Demand Analysis for
Fresh Water Sport Fishing

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1.0 Introduction

The freshwater sport fishing industry is an important component of British Columbia's economy, contributing approximately $500m annually to the province's GDP. Over the years, this expenditure has provided jobs, business opportunities and government revenues. However, in recent years, the growth of the freshwater fishing sector has not kept pace with the overall growth of the provincial tourism sector, and several indicators suggest that demand for fishing has passed a peak and may be declining overall.

This report is intended to contribute to development of the freshwater sport fishing sector through a review of the literature relating to the demand for sport fishing in British Columbia and the factors that affect that demand. It is also intended to provide information that can be integrated into the development of the B.C. Fresh Water Sport Fishing Strategy. In this regard it provides information sources, market performance insights, domestic and international angler market profiles that can used to help guide the development of:

- product and market development strategies;
- higher monetary and non-monetary value angler efforts;
- product–market match strategies which will increase fishing effort while avoiding overcrowding and visitor conflicts; and
- a research program that will address many of the information gaps and data issues required for better decision making associated with managing fresh water fishing demand in British Columbia.

The report is divided into several complementary but discrete sections:

- First, literature relating directly to the demand for sport fishing opportunities in North America in general and B.C. in particular is reviewed (Section 2). This review is comprised of several sub-sections. Initially, a general overview of fresh water angling demand is provided. Then a review of key theoretical frameworks, approaches and empirical findings that can be used to identify those factors triggering or constraining sport fishing demand, as well as tools for analyzing that demand for marketing and management purposes is presented. It offers context setting information that can be used to help guide the development of the B.C.'s Fresh Water Sport Fishing Strategy.

- Section Three complements the preceding literature review by providing a description and discussion of the value of existing databases in supplying information related to fresh water fishing demand in general and the sub-regions of British Columbia in particular. The type of information that can be "mined" from several travel and/or recreational databases is described and examples of angler market analyses capable of being conducted with these databases are illustrated. These databases relate to travel and fishing behaviour in overseas markets, U.S. markets, domestic (B.C. resident and other Canada), as well as distinctly freshwater anglers in the Thompson-Nicola, Okanagan and Cariboo-Chilcotin regions.

- The fourth section of the report (Section 4) outlines components of a strategic research program which could be used to guide future market and supply focused investigations related to managing the demand for fresh water sport fishing in the study regions. It provides brief descriptions of the types of research needed to fill the information gaps not addressed in existing studies. It also offers an estimate of the costs associated with conducting the various comments of this research program.

2.0 Fresh Water Fishing Demand Literature Review

2.1 B.C. Fresh Water Fishing Market Performance Summary

The principal source of information on participation in sport fishing in British Columbia is the National Survey of Recreational Fishing, conducted every five years since 1975. The survey is conducted by the Statistical Services unit of the federal Department of Fisheries and Oceans in Ottawa, in cooperation with provincial and territorial governments across Canada. The results of these surveys provide the most authoritative and up-to-date information on activity and harvest in Canada's recreational fisheries.

Fishing license sales is a further indicator of fishing participation, with information for British Columbia originating with the BC Fisheries and Government Agents Revenue Management System (GARMS).

Table 1 shows freshwater angling licence sales since 1980, along with the origin of anglers for each year. Only basic licence sales are included, since supplementary licences can only be purchased once the basic licence has been purchased and therefore can not be used as an indicator of participation rates (BC Fisheries 2000).

While total numbers of licences have declined since 1980, the interpretation of the figures depends upon the time frame used. In the shorter term, there has been a 9.8% decrease in basic licences issued since a peak was reached in 1995. As will be seen below, this presents difficulties in forming comparisons with the more comprehensive data gathered by the National Survey of Recreational Fishing, since the latest data set available relates to 1995 figures.

However, it seems fair to conclude that the level of participation is currently in decline. This conclusion is reinforced by the fact that the BC population continues to rise, so even a steady level of licence sales represents a decline in participation rates. Further, the tourism sector as a whole continues to grow rapidly in British Columbia, and available statistics indicate that the freshwater angling sector has not kept pace with this growth.

It should also be noted that the relative proportions of BC residents, other Canadians and non-Canadians has remained largely unchanged since 1985, at least at the broad scale of total license sales. As will be described in the following paragraphs, this pattern may not necessarily apply equally to all subgroups within the overall population. In fact, there may be significant opportunities to develop specific market segments within the population who may be interested in fresh water angling but are currently constrained in their participation. Identifying these high affinity segments has significant implications for the development of marketing and management strategies in British Columbia. .

Table 1: Freshwater angling basic license sales by origin

Origin	1980	1985	1990	1995	1997	1998
BC residents	81%	78%	79%	80%	80%	80%
Other Canadians	14%	11%	11%	9%	9%	9%
Non-Canadians	5%	11%	10%	11%	11%	11%
Total Basic licences	419,626	360,139	392,037	397,445	351,794	358,393

Source: BC Fisheries and Government Agents Revenue Management System (GARMS), quoted in BC Fisheries 2000.

An alternative measure of angler effort is provided by the total number of days spent fishing in British Columbia, as defined by 'one angler fishing for any part of a single day' (Table 2). The total licenced angler effort in 1995 was 5.6 million days, an increase of over 20 per cent over 1990. However, this performance indicator suggests relatively limited growth since 1975. As well, the number of licenses sold has declined since 1995. This decline has created challenges for the province's sport fishing industry, and supports the perspective that overall fishing effort has probably flattened or declined since 1995.

Table 2: Number of days fished by active anglers in BC freshwater

Origin	1975	1980	1985	1990	1995
BC residents	4,043,755	4,551,400	4,281,100	4,055,606	5,091,444
Other Canadians	n/a	373,000	243,100	237,699	255,349
Non-Canadians	n/a	289,400	229,800	261,685	271,858
Total days fished	4,570,452	5,213,800	4,754,000	4,554,990	5,618,651
Average days per participant	13	15	15	12	15

Source: Survey of Recreational Fishing in Canada

A measure of the importance of the freshwater fishing sector to British Columbia is the expenditure generated by participants in the sport (Table 3). Overall, expenditures have grown more than 60 per cent since 1980, not taking into account inflation. However, if inflation is considered, those expenditures represent a decline of 18 per cent over the same time period. As well, the impact of licence sales declines since 1995 are not reflected in the figures in Table 3.

Table 3: Total expenditures (capital and direct) of freshwater anglers (in Cdn. $)

	1980	**1985**	**1990**	**1995**
B.C. residents	262,292,559	261,082,564	392,707,695	425,145,506
Other Canadians	39,399,495	28,926,510	29,372,311	24,043,876
Non-Canadians	n/a	21,088,161	33,974,787	44,621,445
Total	**301,692,054**	**311,097,235**	**456,054,793**	**493,810,827**
Adjusted total: 1980 dollars	**301,692,054**	**217,353,268**	**256,133,667**	**248,327,134**

Source: National Surveys of Recreational Fishing 1980-1995

An alternative perspective on the market profile of sport fishing in British Columbia is provided by the five-yearly studies conducted by Statistics Canada on behalf of the Canadian Wildlife Service (CWS), Environment Canada. However, methodological differences make a direct comparison with the National Survey of Recreational Fishing data problematic. For instance, figures for fresh water and tidal fishing are not categorized separately in the CWS study, and the focus is on the behaviour and attitudes of solely Canadian residents. Statistics reported here only deal with participation rates in British Columbia.

Table 4: Participation in sport fishing in British Columbia

	1991	**1995**
Participation rate	26.7%	17.5%
Average days per participant	14.3	18.8

Source: Canadian Wildlife Service, Environment Canada.

A final perspective on the market performance of the angling market is offered here based on statistics collected for the Canadian sport fishing market as a whole (Table 5). The summary of the 1995 National Survey of Recreational Fishing in Canada (DFO 1997) includes a comparison with 1990 figures for a range of variables:

Table 5: Canadian sport fishing market, comparison 1990 to 1995.

Number of active adult anglers	⇩ 6% decrease
Number of active non-resident anglers	⇩ 1.2% decrease
Number of active resident anglers	⇩ 9% decrease
Number of fish kept	⇩ 19.3% decrease
Major purchases and investments	⇧ 5.2% increase

Source: Survey of Recreational Fishing in Canada

2.2 Demographic Change and Angling Participation

A great deal of research has been directed towards explaining participation in recreational fishing in the context of North American population trends. One of the earliest studies to take this approach was conducted by Murdock et al (1992), analysing demographic trends in the general population and their likely impact on sport fishing participation. Four trends of key significance to sport fishing in the US were identified: 1) decreased rates of population growth, 2) an aging population, 3) an increase in minority populations, and 4) a change in household composition. Results suggested that the rate of increase in the angler population would decline as the population aged, and minority components in the population increased.

A later study by Duda et al (1995) included a regression analysis of screener data from the National Survey of Fishing, Hunting and Wildlife-Associated Recreation between 1980 and 1990. The research found that fishing among males had levelled off, and identified three major demographic variables related to decreasing male angling participation:

- the increasing age of America's population reduced overall levels of fishing effort because younger individuals were more likely to fish than older people;

- the declining number of males growing up in rural areas reduced overall levels of fishing effort because males growing up in such regions were more likely to fish than those living in urban areas; and

- the decreasing proportion of white males as a percentage of the US population reduced overall levels of fishing effort, because white males were more likely to fish than non-white males.

One of the problems of projecting future angling populations on the basis of demographic trends in the general population is the assumption that participation rates will remain static over time (Loomis and Ditton, 1991). Even a cursory analysis of actual data shows that this is not the case (Fedler 2000). Therefore, the most recent work on projecting sport fishing participation into the future has attempted to incorporate changes in participation rates over time. Feldner and Holdnak (2000) developed scenarios projecting angler participation over the next three decades under static, increased and declining rates of participation among different age cohorts. However, the results generated under these scenarios highlighted the continuing difficulties associated with attempts to predict participation levels on the basis of population trends, with the various scenarios resulting in estimates differing by as much as 67 per cent.

In the context of demand for sport fishing in British Columbia, future participation will be affected by population age and mix factors as well as by changes in recreational consumer tastes. Given that around 20 per cent of B.C. freshwater anglers are other Canadians and non-Canadians, population changes outside the province will also have a significant impact.

2.3 Market Segmentation and Angler Specialization

There is considerable diversity within the sport fishing population. This reality is often overlooked when describing aggregate views of total participation levels and profiles of the 'average angler'. The limits to developing fisheries management and marketing strategies based on such aggregations are understood by marketing specialists and human dimension specialists in resource agencies. This has been recognized previously as "the average angler who doesn't exist" except in research reports (Shafer 1969). Two broad approaches have been developed to describe the diversity of anglers in the marketplace: market segmentation and specialization.

2.3.1 Market segmentation

Market segmentation is a process of dividing a total market into subgroups that have similar product needs, with the aim of identifying client groups that can be more accurately addressed through tailored marketing strategies and tactics (Legg 1993). A number of approaches have been taken to divide angler populations into smaller sub-groups, including segmentation according to social, demographic and economic characteristics (Toth and Brown 1997), fishing location and species sought (Fedler 1994, Fedler and Leahy 2000), and type of fishing (Legg 1993).

Conclusions drawn from such research have confirmed the diversity of recreational fishing markets, and achieved some level of success in identifying the characteristics of distinct subgroups. For example, in a study of Ontario's recreational fishing market, Legg (1993) found statistically significant differences between 'pro-derby' anglers and 'anti-derby' anglers, and between 'catch-and-release' anglers and 'non-catch-and-release' anglers. However, these means of segmentation have been characterized as single-dimensional, and of not being able to provide an explanation for, nor prediction of, group differences that are independent of the classification variable (Wilde and Ditton, 1994).

In an attempt to overcome this kind of difficulty, Connelly et al (2000) used a specialized market segmentation technique to divide heterogeneous groups of anglers into more homogeneous subgroups. Using five methods of segmentation for data from a mail survey of 5,000 New York fishing license holders, their analysis demonstrated how several types of market segmentation can be combined to better describe anglers. Based on angler preferences for different types of fishing opportunities, six distinct preference segments were identified and proposed as the basis for product-related economic development efforts. Identifying such angler segments can be extremely useful in determining not only their behaviors for resource management purposes, but also for marketing initiatives.

2.3.2 Specialization

The concept of recreation specialization has also been proposed as an alternative approach to segmenting and understanding diversity in sport fishing markets. This concept was first defined by Bryan (1979) as 'a continuum of behaviour from the general to the particular reflected by equipment and skills used in the sport, and activity and setting preferences'. Four broad types of anglers were identified along the continuum, with occasional anglers located at the lower end, followed by generalists, technique specialists, and, at the higher end, technique and setting specialists.

Further studies using the conceptual framework of specialization have found differences in characteristics of groups according to their position along the continuum. McGurrin (1986) classified a sample of trout anglers into three specialization groups, finding differences in activity patterns, fishing effort and water preferences. Chipman and Helfrich (1988) classified river anglers according to specialization, finding differences in motivations for fishing, perceptions, and fishing management preferences.

Despite these broad confirmations of the validity of specialization as a conceptual framework, Fedler et al (1998) suggest there continue to be difficulties in linking the framework to marketing requirements. A principal difficulty is that most sampling frames have been selected based on cost considerations and convenience, so that results fail to yield an understanding of how many novices, generalists and other types of specialists there are at scales large enough to be relevant to state, provincial or national marketing strategies. They conclude that more large-scale studies are required before we have a thorough understanding of how anglers are distributed along the specialization continuum.

2.4 Sport Fishing Motivations

A further perspective on the demand for recreational fishing is provided by research into the personal motivations behind an angler's participation in the sport. This research has been driven by increasing recognition of the need for commercial operators and management agencies to better define the sport fishing product, and more closely relate it to the needs of the angling public (Driver, 1985).

Studies of motivations for outdoor recreationists generally and anglers specifically have revealed a diversity of reasons why people participate (Ditton and Loomis 1985). These reasons highlight the social and psychological motivations for fishing, and that fishing is about far more than just catching fish. Interestingly, most research has confirmed the low reported importance of catching and keeping fish vis-à-vis other motivations.

Many motivation studies have been built upon early work by Driver and Knopf (1976), who asked Michigan anglers to rank 11 motivations for fishing. The highest ranking motivations included experiencing nature, escaping, making a mental change, and exploring. While these subsequent surveys have identified similar motivations in a range of contexts, an attempt by Fedler (1984) to statistically analyse the results of 13 motivational studies was reduced to a basic ranking of four key motivations due to a lack of methodological compatibility between the surveys.

In the British Columbian context, the results of the 1995 Survey of Recreational Fishing in Canada (DFO 1997) follow a broadly similar pattern. The most important motivations for freshwater fishers are reported as relaxation, to enjoy nature and to get away. Catching a fish to eat and catching a trophy fish are ranked among the least important motivations.

2.5 Socialisation

One motivation consistently ranked highly by anglers is socialize with family and friends. Research based around the concept of socialization is aimed at identifying the factors behind an individual's initiation into angling, giving a further perspective on participation levels and demand for sport fishing.

Burch (1969) suggested that all recreation behaviour could be related to 'personal communities' formed at home and at work, within which people share interests and activities, and individuals are socialized into particular activities. This hypothesis became the foundation for subsequent research into socialization into various recreational activities, including sport fishing.

This theoretical perspective was later developed into two principal models as described by McGuire et al (1987): the childhood determination model, and the leisure career model of participation. The former model attributes participation in recreation activities to childhood learning experiences, while the latter suggests that people will continue to be socialized into recreational activities during adulthood. While both models are useful for understanding recruitment into fishing, most research has tended to reinforce the validity of the childhood recruitment model.

To participate in fishing, it would seem an individual must fish as a child. Among active anglers in the US, Duda et al (1995) found that 95% had fished as a child. In a study of youth recruitment to fishing, Dann (1993) found that teen involvement in fishing was the best predictor of long-term involvement in fishing. Fedler (2000) extended this work with an analysis of screener surveys for the 1991 and 1996 National Surveys in the US asking respondents to recall their fishing participation during past years. Participation in fishing for the first time was found to decline with age, with probability of becoming involved with fishing dropping by nearly 50 per cent after youngsters reach age 15.

From a research perspective, some evidence (Kelly 1974, Christensen and Yoesting 1973) has been found to support the leisure career model. While the model suggests that recruitment into sport fishing may continue into adulthood, Responsive Management (1999), writing in the context of the development of a national strategy to increase participation in sport fishing, report that voluntarily initiating fishing in middle and older adult life has been shown to be unlikely without some type of intervention. However, from the practical point of view of stimulating participation in sport fishing, Fedler et al (1998) argue that 'there are simply too many people in the population above childhood and teen years who do not currently fish to not make efforts to introduce (or re-introduce) them to recreational fishing'.

2.6 Participation Constraints and Barriers

Addressing the constraints and barriers faced by individuals with respect to their participation in leisure activities offers an alternative perspective on managing demand for fishing opportunities. It can also be a useful tool in developing freshwater fishing demand management strategies.

Similar to the case with motivation studies, the theory of constraints to participation in recreational fishing originates in more general theory developed to describe constraints and barriers to participation in leisure activities as a whole. Defining a constraint as anything that inhibits an individual’s ability to participate in leisure activities, to spend more time doing so, to take advantage of leisure services, or to achieve a desired level of satisfaction, Jackson (1988) reports over 100 social, economic and physical constraints identified in previous studies.

This diversity of constraints has been conceptualised into three hierarchical categories: intrapersonal, interpersonal, and structural (Crawford and Godbey, 1987; Crawford et al, 1991). Interpersonal constraints involve an individual’s psychological state to affect preferences for different recreational activities, interpersonal constraints involve interactions with others that can influence both preferences and participation frequency, and structural constraints include factors such as time and financial limitations, opportunities to fish, and accessibility of fishing resources.

With respect to participation in sport fishing, the most common constraint identified by anglers is lack of time, often associated with family commitments, work commitments and participation in alternative recreation opportunities (Ritter et al 1992, Responsive Management 1997, USFWS 1997). Research into the constraints faced by women (Thomas and Peterson 1993) identified the negative image of fishing portrayed by animal rights groups and personal safety as important concerns. As well, a recent study by Fedler and Ditton (in press) of constraints across four fishing participation groups confirmed the primacy of ‘lack of time’ as a constraint.

One common feature of most studies of constraints to participation is that the primary constraints identified by anglers relate to personal and social factors, as opposed to issues such as the quality of the fishing experience or management of the fish resource. It appears that traditional management regimes, which focus on bag limits, size, access and other physical factors, ignore the social factors which, for a majority of anglers, are of the most importance (Bissel and Duda 1995).

3.0 Existing Fishing Databases

The preceding discussion focussed on overall findings related to fishing behaviour as discussed in existing academic and resource management agency technical reports and publications. For the most part the findings emanate from studies conducted in the United States. While some research of a behavioural character has been conducted in Canada, and to a lesser extent B.C., for the most part the focus of the reporting has centred on assessing participation rates and fishing effort. Little empirical research has addressed in a substantive way, many of the challenges to managing fresh water fishing demand outlined in the preceding discussion. This section of the report describes and critically assesses the value of existing Canadian and B.C. databases in addressing the demand management issues in fresh water fishing. In particular, the following sections provide insights into the profiles of international and domestic travellers interested in sport fishing in Canada. The investigation uses data derived from 3 internationally focussed long haul pleasure travel surveys, 2 domestic travel surveys, 2 BC Visitor Studies, and a national recreational fishing survey, to describe the overriding traits of BC’s potential and existing angler markets. Future research should build on the information contained in these data bases.

3.1 Long Haul Pleasure Travel Markets Interested in Fishing

The first portion of this discussion describes key characteristics of long haul pleasure travel markets associated with 3 of British Columbia’s largest and most important overseas travel markets: Japan, the United Kingdom, and Germany. It is forecasted that Japan will generate 294,000 overnight visitors, while the United Kingdom and Germany will produce 299,000 and 155,000 visitor nights respectively to B.C. in 2001.

Data concerning these markets were collected as part of a much larger travel market assessment program conducted by the Canadian Tourism Commission, The United States Tourism Industries/International Trade Administration, and the Mexican Secretaria de Turismo. For the purposes of this analysis, the report describes the overriding characteristics of those travel respondents who were potential “fishing” enthusiasts.

Provided below are estimates of the size of each of these international sport fishing based on a combination of country specific fishing interest market penetration levels and population estimates. These market size forecasts are followed by country specific fishing travel market descriptions which systematically profile the socio-demographic, travel philosophy, general travel motivations and perceptions of Canada's most advantageous attributes as a travel destination. More detailed tabular descriptions of these markets are provided in the report's accompanying appendices.

3.1.1 Market Potential Estimates

Of the potential overseas sport fishing markets examined in this report, Japanese travellers comprised the largest potential source of such visitors for Canada. Based on 1993 population estimates and the stated interests of respondents, there was an estimated 2.1 million Japanese pleasure travelers interested in fishing who planned to visit Canada between 1995 and the year 2000. Estimates for the period 1996-2001 for similar types of United Kingdom and German travelers likely to visit Canada were approximately .54 million and .78 million travelers respectively (Appendix 1: Table 1.1).

3.1.2 Market Socio-Demographic Characteristics

Potential anglers from each of these three countries exhibited several commonalties as well as some distinct differences with respect to their socio-demographic characteristics. On average, the largest proportions of them tended to be married males, living in households with two members over 18 years of age, having no children at home, and earning mid-level incomes. When compared with their Japanese counterparts, the potential anglers from Europe were more likely to be older, less educated, living in households with at least two income earners, and more capable of communicating in English and to a lesser extent in French. Table 1.2 (Appendix 1) summarizes the socio-demographic traits of each of these potential angler markets.

3.1.3 Market Travel Philosophies

Travel philosophies provide insights into the overriding predispositions people have about travel vacations. Despite country specific variations, the most important overall travel philosophies of these potential anglers were quite similar. For the most part, these potential anglers were cost and value conscious travelers seeking new and flexible holiday destinations and experiences. They placed high levels of importance on being able to make their own travel arrangements prior to and during the trip. Japanese anglers followed by their German and United Kingdom counterparts were progressively more interested in pursuing trips of greater duration. Table 1.3 (Appendix 1) ranks the most important travel philosophies for these potential angler travel markets.

3.1.4 Market Travel Motivations

General travel motivations are those factors which trigger the trip decisions of vacationers. All three of these potential angler markets were motivated to travel by such factors as the availability of nice weather, as well as personal safety and high standards of cleanliness and hygiene at the destination. Conversely, other general travel motivations served to differentiate each of these international angler markets. Japanese anglers placed their highest priority on being able to visit scenic, high quality, clean environments where they could pursue a wide variety of activities. They were also motivated to travel to places that were relaxing and which provided a change from their workplaces.

German anglers were especially motivated to visit scenic, clean and environmentally sound areas, which offered a wide variety of things to see and do. In contrast to the other angler markets, they were more motivated to travel to places, which offered value for money, as well as opportunities to increase their knowledge about local people and places.

In comparison to the two preceding groups, the United Kingdom travelers were most apt to be motivated to travel by other factors. These included financial factors (e.g., inexpensive travel to and within the country, ease of currency exchange), safety features (e.g. personal safety, hygiene and cleanliness) and the availability of access to lakes, rivers and mountainous areas (Appendix 1: Table 1.4).

3.1.5 Market Perceptions of Canadian Product Advantages

Perceptions of Canadian travel product/activity attributes were fairly consistent for all three countries. Potential anglers emphasized the outstanding scenery, natural environment and wildlife of Canada's mountains, parks, forests, lakes and rivers as being the country's biggest destination assets. Table 1.5 (Appendix 1) summarizes Canada's top ranked product/activity attributes as seen from the perspective of potential anglers from Japan, the United Kingdom and Germany.

3.1.6 Market Travel Patterns

Based on information concerning their most recent pleasure trip, travelling with a "significant other" was the only travel trait, which was common to all three angler markets. Japanese travelers tended to take packaged trips of 4-7 nights, while traveling with their spouse or significant other. They booked their trip shortly after planning it, and used brochures and pamphlets as their most important sources of information to help make these decisions. They stayed at least one night at mid-priced hotels and took part in shopping, informal/casual dining and sightseeing pursuits.

U.K. travelers tended to take longer vacation trips (15-28 nights) which involved traveling with their spouse or significant other. Travel agents were the most important source of information used to help plan their trips. These potential anglers most frequently stayed at least one night at the homes of friends/relatives and pursued shopping, photography and sampling local food opportunities. Their German counterparts took pleasure/vacation trips of shorter duration (14 nights or less), often traveling with their spouse or significant other. They booked their trip shortly after planning it and used travel agents as their most important sources of information. They stayed at least one night at mid price hotels and participated in sampling local foods, shopping and photography most frequently (Appendix 1: Table 1.6).

3.1.7 Data Limitations

The data provided in these studies offers some of the few insights into latent demand fishing affinity travel markets of importance to British Columbia. However, these data were not collected primarily for fishing management purposes and consequently lack specificity of demand management within the study regions. The operational definition of these potential anglers was those respondents who indicated an interest in fishing and the likelihood of visiting Canada within 5 years of participating in the survey. As such these respondents did not necessarily pursue these activities on their subsequent long haul trips but expressed an interest in doing so. As well, it was not possible to identify if these people were potential freshwater or saltwater anglers for BC destinations. However, given their strong affinity for several of the natural attributes this province has as a travel destination, it is reasonable to assume that their fishing interests could potentially be directed at BC opportunities.

3.2 Domestic Fishing Travel Markets

While international travel markets are important to BC tourism and the sport fishing industry, domestic travelers still represent the lion's share of the province's visitors. Consequently this report examined 3 existing databases concerning potential and existing Canadian anglers. They are associated with the Domestic Travel Study (1995), the Canadian Travel Survey (1999) and the BC Visitor Study (1995-1996). The first database reviewed was the Canadian Domestic Travel Survey. While not specific to BC, this data source provided very generalized information concerning the characteristics of Canadian travelers who fished during their travels in Canada. Indeed, many overriding characteristics of this group from a demand management and product development perspective were identifiable.

3.2.1 Market Socio-demographics

From a socio-demographic perspective, those Canadian travelers who fished were most apt to be baby-boomer males, with lower than average income generated by two household contributors (Appendix 1: Table 1.2.2).

3.2.2 Market Travel Philosophies

These Canadian travelers preferred Canadian destinations, which provided them with value for their money. Unlike their international counterparts, they preferred to: make their own travel arrangements, as well as participate in shorter, more frequent trips to lakes or cottages (Appendix 1: Table 1.2.3).

3.2.3 Market Travel Motivations

These Canadian travelers were also motivated to travel by factors similar to their international counterparts. A mix of clean, safe, and quality environments combined with value for money spent and a variety of things to see and do topped their list of travel motivations (Appendix 1: Table 1.2.4).

3.2.4 Product Preferences

When these anglers compared Canada with other North American options, they cited several very distinct attributes which made this country special to them. Overall, they felt that Canada's appeal and competitive advantage lay particularly with the quality of its natural resources and environmental quality (Appendix 1: Table 1.2.5).

3.2.5 Data Limitations

As apparent in the preceding discussion, the Canadian Domestic Travel Survey offers a broad description of the Canadian angler market who travel, and their overriding travel preferences and behaviours. However, as with the international long haul pleasure travel studies, the Domestic Travel Survey was designed for other purposes than assessing freshwater fishing demand. As such it does not differentiate between freshwater and saltwater anglers. Neither is its sample population large enough to identify B.C. specific anglers, let alone those fishers specific to the study area.

3.3 BC Resident and Non-Resident Anglers

The third set of data bases examined were related to the BC Resident and Non-Resident Visitor Study 1995-1996. Unlike the preceding market surveys, these two market studies offered more specific insights into the characteristics of non-resident and resident travelers angling in British Columbia.

3.3.1 Market Size

The incidence of sport fishing amongst resident and non-resident travelers in BC was fairly limited.

3.3.2 Market Socio-Demographics

BC resident anglers tended to be moderately well educated, fully employed, late baby boomers, earning middle income wages. While similar in many respects to resident travelers who fished, the non-resident anglers were more equally distributed amongst males and females, and tended to earn higher average annual household incomes (Appendix 1: Table 1.3.2).

3.3.3 Market Travel Philosophies

The overall travel philosophies of the two angler market segments were relatively similar. Both groups placed importance on spending money on travel, which allowed them to personally arrange visits to places with which they or their friends were familiar. They also preferred to take shorter and more frequent holidays as opposed to longer vacations (Appendix 1: Table 1.3.3).

3.3.4 Market Destination Selection Factors

For the most part, resident and non-resident anglers placed importance on a similar set of factors when selecting BC destinations to visit. These attributes included selecting family oriented, environmentally friendly places which afforded opportunities to be take part in a range of value laden outdoor pursuits including viewing wildlife. Beyond these commonalties, resident travelers tended to place greater emphasis on being able take part in those activities which encouraged learning especially in wilderness and mountainous regions. Non-resident anglers placed greater emphasis on choosing destinations that provided opportunities for a range of adventurous activities but in safe and scenic environments (Appendix 1: Table 1.3.4).

3.3.5 Activities Pursued

Beyond fishing both groups pursued a range of common activities. These included sightseeing, wildlife viewing, photography, hiking and walking, visiting protected areas, as well as shopping and dining out (Appendix 1: Table 1.3.5).

3.3.6 Data Limitations

The Resident and Non-Resident Visitor Studies were designed to explore the broad range of travel patterns of travelers in this province. While they provide a useful starting point for profiling visitors engaged in a variety of pursuits (including fishing), they do not differentiate between fresh and salt-water anglers. In addition their sample populations are not sufficiently large enough to permit statistical analyses of travelling anglers going to the regions that are the focus of this study.

3.4 Canadian Travel Survey Information

Canadian Travel Survey data collected by Statistics Canada offers an alternative perspective on the behavioural characteristics of anglers visiting British Columbia. The data is collected as part of an ongoing Labour Force survey, and therefore represents a ‘household-based’ survey approach, as opposed to the ‘licence-based’ approach of the Survey of Recreational Fishing in Canada. It should be noted that the survey includes only trips with distances of greater than 80km from home taken by Canadian residents. The following analysis deals with travel by anglers in B.C., but could also be conducted for proximate angler markets from Alberta that visit the province.

3.4.1 Market Socio-demographics

The largest proportion of Canadian anglers identified in this travel survey were males (67%) between 25-54 years of age (55%). Less than a fifth (18%) of these anglers were under 15 years old. The majority of these anglers (63%) were employed, and over half of them had some level of post-secondary education. Income levels amongst these anglers was fairly evenly spread across incomes categories, with the exception that only 1% of travellers were from households with less than $20,000 annual income. The lion's share of these anglers (84%) came from households with two or more adults, and 46% were from households with one or more children.

3.4.2 Travel Trip Behaviour

The Canadian Travel Survey yields interesting information on other activities undertaken during trips, and the type of accommodation used. The most popular activities undertaken during the trip in addition to fishing were walking (55%), sightseeing (50%), swimming (38%) and visiting relatives (35%). By far the largest accommodation type used involved camping or trailer park facilities (41%), followed by the homes of friends or relatives (16%) and private cottage or vacation home (11%). Less than one per cent of fishers indicated they used a hunting or fishing lodge.

3.4.3 Travel Trip Destinations

The database also provides a broad indication of those tourism regions used by these travellers in 1999. From these data it is apparent that the Okanagan (25%), Southwestern (23%) and the Cariboo-Chilcotin (8%) captured more than half of the total fishing related trips generated in British Columbia in 1999 (Table 1).

Table 1: Tourism region of destination of BC fishing trips by Canadian residents, 1999

Tourism Region	Trips	Percent
Vancouver Island	116,261	19%
Southwestern	140,421	23%
Okanagan	154,823	25%
Cariboo-Chilcotin	49,174	8%
Yellowhead	68,067	11%
BC Rockies	84,528	13%
Other/not stated	3,889	1%
Total	**617,163**	**100%**

Source: Canadian Travel Survey, 1999.

3.4.4 Origin of Trips by Province

About four fifths (81%) of all trips involving fishing in B.C. were generated by provincial residents (Table 2). Another 15 per cent of the trips originated in Alberta. Only a very small percentage originated in other Canadian provinces.

Table 2: Province of origin for BC fishing trips by Canadian residents, 1999

Province of Origin	Trips	Percent
British Columbia	494,697	81%
Alberta	92,113	15%
Ontario	17,469	3%
All other provinces	12,883	1%
Total	**617,163**	**100%**

Source: Canadian Travel Survey, 1999.

3.4.5 Trip Timing

Compared to trips taken by B.C. residents, fishing trips generated by Albertan travellers to B.C. were more broadly spread across the four quarters of the year and involved a slightly larger proportion of higher income travellers. The Albertans were more likely to include other activities such as visiting friends and relatives, shopping and sightseeing, and slightly more likely to involve stays at motels or hotels. By comparison, trips from Ontario were more concentrated during fall quarter of the year, and were made by significantly higher-income travellers. Ontario travellers were also more likely to include cultural activities such as sightseeing and museum visits, and were much more likely to involve stays at motels or hotels.

3.4.6 Limitations of the Data

Due to its purpose as a survey of the travel patterns of Canadians, the data does not include angling trips within 80 km of the home, or angling trips in Canada by non-residents. A further limitation is that respondents are not asked to distinguish between freshwater and tidal fishing. As such, it offers at best a partial perspective on freshwater sport fishing in British Columbia.

3.5 Survey of Recreational Fishing in Canada 1995-B.C. Database

The final database analyzed in this report is that associated with the Survey of Recreational Fishing in Canada conducted in 1995. Unlike the others reviewed in the preceding sections of this document, it offers considerable insight into the traits of fresh water anglers, especially in the interior of BC. For the purposes of this report, only anglers using the three regions that are the focus of this research are outlined. To illustrate the potential utility of this database in providing market specific behavioural information, a profile of "beginner" anglers (who are crictical to the future growth of fresh water fishing) has been created. It is summarized in this section of the report. The detailed data tables related to this market profile are presented in Appendix 2. In Appendix 3, a similar segmentation profile of "family" anglers is provided. These two segmentations were selected for presentation as they both provide valuable insights into markets which are of importance to the long-term viability of the fresh water sport fishing industry in B.C.

3.5.1 Beginner Angler Overview

Beginner anglers can be the lifeblood of fishing demand. They provide the foundation upon which future fishing effort must be built. Beginners represent about 15% of the B.C. fresh water fishing market. Within the study area of this report (Thompson-Nicola, Cariboo and Okanagan), beginner market penetration varied between 11% in Thompson-Nicola, to 15% in Okanagan, and 15% in the Cariboo.

The following analysis describes the overall characteristics of these beginner anglers, and identifies how they differ from other anglers in the 3 regions. Where anomalies in their trends exist on a regional basis, these differences are highlighted.

3.5.1.1 Types of Licenses Purchased

The largest proportion of beginner anglers purchased annual licenses. However a smaller proportion of them (61%) did so than did other anglers (72%). Beginners were more apt to purchase 8-day or single day licenses than were other anglers. A very small proportion of beginners (<3%) actually purchased supplemental licenses. The largest proportion of licenses (54%) were purchased near the anglers home. However, these beginners were less likely to make near home purchases than were their more experienced counterparts (73%). In this regard, beginners were more apt (32%) to make license purchases en-route to their fishing sites.

3.5.2.0 Fishing Behaviour

3.5.2.1 Fishing Season

The largest proportion of beginners fished during the summer season - June, July and August. They also had relatively large proportions (25%+) fishing in May and September. However, during no season were these proportions of beginners fishing greater than those of other categories in the region.

3.5.2.2 Fishing Locations

The largest proportion of beginners were fishing from forest recreation sites (45%), or in Provincial Parks (22%). These patterns were similar to those of other anglers in the region.

3.5.2.3 Interest in More B.C. Freshwater Angling

The solid majority of beginners (78%) expressed interest in spending more time freshwater fishing in B.C. However a much larger proportion of other anglers (89%) in the region were predisposed to do this.

3.5.2.4 Constraints to More B.C. Fresh Water Angling

Similar to other anglers, beginners cited not enough spare time (89%) and poor catch rates (25%) as their most significant constraints to their participation in more freshwater angling. As a group, they were less concerned about fishing spots being too crowded (8%), and the fish being too small (8%), than were their more experienced counterparts. However they were cost sensitive in their feelings. Indeed beginners were much less likely to fish (43%) if the cost of fishing was increased than were other anglers (32%).

3.5.2.5 Catch and Release Patterns

Beginners were less apt (45%) to be practicing catch and release compared to other anglers in the region (73%). For the vast majority of them (71%) this practice was for voluntary reasons. The most frequently cited reasons were the fish caught being too small and conservation concerns.

3.5.2.6 Fishing Style Patterns

Compared to other anglers in the regions, beginners tended to be:

- proportionally less likely (1%) to be a member of an angling organization;
- less apt to be interested in working on enhancement or conservation efforts that benefit fish (7%);
- fishing with lures (69%) as opposed to bait (27%) or fly gear (25%);
- fishing to similar extents from shore (26%) or from a float/boat (79%);
- fishing proportionally less in stocked lakes (39%), non-stocked lakes (27%), and rivers/streams (21%);
- fishing proportionally less (13%) in tidal waters;
- fishing proportionally less (3%) outside of B.C.

3.5.2.7 Social Interaction

Beginners were also different from their more experienced counterparts with respect to their fishing party composition. In particular beginners were less apt to be fishing alone (5%), but rather taking part in their angling experiences with a friend(s) (65%). Both beginners and other anglers in the regions had high propensities (66%) to fish with family members.

3.5.2.8 Fresh Water Fishing Experience Ratings

Overall half (58%) of the beginners rated their freshwater fishing experience as being good or better. However they were more apt (42%) than their more experienced counterparts to rate their overall experience as being fair or poor. These lower levels of satisfaction appear to influence interest in further involvement with fresh water angling. While more than four-fifths (84%) of beginners expressed an interest in angling in the future (1996), they were much more likely to express no interest in doing so (16%) compared to their angling counterparts.

3.5.2.9 Fishing Effort

The average number of fishing trips with overnight stays undertaken by beginners was 1.9. This compares with an average of 3.3 for other anglers. However, with respect to the length of their fishing trips, beginners averaged 4.1 days, as compared with 3.6 days for other anglers.

3.5.2.10 Accommodation Use

About a quarter of all beginner anglers (26%) stayed at a fishing resort or lodge on their fishing trip. This pattern was similar to that of other anglers in the region. The most important reasons for selecting a fishing lodge for beginners were related to the cost of accommodation, quality of fish and travel time to the lodge.

The largest proportion of these beginners (84%) booked their accommodation directly with the resort/lodge. Beginners were more likely to plan their trips at least 6 months in advance (33%). However, beginners were more apt than more experienced anglers to not book in advance at all (14%). They most frequently heard of the resort/lodge by word of mouth (69%), or magazine (17%), but their sources tended to be more dispersed than those used by other anglers in the region.

3.5.2.11 Fishing Destination Selected Factors

The overriding reasons rated as most important in selecting a fishing destination included lack of pollutants in fish, natural beauty and water quality. These factors were rated at the top of the list for beginners and other fishers alike. However, in comparison to other anglers, beginners placed greater importance on the following factors: places to fish from shore, nearness to food and lodging, quality of tourist facilities, nearness to bait and tackle shops, cost, travel/distance times, and information about the area.

3.5.2.12 Fishing Motivations

Anglers motivated to fish by a number of factors. Those heading the list for all anglers were relaxation, nature and getaway related. Beyond these reasons, beginners placed more importance than their non-angling counterparts on catching fish to eat.

3.5.3 Reactions to Licensing System Changes

Beginners expressed varying levels of approval for proposed licensing system changes. While their overall ratings of support mirrored the rankings expressed by other more experienced anglers, there were some clear differences. Overall, beginners were more apt to approve of creating a conservation license (48%) and facilitating license purchases (28%) via ATM than were other anglers.

3.5.4 Reactions to B.C. Government Fresh Water Fishing Programs

Beginner anglers were similar to other anglers in their feelings about provincial wild fish stock conservation practices. About three-fifths of both groups rated government efforts as being good or better in this regard. They also were more apt (79%) to rate the government's efforts to provide recreational fishing opportunities favourably.

3.5.5 Socio-Demographic Traits

When compared to other anglers, beginners tended to be younger (42.1 years), males (but with a larger proportion of females) and more formally educated (34% college educated). Typically they came from multi-member lower-middle income households, with children under 16 years of age. Almost 90% of them were B.C. residents.

3.5.6 Data Limitations

The B.C. component of the Survey of Recreational Fishing in Canada database is rich in information that can be analyzed at the regional level. It contains useful participation, motivation, constraint, as well as attitudinal information. However, it does not focus on more elaborate dimensions of the demand management issue. It must be complemented with additional information if it is to be useful in this regard. It also does not address the issues to participation confronting non-fishing or drop-out markets. It also requires data freshening – something that will occur when the 2000 survey results are released.

4.0 Research Strategy Priorities

Based on the preceding discussions it is apparent that a wide range of information sources associated with various aspects of fishing participation, fishing effort, and fishing related travel in Canada exist. What is also apparent however, is that for the most part they do not provide a great deal of focussed information concerning those factors triggering or constraining freshwater fishing. Nor do these studies provide sufficient fresh detail at the regional level in British Columbia to clearly provide the information required for the development of comprehensive demand management strategies. More information is required to inform the development of realistic and targeted product-market matching strategies that are so essential in today's highly competitive tourism and recreation markets. Based on our assessment of existing data and technical reports on fishing demand management, we suggest that the following information gaps be addressed:

4.1 Market Segmentation Research

Most previous research has reported findings based on data emanating from samplings of current anglers. Typically these studies have focussed primarily on reporting overall participation rates, fishing effort, and fishing patterns. However, little attempt has been made to understand the characteristics of subgroups of this angling population so that programs designed to enhance the fishing experiences and opportunities for such speciality market segments can be addressed. This report identified how such speciality market profiles can be developed. However, more can be done to understand the product and service needs of key sub-groups of anglers. For instance this research suggests that worthwhile and informative market profiles could be developed concerning different segments of the angler population using existing data bases.

Depending on the priorities of the industry and resource managers, these segmentations could be build around themes such as gender, age, skill level, and overall experience satisfaction. In addition, specific market segmentation research could be conducted on important but poorly understood geographic target markets (e.g.. close proximity markets such as Alberta and the Pacific-Northwest), specific types of water bodies fished (e.g. lakes, rivers) fish types caught, attitudes concerning conservation orientations, or levels of fishing effort. Existing databases would be useful for such segmentation initiatives. However, they could be supplemented with additional information gained from more current data bases such as the recently completed Tourism Attitude and Motivation Study (2000), as well as the Survey of Recreational Fishing in Canada (2000). From a marketing management perspective, efforts should be made in these analyses to understand the full value (monetary and otherwise) of these segmentations so that priorities can be placed on addressing their needs. In this regard, future segmentation analyses should be conducted to not only identify the specific socio-demographic, attitudinal, and fishing behaviour of these segments, but also their relative value (e.g., overall expenditures, resident / non-resident mix, fishing resource use levels etc.) in terms of contributing to the achievement of B.C Sport Fishing Strategy and other related goals.

4.2 Longitudinal Motivation and Constraint Research

Greater understanding of the motivations, attitudes, leisure related product preferences and constraints, as well as the affinities of various potential angling market segments is needed in order to develop effective angler recruitment programs. For the most part, available research only provides snapshots of the market as opposed to more complete trends.

As well, available Canadian surveys of fresh water anglers do not focus much of their attention on factors motivating participation or constraining greater participation. Only a few questions in the Survey of Recreational Fishing in Canada address these issues in a general sense. However, answers to these queries fail to provide sufficient insight into what antecedent or experiential conditions motivated people to fish in the first place, why some people continue to participate while others cease to do so. To address this situation, more probing question on this issue should be included in future national, provincial and regional surveys of anglers. Some of this research could be conducted via annual creel surveys.

Ideally such research should be conducted over a series of years so as to provide a sense of how such demand drivers and inhibitors have shifted over time. In the interim, longitudinal analyses of changes in such motivations and constraints (at more general level) should be conducted by comparing the findings of the Survey of Recreational Fishing in Canada for the periods 1990, 1995, and 2000. Such research should be conducted on a population-wide basis, as well as by speciality market segments. Obtaining comparative data from fishing survey databases prepared for contiguous regions in the United States (e.g., Pacific North-west and Alaska), as well as Alberta would provide a useful backdrop and base of comparison for such longitudinal research.

4.3 Demographic Modelling Research

Given the propensity of various population age cohorts to exhibit different levels of angling effort, it is imperative that fresh water fisheries managers gain an appreciation of the impact of forthcoming demographic shifts on future angling effort and related licence purchases. By establishing past and current participation rates and fishing patterns for specific age cohorts and correlating those patterns to expected shifts in B.C.'s population structure, it would be possible to estimate future demand for various types of fishing in the province. This type of modelling would assist managers in establishing various demand management and product-market matching initiatives for fresh water fishing. For instance, such modelling initiatives could develop scenario-testing procedures, which might provide insights into the effects of introducing various product development regimes on the demand for fishing in various regions in the province. In addition, modelling could be conducted to determine the relative impacts (economic and resource utilisation levels) of focussing marketing efforts on attracting various segments of the potential fishing population.

4.4 Market Retention Research

Retaining existing anglers should be the primary objective of most demand management strategies in B.C. Existing research suggests that the most commonly cited reason for constrained angling participation amongst current fishers is a "lack of spare time". While the reality of competing interests for valuable leisure time is common to most anglers, the choice of other pursuits over angling is often related to those other options being more appealing for a variety of reasons. Research concerning such trade-offs does not exist in B.C.

Qualitative research should be undertaken to determine what constraints, barriers and motivational triggers should be addressed in order to encourage greater participation amongst existing anglers. Current market surveys do not capture such information with information that is rich enough to make informed demand management decisions. Focus group research with various existing angler market segments would help to identify those participation drivers that could be explored on a more comprehensive basis in future angling surveys. Results emanating from such research could play an important role in developing future market research and marketing programs which would help retain existing angling markets.

4.5 Re-adoption Program Development and Tracking Research

While many anglers retain their connection with fresh water fishing for most of their lives, still others drop out of fishing and do not return for a variety of reasons. Little is known about angler drop-outs. Current angling survey methods fail to reach them. However, given their past interest in fishing, it seems reasonable to assume that a reasonable proportion of them might be interested in pursuing fishing in the future, if the barriers to their previous involvement were removed.

Before such programs are installed, research must be done to determine those barriers which should be addressed in any re-adoption recruitment initiative. While identifying drop-outs might be challenging, it is possible that databases of drop-out anglers could be assembled from available angling licence registries or fishing organization / club membership directories. These databases could be used as a sampling frame from which to draw potential angling dropouts who could respond to focus group and / or survey questions concerning their levels of affinity for various types of angling opportunities. These surveys could also focus on identifying those triggers, which would encourage future involvement by various dropout groups (e.g. women, baby boomers, other lifestyle segments etc.). Such information could provide the basis for future programming designed to encourage readoption by past anglers.

Similarly if the B.C. Fresh Water Sport Fishing Strategy implements programs designed to encourage drop-outs to return to freshwater fishing, it would be important to track the effectiveness of such initiatives. In this regard, efforts should be made to ensure that such recruitment programs include a tracking system that can solicit participant responses to the quality of the fishing elements experienced and the influence of the initiative on their future angling intentions. The tracking could be done via focus group sessions with participants, via e-mail, mail, or telephone surveys with participants after they had completed their participation in the program.

4.6 New Entrant Recruitment Program Development and Tracking Research

A significant portion of the B.C. and Canadian population do not fish. Potential market groups of underrepresented anglers include women, youth, and some ethnic groups. A wide variety of recruitment program options are available for encouraging new entrants into the sport. Research should be done to determine the effectiveness of these programs in other geographic areas, and to establish the feasibility and appropriateness of their implementation for various high affinity but underrepresented target markets in B.C.

If the B.C. Fresh Water Sport Fishing Strategy introduces programs for encouraging new entrants to experience fresh water angling in the province, it will be important to conduct research into the effectiveness of these programs. As with re-adopters, efforts should be made to ensure that these recruitment programs include a tracking system that can solicit participant responses to the quality of the fishing elements experienced and the influence of the initiative on their future angling intentions. The tracking could be done via focus group sessions with participants, via e-mail, mail, or telephone surveys with participants after they have completed their participation in such program. As well, on-site surveys could be conducted in conjunction with on-going annual creel surveys. However, such surveys could be broader in focus and capture the perceptions and attitudes of not only beginners but also more seasoned participants. Questioning in such surveys should focus on determining not only their level of involvement in fishing, but also their responses to what motivated them to go fishing, and what they felt were the strengths and weaknesses of their angling experience from fish resource, social and physical setting, information, and price / value perspectives.

4.7 Product – Market Match Analysis

The current portfolio of fresh water fishing opportunities in B.C. has been developed with a strong focus on the harvesting and consumption of quality fish. While awareness of the relative abundance and quality of the fish resource is central to the destination selection decision of most anglers it is not the only priority.

A common theme emanating from available research suggests that most anglers place ever growing importance on using fishing as a vehicle for facilitating relaxation, escape from daily routine, enjoying wildlife and nature, and socialising in the great outdoors with friends and family. People are "going fishing but not necessarily going catching". Appealing to these motivations in product development and marketing messages can be used with reasonable security and effectiveness in most marketing communication programs. However, the extent to which the preferred experiential components of fishing are effectively communicated in the marketplace is unknown.

Qualitative research should be conducted to determine not only the extent to which the current portfolio of angling products match with emerging market trends, but also the reactions of specific angling markets to these offerings. Such research could be conducted via on-site surveys of anglers, off-site focus groups with anglers, and mail surveys to distinct high affinity market groups currently not taking part in angling activities. It should focus on more than issues related to the quality of the fish resource and encompass reactions to a variety of trade-offs related to various combinations of resource setting (e.g. front-country v.s wilderness backcountry), facility development, angling experience (e.g., extent of crowding), and distance to fishing experience (e.g. effect of travel time on fishing experience expectations) components. Such analyses could help resource managers and resort operators to understand the sensitive of anglers to various levels and types of development on B.C.'s interior fresh water lakes and streams.

4.8 Industry Support Research

While most research concerning fresh water sport fishing has focussed on issues related to either managing the resource or the angler, little has been done to more fully understand the role of industry based fishing resorts, equipment suppliers and guiding businesses in delivering the critical products and services required by anglers. Not since the late 1980's has any concerted effort been made in B.C. to identify or address the challenges confronting this key fresh water angling group's needs (DPA Group and Maclaren Plansearch 1988, The Tourism Research Group, DPA Group and Mike Hurst & Associates 1989). Over the past decade, the needs of these industry stakeholders for current and timely information concerning emerging markets, expected facility standards, preferred products and services has grown in importance. At the same time the "on the ground" knowledge and experiences of these industry stakeholders in addressing emerging trends has not be compiled and communicated to those stakeholders interested in the future management of fresh water angling to the extent that it might be done. Research should be conducted to identify those best practices in B.C. and elsewhere that leading fresh water angling business are using to attract, hold and retain high value angler markets.

A research program of this type could involve:

- an on-line internet analysis of existing products, services, programs and marketing approaches used in fresh water angling resorts and destinations;
- on-site consumer surveys and focus group interviews with angler concerning their responses to current and proposed angling products at consumer sport fishing shows; and
- structured case study interviews with leading resort operators who have developed effective approaches to dealing with current market and product delivery challenges. Case studies of this type could be complemented with research concerning those communication strategies (e.g., Internet) which will ensure the timely distribution of such competitive intelligence information to fresh water fishing resort operators and guides.

4.9 Estimated Research Costs

The following section outlines estimated costs for conducting various components of the research agenda described in the preceding sections. These estimates are based on preferred approaches to undertaking these activities. However, depending on the availability of information sources, the appropriateness of various collection methods to on-the ground situations, access to Ministry support, and the timing of activities, the estimates may vary significantly. They are offered as ball-park estimates for budgeting purposes**.**

Research Tasks	**Estimated Costs ($)**
Market Segmentation Research (2000 data)	20,000
Longitudinal Motivation and Constraint Research	15,000
Demographic Modelling Research	30,000
Market Retention Research	30,000
Re-adoption Program Development and Tracking Research	25,000
New Entrant Recruitment Program Development and Tracking Research	25,000
Product – Market Match Analysis	30,000
Industry Support Research	30,000

Appendix 1

Market Profile Information

Table 1.1 Summary Of Potential Long Haul Pleasure Angler Travel Markets

Market Indicator	Japan	U.K.	Germany
Approximate Adult Population (18 Years Or Over)	94,794,000 [1]	46,007,000 [2]	65,498,000 [3]
Incidence Of Long-Haul Pleasure Travelers	26.0% [1]	29.4% [2]	27.6% [3]
Potential Adult Long-Haul Pleasure Travelers	24,779,000 [1]	13,526,000 [2]	18,077,000 [3]
Potential Anglers In The Next 5 Years	19.6%	8.9%	16.7%
Estimated Angler Volume	4,856,684	1,203,814	3,018,859
Incidence of Anglers (Interest) In Canada	67.1%	61.7%	30.4%
Estimated Anglers (Interest) Volume In Canada	3,258,835	742,753	917,733
Incidence of Anglers (Interest & Likelihood) Visiting Canada - Next Five Years	62.3%	72.1%	84.8%
Estimated Anglers (Interest & Likelihood) Volume To Canada - Next Five Years	2,030,254	535,525	778,238

[1] Pleasure Travel Markets To North America. Japan. Final Report. 1995. Page iii.

[2] Pleasure Travel Markets To North America. United Kingdom. Travel Trade Report. 1996. Page 85.

[3] Pleasure Travel Markets To North America. Germany. Travel Trade Report. 1996. Page 82.

Table 1.2: Potential Angler Travel Market Socio-Demographic Characteristics (Most Frequent Responses)

	Market Origin			
Characteristic	**Japan**	**U.K.**	**Germany**	**Canada**
Friends/Relatives Living In Canada	No (89.2%)	No (64.6%)	No (92.8%)	n/a
Friends/Relatives Living In The U.S.	No (76.6%)	No (53.7%)	No (77.7%)	n/a
Household Members < 18	None (57.2%)	None (62.0%)	None (78.0%)	None (52.7%)
Household Members 18+	Two (38.3%)	Two (47.5%)	Two (59.2%)	Two (54.3%)
Gender	Male (79.1%)	Male (73.3%)	Male (63.7%)	Female (69.4%)
Marital Status	Married (67.9%)	Married (56.6%)	Married (49.7%)	Married/living with someone (60.0%)
Age Grouping	25 - 34 years (28.5%)	35 - 44 years (35.3%)	45 - 54 years (30.4%)	40 - 49 years (16.4%)
Education Level	College/university graduate (35.1%)	CSE/Standard Grades/O Grades/ O Levels/ Lowers (33.3%)	Middle school (35.7%)	Graduated from high school (27.0%)
Occupation	White collar worker (18.9%)	Blue collar worker (24.6%)	White collar worker (39.6%)	Professional (16.5%)
Domestic Circumstances	Live with my spouse (62.5%)	Family with children living at home (38.9%)	Single/widowed or divorced - living alone or sharing (27.7%)	n/a
Household Income Contributors	One person (45.4%)	Two (46.2%)	Two (50.7%)	Two (52.0%)
Average Annual Income	7.0 - 9.9 million Yen (28.8%)	£25,001-30,000 (23.4%)	DM 4,501 or over (41.6%)	$20,001 to $30,000 (19.7%)
English Proficiency				
Read	17.7%	n/a	67.3%	n/a
Write	11.1%	n/a	59.1%	n/a
Speak	10.6%	n/a	68.2%	n/a
French Proficiency				
Read	2.5%	21.9%	13.5%	n/a
Write	1.4%	16.4%	10.0%	n/a
Speak	1.8%	25.4%	13.2%	n/a
Credit Card	Visa (74.6%)	Visa (91.5%)	Eurocard (74.5%)	n/a

Table 1.3: Potential Angler Travel Market Travel Philosophies (Top 10 Travel Philosophies By Rank)

Japan	U.K.	Germany	
➢ Inexpensive travel to the destination country is important	• Getting value for holiday money is very important to me	o Getting value for holiday money is very important to me	• There is a lot to see and do in Canada
➢ I like to have all my travel arrangements made before I start	• I like to be flexible on my long-haul holiday going where and when it suits me	o I like to be flexible on my long-haul holiday going where and when it suits me	• Getting value for my holiday money is very important to me
➢ Getting value for holiday money is very important to me	• I enjoy making my own arrangements for my holidays	o When traveling long-haul I usually take holidays of 14 days or less	• I travel for leisure, recreation or holiday whenever I can afford to
➢ I like to be flexible on my overseas holiday	• Inexpensive travel to the destination country is important to me	o I like to go to a different place on each new holiday trip	• I often take holidays during the summer
➢ I like to go to a different place on each new holiday trip	• For me, money spent on long-haul travel is well spent	o For me, money spent on long-haul travel is well spent	• I enjoy making my own arrangements for my holidays
➢ When traveling overseas I usually take holidays of 10 days or less	• I like to go to a different place on each new holiday trip	o I like to have all my travel arrangements made before I start out on holiday	• For me, money spent on travel is very well spent
➢ For me, money spent on overseas travel is well spent	• I like to have all my travel arrangements made before I start out on holiday	o Inexpensive travel to the destination country is important to me	• I generally take frequent short trips of a few days each year
➢ I take holidays overseas whenever I have the means	• I prefer to take extended holidays in warm destinations to escape winter	o I enjoy making my own arrangements for my holidays	• I take lots of short trips to a lake or cottage
➢ I enjoy making my own arrangements for my holidays	• It is important that the people I encounter on a holiday trip speak my language	o Once I get to my destination, I like to stay put	• I generally take one or two trips of a week or more each year
➢ It is important that the people I encounter speak my language	• I don't consider long-haul trips unless I have at least 4 weeks	o I prefer to take extended holidays in warm destinations to escape winter	• I prefer taking a holiday in Canada instead of going to the U.S.

Table 1.4: Potential Angler Travel Market General Travel Motivations (Top 10 Travel Motivations By Rank)

Japan	U.K.	Germany	Canada
➢ Outstanding scenery	• Nice weather	o Personal safety, even when traveling alone	• Standards of hygiene and cleanliness
➢ Environmental quality of air, water and soil	• Variety of things to see and do	o Environmental quality of area	• Personal safety, even when traveling alone
➢ Nice weather	• Personal safety, even when traveling alone	o Destination that provides value for my holiday money	• Nice weather
➢ Just relaxing	• Standards of hygiene and cleanliness	o Outstanding scenery	• Destination that provides value for my holiday money
➢ Variety of things to see and do	• Inexpensive travel within the country	o Nice weather	• Environmental quality of air, water and soil
➢ Personal safety, even when traveling alone	• Inexpensive travel to the country	o Opportunity to increase one's knowledge about places, people and things	• Having fun, being entertained
➢ Standards of hygiene and cleanliness	• Destination that provides value for my holiday money	o Standards of hygiene and cleanliness	• Variety of things to see and do
➢ Comprehensive pre-trip/in-country tourist info. availability	• Opportunity to increase one's knowledge about places, people and things	o Chances to see wildlife, birds and flowers not normally seen	• Outstanding scenery
➢ Getting a change from a busy job	• Interesting and friendly local people	o Interesting and friendly local people	• Interesting and friendly local people
➢ Good public transportation (e.g. airlines, local transit systems)	• Ease of exchanging currency/ Lakes, rivers and mountainous areas	o Comprehensive pre-trip/in-country tourist info. availability	• Easy access to good health care facilities

Table 1.5: Potential Angler Travel Market Perceptions Of Canadian Tourism Product/Activity Attributes (Top 10 Attributes By Rank)

Japan	U.K.	Germany	Canada*
➢ Outstanding scenery	• Outstanding scenery	o Lakes, rivers and mountainous areas	• Casinos or other gambling
➢ Mountainous areas	• Lakes, rivers and mountainous areas	o Outstanding scenery	• Big modern cities
➢ Lakes and rivers	• National or provincial parks and forests	o Wilderness adventures (e.g., a 4 day canoe trip)	• Cruises of one or more nights
➢ Environmental quality of air, water, and soil	• Visits to appreciate natural ecological sites like forests, wetlands, or animal reserves	o National, state or provincial parks and forests	• Shopping
➢ National parks and forests	• Environmental quality of area	o Visits to appreciate natural ecological sites like forests, wetlands, or animal reserves	• Theme parks and amusement parks
➢ Wilderness & undisturbed nature	• Standards of hygiene and cleanliness	o Opportunities to experience the country's unique identity	• Availability of package trips and all inclusive holidays
➢ Visits to appreciate natural ecological sites	• Wilderness adventures (e.g., a 4 day canoe trip)	o Variety of things to see and do	• Nightlife and entertainment (bars, clubs, dancing)
➢ Wilderness adventures	• Chances to see wildlife, birds and flowers not normally seen	o Chances to see wildlife, birds and flowers not normally seen	• Beaches for sunbathing and swimming
➢ Alpine skiing (downhill)	• Hunting/fishing	o Opportunity to do the things you enjoy doing on a holiday	• Nice weather
➢ Chance to see wildlife, birds & flowers not normally seen	• Outdoor activities such as hiking, climbing	o Opportunity to increase one's knowledge about places, people and things	• Tennis

* the U.S. is perceived to be much better than Canada in these product activity/attributes.

Table 1.6: Potential Angler Travel Market - Most Recent Trip Characteristics (Most Frequent Responses)

	Market Origin			
Characteristic	**Japan**	**U.K.**	**Germany**	**Canada**
Main trip type	Beach/resort trip (32.4%)	n/a	n/a	n/a
Main purpose of trip	For pleasure or a vacation (50.5%)	For pleasure or a vacation (46.4%)	For pleasure or a vacation (64.6%)	For pleasure or a vacation (47.1%)
Total nights away from home	4 - 7 nights (47.5%)	15 - 28 nights (49.1%)	14 nights or less (40.1%)	5 to 7 nights (31.9%)
Month in which trip started	August (16.3%)	n/a	n/a	July (39.4%)
Year in which trip started	1994 (55.0%)	n/a	n/a	n/a
Travel companions at start of trip	Wife/husband/boyfriend/girlfriend (33.8%)	Wife/husband/boyfriend/girlfriend (67.5%)	Wife/husband/boyfriend/girlfriend (50.6%)	n/a
Time before actually decided to go on trip	2 months (22.1%)	6 - 11 months (39.1%)	6 - 11 months (21.8%)	One week or less (27.4%)
Time before actually started to book trip	1 month (36.2%)	6 - 11 months (34.9%)	One month (24.6%)	n/a
Trip planning information source	Picked up brochures/pamphlets (58.8%)	Talked to a travel agent (57.6%)	Talked to a travel agent (66.8%)	Talked to friends/family members (78.3%)
Package usage	Yes (69.2%)	No (69.6%)	No (51.4%)	No (85.3%)
Accommodation usage	Mid price hotel (45.9%)	Home of friends or relatives (41.5%)	Mid price hotel (46.8%)	Campground or caravan parks (39.4%)
Activity participation (Top 3)	Shopping (89.1%); Informal/casual dining with table service (79.0%); Sightseeing in cities (76.6%)	Taking pictures or filming (92.2%); Shopping (87.3%); Sampling local foods (86.2%)	Shopping (87.1%); Sampling local foods (85.9%); Taking pictures or filming (82.2%)	Dining in fast food restaurants or cafeterias (56.4%); Sunbathing or other beach activities (54.8%); Taking pictures or filming (49.3%)

Table 1.7: Most Frequent Socio-Demographic Characteristics of Resident v/s Non-resident Anglers

Characteristic	Residents	Non-Residents
Gender	Male (59.9%)	Female (50.1%)
Age	35-44 (26.5%)	35-44 (27.5%)
Highest level of education	Completed high school (34.4%)	Completed high school (28.0%)
Employment status	Employed full time (42.5%)	Employed full time (48.9%)
Total annual household income	\$40,000-\$60,000 (30.2%)	\$60,000 to under \$80,000 (24.0%)

Table 1.8: Resident v/s Non-resident Travel Philosophies Of Anglers

Residents	Non-Residents
➢ I think money used for vacation travel is well spent	• I think money used for vacation travel is well spent.
➢ I do not have to spend a lot of money to enjoy a vacation	• I enjoy making my own arrangements for my trips, rather than using a travel agent.
➢ I enjoy making my own arrangements for my trips, rather than using a travel agent	• I do not have to spend a lot of money to enjoy a vacation.
➢ I would rather take a number of short vacations instead of one long vacation	• I often choose vacation places that I have heard about from friends who have been there before.
➢ I often choose vacation places that I have heard about from friends and relatives	• In any one year I would rather take a number of short vacations instead of one long vacation.

Table 1.9: Resident v/s Non-resident Destination Selection Factors Of Anglers

Residents	Non-Residents
➢ Resting and relaxing	• Participating in outdoor activities
➢ Visiting a place that takes good care of its environment	• Visiting scenic areas
➢ Participating in outdoor activities	• Doing daring and adventuresome activities
➢ Being physically active	• Visiting a place that takes good care of its environment
➢ Viewing wildlife and birds	• Going to a place that is good for the family
➢ Visiting wilderness and undisturbed areas	• Travelling to places where I feel safe and secure
➢ Experiencing and seeing a mountain area	• Getting value for the cost of the trip
➢ Getting value for the cost of the trip	• Visiting historic sites or areas
➢ Going to a place that is good for the family	• Viewing wildlife and birds
➢ Learning new things, increasing my knowledge	• Having a variety of things to see and do

Table 1.10: Resident v/s Non–resident Trip Activities Pursued By Anglers

Residents	Non-Residents
➢ Go sightseeing (67.7%)	• Casual walking (86.2%)
➢ Do wildlife viewing (63.3%)	• Sightseeing in the country (outside city/town) (85.5%)
➢ Do photography (59.0%)	• Dining out in restaurants (77.2%)
➢ Visit friends and relatives (55.2%)	• Wildlife viewing/bird watching (75.4%)
➢ Dine out in restaurants (54.2%)	• Sightseeing in city/town (73.3%)
➢ Go boating (51.3%)	• Visiting National/Provincial park (72.8%)
➢ Go hiking or backpacking (49.6%)	• Shopping (69.2%)
➢ Visit national and provincial parks (39.2%)	• Swimming (68.4%)
➢ Go shopping (38.4%)	• Exploring backcountry wilderness (66.5%)
➢ Visit historic sites (28.0%)	• Photography (63.5%)

Appendix 2

Beginner Angler Market Profile Tables
National Survey of Recreational Fishing, 1995

1995 SURVEY OF RECREATIONAL FISHING IN CANADA
Profile By Skill: Beginner vs. Other (Average/Experienced/Expert)
[TN=Thompson-Nicola; CB=Cariboo; OK=Okanagan; 3-Regions=Any of the 3 Regions]

LICENSING INFORMATION

1. Which of the following basic and supplementary licences did you hold to fish in B.C. FRESH WATER in 1995? (For 8-day and 1-day licenses, please indicate how many you purchased - not included in this analysis). - ** REPORTED BELOW ARE PROPORTIONS **

Basic Licences	**TN Beginner**	**TN Other**	**CB Beginner**	**CB Other**	**OK Beginner**	**OK Other**	**3 Regions Beginner**	**3 Regions Other**
Annual (16-64 years)	60.6%	75.7%	62.0%	69.2%	60.8%	76.0%	60.7%	72.4%
Senior	11.1%	10.3%	9.9%	13.3%	12.0%	11.8%	9.7%	11.2%
8 -day	15.3%	13.8%	18.4%	17.2%	14.0%	4.8%	16.8%	14.0%
1-day	16.2%	5.2%	12.9%	4.4%	20.8%	10.3%	16.5%	6.8%
Disabled	0.0%	0.9%	0.8%	0.8%	0.0%	0.2%	0.3%	0.7%
n	10137	81256	9148	51385	6443	37791	24082	148671

Supplementary Licences	**TN Beginner**	**TN Other**	**CB Beginner**	**CB Other**	**OK Beginner**	**OK Other**	**3 Regions Beginner**	**3 Regions Other**
Steelhead	0.7%	12.4%	0.7%	9.2%	4.1%	5.8%	1.7%	9.1%
Kootenay Lake Rainbow Trout	4.6%	1.9%	2.2%	0.7%	0.0%	1.8%	2.8%	1.7%
Shuswap Lake Char	4.5%	2.2%	0.0%	0.5%	1.8%	2.1%	2.4%	1.7%
Shuswap Lake Rainbow Trout	6.4%	4.7%	0.5%	0.6%	0.0%	2.6%	2.9%	3.1%
Non-tidal Salmon	2.9%	14.0%	3.3%	12.6%	1.8%	11.0%	3.0%	12.2%
Classified Waters	0.0%	0.7%	1.2%	2.1%	0.0%	0.3%	0.5%	1.1%
n	10137	81257	9149	51385	6443	37792	24082	148671

2. Did you purchase your licences for fishing in B.C. FRESH WATER:

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
No answer	0.8%	2.4%	1.6%	3.9%	8.1%	0.9%	3.1%	2.8%
near your home	60.3%	71.9%	54.2%	74.3%	52.6%	79.1%	54.3%	72.7%
en route to your fishing site(s)	28.7%	13.0%	32.3%	11.5%	30.6%	9.4%	32.3%	12.5%
both	10.3%	12.7%	11.9%	10.4%	8.8%	10.6%	10.3%	12.0%
n	8944	68521	8288	38995	5846	33131	21583	120508

3. How many days in total did you spend fishing for recreation in FRESH WATER in British Columbia in 1995? (a "day" is all or any part of a day fished)
- ** REPORTED BELOW ARE PROPORTIONS **

Month - spent at least one day fishing	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
January	5.3%	12.3%	2.3%	11.4%	0.0%	12.4%	2.8%	11.4%
February	6.9%	10.7%	2.3%	13.3%	0.0%	15.4%	3.5%	11.4%
March	1.4%	14.9%	9.5%	11.8%	0.0%	12.0%	3.9%	12.4%
April	5.4%	21.3%	3.1%	14.5%	8.9%	24.9%	5.8%	18.0%
May	29.3%	51.2%	24.6%	43.3%	23.5%	50.6%	25.1%	45.5%
June	29.9%	55.1%	34.7%	51.2%	38.4%	63.9%	32.6%	53.5%
July	47.2%	58.1%	43.2%	53.9%	69.6%	66.8%	48.7%	56.6%
August	43.9%	54.6%	55.0%	49.5%	46.9%	62.8%	47.0%	53.3%
September	33.4%	52.7%	28.6%	45.6%	44.5%	58.0%	35.0%	48.4%
October	6.6%	25.5%	14.4%	25.5%	12.3%	28.4%	11.5%	24.9%
November	3.6%	11.3%	3.7%	7.2%	0.0%	9.0%	2.9%	9.1%
December	1.2%	10.9%	1.5%	8.8%	1.2%	11.8%	1.4%	10.2%
n	10138	81257	9148	51385	6443	37792	24082	148671

4. How many of the days spent fishing in B.C. FRESH WATER in 1995 were:
- ** REPORTED BELOW ARE PROPORTIONS **

Category	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Through the ice	9.5%	11.1%	4.6%	15.2%	1.2%	14.7%	5.8%	12.9%
In rivers/streams for salmon and sea run trout	10.4%	25.8%	13.1%	23.9%	24.0%	22.9%	15.8%	23.4%
In provincial parks	23.9%	22.1%	16.4%	18.8%	34.2%	30.0%	22.3%	21.9%
In national parks	1.2%	3.2%	4.4%	2.0%	1.8%	2.5%	1.7%	2.5%
In forest recreation sites	54.8%	51.9%	46.0%	49.8%	36.0%	55.0%	44.8%	48.8%
n	10137	81256	9099	51385	6443	37791	24033	148671

5. Did you want to spend more time fishing for recreation in B.C. freshwater in 1995?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Yes	84.8%	89.7%	72.4%	88.5%	79.7%	90.3%	78.0%	88.9%
No	15.2%	10.3%	27.6%	11.5%	20.3%	9.7%	22.0%	11.1%
n	10138	81257	9149	51385	6443	37791	24081	148671

6. Why did you not spend more time fishing for recreation in B.C. freshwater in 1995? (check as many as apply)

Reason	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Not enough spare time	89.4%	85.1%	90.5%	84.7%	82.7%	81.5%	88.6%	84.2%
Poor catch rate	21.0%	23.0%	20.4%	18.3%	35.9%	30.6%	24.8%	23.1%
Fishing spots too crowded	5.6%	18.8%	9.6%	13.9%	7.4%	15.4%	7.9%	16.1%
Restrictive regulations	10.1%	10.4%	7.6%	11.4%	12.0%	9.7%	10.0%	11.0%
Fish too small	11.2%	13.9%	1.1%	7.0%	12.4%	20.6%	8.4%	12.5%
Other	13.5%	10.1%	6.2%	8.0%	22.8%	10.6%	11.6%	9.8%
n	8594	72899	6626	45459	5138	34137	18886	132197

7a. Did you practise catch and release fishing in British Columbia FRESH WATER in 1995?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Yes	49.7%	77.8%	33.0%	68.1%	59.9%	77.8%	44.7%	73.3%
No	50.3%	22.2%	67.0%	31.9%	40.1%	22.2%	55.3%	26.7%
n	10138	81166	8973	51013	6442	37684	23906	148101

7b. If yes, was it because it was:

Reason	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Mandatory	13.4%	3.1%	9.1%	2.9%	6.8%	1.5%	8.8%	3.1%
Voluntary	67.9%	68.7%	65.8%	71.7%	72.5%	75.9%	71.4%	70.7%
Both	18.7%	28.2%	25.1%	25.4%	20.6%	22.6%	19.8%	26.2%
No response	5035	62940	2899	34422	3860	29240	10626	107931
n	13.4%	3.1%	9.1%	2.9%	6.8%	1.5%	8.8%	3.1%

7c. If you released fish voluntarily, was it because (check all that apply):

Reason	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Fish were too small	62.0%	61.2%	77.8%	57.8%	80.0%	67.1%	70.1%	61.0%
Fish were too large	2.3%	4.6%	2.2%	6.3%	0.0%	3.6%	1.7%	4.6%
Unwanted species of fish	5.6%	15.0%	0.0%	16.3%	7.5%	14.5%	4.6%	15.1%
Already had your quota	7.4%	11.4%	15.4%	18.0%	2.8%	11.9%	6.8%	12.9%
Conservation concerns	35.6%	62.1%	37.8%	55.7%	33.3%	52.7%	36.1%	56.9%
Not interested in keeping fish	27.7%	26.7%	17.4%	28.2%	26.4%	29.9%	25.0%	27.4%
n	4361	61207	2695	33745	3596	28898	9747	105260

8. As an angler, do you consider yourself to be:

Category	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
An expert	0.0%	4.5%	0.0%	4.6%	0.0%	4.3%	0.0%	4.3%
Experienced	0.0%	42.1%	0.0%	37.3%	0.0%	41.6%	0.0%	39.5%
Average	0.0%	53.4%	0.0%	58.2%	0.0%	54.1%	0.0%	56.2%
A beginner	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%
n	10137	81257	9149	51384	6443	37791	24082	148672

9. Did you fish for recreation in B.C. FRESH WATER in 1995:

a. With fly gear?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	17.1%	22.5%	4.7%	19.3%	13.2%	21.0%	12.3%	20.1%
Usually	10.6%	34.9%	13.4%	29.1%	14.6%	28.9%	12.2%	29.7%
Not usually	21.5%	16.5%	17.7%	17.9%	11.3%	19.3%	17.8%	18.6%
Never	50.8%	26.1%	64.2%	33.6%	60.9%	30.8%	57.7%	31.6%
n	9736	80793	8582	50368	6443	37045	23114	146558

b. With bait?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	5.8%	5.4%	14.3%	7.8%	8.4%	7.5%	9.1%	7.1%
Usually	30.5%	23.3%	28.5%	25.8%	25.0%	22.1%	27.6%	24.8%
Not usually	11.3%	19.1%	9.3%	17.5%	19.8%	26.5%	12.3%	19.4%
Never	52.4%	52.3%	48.0%	48.9%	46.8%	43.8%	50.9%	48.8%
n	9580	80711	8583	50298	6444	37045	22957	146406

c. With lures?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	19.3%	14.9%	25.6%	24.4%	30.3%	17.1%	25.6%	19.4%
Usually	52.7%	38.9%	41.9%	38.9%	34.4%	38.3%	43.5%	38.9%
Not usually	8.6%	20.2%	4.6%	16.4%	11.2%	20.4%	7.6%	18.1%
Never	19.4%	26.0%	28.0%	20.4%	24.0%	24.3%	23.3%	23.6%
n	9579	80711	8582	50297	6442	37045	22958	146406

d. With set lines?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	0.0%	0.8%	1.4%	0.2%	0.0%	0.5%	0.5%	0.6%
Usually	5.5%	3.0%	1.4%	1.5%	3.6%	2.0%	2.8%	2.4%
Not usually	5.7%	3.4%	0.9%	2.5%	7.6%	4.1%	4.8%	3.4%
Never	88.8%	92.8%	96.3%	95.8%	88.8%	93.3%	91.9%	93.6%
n	9316	80676	8320	50237	6442	37045	22695	146310

e. Alone?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	4.1%	3.9%	0.0%	3.8%	0.0%	2.6%	1.8%	3.5%
Usually	6.6%	11.2%	2.1%	12.6%	5.0%	13.0%	3.6%	11.9%
Not usually	13.0%	28.4%	10.5%	22.8%	17.9%	30.2%	13.5%	26.0%
Never	76.3%	56.4%	87.3%	60.8%	77.2%	54.1%	81.1%	58.6%
n	9772	79263	8689	48756	5915	36753	22802	143417

f. With friends?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	33.9%	22.1%	32.9%	25.0%	30.9%	20.3%	33.6%	22.8%
Usually	31.6%	39.7%	27.9%	37.5%	39.7%	42.7%	31.3%	39.0%
Not usually	7.6%	10.5%	5.6%	11.6%	5.0%	13.2%	6.4%	10.9%
Never	26.8%	27.6%	33.7%	25.8%	24.5%	23.8%	28.7%	27.3%
n	9772	79264	8688	48757	5914	36753	22801	143416

g. With family?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	37.3%	26.3%	44.2%	27.5%	27.3%	22.4%	38.1%	26.7%
Usually	25.6%	41.2%	22.3%	40.4%	45.3%	43.7%	27.4%	40.6%
Not usually	4.3%	12.3%	2.2%	8.8%	5.0%	12.7%	3.7%	11.0%
Never	32.8%	20.1%	31.3%	23.3%	22.5%	21.3%	30.8%	21.7%
n	9772	79263	8688	48696	5914	36753	22801	143356

h. From shore?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	8.8%	7.3%	9.9%	8.3%	6.9%	9.5%	9.0%	8.4%
Usually	11.7%	19.3%	13.1%	18.0%	32.1%	24.4%	16.8%	20.4%
Not usually	27.3%	27.7%	13.9%	27.8%	19.7%	27.3%	19.5%	26.3%
Never	52.3%	45.7%	63.0%	46.0%	41.3%	38.8%	54.7%	44.9%
n	9645	77757	8711	46681	5798	36222	22578	139702

i. With hip waders?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	0.7%	4.6%	0.0%	4.0%	1.6%	2.0%	0.7%	3.7%
Usually	2.9%	11.3%	2.1%	10.8%	2.0%	11.2%	2.6%	10.3%
Not usually	3.5%	12.1%	2.3%	11.9%	7.1%	9.1%	4.2%	11.0%
Never	92.9%	72.0%	95.6%	73.2%	89.3%	77.7%	92.5%	75.1%
n	9646	77666	8710	46621	5798	36222	22578	139552

j. With float/boat?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	39.9%	38.3%	44.6%	42.4%	28.4%	34.8%	40.7%	38.6%
Usually	40.8%	40.7%	33.4%	39.9%	49.3%	37.9%	37.9%	38.7%
Not usually	5.4%	6.9%	5.7%	5.6%	6.0%	10.4%	5.7%	7.4%
Never	13.9%	14.1%	16.3%	12.1%	16.3%	16.9%	15.7%	15.3%
n	9645	77401	8711	46622	5798	36222	22577	139287

k. In stocked lakes?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	23.2%	17.3%	9.0%	11.3%	19.9%	12.8%	17.9%	15.1%
Usually	29.8%	39.1%	13.9%	30.7%	26.6%	44.3%	21.0%	34.9%
Not usually	5.9%	13.0%	2.4%	16.6%	11.7%	11.0%	6.1%	13.4%
Never	17.3%	17.2%	34.7%	27.2%	13.6%	17.0%	22.9%	22.3%
Don't know	23.7%	13.5%	40.0%	14.2%	28.2%	14.8%	32.1%	14.3%
n	9123	77638	7874	46551	5564	34750	21218	137781

l. In non-stocked lakes?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	7.8%	9.1%	22.6%	16.0%	5.7%	8.0%	12.3%	11.5%
Usually	18.5%	25.8%	9.3%	32.7%	15.2%	28.3%	14.6%	27.9%
Not usually	9.2%	19.7%	10.0%	12.9%	17.0%	19.7%	8.6%	16.8%
Never	37.6%	31.5%	26.6%	23.8%	36.7%	26.1%	34.9%	28.8%
Don't know	26.9%	13.9%	31.4%	14.7%	25.4%	18.0%	29.6%	15.0%
N	9033	76861	7671	46685	5357	34786	20718	137265

m. In rivers/streams?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Always	8.3%	6.7%	7.0%	9.1%	0.0%	4.6%	5.8%	7.3%
Usually	9.3%	23.7%	11.1%	18.7%	28.3%	26.7%	15.2%	22.5%
Not usually	9.7%	21.0%	6.5%	21.6%	14.3%	25.7%	10.1%	21.2%
Never	72.6%	48.6%	75.4%	50.7%	57.4%	42.9%	68.9%	49.0%
n	8786	76437	7670	46340	5448	34382	20561	136300

10. How would you rate your recreational fishing experience British Columbia FRESH WATER in 1995?

Rating	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Excellent	12.2%	8.2%	5.4%	8.0%	11.7%	4.8%	9.8%	7.7%
Very Good	19.5%	16.4%	19.2%	21.7%	7.7%	13.0%	17.3%	17.5%
Good	26.6%	35.9%	35.7%	35.5%	37.0%	42.1%	30.9%	36.6%
Fair	26.1%	26.2%	24.0%	24.3%	28.2%	27.5%	26.6%	25.8%
Poor	15.7%	13.2%	15.7%	10.5%	15.4%	12.6%	15.4%	12.4%
n	10137	80834	9077	51235	6443	37450	24011	147872

11. If you fished in 1990, how would you describe your recreational fishing experience in 1995 compared to 1990?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Did not fish in 1990	61.6%	26.8%	64.3%	32.0%	70.9%	31.3%	66.6%	30.4%
Much better	3.3%	4.8%	0.0%	4.3%	3.6%	4.8%	1.9%	4.7%
Somewhat better	0.7%	8.2%	5.9%	8.5%	0.0%	9.1%	2.2%	8.4%
About the same	26.3%	28.9%	25.3%	30.4%	19.5%	25.7%	22.5%	28.8%
Somewhat worse	2.0%	19.4%	2.2%	16.9%	0.0%	19.2%	1.7%	18.1%
Much worse	6.1%	11.9%	2.4%	7.9%	5.9%	9.9%	5.1%	9.7%
n	9635	79946	8669	50075	6442	36811	23099	145068

12. Do you intend to fish for recreation in B.C. FRESH WATER in 1996?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Yes	88.7%	91.4%	76.5%	90.8%	91.9%	94.9%	84.0%	91.3%
No	11.3%	8.6%	23.5%	9.2%	8.1%	5.1%	16.0%	8.7%
n	9512	78958	9099	50400	6251	36859	23216	144824

13. How many fishing trips did you take in British Columbia in 1995? (a trip is defined as having an overnight stay)

	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	TN Beginner
Average #. Of Trips	1.99	3.59	1.96	3.27	1.79	3.79	1.88	3.28

14. Average length of fishing trips in days.

	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	TN Beginner
Average Length	3.42	3.6	4.92	3.92	4.92	3.56	4.06	3.64

15. Please indicate in which of the following years you fished for recreation in B.C. FRESH WATER:

Year	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
1994	46.6%	71.4%	38.7%	67.3%	47.6%	68.1%	43.7%	67.7%
1993	26.0%	68.8%	30.7%	64.4%	41.3%	62.2%	32.3%	64.3%
1992	22.1%	65.1%	24.8%	60.3%	34.8%	59.9%	25.7%	60.8%
1991	20.9%	62.3%	20.5%	56.7%	21.2%	52.8%	20.9%	56.6%
1990	17.7%	57.1%	17.3%	54.9%	18.0%	48.7%	16.7%	53.1%
Before 1990	37.3%	77.6%	42.6%	76.9%	23.9%	72.7%	34.1%	75.8%
n	10138	81256	9149	51385	6443	37792	24082	148671

16. Did you stay at a fishing resort or lodge in British Columbia in 1995?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Yes	27.3%	31.5%	29.5%	30.7%	17.9%	14.7%	25.8%	27.0%
No	72.7%	68.5%	70.5%	69.3%	82.1%	85.3%	74.2%	73.0%
n	10137	80891	9149	51011	6443	37673	24082	147981

17. How do you prefer to book your stay at a resort/lodge?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Directly with resort/lodge	84.5%	90.6%	75.4%	87.3%	89.9%	79.8%	84.3%	88.9%
Through 1-800 central reservation system	4.3%	1.9%	0.0%	0.9%	0.0%	8.7%	1.9%	1.5%
Don't prebook	11.2%	7.5%	24.6%	11.8%	10.1%	11.4%	13.8%	9.6%
n	2769	25380	2700	15557	1152	5548	6202	40061

18. How far in advance did you start planning your trip to the resort/lodge?

Timeframe	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
2 weeks in advance	14.4%	19.0%	21.4%	22.3%	0.0%	24.4%	15.8%	19.2%
2-weeks - 2 months in advance	0.0%	22.7%	32.2%	15.3%	27.7%	26.6%	19.2%	22.2%
2 months - 6 months in advance	33.4%	34.2%	21.4%	33.9%	39.3%	28.5%	28.5%	33.3%
6 months or more in advance	48.0%	23.0%	16.4%	22.4%	22.9%	17.0%	32.9%	22.6%
Unknown	4.2%	1.0%	8.6%	6.2%	10.1%	3.5%	3.8%	2.7%
	2770	25450	2701	15676	1152	5548	6203	39915

19. How did you find out about the resort/lodge?

Source	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Newspaper	0.0%	2.5%	2.6%	2.6%	0.0%	0.0%	1.1%	2.0%
Magazine	16.3%	11.4%	14.6%	15.3%	18.9%	13.6%	17.2%	11.5%
Sportsmans show	12.8%	8.7%	4.1%	6.5%	0.0%	6.9%	7.5%	7.6%
Word of mouth	62.2%	70.7%	79.0%	64.7%	70.8%	77.9%	68.6%	68.6%
Other	21.5%	19.5%	7.7%	22.6%	10.2%	12.2%	14.8%	21.0%
n	2769	25449	2701	15677	1152	5547	6202	39914

20. A number of changes have been suggested for the licensing system for fishing in B.C. FRESH WATER.
Which one(s) do you think are worth being brought forward for public review at a future date? (Check as many as apply)

Change	**TN Beginner**	**TN Other**	**CB Beginner**	**CB Other**	**OK Beginner**	**OK Other**	**3 Regions Beginner**	**3 Regions Other**
introduction of a conservation licence at a reduced price with reduced harvest limits	49.6%	44.8%	39.3%	39.7%	55.6%	49.1%	48.3%	43.7%
introduction of a catch and release licence at a reduced price, but with no harvest allowed	41.9%	32.6%	24.2%	28.3%	29.9%	38.0%	33.6%	33.0%
Introduction of a junior licence that would allow juveniles (under 16 years) their own quotas	23.0%	26.6%	25.6%	26.3%	33.0%	23.1%	25.5%	26.4%
Introduction of a combined freshwater/tidal water fishing licence	40.7%	45.5%	43.1%	40.4%	30.6%	41.2%	40.4%	43.4%
Introduction of a multi-year licence	40.2%	39.5%	49.0%	39.1%	47.2%	46.5%	42.9%	40.7%
Selling licences from ATM - type machines in shopping centres	23.1%	23.6%	34.2%	20.2%	31.7%	23.0%	27.8%	23.4%
Selling licences over the telephone and mailing to you	17.1%	17.9%	23.6%	19.3%	13.8%	14.2%	19.1%	18.4%
n	10137	81257	9148	51385	6443	37791	24082	148671

21. Did you fish in B.C. TIDAL WATERS in 1995?

Response	**TN Beginner**	**TN Other**	**CB Beginner**	**CB Other**	**OK Beginner**	**OK Other**	**3 Regions Beginner**	**3 Regions Other**
Yes	8.4%	23.2%	16.0%	21.0%	12.4%	16.2%	12.7%	20.4%
No	91.6%	76.8%	84.0%	79.0%	87.6%	83.8%	87.3%	79.6%
n	10137	80905	9078	50789	5894	37364	23464	147295

22 Did you fish for recreation outside British Columbia in 1995?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Yes	6.5%	8.0%	2.3%	6.8%	2.1%	7.4%	3.1%	7.8%
No	93.5%	92.0%	97.7%	93.2%	97.9%	92.6%	96.9%	92.2%
n	8943	66588	8184	38290	5537	31622	21169	116758

23. Were you a member of an organized angling group or association in 1995?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Yes	0.0%	8.8%	1.5%	8.8%	1.3%	4.7%	0.6%	7.4%
No	100.0%	91.2%	98.5%	91.2%	98.7%	95.3%	99.4%	92.6%
n	8738	66827	8184	38085	5655	31685	21082	116962

24 Are you be interested in working on enhancement, conservation or other efforts that benefit fish in your community?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Very interested	7.1%	21.5%	7.9%	20.4%	2.2%	21.8%	6.6%	20.9%
Somewhat interested	22.1%	42.1%	28.4%	40.3%	43.2%	43.4%	30.9%	41.1%
Not interested	46.9%	20.5%	38.6%	22.8%	37.5%	21.8%	39.8%	22.0%
Unsure	24.0%	15.9%	25.1%	16.5%	17.1%	13.0%	22.7%	15.9%
n	8534	67077	8310	37512	5420	31941	20769	116542

25. How would you rate provincial government efforts in B.C. FRESH WATER to:

a. Conserve wild fish stocks

Rating	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Excellent	6.9%	4.0%	11.5%	5.7%	2.1%	4.3%	7.6%	4.9%
Very good	19.4%	17.3%	12.2%	18.9%	14.4%	10.7%	16.7%	16.8%
Good	36.1%	38.1%	41.1%	34.8%	44.3%	42.3%	37.2%	38.4%
Fair	21.5%	25.2%	26.4%	25.3%	26.1%	27.3%	25.4%	24.3%
Poor	16.1%	15.4%	8.7%	15.3%	13.2%	15.4%	13.1%	15.6%
n	8780	75733	7109	45918	5639	35000	20288	135872

b. Provide recreational fishing opportunities

Rating	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Excellent	15.0%	7.0%	12.5%	8.6%	4.0%	7.1%	11.8%	7.8%
Very good	31.2%	24.3%	24.4%	29.9%	21.2%	22.2%	26.6%	25.3%
Good	39.9%	42.8%	43.3%	36.6%	42.8%	39.9%	40.4%	40.0%
Fair	8.5%	20.5%	18.0%	19.0%	18.0%	23.3%	14.9%	20.7%
Poor	5.4%	5.5%	1.8%	5.8%	13.9%	7.5%	6.3%	6.1%
n	9010	75862	7682	45461	5870	35163	20985	135195

26. There are a number of factors which play a role in determining the choice of fishing destinations. We would like you to rate each for the following factors based on their importance to you in selecting where you fish in British Columbia: Please rate each factor on a scale of 1 (not important) to 5 (extremely important).

Factor	**TN Beginner**	**TN Other**	**CB Beginner**	**CB Other**	**OK Beginner**	**OK Other**	**3 Regions Beginner**	**3 Regions Other**
Water quality	4.08	4.27	4.28	4.32	4.16	4.24	4.18	4.30
Natural beauty of the area	4.18	4.06	4.12	4.05	4.37	3.96	4.19	4.06
Presence of wildlife in the area	3.39	3.40	3.41	3.48	3.24	3.48	3.36	3.45
Places to fish from shore	2.91	2.54	2.59	2.54	3.30	2.74	2.89	2.61
Lack of angler crowding	3.75	4.02	3.48	4.00	3.81	3.80	3.65	3.97
Absence of other recreationists	3.05	3.23	2.93	3.14	3.31	3.04	3.10	3.16
Nearness to food and lodging	2.23	1.93	2.22	1.78	2.34	1.74	2.25	1.87
Quality of tourist facilities	2.29	2.07	2.24	2.07	2.49	2.04	2.32	2.09
Boat launching/marina facilities	2.34	2.48	2.53	2.53	2.51	2.49	2.44	2.53
Access to other recreational facilities	2.23	1.90	2.21	1.89	2.28	1.94	2.19	1.91
Nearness to bait and tackle shops	1.83	1.77	1.87	1.65	1.84	1.70	1.87	1.75
Parking availability	2.83	2.58	2.56	2.45	2.43	2.70	2.59	2.57
Cost	3.71	3.35	3.45	3.17	3.45	3.17	3.54	3.25
Lack of pollutants in fish	4.50	4.59	4.66	4.59	4.44	4.60	4.52	4.58
Size of fish	3.28	3.54	3.16	3.57	3.43	3.52	3.28	3.53
Chance to catch a trophy fish	2.04	2.77	1.80	2.85	2.08	2.85	1.98	2.78
Catch rate per hour of all fish	2.27	2.67	2.37	2.62	2.27	2.80	2.32	2.68
Catch rate per hour of fish you can keep	2.09	2.34	2.22	2.37	2.18	2.43	2.17	2.37
Presence of favorite species	2.86	3.63	2.95	3.60	2.76	3.37	2.83	3.55
Variety of species available	2.24	2.52	2.34	2.73	2.62	2.64	2.38	2.61
Distance/travel time	3.30	3.04	3.13	2.77	2.94	2.99	3.13	2.93
Information about the area	3.16	2.97	3.23	2.91	3.11	3.04	3.16	2.98

27. Anglers are motivated to fish for a number of reasons. We have listed some possible reasons below. Would you please rate each of these reasons as they relate to why you fish where you do in British Columbia:
Please rate each factor on a scale of 1 (not important) to 5 (extremely important).

Reason	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
To catch fish to eat	2.67	2.71	3.38	2.90	2.59	2.82	2.90	2.81
For relaxation	4.42	4.51	4.09	4.54	4.12	4.51	4.22	4.50
For companionship	3.52	3.37	3.54	3.45	3.14	3.43	3.40	3.41
To enjoy nature	4.41	4.44	4.23	4.43	4.28	4.43	4.31	4.42
Challenge and excitement	3.22	3.69	2.79	3.62	2.98	3.70	3.00	3.66
To improve your fishing skills	2.56	2.82	2.30	2.66	2.32	2.85	2.41	2.73
To get away	4.24	4.35	3.93	4.27	4.02	4.26	4.06	4.29
Family togetherness	3.53	3.70	3.63	3.56	3.51	3.64	3.49	3.66
To catch trophy fish	1.61	2.19	1.39	2.25	1.62	2.25	1.55	2.19
For a sense of achievement	1.89	2.31	1.84	2.29	2.04	2.30	1.92	2.29

28a. Please consider the number of days you fished and what you paid to fish for FRESH WATER in British Columbia during 1995, the amount of money you spent for similar recreational activities, and your income in 1995. Would you still have fished for recreation in B.C. FRESH WATER had your out of pocket costs PER FISHING DAY been higher due to increased costs for gasoline, accommodation, supplies, etc?

Response	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Yes	59.1%	70.3%	52.8%	63.7%	61.6%	68.4%	56.7%	67.9%
No	40.9%	29.7%	47.2%	36.3%	38.4%	31.6%	43.3%	32.1%
n	10137	81257	9148	51385	6442	37791	24082	148671

28b. What is the maximum additional amount you would have paid PER FISHING DAY before deciding it was too expensive to fish at all in British Columbia in 1995?

Amount	**TN Beginner**	**TN Other**	**CB Beginner**	**CB Other**	**OK Beginner**	**OK Other**	**3 Regions Beginner**	**3 Regions Other**
Less than $10.00 per day	9.5%	14.9%	22.8%	17.0%	22.2%	20.3%	16.7%	16.5%
$10.00 per day	30.4%	23.6%	31.2%	25.8%	28.3%	21.4%	30.5%	23.7%
$20.00 per day	31.1%	21.8%	17.8%	24.8%	20.1%	26.9%	24.9%	23.7%
$30.00 per day	9.9%	8.5%	11.9%	6.6%	8.4%	9.8%	11.0%	8.3%
$40.00 per day	3.3%	3.8%	2.1%	6.3%	5.5%	4.7%	3.0%	4.2%
$50.00 per day	12.2%	17.1%	7.9%	11.7%	2.9%	6.3%	7.3%	13.7%
$60.00 per day	0.0%	1.6%	0.0%	2.8%	5.5%	0.5%	1.6%	1.7%
$70.00 per day	0.0%	1.5%	2.2%	0.9%	0.0%	2.6%	0.8%	1.6%
$80.00 per day	0.0%	1.5%	0.0%	0.9%	0.0%	0.3%	0.0%	1.1%
$90.00 per day	1.5%	0.0%	0.0%	0.0%	0.0%	0.5%	0.7%	0.1%
$100.00 per day	0.0%	3.7%	0.0%	1.6%	0.0%	6.9%	0.0%	3.9%
More than $100.00 per day	2.2%	1.8%	4.2%	1.5%	7.0%	0.0%	3.5%	1.4%
n	5997	57126	4830	32714	3968	25837	13664	100894

29. Age

Age Category	**TN Beginner**	**TN Other**	**CB Beginner**	**CB Other**	**OK Beginner**	**OK Other**	**3 Regions Beginner**	**3 Regions Other**
Lt 20 yrs	1.9%	0.6%	3.1%	1.4%	3.4%	1.3%	2.9%	0.9%
20- 24 yrs	4.5%	2.7%	3.1%	3.2%	4.8%	4.0%	4.4%	3.0%
25- 34 yrs	25.5%	16.3%	26.2%	14.7%	25.1%	19.6%	24.9%	16.4%
35- 44 yrs	28.5%	28.0%	31.8%	25.6%	25.7%	32.3%	29.7%	28.0%
45- 54 yrs	17.5%	25.6%	21.6%	21.2%	16.2%	19.0%	19.2%	23.6%
55- 64 yrs	5.2%	13.8%	5.1%	17.9%	6.4%	11.8%	5.3%	14.5%
65 and over	12.7%	11.7%	9.1%	15.4%	14.3%	11.1%	10.8%	12.6%
Unknown	4.1%	1.3%	0.0%	0.7%	4.1%	0.9%	2.8%	1.0%
n	10137	81255	9149	51386	6443	37790	24081	148671
Average Age	**42.93**	**46.58**	**41.86**	**47.58**	**42.39**	**44.63**	**42.12**	**46.54**

30. Gender:

Gender	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Male	74.0%	87.7%	51.0%	84.3%	65.3%	90.2%	63.9%	87.2%
Female	26.0%	12.3%	49.0%	15.7%	34.7%	9.8%	36.1%	12.8%
n	10138	80648	9148	51314	6443	37619	24082	147991

31a. Excluding yourself, how many members of your household 16 years of age or over?

Number	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
None	15.2%	22.1%	23.1%	20.6%	29.2%	15.8%	22.6%	21.2%
One	56.2%	49.6%	51.3%	50.5%	37.9%	51.4%	49.1%	49.8%
Two	17.5%	16.7%	12.7%	15.5%	28.6%	21.8%	17.8%	17.2%
Three or more	11.1%	11.5%	12.8%	13.4%	4.3%	11.0%	10.4%	11.9%
n	10138	81256	9149	51385	6443	37791	24082	148672

31b. Of these individuals, how many of each type of BC FRESHWATER fishing licences did they purchase in 1995?
- ** REPORTED BELOW ARE PROPORTIONS **

Number of licences purchased by type	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Annual	40.1%	38.1%	42.2%	40.4%	23.0%	45.5%	34.9%	39.1%
Senior	4.2%	6.5%	6.4%	8.3%	11.8%	8.3%	7.4%	6.7%
Disabled	0.0%	0.3%	2.4%	0.2%	0.0%	0.0%	0.9%	0.2%
8-day	8.3%	9.0%	11.7%	7.5%	6.8%	3.0%	9.7%	7.8%
1-day	6.9%	2.5%	2.8%	2.2%	7.2%	2.5%	5.1%	2.7%
n	10137	81166	9148	51385	6443	37791	24082	148580

32. How many members of your household under 16 years of age fished for recreation in British Columbia FRESH WATER in 1995, and how many days in total did they fish?

a. Household members under 16 years

Number	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
None	71.7%	70.9%	66.9%	75.0%	72.4%	65.4%	71.4%	71.1%
One	5.6%	14.2%	11.3%	9.8%	7.7%	18.1%	7.8%	13.6%
Two	19.6%	11.6%	11.9%	12.5%	10.6%	14.6%	14.1%	12.5%
Three or more	3.1%	3.4%	10.0%	2.6%	9.3%	1.9%	6.7%	2.8%
n	10138	81256	9148	51386	6442	37791	24082	148672

b. Total days fished

33. What is the highest level of education you have completed? (please check one only)

Education Level	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Unknown	0.9%	2.3%	0.5%	2.1%	1.4%	2.4%	1.0%	2.1%
No formal schooling	0.0%	0.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.3%
Elementary (grade school)	2.5%	6.3%	9.1%	6.2%	8.1%	4.8%	5.3%	5.7%
Secondary (high school)	40.9%	36.2%	27.2%	38.2%	30.0%	36.0%	32.3%	36.9%
Trade/Vocational	18.4%	21.9%	26.0%	20.1%	19.1%	20.7%	21.2%	21.0%
College/University	28.4%	25.0%	32.1%	25.2%	37.9%	30.8%	33.6%	26.4%
Post graduate	8.9%	8.0%	5.0%	7.9%	3.4%	5.3%	6.6%	7.7%
n	10138	81256	9148	51384	6443	37792	24082	148671

34. What category best describes your employment status in 1995? (Please check one only)

Category	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Unknown	0.0%	2.1%	0.0%	1.7%	3.4%	1.7%	0.9%	1.8%
Full-time employee	67.0%	66.3%	58.2%	59.5%	55.6%	69.5%	62.4%	65.5%
Part-time employee	6.3%	8.4%	10.9%	9.2%	11.4%	5.9%	9.2%	7.8%
Retired	17.0%	17.4%	15.7%	24.0%	17.0%	18.1%	15.4%	19.4%
Homemaker	5.6%	2.3%	12.1%	3.0%	5.9%	1.1%	7.5%	2.5%
Student	4.0%	2.1%	0.8%	1.6%	4.8%	1.1%	3.2%	1.6%
Unemployed	0.0%	1.3%	2.3%	1.0%	1.8%	2.6%	1.4%	1.4%
n	10138	81257	9149	51385	6443	37792	24083	148672

35. Please indicate which of the following categories best represents your total personal income before taxes in 1995.

Category	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Unknown	11.9%	8.7%	5.5%	10.6%	7.1%	10.1%	9.0%	9.5%
None	6.6%	2.2%	6.4%	2.0%	5.2%	0.6%	5.2%	2.0%
Less than $10,000	3.1%	3.8%	9.9%	3.8%	7.6%	3.8%	6.9%	3.8%
$10,000 to $19,999	7.0%	7.2%	11.7%	10.5%	19.1%	10.4%	11.6%	8.3%
$20,000 to $29,999	15.5%	13.1%	12.6%	14.0%	18.7%	16.2%	14.9%	13.3%
$30,000 to $39,999	24.2%	16.7%	18.7%	14.0%	18.1%	15.6%	19.9%	15.7%
$40,000 to $49,999	14.2%	16.3%	13.7%	14.6%	6.4%	14.2%	12.5%	15.5%
$50,000 to $59,999	5.9%	12.4%	10.3%	12.1%	6.8%	12.2%	8.2%	12.7%
$60,000 to $69,999	6.9%	7.4%	4.9%	8.1%	0.0%	6.0%	4.8%	7.4%
$70,000 to $79,999	2.6%	4.0%	4.4%	2.9%	5.9%	4.9%	4.1%	4.2%
$80,000 to $89,999	0.0%	1.5%	0.8%	1.4%	5.2%	1.3%	1.7%	1.4%
$90,000 or more	1.9%	6.9%	1.1%	5.9%	0.0%	4.7%	1.2%	6.1%
n	10137	81256	9149	51384	6442	37791	24082	148671

36. Please indicate which of the following categories best represents your total household income before taxes in 1995.

Category	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Unknown	11.9%	10.3%	6.3%	12.4%	10.5%	11.0%	10.2%	10.9%
None	0.0%	0.8%	0.5%	0.1%	0.0%	0.5%	0.2%	0.6%
Less than $10,000	0.8%	0.8%	3.1%	0.7%	0.0%	0.7%	1.5%	0.8%
$10,000 to $19,999	3.5%	3.4%	2.6%	5.2%	6.1%	4.0%	3.5%	3.9%
$20,000 to $29,999	10.4%	7.2%	12.5%	9.0%	8.3%	8.8%	9.3%	7.8%
$30,000 to $39,999	16.1%	10.3%	16.1%	10.0%	16.8%	12.1%	16.0%	9.9%
$40,000 to $49,999	12.9%	12.6%	6.8%	11.3%	19.7%	13.2%	12.2%	12.5%
$50,000 to $59,999	8.8%	11.2%	8.6%	11.6%	11.1%	9.8%	9.3%	11.0%
$60,000 to $69,999	5.0%	12.9%	10.1%	8.6%	10.7%	11.5%	8.8%	11.2%
$70,000 to $79,999	0.0%	6.9%	12.4%	8.5%	9.1%	6.6%	7.2%	7.8%
$80,000 to $89,999	9.0%	6.6%	1.9%	8.4%	3.4%	8.0%	5.0%	7.7%
$90,000 to $99,999	8.8%	4.4%	8.3%	3.1%	0.8%	5.0%	7.1%	4.2%
$100,000 to $119,999	7.5%	6.3%	4.1%	4.6%	3.4%	3.2%	5.3%	5.2%
$120,000 to $139,999	5.2%	1.5%	3.4%	2.0%	0.0%	3.3%	3.2%	2.1%
$140,000 to $159,999	0.0%	2.2%	2.4%	1.9%	0.0%	0.6%	0.9%	1.7%
$160,000 or more	0.0%	2.6%	0.8%	2.9%	0.0%	1.7%	0.3%	2.6%
n	10137	81258	9148	51384	6442	37790	24081	148672

38. Origin of Anglers:

Origin	TN Beginner	TN Other	CB Beginner	CB Other	OK Beginner	OK Other	3 Regions Beginner	3 Regions Other
Resident BC	88.2%	84.3%	91.4%	76.0%	90.7%	87.7%	89.9%	81.1%
Non-Resident Canadian	2.7%	6.4%	1.9%	5.2%	6.5%	7.7%	3.2%	6.8%
Non-Resident Other	9.1%	9.2%	6.8%	18.8%	2.7%	4.6%	6.9%	12.1%
n	10138	81257	9148	51385	6443	37791	24081	148670

Appendix 3

B.C. Family Angler Market Profile
National Survey of Recreational Fishing, 1995

Introduction

Family anglers represent a sizeable and significant proportion of B.C.'s fresh water fishing market. In the Thompson-Nicola, Cariboo and Okanagan regions, family anglers represented about 67% of angler population. The following analysis describes the overall characteristics of these family anglers, and identifies how they differ from other anglers in the three regions. Where significant differences in the pattern exist on a regional basis, these are highlighted in the text.

1.0 Licensing Information

1.1 Types of Licenses Purchased

The largest proportion of family anglers purchased annual licenses (72%), a slightly higher proportion than of other anglers (69%). The differences in purchase patterns for senior, one-day and eight-day licenses between family and non-family anglers were also small. However, family anglers were less likely to purchase licenses in every class of supplementary license than were their non-family counterparts. The largest proportion of these licenses (69%) was purchased near to the home, a figure which matches very closely the status for non-family anglers.

2.0 Fishing Behaviour

2.1 Fishing Season

The largest proportion of family anglers fished during the summer season, with more than 50% fishing during June, July and August, and more than 40% fishing in May and September. Less than 10% of family anglers fished in any month from November to March. This seasonal spread was more concentrated than for non-family anglers, of whom less than 50% participated during each summer month, and more than 10% during each winter month.

2.2 Fishing Locations

The largest proportion of family anglers fished from forest recreation sites (50%) and provincial parks (23%). This compares with non-family anglers in the three regions, of whom 46% fished from forest recreation sites and 20% from provincial parks.

2.3 Interest in More B.C. Freshwater Angling

A large majority of family anglers (89%) expressed interest in spending more time fishing in B.C. freshwater. For non-family anglers, the majority was slightly less at 86%.

2.4 Constraints to more B.C. Freshwater Angling

The principal reasons stated by family anglers for not participating more in B.C. freshwater fishing were not enough spare time (85%) and poor catch rates (24%). These constraints were similar to those stated by non-family anglers.

2.5 Catch and Release Patterns

Similar to other anglers, family anglers for the most part practiced catch and release (71%). Some regional variation was apparent, with more than 75% practicing catch and release in both Thompson-Nicola and Okanagan, as compared with 63% in the Cariboo region

2.6 Fishing style patterns

Compared with other anglers in the three regions, family anglers tended to be:

- Proportionally less likely to belong to an angling organization (4%)
- Less likely to be interested in working on enhancement or conservation
- More likely to be fishing with bait and lures than fly gear
- More likely to be fishing from a float/boat than from shore or with hip waders
- More likely to be fishing in stocked lakes and non-stocked lakes than rivers/streams
- Fishing proportionally less in tidal waters (17%)
- Fishing proportionally less outside B.C. (5%)

2.7 Social Interaction

Family anglers tended not to fish alone, with 68% reporting that they never did. This compares with non-family anglers, of whom only 50% said they never fished alone. Family anglers were also less likely to fish with friends, with 17% reporting that they always did compared with 39% of non-family anglers.

2.8 Freshwater Fishing Experience Ratings

A majority of family anglers (62%) rated their freshwater fishing experience as being good or better, a similar figure to their non-family counterparts. However, 9% of them rated their experience as excellent, which compares with 6% for non-family anglers. Again, a large majority of family anglers (92%) expressed an interest in fishing in B.C. in the future, as compared with 87% of non-family fishers.

2.9 Accommodation Use

Slightly over a quarter of family fishers (29%) stayed at a fishing resort or lodge on their fishing trip. This pattern was similar to that for other anglers in the three regions (25%). The majority preferred to book directly with the lodge or resort (88%), a pattern similar to non-family anglers, and only around 2% made use of a 1-800 central reservation system. Most heard of the resort/lodge by word of mouth, with proportions ranging from 63% in the Cariboo to 80% in the Okanagan region.

2.10 Fishing Destination Selection Factors

The most important factors for family anglers in selecting a fishing destination included natural beauty, water quality and lack of pollutants in fish. These factors were prioritized by both family and non-family anglers. There were, however, some small differences in the ranking of other factors, with family anglers more likely to prioritize items including quality of tourist facilities, boat launch facilities and availability of parking.

2.11 Fishing Motivations

The strongest motivational factors for all anglers were related to relaxation, nature and the need to get way. Family anglers placed a slightly greater importance on catching fish, while family togetherness still rated fourth behind the three factors above.

3.0 Reactions to Licensing System Changes

Family anglers differed from non-family anglers in their reactions to proposed licensing system changes. While they were less likely to approve of the introduction of a new catch and release license (31%), a combined freshwater/tidal license (39%) and the selling of licenses by phone/mail (16%), they were more likely to approve of the introduction of a junior license that would allow juveniles their own quotas (28%).

4.0 Reactions to B.C. Government Freshwater Fishing Programs

Family anglers were similar to other anglers in their feelings about the wild fish conservation practices of the provincial government, with slightly over 60% of both groups rating government efforts as good or better. However, they were more likely (76%) to positively rate the government's programs to provide opportunities for recreational fishing.

5.0 Socio-Demographic Traits

Compared with other anglers, those who fished with their families were more likely to be in the 35 to 64 age range. While only a minority (20%) were female, this proportion was much larger than with non-family anglers, of whom only around 7% were female. Family anglers were marginally less educated than their non-family counterparts, were more likely to class themselves as homemakers or full-time employees. They typically came from middle-income households, and the majority (83%) were B.C. residents

Appendix 4

Fresh Water Sport Fishing Bibliography
With
Select Annotations

The following bibliography provides a listing of key reports, documents and web sites related to assessing and managing demand for sport fishing. It is ordered according to themes discussed in the main body of this report. Listings are presented chronologically within each section so as to ease the identification of the most recent research and data collected.

Section 1: BC Market Performance Profile

BC Fisheries (2000). BC Sport Fishing Industry Profile.
-http://www.bcfisheries.gov.bc.ca/pdf/sport-fishing-profile.pdf

BC Statistics (2000). British Columbia's Fisheries and Aquaculture Sector. BC: Ministry of Finance and Corporate Relations.
-provides estimates of GDP and employment for fisheries sectors including sport fishing that are comparable with other parts of the provincial economy.

Drew North Consulting Group et al (2000). Forest & Fisheries Tourism Opportunities Study for the100 Mile & Horsefly Forest Districts of British Columbia. Victoria: B.C. Ministry of Small Business, Tourism and Culture.

J. Paul & Associates Inc (1999). BC's Tourism Product: 1994-1998 Trends and Future Direction. Victoria: B.C. Ministry of Small Business, Tourism and Culture.

Tourism BC (1998). BC Tourism Product Guide. Victoria: B.C. Ministry of Small Business, Tourism and Culture.

Fedler, A J, Ditton, R B and Duda, M D (1998). Factors Influencing Recreational Fishing and Boating Participation. Alexandria, VA: Sportfishing and Boating Partnership Council.

G.S.Gislason & Associates (1998). Fishing Communities in Transition: The Gislason Review. Ottawa: Government of Canada.

Department of Fisheries and Oceans (1997). 1995 Survey of Recreational Fishing in Canada. Ottawa: Department of Fisheries and Oceans, Statistical Services.

Price Waterhouse and The ARA Consulting Group (1996). Tourism Industry Product Overview. Victoria, BC: Ministry of Small Business, Tourism and Culture.

Department of Fisheries and Oceans, Surveys Unit (1994). 1990 Survey of Recreational Fishing in Canada. Ottawa: Department of Fisheries and Oceans.

Environment Canada, Canadian Wildlife Service (1993). Highlights of the 1991 Survey: Importance of Wildlife to Canadians. Ottawa: Environment Canada.

BC Ministry of Forests (1991). Outdoor Recreation Survey 1989/90. Victoria, BC: Ministry of Forests, Recreation Branch.

BC Ministry of Environment, Lands and Parks (n.d.) Fresh Water Sport Fishing in British Columbia: Results of the 1990 National Survey of Sport Fishing. Victoria, BC: Ministry of Environment, Lands and Parks, Fisheries Branch.
-*includes brief analysis of trends 1975 – 1990.*

Environment Canada, Canadian Wildlife Service (1990). The Economic Significance of Wildlife-related Recreational Activities. Ottawa, Environment Canada.
-*for the first time in 1987, the Importance of Wildlife to Canadians survey included questions about participation in recreational fishing*

The Tourism Research Group, DPA Group and Mike Hurst & Associates (1989). A Marketing and Product Development Manual for the Fresh Water Fishing Resorts of British Columbia. Victoria, BC: Ministry of Tourism, Recreation and Culture and Canada – British Columbia Subsidiary Agreement on Tourist Industry Development.
-*includes information on supply and management issues associated with fresh water fishing resorts. Product development manual provides insights into financial planning characteristics of supply*

BC Ministry of Environment and Parks, (1988). British Columbia Freshwater Results of the 1985 National Survey of Sport Fishing. Victoria, BC: Ministry of Environment and Parks, Planning and Assessment Branch.
-*includes analysis of trends in participation and effort*

DPA Group and Maclaren Plansearch (1988). Fishing Lodges and Resorts in British Columbia: Marketing and Development Initiatives. Final Report. Victoria, BC: Ministry of Tourism, Recreation and Culture and Canada – British Columbia Subsidiary Agreement on Tourist Industry Development.
-*study of the sport fishing lodge/resort industry suggests appropriate product development and marketing initiatives. Includes salt water and fresh water operations.*

DPA Group and Maclaren Plansearch (1988). Fishing Lodges and Resorts in British Columbia: Marketing and Development Initiatives. Summary Report. Victoria, BC: Ministry of Tourism, Recreation and Culture and Canada – British Columbia Subsidiary Agreement on Tourist Industry Development.
-*summary of the B.C. sport fishing lodge/resort industry with respect to product development and marketing initiatives.*

Department of Fisheries and Oceans (n.d.). Freshwater Sport Fishing in British Columbia, 1985. Ottawa: Department of Fisheries and Oceans.
-*summarizes highlights of the B.C. portion of the 1985 survey.*

BC Ministry of Environment and Parks (1988). Economic Values and Impacts of Freshwater Sport fishing in British Columbia. Victoria, BC: Ministry of Environment and Parks, Recreational Fisheries Branch.
-describes net economic value and economic impact of fresh water sport fishery in B.C.

BC Ministry of Environment (1986). The Value and Characteristics of Freshwater Angling in British Columbia. Victoria, BC: Ministry of Environment, Fisheries Branch.
-provides estimates based on 1981 mail survey to holders of BC freshwater fishing licenses. Includes comparison with results of 1980 National Survey of Recreational Fishing for BC.

Environment Canada (1983). Highlights of the 1981 Survey. Ottawa, ON: Environment Canada: Canadian Wildlife Service.
-reports on the Importance of Wildlife to Canadians Survey, but does not include fishing

Department of Fisheries and Oceans (n.d.) Sportfishing in Canada, 1980 Survey Highlights. Ottawa: Department of Fisheries and Oceans.
-summarizes survey highlights

BC Ministry of Environment (n.d.). Fresh Water Sport Fishing in British Columbia: An Overview of the 1980 National Survey of Sports Fishing. Victoria, BC: Ministry of Environment.

Section 2: Population Trends and Angling Participation

Fedler, A J (2000). Participation in Boating and Fishing: A Literature Review.
-http://www.rbff.org/pressroom/Lit-Review-Final.pdf
-prepared for the Recreational Boating and Fishing Foundation

Fedler, A J and Holdnak, A (2000). Implications of US Population Growth for Recreational Fishing. Arlington, VA: US Fish and Wildlife Service.
-builds several different scenarios for projecting angler participation into the future.

Responsive Management (1999). The Future of Fishing in the United States: Assessment of Needs to Increase Sport Fishing Participation. Final report prepared for the International Association of Fish and Wildlife Agencies. Washington, DC.

Fedler, A J, Ditton, R B, Mark, D and Duda, M D (1998). Factors Influencing Recreational Fishing and Boating Participation. Technical Review Group.
-http://sfbpc.fws.gov/white.htm
-prepared for the Sport Fishing and Boating Partnership Council

Sipponen, M and Muotka, M (1996). "Factors Affecting the Demand for Recreational Fishing Opportunities in Finnish Lakes During the 1980s." Fisheries Research 26(3-4): 309-323.
- a linear regression analysis was developed to explain the demand for recreational fishing. The results suggest that the average annual price index for recreational fishing was so low that it did not affect the market behaviour of recreational fishermen. The pricing policy seems to be rather a function of social values than economic forces and consequently provides only weak signals for creating improvements in recreational fishing opportunities.

Murdock, S H, Loomis, D K, Ditton, R B and Hoque, M N (1996). "The implications of demographic change for recreational fisheries management." Journal of Human Dimensions of Fish and Wildlife Management 1:14-37.
-*analysis of population dynamics suggests that the rate of increase of the angling population will decline, the population will become older, and the population will have larger minority components.*

Duda, M D, Bissell, S J and Young, K C (1995). Factors related to hunting and fishing participation in the United States. Phase V: final report. Harrisonburg, Virginia: US Fish and Wildlife Service.
-*summary of three-year study on the factors related to hunting and fishing participation in the United States*
-*1) literature review, 2) focus groups, 3) multivariate analysis of 1980, 1985 and 1991 National Survey of Fishing, Hunting and Wildlife-Associated Recreation, 4) nationwide telephone survey.*
-*'the most exhaustive review, data collection and analysis of any study of hunting and fishing to date'.*

Duda, M D, Thomson, E, Heberlein, T and Young, K C, (1995). Factors related to hunting and fishing participation in the United States. Phase IV: quantitative analysis. Harrisonburg, Virginia: US Fish and Wildlife Service.
-*describes major demographic factors influencing male angling participation levels: increasing age, fewer males growing up in rural areas and a decreasing proportion of white males as a percentage of the US population.*

Bissel, S.J. and M.D. Duda (1995). Factors Related to Hunting and Fishing Participation in the United States: Phase III: Fishing Focus Groups. Washington, DC: U.S. Government Printing Office. 209 pp.

Pollock, K. H., C.M. Jones and T.L. Brown (1994). Angler Survey Methods and Their Applications in Fisheries Management. Evans City, PA: American Fisheries Society, 1994. 371 pp.
-presents various sampling methods for application in angler (off-site) and creel (on-site) surveys for the management of fisheries. Practical discussions are provided around such themes as planning and executing surveys, statistical theory of survey sampling, questionnaire construction, mail surveys, telephone surveys, and door-to-door surveys. More unique to fisheries are the sections on access point surveys, aerial surveys, and creel surveys.

BC Ministry of Environment (1994). A Report on Non-tidal Angling Fee Structure. Victoria, BC: Ministry of Environment.
-includes modeling of demand elasticity

Duda, M D and Bissel, S J, (1993). Factors related to hunting and fishing participation in the United States. Phase II: hunting focus groups. Harrisonburg, Virginia: US Fish and Wildlife Service.
-exclusive focus on participation on hunting

Duda, M D (1993). Factors relating to hunting and fishing participation in the United States. Phase I: Literature review. Harrisonburg, VA: Responsive Management.

Dann, S L (1993). Youth Recruitment into Fishing: The Influence of Familial, Social and Environmental Factors and Implications for Education Intervention Strategies to Develop Aquatic Stewardship. Unpublished PhD dissertation, Michigan State University.

Montana Department of Fish, Wildlife and Parks (1993). Montana Survey of Fishing and Associated Water Recreation.
-profile of recreational fishers.

Murdock, S H, Backman, K, Ditton, R B, Hoque, M N and Ellis, D (1992). “Demographic change in the United States in the 1990s and the Twenty-first Century: Implications for Fisheries Management.” Fisheries 7(2).
-includes implications for sport fishing participation, and for fisheries management.

Ditton, R B (1991). Demographic change and its impact on fisheries. Paper presented at the North American Fisheries Leadership Workshop, May 21, 1991, Snowbird, Utah.
-presentation based on above.

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Section 3: Market Segmentation and Specialization

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