, socio-economic performance and potential of Canada's sport fisheries. At the time no comprehensive information existed, but data from the only previous survey in 1961, indicated that millions of Canadians and hundreds of millions of dollars were involved.

The idea of a national survey was soon born and fisheries agencies from across the country launched the first nationally co-ordinated set of surveys for the 1975 calendar year. These surveys are intended to provide authoritative data on the magnitude and importance of Canada's sport fisheries and consistent and comparable data from a common group of questions. The success of the 1975 survey led to a second survey in 1980 and a strong commitment to continue the surveys at five-year intervals.

Methods

Survey design

Survey questionnaires are developed based on the common national survey design so that results can be compiled and compared across the country. In addition to the nationally common questions, the Yukon questionnaire also includes questions specific Yukon fisheries and issues. The survey included questions about:

- fishing activity: time spent fishing, type of waters, species caught and kept
- stocked lakes program
- satisfaction with the fishing experience
- assessment of the status and trends of Yukon's fisheries
- opinion on fisheries management
- financial expenditure information on fishing and fishing related activities
- basic demographic information.

The survey questionnaire also included a map of Yukon. The Yukon was divided into Regions 1 through 7 which were based on the road network within the territory (Fig. 1).

Survey implementation

Resident and non-resident anglers were selected using stratified, systematic random sampling of data sets of anglers who held a fishing licence during the survey year. Surveys were mailed out to the random subset of anglers along with a cover letter that explained the purpose of the survey and encouraged respondents to participate. Seven weeks following the first mail-out a second mail-out to all non-respondents was done, which increased the response rate. Completed surveys were sorted, screened, coded, and analyzed.

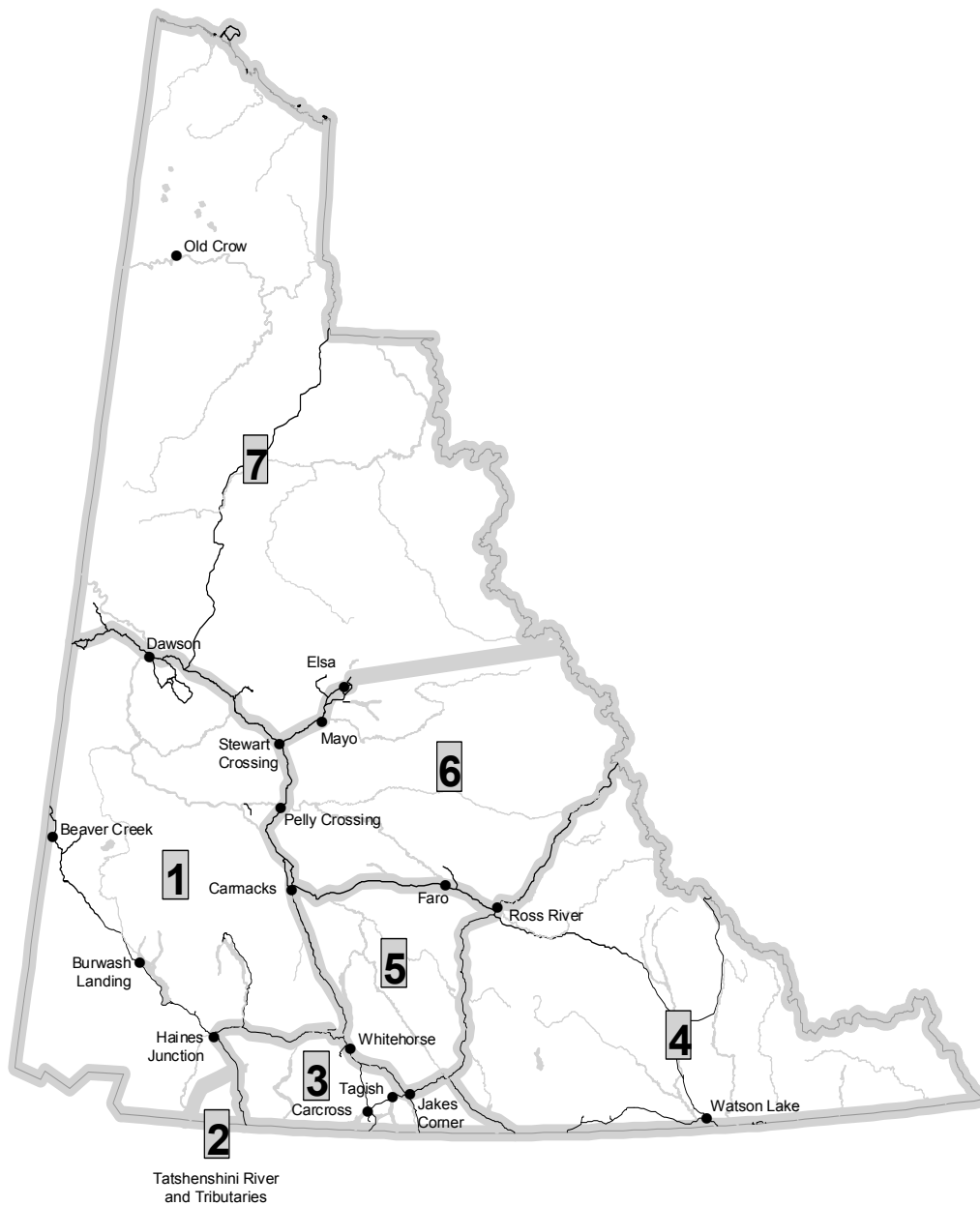


Figure 1: Map of Yukon, showing seven regional divisions for purpose of measuring fishing effort

Results and Discussion

Angler profile

There were 16,499 licensed anglers in the Yukon in 1995, 45% or 7,482 were residents of the territory (Table 1).

	Resident	Canadian non-resident	Other non-residents	Total
Total Licensed Angling Population (a)				
Adults	7482	3589	5428	16,499
Active Adult Anglers				
-Males	4660	2488	3726	10,874
(Average Age, Years)	42	49	50	46
-Females	1632	568	706	2906
(Average Age, Years)	37	41	47	40
Total Active Anglers - Adults	6292	3057	4432	13,781
Children (b)	836	190	191	1217
Total Active Anglers - All Ages	7128	3247	4623	14,998

(a) Individuals who purchased an angling licence in the Yukon. This group provides the basis for the statistical information in this bulletin.

(b) Individuals under 16 years of age.

74% of the active resident adult anglers were male and 26% were female. For non-resident anglers, 83% were male and 17% were female. The average age of all anglers was 45 years.

Approximately 35% of resident anglers rated themselves as either expert or experienced anglers, 45% as average, and 20% as beginner. Of non-resident anglers, 43% rated themselves as either expert or experienced anglers, 41% as average, and 16% as beginner.

Attitudes of anglers towards catch and release fishing are summarised in Table 2. Approximately 74% of anglers voluntarily practised catch and release fishing in the Yukon in 1995.

	Practised			Did not Practice %	Did Practice %
	Mandatory %	Voluntary %	Both %		
Resident	2	68.2	30	29.4	70.6
Canadian non-resident	4.5	78	18	37.7	62.3
Other non-resident	2.2	74.9	23	31.5	68.5
Average	2.9	73.7	23	32.9	67.1

Resident anglers are equally split on the decision on whether to ban barbed hooks, while non-resident Canadian anglers support the banning of barbed hooks (Table 3).

Table 3. Anglers who support the ban on barbed hooks in Yukon, 1995.			
	Resident %	Canadian non-resident %	Other non-resident %
Yes	49	65.9	49.1
No	51	34.1	50.9

While a large percentage of anglers agree with holding fishing derbies or tournaments, few participated (Table 4): 15% of Yukon residents and less than 1% of non-residents (Table 5).

Table 4. Anglers who agree with Holding Fishing Derbies or Tournaments in Yukon, 1995.			
	Resident %	Canadian non-resident %	Other non-resident %
Yes	64.5	57.9	41.7
No	35.5	42.1	58.3

Table 5. Anglers who Participated in Fishing Derbies or Tournaments in Yukon, 1995.			
	Resident %	Canadian non-resident %	Other non-resident %
Yes	15.3	0.9	0
No	84.7	99.1	100

Angling Effort

Anglers fished in the open water season, approximately from April to October, a total of 123,412 days in Yukon in 1995. On average, each angler spent nine days fishing with Yukon anglers averaging approximately 3 times as many days (14) as non-resident anglers (5). Resident anglers fished a total of 4,761 days through the ice, while non-residents spent 517 days fishing through the ice.

For the purposes of analysis, the Yukon's sport fishery was divided into seven regions. Resident anglers showed a decided preference for the South Central region (which is the area that contains most of the resident population), where they spent over twenty-five percent of their fishing time. Another twenty percent of their time was divided between the Central and South East regions. For their part, non-residents favoured the Central, South West, and Southeast regions.

Harvest

In 1995, anglers in the Yukon caught an estimated 288,587 fish of all species and retained 80,258 of them (Table 6).

Table 6. Harvest of Fish Species by Anglers in Yukon, 1995.								
Fish Species	Resident		Canadian non-resident		Other non-resident		Total	
	Caught	Kept	Caught	Kept	Caught	Kept	Caught	Kept
Arctic Grayling	70,033	22,629	13,978	3,947	48,406	12,900	132,418	39,477
Lake Trout	29,931	11,689	6,485	1,314	17,626	3,222	54,043	16,226
Rainbow Trout	9,960	3,797	1,489	657	2,219	561	13,666	5,015
Northern Pike	35,441	7,206	8,373	1,183	21,563	3,082	65,379	11,472
Whitefish	2,559	1,520	82	34	1,931	553	4,573	2,108
Coho	2,089	535	14	14	2,318	276	4,422	826
Sockeye	1,671	462	63	63	934	380	2,669	906
Chinook	4,088	1,471	392	212	1,474	169	5,955	1,853
Arctic Char	757	589	124	0	868	74	1,750	663
Other	2,170	1,395	471	154	1,066	155	3,708	1,705
Total	158,704	51,299	31,473	7,581	98,409	21,376	288,587	80,258

Resident anglers caught 55% of the fish harvested (by number) and kept 64%. Arctic grayling and lake trout were the most widely kept species, with Arctic grayling alone accounting for 49% of the harvest by number.

Anglers caught on average 21 fish, but kept only 6 fish, with resident anglers catching and keeping the most at 8 fish (Table 7).

Table 7. Disposition of Fish Caught and Kept by Anglers in Yukon, 1995.				
	Resident	Canadian non-resident	Other non-resident	Total
Total Fish Caught	158,704	31,473	98,409	288,587
Ave. per Angler	25	10	22	20
Total Fish Kept	51,300	7,582	21,377	80,258
Ave. per Angler	8	2	4	5
Total weight of Fish Kept (lbs)	167,481	21,282	52,748	241,510
Ave. per Angler	27	7	12	15

The total weight of fish kept was 241,510 pounds (109,549 kilograms).

Resident anglers spent 83,565 days fishing in the Yukon with over 15%, or 12,576 days, spent fishing on the Marsh-Tagish Lakes system.

Twenty-five percent of lake trout caught and kept in the Yukon came from within this system (Table 10).

Table 10. Lake Trout fishing on the Marsh-Tagish Lakes System in Yukon, 1995.				
	Resident	Canadian non-resident	Other non-resident	Total
Total Days Fished	9,539	1,190	1,847	12,576
Average	6	3	4	4
Trout Caught	8,632	932	3,912	13,476
Average	5	2	9	5
Trout Kept	3,042	281	613	3,936
Average	2	1	1	1

Stocking Program

Close to 20% of Yukon residents fished in the stocked lakes in the Yukon in 1995, while only 5% of non-residents accessed these lakes (Table 8).

Table 8. Percentage of Anglers who fished in Stocked Lakes in Yukon, 1995.			
	Resident %	Canadian non-resident %	Other non-resident %
Yes	19.2	4.1	1.6
No	80.8	95.9	98.4
Total	100	100	100

Anglers' opinions on the quality of fishing in stocked lakes were spread evenly between poor and very good (Table 9).

Table 9. Attitude of active anglers on the quality of stocked lake fishing in Yukon, 1995.			
Rating	Resident %	Canadian non-resident %	Other non-resident %
Excellent	7.3	0	0
Very Good	11.6	12.8	79
Good	24.6	27.5	0
Fair	22	24.1	21
Poor	30.2	35.7	0
No Opinion	4.4	0	0

Motivations

Non-resident anglers made 13,711 trips to the Yukon in 1995, or about two trips per angler. Seventy-two percent of these trips were fishing trips (Table 11).

Characteristics	Number
Trips to the Yukon (all reasons)	13,711
Fishing trips to the Yukon	9,945
Days spent for all reasons	115,893
Days fished	39,847
Total night spent on fishing trips	94,730

Forty percent of licensed adult resident anglers fished outside the territory in 1995. They fished mainly in Alaska and British Columbia and usually while on vacation, at the cottage or on business.

Resident and non-residents alike listed the lack of pollutants in fish and water quality as the most important factors that play a role in determining the choice of fishing destinations in the Yukon in 1995. Other important factors were the natural beauty, lack of angler crowding and presence of wildlife. Anglers assigned little importance on nearness to food, lodging and tourist facilities and access to recreational facilities. (Table 12).

The majority of anglers rated relaxation, enjoying nature and getting away as extremely important reasons to fish. Less important reasons were catching a trophy fish and for a sense of achievement.

Factors Ratings: 1(not important) 5(very important)	Resident	Canadian non-resident	Other non-resident
Water Quality	4.16	4.48	4.44
Natural Beauty	3.85	4.24	4.23
Presence of Wildlife	3.11	3.42	3.62
Shore fishing	3.36	3.4	3.4
Lack of Angler Crowding	3.99	4.08	4.23
Absence of Other Anglers	3.39	3.53	3.56
Nearness to Food/Lodging	1.6	2.2	1.92
Tourist Facility	1.66	2.54	2.12
Boat Launching/Marina	2.25	2.52	2.09
Access to Recreational Facilities	1.64	2.27	1.81
Nearness to Tackle Shops	1.33	1.84	1.89
Parking Availability	2	2.73	2.62
Availability of Handicapped Facilities	2.55	2.98	2.97

Lack of Pollutants in Fish	4.45	4.58	4.35
Size of Fish	2.97	3.09	3.5
Chance to Catch a Trophy Fish	2.12	2.41	2.84
Catch Rate of All Fish	2.46	2.62	2.78
Catch Rate of Fish You Keep	2.25	2.21	2.24
Presence of Favourite Species	3.35	3.03	3.33
Variety of Species	2.8	3.08	3.22
Distance/Travel Time	3	2.73	2.65
Information About the Area	2.55	3.33	3.3

Approximately 73% of non-resident anglers said they would have substituted other activities if there had been no fishing opportunities (Table 13).

Activity	Canadian non-resident	Other non-resident
Stayed Shorter Time	10.2	20.9
Substituted Other Activities	84.6	60.7
Not come at all	5.2	18.4

Seventy-five percent of active anglers rated fishing in the Yukon as good to excellent. Less than 25% of anglers rated fishing as either fair or poor (Table 14).

Rating	Resident %	Canadian non-resident %	Other non-resident %
Excellent	16	23.1	22.7
Very Good	28	23.4	26.2
Good	32.1	30.8	25.9
Fair	15.1	11.4	12.2
Poor	8.9	11.3	13

Willingness to Pay

Active anglers were asked, "If your fishing costs had been higher in the Yukon in 1995 due to increased costs for gasoline, accommodation, supplies and other services, at what additional daily cost would you have decided not to fish?" Multiple choice answers were set at \$10 intervals up to \$100 per day. The results are shown in Table 15.

Table 15. Additional Costs Active Anglers Are Willing To Pay for Fishing in Yukon, 1995.

Additional Cost Per Day	Resident %	Canadian non-resident %	Other non-resident %	Average %
< \$10.00	12.4	8.3	12.6	11.1
\$10.00	26.1	26.7	24.1	25.6
\$20.00	22.5	22.4	17	20.6
\$30.00	9	6	17.3	10.8
\$40.00	3.4	5.7	1.3	3.5
\$50.00	14.1	16.5	13	14.5
\$60.00	2.6	0.7	0.6	1.3
\$70.00	1.2	3.6	0.6	1.8
\$80.00	2.7	2.4	1.5	2.2
\$90.00	0	0	0	0
\$100.00	2.1	4	6.1	4.1
> \$100.00	3.8	3.8	5.9	4.5

Eleven percent indicated they were willing to pay less than \$10.00 additional costs per day. Forty-six percent of anglers were willing to pay between \$10.00 to \$20.00 additional costs per day.

Expenditures and Investments

Anglers in the Yukon invested \$8.5 million on major durables and property in 1995 (Table 16), of which \$4.7 million, or 56% was attributed to sport fishing activities. Boats and fishing equipment attracted a total from all anglers of \$3.5 million, while special vehicles (ATV's, snowmobiles, camper trucks, etc.) were popular items for residents, accounting for \$2.4 million. Resident anglers alone accounted for \$7,492,415 spent in the Yukon on major fishing related purchases, or 88% of the overall total.

Table 16. Major Purchases of Durables and Property attributable in whole or in part to Recreational fishing in Yukon, 1995.

Expenditures \$	Resident	Canadian non-resident	Other non-resident	Total
Fishing Equipment	391,101	25,596	74,622	491,320
Boating Equipment	3,028,472	399	14,205	3,043,075
Camping Equipment	1,329,021	6,853	162,398	1,498,272
Special Vehicles	2,445,909	26,078	605,182	3,077,169
Land/Buildings	113,863	0	6,922	120,785

Other	184,049	13,088	51,246	248,383
Total	7,492,415	72,014	914,576	8,479,005
Total Attributable to Sport Fishing	4,291,817	45,021	401,959	4,738,798

Yukon residents spent \$4.3 million attributed totally to sport fishing or 91% of the total spent by all anglers.

In direct expenditures, residents and non-resident non-Canadian anglers accounted for the most money spent at just over \$3 million each. The largest amount was spent on food and travel costs by all anglers (Table 17).

Expenditures \$	Resident	Canadian non-resident	Other non-resident	Total
Lodging Costs	38,698	192,057	356,234	586,989
Campsite Fees	58,324	125,868	239,608	423,801
Food Costs	1,015,288	543,896	811,892	2,371,077
Travel Costs	1,134,073	590,399	1,143,940	2,868,413
HHLD Boat Costs	331,626	33,903	52,028	417,557
Boat Rental	38,534	5,753	162,227	206,514
Fishing Supplies	321,135	82,079	122,328	525,542
Guide Costs	34,606	4,751	46,297	85,653
Licence Fees	102,128	60,124	121,998	284,249
Access Fees	217	0	9,390	9,607
Other Costs	24,353	18,176	74,141	116,671
Total Direct Expenditures	3,098,983	1,657,006	3,140,082	7,896,072

Comparison with 1990 Results

Total licensed anglers of both resident and non-residents in the Yukon increased by 3.4% in 1995 while the total number of active anglers increased by 2.5%.

Resident anglers fished approximately 300 more days in 1995, resulting in only a 1% increase. Non-residents decreased their fishing activity by 2.4 %, spending approximately 39,847 days fishing in 1995 as compared to 40,806 days in 1990.

The total harvest of all species combined was down by 24% from approximately 105,008 fish caught and retained in 1990 to 80,258 fish caught and retained in 1995.

Total direct expenditures by all licensed anglers in the Yukon increased by 42% in 1995, from \$6.8 million spent in 1990 to \$9.6 million spent in 1995. The major purchase and investment category increased by 12% and likewise, the amount of purchases and investments that were totally attributable to sport fishing was up 12%.

Yukon resident purchases in 1995 were similar to 1990 with only a slight increase in total amount attributable to sport fishing. Non-residents made the most significant increase in purchase, with major purchases increasing by 586% and the total amount attributable to sport fishing increasing by 295% (Table 19).

Table 19. Comparisons of Angler Characteristics, Days Fished, Species Harvested and Expenditures in the Yukon in 1990 and 1995.									
	Resident			Non-resident			Total		
	1990	1995	Change	1990	1995	Change	1990	1995	Change
Total Licensed Angling Population	7,824	7,482	-4.40%	8,135	9,017	11%	15,959	16,499	3.40%
Total Active Adult Anglers	6,591	6,292	-4.50%	6,854	7,489	9.30%	13,445	13,781	2.50%
Total Days Fishing	82,880	83,565	0.83%	40,806	39,847	-2.40%	123,686	123,412	-0.22%
Total Fish Caught and Retained	64,564	51,300	-21%	40,442	28,959	-28%	105,008	80,258	-24%
Total Direct Expenditures	3,486,047	3,110,145	-11%	3,361,323	6,579,972	43%	6,847,370	9,693,118	42%
Major Purchases and Investments	7,405,702	7,492,414	1.20%	143,806	986,589	586%	7,549,508	8,479,004	12%
Total Attributable to Sport Fishing	4,106,367	4,291,817	4.50%	113,288	446,979	295%	4,219,655	4,738,797	12%

Conclusions

The results of the 1995 survey of sport fishing in the Yukon confirm that it is a significant form of outdoor recreation and an important socio-economic component of the natural resource sector in the territory. It is estimated anglers spent \$9.6 million on direct expenditures. These included expenditures for accommodation, food, travel, bait, licenses, etc. Additionally, anglers invested \$8.5 million on major durables and property, of which \$4.7 million was used totally for sport fishing.

Anglers also indicated they were prepared to spend additional money above their current costs in 1995 before they would stop fishing. Although this information has not yet been taken into consideration in addressing the total value of the fishery, it does indicate that anglers place more value on the resource than they currently spend.

Overall, 13,781 adults actively fished in the Yukon in 1995 with 6,292 of these anglers being residents of the territory. Anglers fished a total of 123,412 days in 1995, and they harvested 80,258 fish of all species. These fish weighed 109,549 kilograms or 241,510 pounds.

Yukon anglers indicated they were more concerned about the fishing experience than they were about catching fish. They rated lack of pollutants in fish and quality of the water as the two most important factors, while nearness to food/lodging and access to recreational facilities were least important. Although fish provide the focus for angling activity, other elements must be considered by managers in order to provide a greater recreational fishing experience.