

**Angling Guide Data Summary
for the
1990 to 2002 and 2004 to 2007
Licence Years
Skeena River Watershed**

Prepared by

SKR Consultants Ltd.
Smithers, B.C.
V0J 2N1

for

B.C. Ministry of Environment
Fisheries Branch
Skeena Region
Smithers, BC

and

Pacific Salmon Foundation
Vancouver, B.C.

April 2010

Suggested Citation:

Saimoto, R.S., R.K. Saimoto, 2010. Angling Guide Data Summary for the 1990 to 2002 and 2004 to 2007 licence years in the Skeena River Watershed. *Prepared by SKR Consultants Ltd., Final Report submitted to BC Ministry of Environment and The Pacific Salmon Foundation.*

TABLE OF CONTENTS

List of Tables	iv
List of Figures	vi
List of Appendices	vi
Acknowledgements.....	vi
1.0 INTRODUCTION.....	1
2.0 BACKGROUND INFORMATION.....	2
3.0 THE ANGLING GUIDE MANAGEMENT SYSTEM	5
4.0 AGMS DATA SUMMARY	6
4.1 ANGLING GUIDE REPORTS.....	7
4.1.1 CLASSIFIED WATERS.....	8
4.1.2 NON-CLASSIFIED WATERS	9
4.1.3 LAKES.....	10
4.2 ANGLING GUIDE ACTIVITY.....	11
4.2.1 CLASSIFIED WATERS.....	12
4.2.2 NON-CLASSIFIED WATERS	13
4.2.3 LAKES.....	14
4.3 SPECIES REPORTED BY ANGLING GUIDES.....	15
4.3.1 STEELHEAD	19
4.3.2 RAINBOW TROUT	20
4.3.3 CHINOOK SALMON	22
4.3.4 SOCKEYE SALMON	23
4.3.5 COHO SALMON.....	24
4.3.6 CUTTHROAT TROUT	25
4.3.7 PINK SALMON.....	26
5.0 DISCUSSION	27
6.0 LITERATURE CITED.....	29

LIST OF TABLES

Table 1.	Summary of major waters, location, and classified waters designation for the Skeena River watershed.	4
Table 2.	Data recorded on angling guide report forms.....	4
Table 3.	Number of angling guides reporting their activities in the Skeena watershed for different years.	6
Table 4.	Total number of angling guides reporting activities in Class I or Class II waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	8
Table 5.	Total number of angling guides reporting activities in non-classified waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	9
Table 6.	Total number of angling guides reporting activities at various lakes in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	10
Table 7.	Guide reported angler days for Class I or Class II waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	12
Table 8.	Guide reported angler days for non-classified waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	13
Table 9.	Guide reported angler days for Lakes in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	14
Table 10.	Guide reported catch of all species reported for Class I or Class II waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	16
Table 11.	Guide reported catch of all species reported for non-classified waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	16
Table 12.	Guide reported catch of all species for lakes in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	16
Table 13.	Total catch from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years of each species reported by angling guides for locations in the Skeena watershed during Class I or Class II status.	17
Table 14.	Total catch from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years of each species reported by angling guides for non-classified waters in the Skeena watershed.	17
Table 15.	Total catch from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years of each species reported by angling guides for lakes in the Skeena watershed.	18
Table 16.	Guide reported catch of steelhead for Class I or Class II waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	19
Table 17.	Guide reported catch of steelhead for non-classified waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	19
Table 18.	Guide reported catch of steelhead for lakes in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	19
Table 19.	Guide reported catch of rainbow trout for Class I or Class II waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	20
Table 20.	Guide reported catch of rainbow trout for non-classified streams in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	21
Table 21.	Guide reported catch of rainbow trout for lakes in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	21
Table 22.	Guide reported catch of chinook salmon for Class I or Class II waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	22
Table 23.	Guide reported catch of chinook salmon for non-classified waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	22
Table 24.	Guide reported catch of chinook salmon for lakes in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.	22

Table 25.	Guide reported catch of sockeye salmon for Class I or Class II waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.....	23
Table 26.	Guide reported catch of sockeye salmon for non-classified waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.....	23
Table 27.	Guide reported catch of sockeye salmon for lakes in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.....	23
Table 28.	Guide reported catch of coho salmon for Class I or Class II waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.....	24
Table 29.	Guide reported catch of coho salmon for non-classified waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.....	24
Table 30.	Guide reported catch of coho salmon for lakes in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.....	24
Table 31.	Guide reported catch of cutthroat trout for Class I or Class II waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.....	25
Table 32.	Guide reported catch of cutthroat trout for non-classified waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.....	25
Table 33.	Guide reported catch of cutthroat trout for lakes in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.....	25
Table 34.	Guide reported catch of pink salmon for Class I or Class II waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.....	26
Table 35.	Guide reported catch of pink salmon for non-classified waters in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.....	26
Table 36.	Guide reported catch of pink salmon for lakes in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.....	26

LIST OF FIGURES

Figure 1. The Skeena River watershed, showing the four sections of the mainstem Skeena River, and the two sections of the Zymoetz River (Dolan 2008). 3

Figure 2. Total number of angling guides reporting activities in classified waters, non classified waters, and lakes in the Skeena watershed during different licence years..... 7

Figure 3. Total number of guided angler rod days reported by angling guides for classified waters, non classified waters, and lakes in the Skeena watershed during different licence years..... 11

LIST OF APPENDICES

Appendix 1. List of streams with watershed code and description of locations in the Skeena watershed from the AGMS database..... 30

Appendix 2. List of Lakes with watershed code and description of locations in the Skeena watershed from the AGMS database..... 32

ACKNOWLEDGEMENTS

We wish to thank Katrina Connors of the Pacific Salmon Foundation and the B.C. Smithers Fisheries Section of the Ministry of Environment for their patience and support. Additional thanks are to Dean Peard for his review of the draft versions of this summary, and his useful input. Credit for the primary design of the Angling Guide Management System database and user tool goes to J. DeGisi (B.C. Environment, Smithers).

1.0 INTRODUCTION

The Pacific Salmon Foundation and the Ministry of Environment have jointly managed and administered funding for this entry of angling guide report information for the Skeena watershed for the 2004/2005, 2005/2006, and 2006/2007 licence years into the Angling Guide Management System (AGMS) database, and for the update of the AGMS to a more recent version of Microsoft Access (MS Access 2007). The remainder of the angling guide reports, presently not entered in the AGMS database (i.e. 2002/2003, 2003/2004, 2008/2009 licence years), will hopefully be entered by the Skeena Region Fisheries Section of the Ministry of Environment (BCE) or as funds become available. The data summary for this project will include the data from angling guide reports for the 1990/1991 to 2001/2002 licence years that were entered by BCE and for the 2007/2008 licence year for the Skeena watershed that was more recently entered into the AGMS for a preliminary update of guided angling activity (SKR 2009). The primary intent of this update is to provide a more complete view of recent guiding activities to show any potential trends or variations in guided angler demographics, effort, catch, and the status of angling guide activities in the Skeena Watershed. This data summary report provides the following:

- background information for the Skeena watershed, sport fishery and angling management plan,
- a description of the Angling Guide Management System, data entry, and updates to the database and its functions,
- a general summary of the angling guide data for the Skeena Watershed from 1990 to 2001 and 2004 to 2007 licence years, and
- a brief discussion of the results with some suggestions of potential modifications to the data requirements, AGMS data entry tool, AGMS dataset, and data quality assurance to improve the reliability and usefulness of future information collected from angling guides.

2.0 BACKGROUND INFORMATION

The Skeena River drains the second largest watershed in British Columbia (Gottesfeld et al 2002), and provides world renowned sport-fishing opportunities (Dolan 2008). The Skeena watershed is bordered by the Nechako Plateau to the west, the Skeena Mountains to the north and the Coast Range to the south, and drains into Hecate Strait on the west coast of British Columbia near the port of Prince Rupert (Gottesfeld et al 2002, Walters et al 2008). The watershed provides habitat for a variety of anadromous and resident fish species, including all five species of pacific salmon. The sport-fishery in the watershed targets salmonid species, primarily chinook (*Oncorhynchus tshawytscha*), coho (*O. kisutch*), sockeye (*O. nerka*), and steelhead (*O. mykiss*), cutthroat trout (*O. clarki*), rainbow trout (*O. mykiss*), Dolly Varden (*Salvelinus malma*) and bull trout (*S. confluentus*). Historically, sportfishing in the lower portion of the Skeena watershed, downstream of the Kitsumkalum River, target both, steelhead and pacific salmon, while the majority of angling effort in mid- and upper sections of the Skeena watershed target steelhead.

As a part of BCE freshwater angling management, additional licence requirements have been implemented to improve angling experiences by addressing crowding at several defined areas in the Skeena watershed (BC Environment 2010). Two sections of the Skeena River mainstem and 14 major tributaries have been assigned the additional licence requirements defined by Class I or Class II status: Skeena 2, Skeena 4, Ecstall, Gitnadoix, Lakelse, Kitsumkalum (*alias* Kalum), Zymoetz (*alias* Copper), Kitwanga, Kitseguetla, Bulkley, Suskwa, Morice, Babine, Kluatantan, and Sustut rivers (Figure 1, Table 1). Fishing regulations for these waters are described in the annual *Freshwater Fishing Regulations Synopsis* (B.C. Environment 2008a) and includes the designations of non-classified and classified waters in order to protect high quality recreational fisheries (Morten and Parken 1998). The classified waters status have been given to specific locations and time periods with Class I waters being generally remote locations and Class II waters being more accessible but still providing quality angling experience (Dolan 2008). At Class I or Class II waters, non-guided anglers can fish with a special “Classified Waters License”, but angling guides require licensed rod days for classified waters to bring customers who also have a Classified Waters Licence. In 2009/2010, there were four Class I waters and thirteen Class II waters in the Skeena watershed (*see* Table 1). A cap for maximum number of client rod days (CAP) for guided angler effort has been set for each classified waterbody (Table 1). Individual angler guides have been allocated a portion of the total CAP for their classified waters, but are also permitted to guide on non-classified waters.

Angling guide licences are administered through the Permit Authorization Service Bureau in Victoria (PASB), but are reviewed by regional offices. Angling guides in the Skeena Region are required to submit annual angling guide reports detailing angler effort and catch annually on provided forms for activities on both classified and non-classified waters (Table 2), although the accuracy of this information depends entirely on the cooperation and daily record keeping ability of individual guides. Guides are required to report the catch for each individual angler on each day separately for the classified waters, while multiple anglers fishing on the same day on non-classified waters have been grouped together. The Angling Guide Management System database has been developed by BCE to provide a method for comparing annual report submissions. Unfortunately, AGMS was not used after the 2001/2002 licence year, until recent updates in 2008 (SKR 2009). Due to the variability of data reporting, potential biases in some data types (e.g. species not recorded), and the omission of quality assurance for historical data entry prior to 2004/2005, the trends or events identified in this AGMS data summary should not be accepted without more detailed analyses of the related hard copy guide reports, allocations and licence transfers.



Figure 1. The Skeena River watershed, showing its main tributaries and the four sections of the mainstem Skeena River, and the two sections of the Zymoetz River (Dolan 2008).

Table 1. Summary of major waters, descriptions, and classified waters designation and CAP's for the Skeena River watershed.

Waterbody Name	Watershed Code	Description	Classified Waters (BC Environment 2008a)	Max Number (CAP) ¹	
				Guides	Guided rod days
Skeena 1	400	From mouth to Exchamsiks River confluence	<i>not classified</i>		
Skeena 2	400	From Exchamsiks to 1.5 km above Kitsumkalum River	Class II July 1 – Sept 30	17	4687
Skeena 3	400	1.5 km above Kitsumkalum to 1.5 km above Zymoetz	<i>not classified</i>		
Skeena 4	400	1.5 km upstream of Zymoetz to headwaters	Class II July 1 – Oct 31	10	1000
Skeena Tributaries	400-XXXX	Includes tributaries except those listed below	Class II all year Ecstall R., Class II all year Kitwanga R., Class II all year Kluatantan R., Class I all year Gitnadoix River	4 0 2 5	163 0 55 300
Exchamsiks	410		<i>not classified</i>		
Lakelse	420	Includes tributaries	Class II all year	0	0
Kitsumkalum	430	Includes tributaries	Class II all year	13	959
Zymoetz 1	440	Includes tributaries	Class I Sept 1 – Oct 31 above Limnonite Creek	5	200
Zymoetz 2	440	Includes tributaries	Class II Sept 1 – Oct 31 below Limnonite Creek	3	250
Kitseguekla	450	Includes tributaries	Class II all year	0	0
Bulkley	460	Includes tributaries except Morice	Class II Sept 1 – Oct 31 Class II all year Suskwa River	7 0	1504 0
Morice	460-600600	Includes tributaries	Class II Sept 1 – Oct 31	3	433
Kispiox	470	Includes tributaries	Class II Sept 1 – Oct 31	4	393
Babine	480	Includes tributaries	Class I Sept 1 – Oct 31 Skeena River to juvenile fish counting weir at outlet of Nilkitwa Lake	4	1798
Sustut	490	Includes tributaries	Class I Sept 1 – Oct 31	2	750

¹ Maximum number of guides and rod days refer to classified waters periods only, and are summarized in the Wildlife Act (BC Environment 2008b).

Table 2. Data recorded on angling guide report forms.

Data type	Non-classified Waters Form	Classified Waters Form	Comments
Guide Name	Yes	Yes	
Angling Guide Licence	Yes	Yes	Not captured in AGMS
Waterbody	Yes	Yes	Section of waterbody not always specified
Date	Yes	Yes	
Angler Days	Combined for each day	Separate for each angler on each day	Some guides group multiple days for same anglers
Angler Name	No	Yes	Not captured in AGMS
Angler Licence #	No	Yes	Not captured in AGMS
Angler Residence	Combined for each day	Separate for each angler on each day	Some guides group multiple days for same anglers
Catch (Species)	Combined for each day	Separate for each angler on each day	Some guides do not report the catch for each species caught separately
Catch (Kept)	Combined for each day	Separate for each angler on each day	Some guides do not report the catch for each species caught separately
Catch (Released)	Combined for each day	Separate for each angler on each day	Some guides do not report the catch for each species caught separately
Catch (Total)	Combined for each day	Separate for each angler on each day	Some guides do not report the catch for each species caught separately

3.0 THE ANGLING GUIDE MANAGEMENT SYSTEM

The Skeena Region Fisheries Section of the British Columbia Ministry of Environment (BCE) has developed and implemented the Angling Guide Management System (AGMS) data tool in order to store and summarize the data that is submitted annually by angling guides in compliance with their guide licence requirements. The AGMS database (MS Access 2) was initially designed from 1990 to 1993, and was revised in 1998 (MS Access97) by J. DeGisi (1998). Angling guide reports from the 1990/1991 to 2001/2002 licence years were entered by BCE, but AGMS was not maintained after the 2001/2002 licence year. SKR Consultants Ltd has more recently entered the angling guide reports for 2007/2008 (SKR 2009). The latest version of the AGMS (i.e. Version 3, *AGMS3_MS_Access_2007.mdb* and *AGMS3_Data.mdb*) has been made compatible with MS Access 2007, but is saved in MS Access 2003 format (i.e. *.mdb).

In conjunction with the update of AGMS, angling guide reports for the Skeena watershed from the 2004/2005, 2005/2006, and 2006/2007 licence years were added to the database. Most of the angling reports were adequately completed, but some of the data was ambiguous or incomplete and some inferences were made during data entry. For example, some guides combined the catch for anglers fishing on multiple days for the entire length of the fishing trip. In these cases, catch was arbitrarily re-allocated to individual days to ensure that overall catch and effort data remained intact, yet to ensure conservative estimates of daily catch per rod day. New guides certified since 2004 have been added to the database, and new waters not previously entered into the database have been added to the AGMS tables [Waters] and [Link Waters Status] where applicable. Only data for guides operating in the Skeena watershed were entered, and these data were located by manually reviewing each of the angling guide files located in the BCE Smithers office. Data Quality Assurance of newly entered data included comparison of all paper data to the entered digital data and queries were run to ensure that angling days at classified waters were correctly determined based on date and location.

A number of data summary queries and crosstab queries have been created in the AGMS3 data entry tool (i.e. *AGMS3_MS_Access_2007.mdb*) to provide easier access to the following information:

- number of guides reporting for classified waters, non-classified waters and lakes per licence year,
- number of guides reporting for each water in classified waters, non-classified waters and lakes per licence year,
- cumulative number of angler days reported each year by angling guides for each water in classified waters, non-classified waters and lakes,
- cumulative catch of each species per licence year reported by angling guides in classified waters, non-classified waters and lakes, and
- cumulative catch of commonly reported species (i.e. steelhead, chinook, coho, sockeye, rainbow trout, cutthroat trout, and pink salmon) per licence year for each water in classified waters, non-classified waters and lakes.

4.0 AGMS DATA SUMMARY

As of March 2010, the Angling Guide Management System (AGMS) includes annual report information received from angling guides active in the Skeena Region from 1990/1991 to 2001/2002, and in the Skeena watershed from 2004/2005 to 2007/2008 licence years. The total number of angling guides reporting guided angling activities in the Skeena watershed for each year has consistently ranged from 37 to 44 guides submitting reports, with the exception of the 1990/1991 and 2000/2001 licence years that had 50 guides reporting (Table 3). Individual guides have reported activity in up to 6 classified waters, 13 non-classified waters, and 12 lakes in any one season. The spatial distribution of angling guides, the spatial distribution and effort of guided anglers, and the temporal and spatial distributions of guided angler catch reported by angling guides are summarized in the following sections.

Table 3. Number of angling guides reporting their activities in the Skeena watershed for different years.

Skeena Watershed Angling Guide Reports	
Licence Year	# of Guides
1990/1991	50
1991/1992	42
1992/1993	39
1993/1994	37
1994/1995	43
1995/1996	43
1996/1997	39
1997/1998	40
1998/1999	38
1999/2000	43
2000/2001	50
2001/2002	40
2002/2003	data not entered
2003/2004	data not entered
2004/2005	40
2005/2006	45
2006/2007	40
2007/2008	38
2008/2009	data not entered

4.1 ANGLING GUIDE REPORTS

Because the same angling guide can report activities for a mix of classified waters (Class I or Class II status), unclassified waters and lakes within the same licence year, the total number of angling guides reporting activities in classified waters, non-classified waters and lakes for each licence year (Figure 2) is always more than the number of guided anglers listed in Table 3. No obvious trends in guide activity is evident based on the number of guides that have reported from 1990/1991 to 2001/2002 and 2004/2005 to 2007/2008 licence years. Interestingly, the peak in guides reporting their activities in 1990/1991 (i.e. 50 guides, *see* Table 3) was predominantly from a surge in the number of angling guides reporting activities in classified waters, but the peak in guides reporting in 2000/2001 (i.e. 50 guides, *see* Table 3) was associated with the highest recorded number of guides reporting activities in non-classified waters. The spatial distribution of angling guides that have reported activities at particular rivers with classified or non-classified status, and for specific lakes are summarized in the following sections.

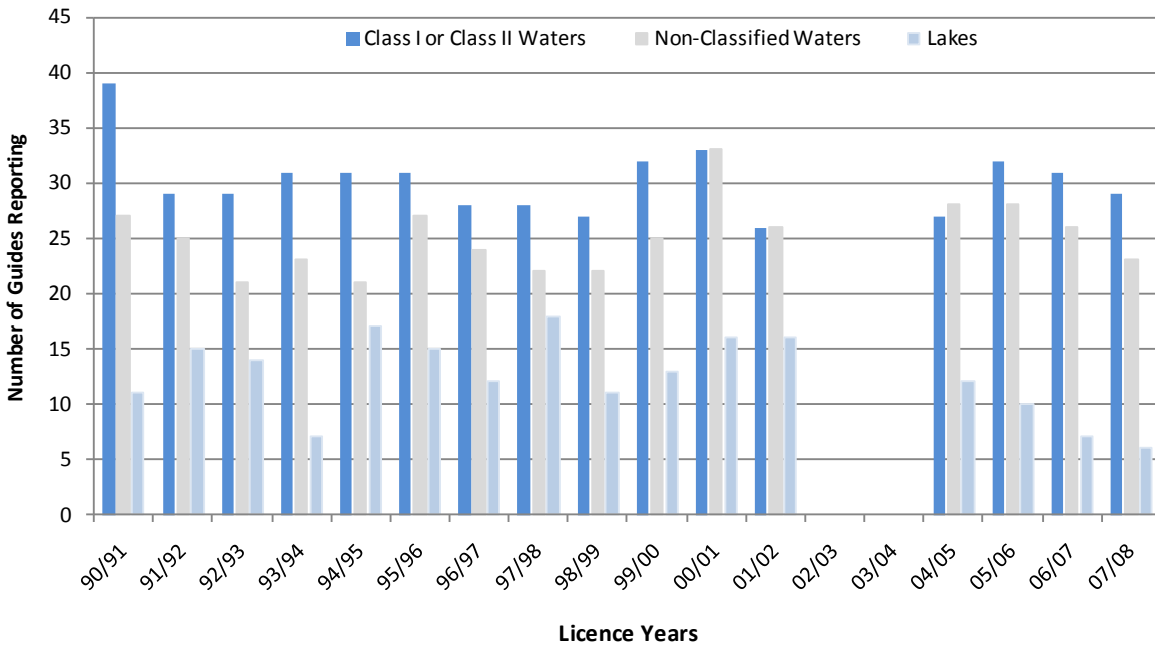


Figure 2. Total number of angling guides reporting activities in classified waters, non-classified waters, and lakes in the Skeena watershed during different licence years.

4.1.1 Classified Waters

The number of angling guides submitting reports for their activities in various waters with Class I or Class II status has been variable, but has not exceeded the maximum allowable number of licences (CAP) listed in the 2008 Wildlife Act (BC Environment 2009b). It is presently not possible to check if any licenced angling guides failed to report their activities since the numbers of allocated licences have not been maintained in the AGMS database. The actual numbers of angling guides reporting their activities at various classified water locations is closely related to the CAP's (*see* Table 1) with the most guides reporting activities at Skeena River 2 (i.e. Exchamsiks River to 1.5 km upstream of the Kitsumkalum River), Skeena River 4 (i.e. upstream of 1.5 km above the Zymoetz River), and at the Kitsumkalum and Bulkley rivers (Table 4).

Table 4. Total number of angling guides reporting activities in *Class I or Class II waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Class I or Class II Waters	Guides Reporting / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
SKEENA R 2	17	14	14	15	16	15	13	12	12	13	13	13			7	10	12	11	7 - 17
SKEENA R 4	14	7	6	6	3	4	3	3	4	5	6	8			6	6	9	9	3 - 14
KITSUMKALUM R	12	10	10	11	12	9	11	8	10	11	11	9			7	6	10	7	6 - 12
BULKLEY R	5	6	7	6	7	7	7	8	9	8	8	7			6	8	7	7	5 - 9
ZYMOETZ R 2	2	1	1	2	2	3	3	4	3	4	4	4			2	2	3	5	1 - 5
ZYMOETZ R 1	3	1		1	1	2	2	2	2	3	2	3			3	3	5	3	1 - 5
KISPIOX R	4	4	2	3	2	2	3	2	3	3	3	2			3	3	3	3	2 - 4
BABINE R 1	4	3	3	3	3	3	3	3	3	3	3	2			3	3	3	3	2 - 4
GITNADOIX R A	4	3	2	2	2	2	1	1	1	1	1	1							1 - 4
ECSTALL R	3	2	2	2	2	3	2	1	2	3	2	2			2	2	2	2	1 - 3
MORICE R	3	2	2	2	3	3	3	2	2	2	3	1			2	2	2	2	1 - 3
BABINE R 2			1			1	3	2		2	2								1 - 3
SUSTUT R	2	2	2	2	2	2	2	2	2	2	2	2			2	2	2	1	1 - 2
CLORE R											2				1				1 - 2
KLUATANTAN R	1	1		1	1	1									1	1	1	1	1 - 1
LAKELSE R										1					1	1			1 - 1
KITWANGA R									1	1									1 - 1
SKEENA R (Classified)															1	1			1 - 1
NANGEESE R																		1	1 - 1
SWEETIN R																		1	1 - 1

Note: Locations sorted by descending order of the maximums of each range (*see* Appendix 1 and 2 for watershed code and location descriptions)

4.1.2 Non-classified Waters

Limits to the number of angling guide licences issued (i.e. CAP's) for each licence year for non-classified waters in the Skeena watershed have not been designated in the Wildlife Act (BC Environment 2008b). The lower mainstem of the Skeena River, (i.e. Skeena 1,2, and 3: downstream of 1.5 kilometres upstream of the Zymoetz River), the Kasiks, Exchamsiks, Bulkley and Zymoetz rivers have the highest numbers of active angling guides on non-classified waters. Nilkitkwa Lake and Rainbow Alley (i.e. Babine R 2) has had up to 6 active angling guides reporting activities in one licence year (e.g. 1993/1994), but appears to be declining in the more recent years (Table 5). Interestingly, the number of licenced guides reporting activity on the Skeena, Exstew, Zymagotitz and lower Zymoetz rivers, and at Williams and Gamble creeks appear to have increasing numbers of angling guides reporting activities since the 2003/2004 licence year (Table 5), but this may be associated with licence transfers occurring in mid-season (Peard, pers. comm. 2010).

Table 5. Total number of angling guides reporting activities in *non-classified waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Non-Classified Waters	Guides Reporting / Licence Year																RANGE		
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06		06/07	07/08
SKEENA R 3	5	4	5	7	5	9	9	7	5	7	14	9			11	13	11	10	4 - 14
KASIKS R	6	5	6	6	8	7	11	4	3	6	10	9			8	8	7	9	3 - 11
SKEENA R 1	5	3	3	2	2	5	4	5	4	6	7	7			9	10	10	11	2 - 11
SKEENA R (Non-Classified)															10	10	8	1	1 - 10
EXCHAMSIKS R	2	3	7	3	4	4	4		2	3	2	3		4	4	5	5		2 - 7
SKEENA R 2	4	4		4	2	6	3	2	5	7	6	6		3	4	5	6		2 - 7
ZYMOETZ R 2	2	1	2	2	1	3	4	2	4	4	3	6		2	3	3	4		1 - 6
BABINE R 2	3	4	3	6	3	4	5	4	4	4	5	3		5	2	2	1		1 - 6
ZYMAGOTITZ R	1		2	2	2	2	2	1	2	1	2	1		5	4	6	4		1 - 6
BULKLEY R	3	5	2	4	3	2	2	1	2	1	3	5		3	2	3	4		1 - 5
EXSTEW R					1		1			1		2		5	2	3	3		1 - 5
KISPIOX R	3	4	2	2	1	1	1	1	1	1		1						1	1 - 4
ZYMOETZ R 1	1			1			1			1				3	2	4	3		1 - 4
BABINE R 1	3	1	2	2	2	2	3	3	3	2	2	2		2	1			1	1 - 3
FULTON R	1	1		1	1	1	1	1	1	2	2	3			1				1 - 3
SUSTUT R	2	2	2	2	2	2	1	2	1	2	1	1		1	2	1	1		1 - 2
MORICE R		1	1	1	1	1				1	2	1		1	1	1	1		1 - 2
SKEENA R 4	1	1	1	2	1	1		1			1			1	1	1	1		1 - 2
WILLIAMS C							1			1		2		2	2	1	1		1 - 2
KLEANZA C						1					2	1			1	1	1		1 - 2
CEDAR R						2						1							1 - 2
MORRISON C	1	1	1	1	1	1	1	1	1	1	1	1		1					1 - 1
NANIKA R								1	1	1	1	1		1	1	1			1 - 1
KHYEX R	1	1				1	1										1	1	1 - 1
BURNIE R						1		1	1		1								1 - 1
HOWSON C						1			1		1								1 - 1
CLORE R										1								1	1 - 1
GAMBLE C																	1	1	1 - 1
GOAT C														1	1				1 - 1
FIDDLER C										1									1 - 1
KULDO C																		1	1 - 1
NILKITKWA R																		1	1 - 1
OLIVER C						1													1 - 1
PINKUT C														1					1 - 1
SCOTIA R																1			1 - 1
SHEGUNIA R		1																	1 - 1
SICINTINE R																		1	1 - 1
SLAMGEESH R			1																1 - 1

Note: Locations are sorted in descending order of the maximums of each range (see Appendix 1 for watershed codes and location descriptions)

4.1.3 Lakes

No lakes in the Skeena watershed have been given Class I or Class II status, and the issuance of angling guide licences is not limited for any lakes under the Wildlife Act (BC Environment 2008b). The highest number of angling guides reporting activity on lakes has been for Babine Lake in 1999/2000 to 2001/2002 licence years (i.e. 7 guides reporting), but two or less guides have reported since the 2004/2005 licence year. In addition, Morice, Kitsumkalum, Lakelse, and Morrison lakes are the larger lakes in the Skeena watershed that consistently have had one to three angling guides reporting their licenced activities. Klinger, Khtada, Swan, Helen, Mooseskin Johnny, Nez and South Saddle lakes are some of the smaller lakes in the Skeena watershed where one to three angling guides have commonly reported guiding activities (Table 6). Overall however, there appears to be a notable decline of the total number of smaller lakes with guided angling activities in the Skeena watershed since 2004.

Table 6. Total number of angling guides reporting activities at various *lakes* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Lakes	Guides Reporting / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
BABINE L	4	5	4	2	3	5	5	6	4	7	6	7							1 - 7
ROSS L		3	4																1 - 4
LAKELSE L					1	2	1	1	1	1		2			3	2			1 - 3
SWAN L	3	3	2	2	3														2 - 3
MORICE L	1	1	1		1	2		1	1	1	1	2			2	2	2	1	1 - 2
KITSUMKALUM L	1	1	1		1	2		2		2	1	1			1	1	1	2	1 - 2
KHTADA L	1					1	2	1		2	1	1			1	1	1	1	1 - 2
KLINGER L		1	1					2	2	2	2	2	1		1	1	1	1	1 - 2
HELEN L								1	2	1	2	1			1	1	2	1	1 - 2
BARRETT L								1	1	1	1	1			1	2	2		1 - 2
HIDDEN L	2	1	1	1	1						1	1							1 - 2
NANIKWA L	2	2	1	1	2						1	1							1 - 2
NILKITWAL										2					1	1	1	1	1 - 2
VALLEE L								1	2	2	1	1							1 - 2
BEAR L	2		1	1			1												1 - 2
DUCKWING L		1		1		1		2											1 - 2
GRIZZLY L	1	2	1					1											1 - 2
MCBRIDE L	2								1			1							1 - 2
MITTEN L		1	2																1 - 2
SHEA L	2																		2 - 2
MORRISON L	1	1	1	1		1	1	1	1	1	1	1			1		1		1 - 1
MOOSESKIN JOHNNY L			1		1	1	1	1	1	1	1	1			1	1	1		1 - 1
SOUTH SADDLE L			1	1	1	1	1	1	1	1	1	1					1		1 - 1
NEZ L	1	1	1					1	1	1	1	1			1	1			1 - 1
BURNIE L			1		1	1	1	1	1	1	1	1							1 - 1
DUTI (N) L			1		1	1			1		1	1			1	1	1		1 - 1
SILVERTHORNE L	1	1	1					1		1	1	1							1 - 1
TALTAPIN L	1	1	1			1	1	1	1										1 - 1
FISHPAN L	1	1	1	1	1	1	1												1 - 1
KIDPRICE L	1	1		1	1					1		1							1 - 1
DUNALTER L		1	1						1		1	1							1 - 1
CANYON L		1	1		1				1	1	1								1 - 1
DUTI (S) L						1				1					1	1	1		1 - 1
FRY PAN L	1	1						1		1	1								1 - 1
SECRET L										1	1				1	1	1		1 - 1
SLAMGEESH L	1	1	1						1										1 - 1
HOLLAND L	1	1	1			1													1 - 1
SKINHEAD L					1					1	1								1 - 1
ATNA L					1					1	1								1 - 1
CHAPMAN L		1	1							1									1 - 1
HELENE L						1	1			1									1 - 1
NETALZUL L												1	1					1	1 - 1
TZAHNY L	1	1	1																1 - 1
MUDDY L	1						1												1 - 1
STEPHENS L		1			1														1 - 1
FLATFISH L		1	1																1 - 1
KITWANCOOL L											1					1			1 - 1
FULTON L			1								1								1 - 1
HODDER L									1			1							1 - 1
SUNSET L								1	1										1 - 1
GUNANOOT L			1		1														1 - 1
MCDONELL L			1												1				1 - 1
TYREE L		1									1								1 - 1
ONERKA L										1									1 - 1
TOUHY L											1								1 - 1
BILL NYE L								1											1 - 1
CHARLOTTE L					1														1 - 1
WILLIAMS L					1														1 - 1
FOOTSORE L												1							1 - 1
GILMORE L															1				1 - 1
KLATE L										1									1 - 1
SWAMP L																			1 - 1
CHISHOLM L		1		1															1 - 1
DAMSHILGWIT L		1																	1 - 1
KLUAYAZ L								1											1 - 1
OWEN L			1																1 - 1
PEANUT L											1								1 - 1
PINE TREE L		1																	1 - 1
ROBINSON L		1																	1 - 1
ROUND L		1																	1 - 1
SAINYA L					1														1 - 1
WILSON L									1										1 - 1

Note: Locations are sorted in descending order of the maximums of each range (see Appendix 1 for watershed codes and location descriptions)

4.2 ANGLING GUIDE ACTIVITY

The total number of angler days reported by angling guides for classified waters (Class I or Class II status), unclassified waters and lakes have all shown variability from year to year (Figure 3): 5356 -9106 angler rod days/year for classified waters, 1715 – 3658 for unclassified waters, and 235 – 1382 for lakes. Notable peaks in guided angler rod days on classified waters were in the 1990/1991 (9106 guided angler rod days), 1995/1996 (7841 guided angler rod days) and 1999/2000 (8015 guided angler rod days) licence years. The total numbers of guided angler rod days per licence year on non-classified waters appears to be less variable in recent years, as the low numbers of guided angler rod days reported occurred back in the early 90’s. Interestingly, the total numbers of guided angler rod days reported for lakes since 2004 appears to show a decline in guided angling activities on lakes in the Skeena watershed. The distribution of guided effort (i.e. angler rod days) reported for particular rivers with classified or non-classified status, and for specific lakes are summarized in the following sections.

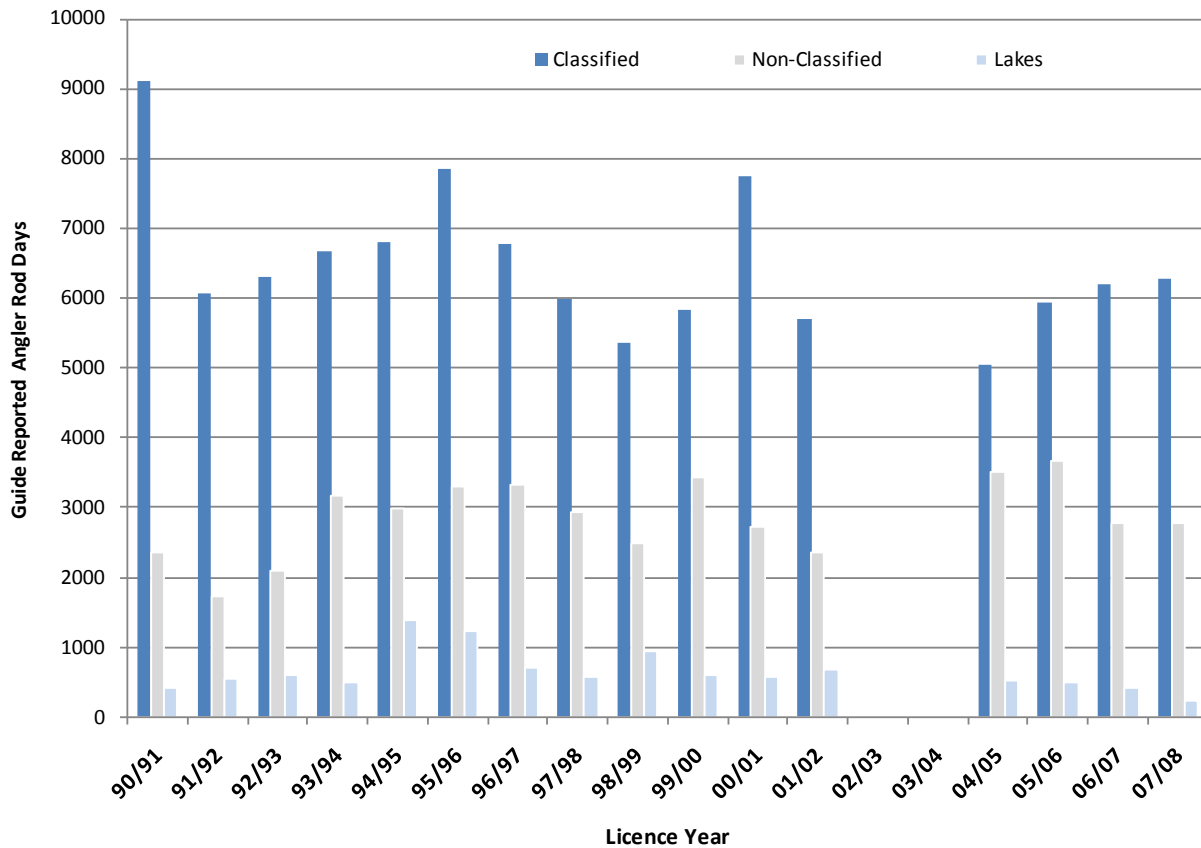


Figure 3. Total number of guided angler rod days reported by angling guides for classified waters, non classified waters, and lakes in the Skeena watershed during different licence years.

4.2.1 Classified Waters

The total numbers of guided angling rod days reported for classified waters (i.e. Class I or Class II status) has been variable, and appears to have potentially exceeded the maximum allowable allocations listed in the 2008 Wildlife Act (*see* Table 1, BC Environment 2008b) on the Kispiox River in the 1999/2000 and 2000/2001 licence years (Table 7). Although not recently, a small amount of guided angler rod days have been reported for Lakelse River which presently allows no licences or angler days to be allocated under the Wildlife Act (BC Environment 2008b). For the reported angler days on Lakelse River, five of the seven reported anglers in 1999/2000 were reported in the comments field to be “on their own”, thus not guided. The total number of guided angler days reported for the different classified waters has been variable, but information was not available to determine if significant proportions of allocated angler days were not used or possibly have not been reported. The most guide activity on record for one location in a single licence year, is 4052 guided angler days in 1990/1991 on the Skeena River from Exchamsiks River to just upstream of the Kitsumkalum River (i.e. Skeena 2). Interestingly, the total number of reported guided angling activity at Skeena River 2 appears to have decreased in more recent years (Table 7). It is also noteworthy that guided activities have either been reduced to none, or have not been reported, since the 2004/2005 licence year for the Gitnadoix River (Table 7).

Table 7. Guide reported angler days for *Class I or Class II waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Class I or Class II Waters	Guide Reported Angler Days / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
SKEENA R 2	4052	2418	3118	2879	2531	3276	2110	1562	614	1029	2291	1793			980	1000	1387	1448	614 - 4052
BABINE R 1	1706	1526	1397	1386	1567	1704	1722	1714	1671	1694	1785	1281			1409	1456	1528	1573	1281 - 1785
BULKLEY R	973	418	544	822	1097	1124	1120	1047	1146	947	1394	929			667	1225	726	701	418 - 1394
SUSTUT R	403	452	290	301	366	358	373	400	495	564	669	654			659	712	682	611	290 - 712
KITSUMKALUM R	667	259	420	344	397	412	499	415	500	374	484	307			223	377	649	642	223 - 667
KISPIOX R	221	334	134	273	208	318	244	235	350	404	406	255			387	391	342	410	134 - 410
MORICE R	390	350	100	256	357	275	308	282	305	374	406	50			339	331	289	268	50 - 406
SKEENA R 4	272	157	105	193	59	148	144	117	107	158	173	179			162	184	312	330	59 - 330
ZYMOETZ R 1	195	8		3	8	12	16	17	23	30	26	41			76	79	106	78	3 - 195
ZYMOETZ R 2	47	10	1	31	35	63	59	99	80	181	75	119			35	33	69	108	1 - 181
ECSTALL R	40	31	98	91	117	119	132	80	49	37	21	54			69	90	72	46	21 - 132
GITNADOIX R A	132	73	95	64	20	19	25	19	12	28		26							12 - 132
KLUATANTAN R	8	26		34	35	17									24	16	35	54	8 - 54
SKEENA R (Classified)																38	6		6 - 38
CLORE R											22				2				2 - 22
BABINE R 2/Rainbow Alley			2			4	12	14			6								2 - 14
LAKELSE R									7						3	3			3 - 7
SWEETIN R																		6	6 - 6
NANGESE R																		6	6 - 6
KITWANGA R								4	3										3 - 4
Combined	9106	6062	6304	6677	6797	7849	6764	6001	5356	5830	7758	5688			5035	5935	6203	6281	5035 - 9106

Note: Locations are sorted in descending order of the maximums of each range (*see* Appendix 1 for watershed codes and location descriptions)

4.2.2 Non-classified Waters

No limits to the number of guided angler days to be allocated for each licence year for non-classified waters in the Skeena watershed have been designated in the Wildlife Act (BC Environment 2008b). The lower mainstem of the Skeena River, (i.e. Skeena 1, 2, and 3: downstream of 1.5 kilometres upstream of the Zymoetz River) consistently has the highest guided angling pressure in the Skeena watershed. Babine River 2, is actually the Nilkitkwa Lake and Rainbow Alley section of the Babine River between Nilkitkwa and Babine lakes, but has historically had the second most guide activity on record, but notable declines of guided angling effort are apparent since the 2004/2005 licence year. Recent increases in guide angling activities for non-classified waters are apparent for the Zymoetz (i.e. section 1 and section 2), Zymagotitz, Morice, and Exstew rivers and Gamble Creek (Table 8).

Table 8. Guide reported angler days for *non-classified waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Non-Classified Waters	Guide Reported Angler Days / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
BABINE R 2/Rainbow Alley	895	823	816	1122	993	950	908	1497	671	1032	608	603			262	336	355	310	262 - 1497
SKEENA R 3	630	118	529	1167	981	1207	1335	404	1042	1312	1127	644			1123	877	1213	1212	118 - 1335
SKEENA R (Non-Classified)															679	1219	193	108	108 - 1219
SKEENA R 1	325	208	133	112	188	244	205	358	201	214	243	159			343	445	248	279	112 - 445
KASIKS R	40	39	163	172	254	302	295	144	48	69	132	124			126	143	106	173	39 - 302
BABINE R 1	55	24	28	99	75	130	225	214	201	235	218	223			145	159		55	24 - 235
ZYMOETZ R 2	18	4	23	21	11	101	35	6	28	74	55	233			273	175	167	245	4 - 273
SUSTUT R	83	137	154	111	108	45	166	64	2	178	51	59			62	42	34	42	2 - 178
BULKLEY R	97	115	54	99	74	43	32	122	101	10	34	76			53	31	59	71	10 - 122
SKEENA R 2	98	27		80	101	52	12	13	38	89	93	48			93	37	49	55	12 - 101
NANIKA R								83	68	101	30	16			36	35	31		16 - 101
KISPIOX R	59	97	35	99	35	27	14	5	31	44		19						17	5 - 99
GAMBLE C																		97	32 - 97
EXCHAMSIKS R	18	56	92	23	30	82	55		24	20	10	66			44	35	49	58	10 - 92
ZYMOETZ R 1	2			3			2			6					62	51	92	14	2 - 92
MORICE R		2	6	4	4	1				12	32	21			70	13	14	16	1 - 70
MORRISON C	16	25	54	30	33	10	14	16	13	9	16	10			4				4 - 54
ZYMAGOTTITZ R	3		7	11	14	45				6	1	21			51	22	23	41	1 - 51
EXSTEW R				24			9			3	3	15			40	7	18	17	3 - 40
FULTON R		31	3		21	10	10	12		8	4	13				8			3 - 31
SKEENA R 4	2	2	3	12	28	13		1			13				3		6	2	1 - 28
NILKITKWA R																		19	19 - 19
WILLIAMS C							1			3		4			15	10	1	6	1 - 15
CLORE R											14							2	2 - 14
OLIVER C						12													12 - 12
FIDDLER C											12								12 - 12
BURNIE R						4		4	6		11								4 - 11
GOAT C															11	7			7 - 11
KLEANZA C						9					9	2				6	5	3	2 - 9
KHYEX R	7	6				3	9										2	2	2 - 9
CEDAR R						8						1							1 - 8
PINKUT C															8				8 - 8
HOWSON C						2		6		1									1 - 6
SLAMGEESH R			4																4 - 4
SCOTIA R																	2		2 - 2
KULDO C																		2	2 - 2
SICINTINE R																		2	2 - 2
SHEGUNIA R		1																	1 - 1
Combined	2348	1715	2104	3165	2974	3300	3327	2943	2480	3425	2717	2357			3503	3658	2764	2783	1715 - 3658

Note: Locations are sorted in descending order of the maximums of each range (see Appendix 1 for watershed codes and location descriptions)

4.2.3 Lakes

Although it is listed under non-classified waters as a river, Babine River 2 (i.e. Nilkitkwa Lake and Rainbow Alley, *see* Table 8) can be grouped with lakes and has consistently had the most reported guided angling rod days for lakes in the Skeena watershed (250 -1497 rod days/licence year). Babine and Khtada lakes have had the next highest and consistent angling guide activities, with guides reporting 26 to 817 and 4 to 371 guided angler rod days, respectively. The significant number of guided angler rod days reported in the early 90's at Swan Lake is suspected to be a reporting or data entry error referring to a different Swan Lake in the Swift River drainage near the Yukon border to British Columbia. Interestingly, angling guide activity on Babine Lake (Table 9) and Babine River 2 (Table 8) appear to have declined since 2004/2005. A potential surge of guided angling activity in 2004/2005 and 2005/2006 on South Duti Lake is also evident (Table 9). The most obvious trend of guided angling activities in the Skeena watershed has been the decline of reported activity at only 7 lakes in the 2007/2008 licence year.

Table 9. Guide reported angler days for *Lakes* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Lakes	Guide Reported Angler Days / Licence Year															RANGE			
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05		05/06	06/07	07/08
BABINE L	44	99	61	98	817	718	128	92	551	102	109	108			50	41	26	27	26 - 817
KHTADA L	4					302	371	191		196	179	317			131	158	160	190	4 - 371
SWAN L	147	127	128	194	234										149	120	66		127 - 234
DUTI (S) L					16			6											6 - 149
MORICE L	12	4	2		4	10		85	77	97	45	19			34	37	35	2	2 - 97
DUTI (N) L					88	5			60		11	40			12	8	20		5 - 88
SOUTH SADDLE L			7	83	37	39	40	8	32	11	32	20					6		6 - 83
MORRISON L	40	28	79	53		27	17	25	38	16	14	23			4		16		4 - 79
MOOSESKIN JOHNNY L			76		59	46	47	46	48	41	47	44			43	49	36		36 - 76
NANIKAL L	27	40	4	18	57						11								4 - 57
ROSS L	20	44						2							4				2 - 44
NEZ L	22	30	28				36	22	4	6	8	18			16	18			4 - 36
DUNALTER L	36	18						2		4	2	5							2 - 36
FISHPAN L	28		22	9	13	2	2												2 - 28
ATNA L				3						26	2								2 - 26
GRIZZLY L	6	25	2					4											2 - 25
BARRETT L								14	24	20	6	5			8	2	3		2 - 24
BURNIE L			23		16	18	16	19	14	5	15	12							5 - 23
KITSUMKALUM L		15	8		5	18		14		22	20				6	8	1	10	2 - 22
NILKITWA L										22					4	19	18	2	2 - 22
KLINGER L		13	6					13	9	8	2	3			18	9	6		2 - 18
LAKELSE L					4	9	18	3	7	18					13	11			3 - 18
DUCKWING L		6		18		1		7											1 - 18
HELEN L								1	16	8	8	2			4	9	10	2	1 - 16
HIDDEN L	13	6	16	6	8						4	7							4 - 16
BEAR L	7		15	2			9												2 - 15
MITTEN L			15	15															15 - 15
SLAMGEESH L	4	10	3						14										3 - 14
HOLLAND L	14	2	2			2													2 - 14
NETALZUL L											6	12						2	2 - 12
TZAHNY L	6	13	6																6 - 13
SHEA L	13																		13 - 13
SILVERTHORNE L	10	12	2					2	2	4	1	1							1 - 12
FRY PAN L	12	3						5		2	2								2 - 12
FLATFISH L		3	12																3 - 12
KLUJAYAZ L								12											12 - 12
SECRET L											2	12			6	8	11		2 - 12
KIDPRICE L	4	2		6	8					4		4							2 - 8
CANYON L		1	3	2					4		8								1 - 8
MCDONELL L			7												8				7 - 8
GUNAWOOT L			6	8															6 - 8
VALLÉE L								2	7	6	1	2							1 - 7
MCRBIDE L	7								6			2							2 - 7
TALTAPIN L	5	4	2			3	3	6	2										2 - 6
HELENE L						6	3		4										3 - 6
CHAPMAN L		3	6							2									2 - 6
TYHEE L		6								1									1 - 6
ROBINSON L		6																	6 - 6
FOOTSORE L												6							6 - 6
ROUND L		6																	6 - 6
OWEN L			6																6 - 6
ONERKA L										6									6 - 6
KITWANCOOL L											2					5			2 - 5
CHARLOTTE L					5														5 - 5
SAIYA L					5														5 - 5
SKINHEAD L					4					2	1								1 - 4
MOODY L	4						2												2 - 4
STEPHENS L		3			4														3 - 4
SUNSET L								2	4										2 - 4
FULTON L			1							4									1 - 4
PEANUT L											4								4 - 4
WILSON L									4										4 - 4
GILMORE L															4				4 - 4
TOUHY L												3							3 - 3
CHISHOLM L			3																3 - 3
HODDER L										2		2							2 - 2
BILL NYE L								2											2 - 2
SWAMP L				2															2 - 2
DAMSHILGWIT L		1																	1 - 1
KLATE L										1									1 - 1
WILLIAMS L					1														1 - 1
PINE TREE L		1																	1 - 1
Combined	429	543	610	489	1382	1222	692	583	931	612	564	672			514	502	414	235	235 - 1382

Note: Locations are sorted by descending order of the maximums of each range (*see* Appendix 2 for watershed codes and location descriptions)

4.3 SPECIES REPORTED BY ANGLING GUIDES

Guide reported catch of each species encountered at classified and non-classified waters and lakes in the Skeena watershed from 1990 to 2008 are summarized in tables 10, 11, and 12. The annually reported steelhead catch by guided anglers (i.e. 1777 – 7923 ST/licence year) has consistently represented the predominant species reported for classified waters in the Skeena watershed since 1990. Rainbow trout has been the predominant species reported by angling guides for activities in non-classified waters (1839 – 6330 RB/licence year) and lakes (168 – 2734 RB/licence year) in the Skeena watershed, but had record low reported catches in 2007/2008 compared to other years. Notable numbers of pink, chinook, sockeye, and coho salmon have also been reported for classified waters since 1990, with a recent increase of sockeye being reported since 2006/2007 (Table 10). The total number of pink and sockeye salmon reported since 2004/2005 for unclassified waters (Table 11) show an apparent increase of catch or reporting of catch for these species. Of the other species listed, bull trout appear to be regularly reported for classified waters, and cutthroat trout are regularly reported for non-classified waters and lakes.

The distribution of species reported by angling guides at different locations from 1990 to 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years are presented in tables 13, 14, and 15 for classified waters, non-classified waters, and lakes, respectively. These results are presented to provide an overview of the potentially targeted and by-catch species at different locations. Readers should be aware that some unidentified species have been removed or summed (e.g. mountain, lake and “general” whitefish) for this presentation. It is also noteworthy that bull trout (BT) was not differentiated from Dolly Varden char by angling guides reporting from 1990 to 2002. In addition, some species in historical data for Swan Lake were likely confused with the Swan Lake in the Swift River watershed, thus capture of arctic grayling and northern pike reported in the Skeena watershed and entered in AGMS are not presented.

The annual guide reported catch of steelhead, rainbow trout, cutthroat trout, chinook, coho, and sockeye at different locations in the Skeena watershed during classified or non-classified status, and for lakes are summarized in the following sections.

Table 10. Guide reported catch of all species reported for *Class I or Class II waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

SPECIES	Guide Reported Catch / Licence Year for Class I and Class II Waters																RANGE		
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06		06/07	07/08
Steelhead	4128	1777	3534	4507	5103	5212	4720	5280	7212	6209	7923	5051			5492	5413	4840	3700	1777 - 7923
Pink salmon	929	574	570	162	42	328	552	107	24	114	184	615			149	709	214	2655	24 - 2655
Chinook salmon	1268	1011	1280	1340	821	784	663	597	485	674	1079	1875			347	513	740	414	347 - 1875
Sockeye salmon	5	23	20	51	14	18	78	187	3	5	351	309			113	143	713	1168	3 - 1168
Coho salmon	1033	909	420	552	543	579	566	143	195	465	321	641			121	285	246	462	121 - 1033
Trout (general)								494							2		2		2 - 494
Bull trout											9				104	166	222	160	9 - 222
Cutthroat trout	70	64	16	17	2	8	12	68	71	157	107	24			11	13	53	17	2 - 157
Dolly Varden	103	68	27	51	46	63	36	81	97	143	140	31			33	46	92	8	8 - 143
Species not recorded		2	6	22	2										4	124	17	21	2 - 124
Rainbow trout	32	4	3	1	7	20	3	25	26	9	2	3			6	5	9	3	1 - 32
Whitefish (general)		1	4		4	6	8	15	12	1	2				18	12	5	1	1 - 18
Salmon (general)															14	12			12 - 14
Chum salmon				1	1	2	3		2	3	2	3			6	1	4	13	1 - 13

Note: Species are sorted in descending order of the maximums of each range

Table 11. Guide reported catch of all species reported for *non-classified waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

SPECIES	Guide Reported Catch / Licence Year for Non-Classified Waters																RANGE		
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06		06/07	07/08
Rainbow trout	4118	3621	3976	4581	3544	3495	3121	6194	4887	6330	6097	3945			3194	3115	4578	1839	1839 - 6330
Coho salmon	119	119	269	330	614	532	596	129	273	920	464	1361			574	1588	672	650	119 - 1588
Steelhead	91	15	64	377	390	430	588	448	962	1239	774	1097			1287	1067	582	519	15 - 1287
Pink salmon		315	61	163	9	108	198	32	13	213	74	302			312	1136	108	635	9 - 1136
Chinook salmon	291	437	570	892	412	377	337	152	317	446	560	504			631	810	547	166	152 - 892
Cutthroat trout	20	186	52	588	97	17	25	6	538	27	834	111			93	319	585	323	6 - 834
Sockeye salmon	5	2	11	5	16	202	252	111	76		316	413			357	490	754	314	2 - 754
Unknown / Unrecorded				1											385	481	177	0	0 - 481
Dolly Varden	25	87	32	13	26	38	43	17	52	89	32	62			168	72	94	19	13 - 168
Bull trout											6	17			151	45	42	51	6 - 151
Species not identified																85			85 - 128
Trout (general)								15							93	118			15 - 118
Whitefish (general)		1		53	6	12	1			3		3			51	15			1 - 53
Salmon (general)															27	8			8 - 27
Lake trout				1	24					18		2			2	3	2		1 - 24
Chum salmon						3	4	1	9		4				7	12	3	2	1 - 12
Burbot															2	5			2 - 5
Chinook salmon (jack)								5											5 - 5

Note: Species are sorted by descending order of the maximums of each range

Table 12. Guide reported catch of all species for *lakes* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

SPECIES	Guide Reported Catch / Licence Year for Lakes																RANGE		
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06		06/07	07/08
Rainbow trout	447	789	671	1145	2728	2734	1415	1213	1891	932	1381	1463			1061	1357	1207	168	168 - 2734
Cutthroat trout	619	567	906	85	348	332	288	269	524	293	780	758			217	212	134	18	18 - 906
Lake trout	270	234	170	203	413	60	184	136	158	184	119	78			72	64	99	18	18 - 413
Dolly Varden	14	76	22	10	205	31	3	14	14	83	3				2	7	5		2 - 205
Trout (general)												12			3	155			3 - 155
Pink salmon			65		71							8			6			7	6 - 71
Sockeye salmon		7	25		69			14			11	60			9		28	56	7 - 69
Coho salmon		21	21		2	2	26	1	46	35	42	1			23	52	3	9	1 - 52
Chinook salmon	7	12		2	52			52	12										2 - 52
Species not recorded					48										9				9 - 48
Bull trout											1					40			1 - 40
Steelhead						11		4	36	12						5			4 - 36
Kokanee									30	2		10							1 - 30
Eastern Brook Trout		2	4						25	14	9	6			19	11	8		2 - 25
Whitefish (general)		3								2					2	12	3		2 - 12
Burbot									2			7							2 - 7

Note: Species are sorted by descending order of the maximums of each range

Table 13. Total catch from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years of each species reported by angling guides for locations in the Skeena watershed during *Class I or Class II status*.

Class I or Class II Waters	Total catch of each species reported from 1990/1991 to 2001/2002 and 2004/2005 to 2007/2008										
	ST	CH	CO	SK	PK	CT	DV	BT	RB	CM	WF
BABINE R 1	36619	34	26	2			11		3		
BULKLEY R	17236	5	40		121	9	2		4		
CLORE R	21							3			
ECSTALL R	1	1357	64		1			2		2	
GITNADOIX R A			1909		12	22	5				
KISPIOX R	4486	3	359	4	101	270	182	8	37	3	0
KITSUMKALUM R	2678	2783	1089	9	182	209	349	570	48	1	0
KITWANGA R						128					
KLUATANTAN R	367	26	10				41		9		
LAKELSE R			47								
MORICE R	6432		25								
NANGEESE R											
SKEENA R (Classified)	10	7									
SKEENA R 2	3954	9348	3727	2685	7229	75	122	13	3	35	
SKEENA R 4	1263	317	55	472	276	5	58	6			
SUSTUT R	5240	8	22	3			273		49		0
SWEETIN R											
ZYMOETZ R 1	1028	1	32				4	28			0
ZYMOETZ R 2	1293		97			1	29	34	6		

Note: ST (Steelhead), CH (Chinook), CO (Coho), SK (Sockeye), PK (Pink), CT (Cutthroat), DV (Dolly Varden char), BT (bull trout), RB (Rainbow trout), CM (Chum), WF (Whitefish spp.)

Table 14. Total catch from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years of each species reported by angling guides for *non-classified waters* in the Skeena watershed.

Non-Classified Waters	Total catch of each species reported from 1990/1991 to 2001/2002 and 2004/2005 to 2007/2008													
	RB	ST	CH	CO	SK	PK	CT	DV	BT	CM	WF	LT	BB	KO
BABINE R 1	89	5101	48		274			1		4				
BABINE R 2	64331	287	83		196	6	2342	29	3		0	16		
BULKLEY R	8	461	216	8		414	12	21	4					
BURNIE R							29							
CEDAR R		2												
CLORE R		40												
EXCHAMSIKS R	3	9	30	1146	1		50	13	4					
EXSTEW R		13		160				7	86					
FIDDLER C		1		8			14							
FULTON R	380				20		185				0			6
GAMBLE C	75		20	3		3	548							
GOAT C				36										
HOWSON C							1	4						
KASIKS R	11	63	16	3972	1	51	237	46	12	1				
KHYEX R		30		9				1						
KISPIOX R	124	72	299	49	2	231	115	72		1				
KLEANZA C	4	2				3	9	2						
KULDO C														
MORICE R		87	14			30		17						
MORRISON C	993	0												12
NANIKA R	510	51	30	23				90	24		0	24		
NILKITKWA R	130							13						
OLIVER C								2	4		1			
PINKUT C	12										0			
SCOTIA R														
SHEGUNIA R						6								
SICINTINE R														
SKEENA R (Non-Classified)		338	800	769	392	176		2						
SKEENA R 1	2	898	680	1563	150	854	60	134	11	8				
SKEENA R 2		187	196	266	1	40	43	26	23					
SKEENA R 3	1	817	3412	972	2306	1842	14	75	13	30				2
SKEENA R 4		7	86				1	2						
SLAMGEESH R			5											
SUSTUT R	13	100	1335	3	4			113			0			
WILLIAMS C							145	2	15		0			
ZYMAGOTITZ R	1	96		155			1	31	24					
ZYMOETZ R 1		137	32	12				27	30					
ZYMOETZ R 2	1	1175	149	56	3	29		156	65		0			5

Note: RB (Rainbow trout), ST (Steelhead), CH (Chinook), CO (Coho), SK (Sockeye), PK (Pink), CT (Cutthroat), DV (Dolly Varden char), BT (bull trout), CM (Chum), WF (Whitefish spp.), LT (Lake trout), BB (burbot), KO (Kokanee)

Table 15. Total catch from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years of each species reported by angling guides for *lakes* in the Skeena watershed.

Lakes	Total catch of each species reported from 1990/1991 to 2001/2002 and 2004/2005 to 2007/2008													
	RB	CT	LT	CO	SK	PK	CH	DV	BT	EB	KO	ST	WF	BB
ATNA L	34		8					27						
BABINE L	5544	130	1105	22	276	71	2				65	11	20	4
BARRETT L	194													
BEAR L	26	16	85											
BILL NYE L	20													
BURNIE L		213												
CANYON L	26		10					19						
CHAPMAN L	5	30												
CHARLOTTE L	19													
CHISHOLM L		11												
DAMSHILGWIT L				18				12						
DUCKWING L	173													
DUNALTER L	169	38												
DUTI (N) L	1449	8												
DUTI (S) L	1952													
FISHPAN L		635												
FLATFISH L		120												
FOOTSORE L		23												
FRY PAN L		155												
FULTON L	9		1											
GILMORE L	7													
GRIZZLY L		178												
GUNANOOT L	5													
HELEN L		199												
HELENE L	48													
HIDDEN L	8	35				65				3				
HODDER L		24												
HOLLAND L		250												
KHTADA L	3327	7												
KIDPRICE L	60							8						
KITSUMKALUM L		5		116	3		1	43				18		
KITWANCOOL L	30	166							30					
KLATE L		11												
KLINGER L	31									94				
KLUAYAZ L								5						
LAKELSE L	22	130		109		14		28						
MCBRIDE L		9	2											5
MCDONELL L		30												
MITTEN L	6	323												
MOOSESKIN JOHNNY L		2645												
MORICE L	847	4	333	16		7	64	75	11			39	3	
MORRISON L	1107		193											
MUDDY L		45												
NANIKA L	359	0	3					51	32					
NETALZUL L		579												
NEZ L	808													
NILKITWA L	375	9												
ONERKA L	114													
OWEN L	3		2											
PEANUT L		28												
PINE TREE L		6												
ROBINSON L	8													
ROSS L	87									6				
ROUND L														
SAIYA L														
SECRET L	847													
SHEA L		57												
SILVERTHORNE L	163													
SKINHEAD L	25													
SLAMGEESH L	63			1			19	64						
SOUTH SADDLE L	2326													
STEPHENS L		14		2										
SUNSET L	22													
SWAMP L	10													
SWAN L	103	46	703					153						
TALTAPIN L	56													
TOUHY L		90												
TYHEE L														
TZAHNY L	103							6						
VALLEE L	1	81												
WILLIAMS L			17					17						
WILSON L	27													

Note: RB (Rainbow trout), CT (Cutthroat), LT (Lake trout), CO (Coho), SK (Sockeye), PK (Pink), CH (Chinook), DV (Dolly Varden char), BT (bull trout), WF (Whitefish spp.), BB (burbot), KO (Kokanee)ST (Steelhead),

4.3.1 Steelhead

The majority of steelhead catch by guided anglers in the Skeena watershed has been reported at locations with class I or class II status, although the percentage of steelhead catch reported for non-classified waters appears to be increasing with up to 19.4 % (i.e. 2004/2005) of total reported catch attributed to non-classified waters for the latest four years on record (Table 16 and 17). The majority of steelhead for the classified waters has been reported for the Babine (i.e. 904-3539 ST/licence year) and Bulkley (e.g. 188-1915 ST/licence year) rivers with occasional notable annual catches reported for the Sustut (e.g. 780 in 2004/2005) and Kispiox (e.g. 567 in 2000/2001) rivers. Increases in steelhead catch in non-classified waters are most notable at Babine River 2 (i.e. Nilkitkwa/Rainbow Alley), and Sustut and Kasiks rivers. As expected, steelhead catch at lakes in the Skeena watershed remain uncommon based on angling guide reports submitted for the 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Table 16. Guide reported catch of steelhead for *Class I or Class II waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Class I or Class II Waters	Guide Reported Steelhead Catch / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
BABINE R 1	1895	904	1986	2039	2531	2330	2241	2351	3539	3139	3291	2023			2606	2411	1945	1388	904 - 3539
BULKLEY R	757	188	728	1198	1105	1384	939	1476	1719	1110	1915	1086			710	1170	1040	700	188 - 1915
SUSTUT R	250	104	149	267	210	205	234	268	431	365	674	484			780	356	287	176	104 - 780
MORICE R	623	247	68	434	624	424	425	504	370	496	707	48			496	314	148	91	48 - 707
KISPIOX R	90	94	156	219	178	249	271	256	502	415	567	238			360	306	222	284	90 - 567
SKEENA R 2	260	205	401	226	339	376	338	108	109	158	387	374			102	166	204	201	102 - 401
KITSUMKALUM R A	72	19	28	56	85	170	128	81	166	217	262	226			93	298	364	390	19 - 390
SKEENA R 4	72	10	17	58	5	20	29	71	115	51	72	104			130	101	238	169	5 - 238
ZYMOETZ R 2	6	3	1	10	19	41	85	119	217	167	117	210			21	32	119	126	1 - 217
ZYMOETZ R 1	101	1			7	11	30	46	43	91	59	119			143	131	153	93	1 - 153
KLUATANTAN R	2	2				2									60	114	105	82	2 - 114
CLORE R											11				10				10 - 11
SKEENA R (Classified)																10			10 - 10
ECSTALL R								1											1 - 1
Combined	4128	1777	3534	4507	5103	5212	4720	5280	7212	6209	8062	4912			5511	5409	4825	3700	1777 - 8062

Table 17. Guide reported catch of steelhead for *non-classified waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Non-Classified Waters	Guide Reported Steelhead Catch / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
BABINE R 1	34		3	165	303	189	430	419	612	859	420	416			567	524		160	3 - 859
ZYMOETZ R 2	13			2	3	3	118	87	11	41	107	73	335		124	75	101	82	2 - 335
SKEENA R 1	14	7	14	10	2	23	2	12	46	191	91	168			75	122	73	48	2 - 191
SKEENA R 3	7		33	48	6	17	9	5	166	37	54	50			69	62	167	87	5 - 167
BULKLEY R	12	1	9	67	67	5	2	0	39		49	48			32	24	27	79	0 - 79
SKEENA R (Non-Classified)															77	168	93		77 - 168
BABINE R 2	2		1			73		1			1				189		20		1 - 189
SKEENA R 2	4	6		22		2				31	12	52			23	1	21	12	1 - 52
ZYMOETZ R 1				1			4			11					17	57	43	3	1 - 57
SUSTUT R	4			2			15		1						44	16	13	5	1 - 44
ZYMAGOTTITZ R	0											23			34	7	10	22	0 - 34
MORICE R			2		6					0	34	0			45				0 - 45
KISPIOX R		1		52	3	1		1	9		5								1 - 52
KASIKS R	0						10								14	6	14	19	0 - 19
NANIKA R								48	3			38							3 - 48
CLORE R																		2	2 - 38
KHYEX R	1						29												1 - 29
EXSTEW R															13				13 - 13
EXCHAMSIKS R						1									7	1			1 - 7
SKEENA R 4				7															7 - 7
KLEANZA C										1						1			1 - 1
CEDAR R						2													2 - 2
FIDDLER C										1									1 - 1
Combined	91	15	64	377	390	431	588	449	962	1239	779	1092			1330	1064	582	519	15 - 1330

Table 18. Guide reported catch of steelhead for *lakes* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Lakes	Guide Reported Steelhead Catch / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
MORICE L								36		3									3 - 36
BABINE L						11													11 - 11
KITSUMKALUM L								4		9					5				4 - 9
Combined	0	0	0	0	0	11	0	4	36	12	0	0		0	5	0	0	0	0 - 36

Note: Locations are sorted in descending order of maximums of each range (see Appendix 1 and 2 for watershed codes and location descriptions)

4.3.2 Rainbow Trout

The annual guide reported catches of rainbow trout have been primarily for lakes (i.e. including Babine R 2, Table 19 and 20), representing from 93% to 99% of the total annual reported catch of rainbow trout. The by-catch of rainbow trout in classified waters appears to be minimal (Table 19), but may not have been consistently reported by all angling guides. A record low total catch reported by angling guides for rainbow trout in non-classified waters and lakes has been reported recently (i.e. 2007/2008), but it is partly associated with reduced numbers of guides reporting and angler days reported (*see* Table 5 and 8). Nevertheless, Babine River 2 (i.e. Nilkitwa Lake/Rainbow Alley) has consistently had, and continues to have, the majority of guide reported catch of rainbow trout in the Skeena watershed (i.e. 1699-6215 RB/licence year). Khtada Lake (e.g. 708 in 1996/1997) and Duti lakes (e.g. 614 in 2005/2006) have also had significant numbers of rainbow trout reported by angling guides on occasional years. Recent increases in rainbow trout catch have been reported by angling guides for Nilkitwa River in 2007/2008 (Table 20) and Secret Lake (Table 21) from 2004 to 2007.

Table 19. Guide reported catch of rainbow trout for *Class I or Class II waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Class I or Class II Waters	Guide Reported Rainbow Trout Catch / Licence Year																RANGE		
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06		06/07	07/08
KISPIOX R	31							2	1	1	2								1 - 31
KITSUMKALUM R A			1					15	5			3				2	7	3	1 - 15
SUSTUT R	1	3	2	1	7	11		8	10	6									1 - 11
KLUATANTAN R						9													9 - 9
KITSUMKALUM R (A,B,C)														6	3	2			2 - 6
ZYMOETZ R 2									6										6 - 6
BULKLEY R							2		2										2 - 2
SKEENA R 2		1							2										1 - 2
BABINE R 1							1			2									1 - 2
Combined	32	4	3	1	7	20	3	25	26	9	2	3		6	5	9	3	1 - 32	

Note: Locations are sorted in descending order of the maximums of each range (*see* Appendix 1 for watershed codes and location descriptions)

Table 20. Guide reported catch of rainbow trout for *non-classified waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Non-Classified Waters	Guide Reported Rainbow Trout Catch / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
BABINE R - Rainbow Alley	4034	3433	3902	4410	3344	3388	3075	5774	4699	6215	5923	3735			3113	3059	4475	1699	1699 - 6215
MORRISON C	82	78	50	22	103	42	21	214	45	53	123	122			38				21 - 214
NANIKA R								160	143	52	47	27			18	39	24		18 - 160
NILKITKWA R																		130	130 - 130
KISPIOX R		14	8	94	6					2									2 - 94
FULTON R		75	10		83	62	18	44		6	4	61				17			4 - 83
GAMBLE C																	75		75 - 75
BABINE R 1	2	21		54											12				2 - 54
PINKUT C															12				12 - 12
KASIKS R					8													3	3 - 8
BULKLEY R			6				2												2 - 6
SUSTUT R				1		3	5	2		2									1 - 5
KLEANZA C																		3	1 - 3
EXCHAMSIKS R																			3 - 3
SKEENA R 1																			2 - 2
SKEENA R 3																		1	1 - 1
ZYMAGOTTITZ R																1			1 - 1
ZYMOETZ R 2															1				1 - 1
Combined	4118	3621	3976	4581	3544	3495	3121	6194	4887	6330	6097	3945			3194	3115	4578	1839	1839 - 6330

Note: Locations are sorted in descending order of the maximums of each range (see Appendix 1 for watershed codes and location descriptions)

Table 21. Guide reported catch of rainbow trout for *lakes* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Lakes	Guide Reported Rainbow Trout Catch / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
BABINE L	90	261	134	163	1816	1166	81	102	1079	115	203	97			50	88	58	38	38 - 1816
KHTADA L						607	708	273		305	242	604			94	208	161	125	94 - 708
DUTI (S) L						490		174							426	614	248		174 - 614
DUTI (N) L					577	125			150		275	110			47		165		47 - 577
SOUTH SADDLE L			66	567	241	211	334	71	198	65	250	233					90		65 - 567
MORICE L	25	3	8		3	10		320	170	71	75	43			29	55	35		3 - 320
SECRET L											11	132			284	210	210		11 - 284
NILKITWA L											175				15	61	119	5	5 - 175
DUCKWING L		3		164		4	2												2 - 164
NEZ L	67	97	110			156	81	15	33	48	52			71	78				15 - 156
MORRISON L	83	42	122	60		85	96	120	92	127	59	105		4			112		4 - 127
NANIKA L	74	120	11	94	44						16								11 - 120
ONERKA L										114									114 - 114
DUNALTER L		94	56									19							19 - 94
SILVERTHORNE L	72	47	16					2	10	10	4	2							2 - 72
SWAN L	19	4	15	63	2														2 - 63
ROSS L		24	61					2											2 - 61
TZAHNY L	7	60	36																7 - 60
BARRETT L							29	54	36	14	37				8	5	7		5 - 54
SLAMGEESH L		15	13						35										13 - 35
KITWANCOOL L																30			30 - 30
WILSON L								27											27 - 27
ATNA L					9					25									9 - 25
KIDPRICE L	3			24	17					9		7							3 - 24
BEAR L			5				21												5 - 21
HELENE L						20	10		18										10 - 20
BILL NYE L								20											20 - 20
CHARLOTTE L				19															19 - 19
CANYON L		1	5					16		4									1 - 16
SKINHEAD L					0				10	15									0 - 15
KLINGER L												4			14	8	2		2 - 14
TALTAPIN L	7	10	3			10	9	5	12										3 - 12
LAKELSE L						6		4							12				4 - 12
SUNSET L								10	12										10 - 12
SWAMP L				10															10 - 10
FULTON L									9										9 - 9
ROBINSON L		8																	8 - 8
GILMORE L														7					7 - 7
GUNANOOT L			5																5 - 5
HIDDEN L											8								8 - 8
CHAPMAN L			2						3										2 - 3
OWEN L			3																3 - 3
VALLEE L									1										1 - 1
MITTEN L																			0 - 0
Combined	447	789	671	1145	2728	2734	1415	1213	1891	932	1391	1453			1061	1357	1207	168	168 - 2734

Note: Locations are sorted in descending order of the maximums of each range (see Appendix 2 for watershed codes and location descriptions)

4.3.3 Chinook Salmon

The majority of reported catch of chinook by angling guides has been for lower Skeena River (i.e. downstream of the Zymoetz River) and Kitsumkalum rivers (Table 22 and 23). Overall, the distribution of guide reported catch of chinook salmon in the Skeena watershed has been variable between classified and non-classified waters, and uncommon for lakes (Tables 22, 23, and 24). The percentages of annually reported catch of chinook by angling guides on classified waters have ranged from 19% to 65% of total numbers reported for the Skeena watershed in various years, and this appears to be related to the distribution of guiding activity between Skeena River 2 (Class II) and Skeena River 3 (non-classified). The Ecstall (e.g. 262 in 1992/1993, Table 22), Sustut (e.g. 219 in 1992/1993, Table 23) and Kispiox (e.g. 94 in 1993/1994) rivers have also had notable numbers of chinook reported by angling guides for some years (Table 22 and 23).

Table 22. Guide reported catch of chinook salmon for *Class I or Class II waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Class I or Class II Waters	Guide Reported Chinook Catch / Licence Year																RANGE		
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06		06/07	07/08
SKEENA R 2	861	819	597	1015	508	530	314	360	239	416	821	1378			288	373	559	270	239 - 1378
KITSUMKALUM R A	341	121	375	191	193	140	226	125	208	135	164	397			16	30	71	50	16 - 397
ECSTALL R	47	51	262	112	70	110	101	76	29	44	56	52			41	110	102	94	29 - 262
SKEENA R 4	16	1	32	16	29	3	20	36		76	38	48			2				1 - 76
BABINE R 1	2	9	14						9										2 - 14
KLUATANTAN R		10		6	9	1													1 - 10
SUSTUT R	0				8														0 - 8
SKEENA R (Classified)																	7		7 - 7
BULKLEY R	1				4														1 - 4
KISPIOX R									3										3 - 3
BABINE R 2/Rainbow Alley							2				1								1 - 2
ZYMOETZ R 1																	1		1 - 1
Combined	1268	1011	1280	1340	821	784	663	597	485	674	1080	1875			347	513	740	414	347 - 1875

Table 23. Guide reported catch of chinook salmon for *non-classified waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Non-Classified Waters	Guide Reported Chinook Catch / Licence Year																RANGE		
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06		06/07	07/08
SKEENA R 3	116	61	124	449	244	260	260	39	241	290	390	225			148	148	307	110	39 - 449
SKEENA R (Non-Classified)															289	425	86		86 - 425
SUSTUT R	94	200	219	190	82	19	48	23		73	93	198			73	23			19 - 219
SKEENA R 1	25	111	114	86	3	24	20	8	2		27	12			23	170	47	8	2 - 170
KISPIOX R	9	35	49	94	28	0	4		7	38		35							0 - 94
BULKLEY R	34	21	1	14	14	27		45	32		12	14			1		1		1 - 45
SKEENA R 2	5	5			0	22	1		27	45	19	15			30	24	3		0 - 45
ZYMOETZ R 2						1					1	1			40	30	33	43	1 - 43
BABINE R 1		3	37	4	1		3												1 - 37
NANIKA R								30											30 - 30
SKEENA R 4				27	17	23		1		14							3	1	1 - 27
BABINE R 2	7	1	21	23	13	1		6	8										1 - 23
GAMBLE C																	20		20 - 20
ZYMOETZ R 1	1														17	5	9		1 - 17
EXCHAMSIKS R					10										3		17		3 - 17
KASIKS R				3	0		1								7		5		0 - 7
SLAMGEESH R			5															1	5 - 5
MORICE R		0		2						3	4						1	4	0 - 4
Combined	291	437	570	892	412	377	337	152	317	446	559	504			631	825	532	166	152 - 892

Table 24. Guide reported catch of chinook salmon for *lakes* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Lakes	Guide Reported Chinook Catch / Licence Year																RANGE		
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06		06/07	07/08
MORICE L								52	12										12 - 52
NANIKA L					51														51 - 51
SLAMGEESH L	7	12																	7 - 12
BABINE L				2	0														0 - 2
KITSUMKALUM L					1														1 - 1
Combined	7	12	0	2	52	0	0	52	12	0	0	0			0	0	0	0	0 - 52

Note: Locations are sorted in descending order of the maximums of each range (see Appendix 1 and 2 for watershed codes and location descriptions)

4.3.4 Sockeye Salmon

Historically, catch of sockeye salmon has not been commonly reported by angling guides in the Skeena watershed based on angling guide reports from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years. An increase in sockeye catch by guided anglers has become apparent in guide reports since the 2005/2006 licence year for Skeena River 2 (i.e. 148 to 1144 from 2005/2006 to 2007/2008) and Skeena River 3 (i.e. from below 15 prior to 1996/97 to >193 since 2004/2005). The relatively high reported catch of sockeye in the Skeena River 2 (Class II) supports that sockeye has become the primary target species for guided angling in the lower Skeena Class II waters when compared to reported catches of other species at this location.

Table 25. Guide reported catch of sockeye salmon for *Class I or Class II waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Class I or Class II Waters	Guide Reported Sockeye Catch / Licence Year																RANGE		
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06		06/07	07/08
SKEENA R 2	3	22	17	17	10	2	68	181	1	2	51	248			64	143	712	1144	1 - 1144
SKEENA R 4			1	34	4			3		3	297	60		47				23	1 - 297
BABINE R 2						16	10												10 - 16
KITSUMKALUM R A									2		2	1					1	1	1 - 2
KISPIOX R		1						2			1								1 - 2
SUSTUT R			2					1											1 - 2
KITSUMKALUM R (A,B,C)														2					2 - 2
BABINE R 1		2																	2 - 2
Combined	5	23	20	51	14	18	78	187	3	5	351	309		113	143	713	1168	3 - 1168	

Table 26. Guide reported catch of sockeye salmon for *non-classified waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Non-Classified Waters	Guide Reported Sockeye Catch / Licence Year																RANGE		
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06		06/07	07/08
SKEENA R 3			8	5	10	12	5	70	71		269	398			263	426	576	193	5 - 576
BABINE R 1	2			6		78	163	20	5										2 - 163
SKEENA R (Non-Classified)														81	44	152	115		44 - 152
BABINE R 2						106	58	6											6 - 106
SKEENA R 1			2			6	26	15			27	15		10	19	25	5		2 - 27
FULTON R										20									20 - 20
SUSTUT R	3		1																1 - 3
ZYMOETZ R 2														2	1				1 - 2
KISPIOX R		2																	2 - 2
SKEENA R 2																		1	1 - 1
KASIKS R														1					1 - 1
EXCHAMSIKS R																	1		1 - 1
Combined	5	2	11	5	16	202	252	111	76	0	316	413		357	490	754	314	0 - 754	

Table 27. Guide reported catch of sockeye salmon for *lakes* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Lakes	Guide Reported Sockeye Catch / Licence Year																RANGE		
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06		06/07	07/08
BABINE L		7	25		66			14			11	60			9		28	56	7 - 66
KITSUMKALUM L					3														3 - 3
Combined	0	7	25	0	69	0	0	14	0	0	11	60		9	0	28	56	0 - 69	

Note: Locations are sorted in descending order of maximums of each range (see Appendix 1 and 2 for watershed codes and location descriptions)

4.3.5 Coho Salmon

The annual distribution of guide reported catch of coho salmon in the Skeena watershed has been variable between classified and non-classified waters, and uncommon from lakes (Tables 22, 23, and 24). The majority of reported catch of coho by guided anglers has been on the lower Skeena River (ie. downstream of Zymoetz River) including the Class II waters (i.e. Skeena River 2, Exchamsiks River to 1.5 km upstream of Kitsumkalum River). Although coho catch on the Gitnadoix River has historically had the highest reported guided angler catch of coho in the Skeena watershed (e.g. 478 in 1991/1992, Table 28), no coho catch has been reported from the Gitnadoix for the 2004/2005 to 2007/2008 licence years. Notable annual catch of coho have also been reported by angling guides for the Kitsumkalum River (178 in 1990/1991, Table 28), and Kasiks (e.g. 506 in 1999/2000) and Exchamsiks (e.g. 264 in 2005/2006, Table 29) rivers.

Table 28. Guide reported catch of coho salmon for *Class I or Class II waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Class I or Class II Waters	Guide Reported Coho Catch / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
GITNADOIX R A	419	478	268	267	75	107	109	19		122		45							19 - 478
SKEENA R 2	340	327	124	252	428	394	321	94	4	171	207	397		35	144	124	365		4 - 428
KITSUMKALUM R	178	72	1	16	11	60	63	19	93	100	35	147		20	111	90	73		1 - 178
KISPIOX R	39	18	3	12	17	16	31	7	44	31	68	34		9	1	7	1		1 - 68
ECSTALL R							41			23									23 - 41
ZYMOETZ R 2	0					2	1	3	30	11	11	8					12	19	0 - 30
LAKELSE R										7				30	10				7 - 30
BABINE R 1	1	1	4						20										1 - 20
SKEENA R 4	19		1	1	2			1				4		15	8		4		1 - 19
BULKLEY R	8	1	19		2				1		6				3				1 - 19
ZYMOETZ R 1														13	6	13			6 - 13
MORICE R	13	11													1				1 - 13
SUSTUT R	9	1			8				3										1 - 9
KLUATANTAN R	7			3															3 - 7
Combined	1033	909	420	552	543	579	566	143	195	465	321	641		122	284	246	462		122 - 1033

Table 29. Guide reported catch of coho salmon for *non-classified waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Non-Classified Waters	Guide Reported Coho Catch / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
SKEENA R (Non-Classified)														94	578	94	3		3 - 578
KASIKS R	40	40	175	155	469	382	458	69	40	506	196	472		141	363	261	205		40 - 506
EXCHAMSIKS R	36	28	67	44	55	33	61			72	6	422		27	175	48	72		6 - 422
SKEENA R 1	22	22	10	14	28	60	42	56	95	262	195	328		89	164	58	118		10 - 328
SKEENA R 3		16	8	15	5	5	13	4	123	6	49	53		126	264	152	133		4 - 264
SKEENA R 2	12	12		79	42	17	12			50	5	13		5		2	17		2 - 79
ZYMAGOTTITZ R				17	6	35				11	2	39		35			2	8	2 - 39
KISPIOX R	9									4		4						36	4 - 36
EXSTEW R					8		9			4		22		20	32	34	31		4 - 34
GOAT C														26	10				10 - 26
ZYMOETZ R 2			1	5						1	3	8		8		6	24		1 - 24
NANIKA R								15		8									8 - 15
KHYEX R		1															8		1 - 8
FIDDLER C										8									8 - 8
ZYMOETZ R 1														3	2	7			2 - 7
BULKLEY R			6		1		1												1 - 6
GAMBLE C																		3	3 - 3
SUSTUT R			2	1															1 - 2
Combined	119	119	269	330	614	532	596	129	273	920	468	1357		574	1588	672	650		119 - 1588

Table 30. Guide reported catch of coho salmon for *lakes* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Lakes	Guide Reported Coho Catch / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
LAKELSE L							26			44			1			15			1 - 44
KITSUMKALUM L		2				2				21	42				23		3	9	2 - 42
BABINE L			21					1											1 - 21
DAMSHILGWIT L		18																	18 - 18
MORICE L								2	14										2 - 14
STEPHENS L					2														2 - 2
SLAMGEESH L		1																	1 - 1
Combined	0	21	21	0	2	2	26	1	46	35	42	1		23	52	3	9		0 - 52

Note: Locations are sorted in descending order of maximums of each range (see Appendix 1 and 2 for watershed code and location descriptions)

4.3.6 Cutthroat Trout

Since the 2003/2004 licence year, the most consistent and notable totals of guided angler catch of cutthroat trout in the Skeena watershed have been from the Kitsumkalum River (Class II, Table 31), Gamble Creek, Kasiks River, Babine River 2 (non-classified waters, Table 32), and Mooseskin Johnny, Netalzul, Kitwancool, and Helen lakes (Table 33). Noteworthy is the apparent initiation of guiding activity at Gamble Creek in the 2006/2007 with the highest guide reported catch of cutthroat trout on record (Table 31, 32, and 33).

Table 31. Guide reported catch of cutthroat trout for *Class I or Class II waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Class I or Class II Waters	Guide Reported Cutthroat Catch / Licence Year														RANGE				
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04		04/05	05/06	06/07	07/08
KITSUMKALUM R A			7	10	1	4	2	13	12	4	91	3				37	16	1 - 91	
KISPIOX R	47	39	8	10			10	52	58	11	6	20						6 - 58	
SKEENA R 2	13	5	1	7	1	4			1	14	10			4	2	13		1 - 14	
GITNADOIX R A	10	12																10 - 12	
KITSUMKALUM R (A,B,C)														7	9	3		3 - 9	
BULKLEY R		6						3										3 - 6	
SKEENA R 4		2										1			2			1 - 2	
ZYMOETZ R 2																	1	1 - 1	
Combined	70	64	16	17	2	8	12	68	71	29	107	24			11	13	53	17	2 - 107

Table 32. Guide reported catch of cutthroat trout for *non-classified waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Non-Classified Waters	Guide Reported Cutthroat Catch / Licence Year														RANGE				
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04		04/05	05/06	06/07	07/08
BABINE R 2/Rainbow Alley				586	32	6			455		761	21			228	206	45	2 - 761	
GAMBLE C																327	221	221 - 327	
FULTON R		82	27		60					2								2 - 82	
KISPIOX R	14	63	12	2	5		3	4	8	4								2 - 63	
WILLIAMS C												22			61	62		22 - 62	
KASIKS R						2	8		29		37	40			17	26	44	2 - 44	
SKEENA R 1		41				1	1	1						3	1	3	9	1 - 41	
EXCHAMSIKS R							5		32		9				1		3	1 - 32	
SKEENA R 2	6					3				20		11			1		1	1 - 20	
BURNIE R						3		1	14		11							1 - 14	
FIDDLER C											14							14 - 14	
NILKITKWA R																	13	13 - 13	
BULKLEY R			12															12 - 12	
SKEENA R 3										1	1				9	2	1	1 - 9	
KLEANZA C						0						9						0 - 9	
OLIVER C						2												2 - 2	
SKEENA R 4															1			1 - 1	
ZYMAGOTITZ R			1															1 - 1	
HOWSON C											1							1 - 1	
Combined	20	186	52	588	97	17	25	6	538	27	834	111			93	319	585	323	6 - 834

Table 33. Guide reported catch of cutthroat trout for *lakes* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Lakes	Guide Reported Cutthroat Catch / Licence Year														RANGE				
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04		04/05	05/06	06/07	07/08
MOOSESKIN JOHNNY L			331		245	241	214	191	275	172	405	220			155	99	97	97 - 405	
NETALZUL L											206	362						11 - 362	
FISHPAN L	205		258	85	67	9	11											9 - 258	
MITTEN L		213	110															110 - 213	
HOLLAND L	157	35	40			18												18 - 157	
BABINE L			8						122	128								8 - 128	
KITWANCOOL L											106				60			60 - 106	
GRIZZLY L	49	98	22				9											9 - 98	
TOUHY L												90						90 - 90	
FRY PAN L	74	60					16		0	5								0 - 74	
FLATFISH L		50	70															50 - 70	
HELEN L							2	64	18	16	6			4	45	37	7	2 - 64	
SHEA L	57																	57 - 57	
LAKELSE L					4	26		7	5	47		1		40				1 - 47	
SWAN L		46																46 - 46	
BURNIE L			34		27	38	28	25	18	18	22	3						3 - 38	
MUDDY L	10						35											10 - 35	
HIDDEN L	35																	35 - 35	
VALLEE L								13	32	23	10	3						3 - 32	
CHAPMAN L		30																30 - 30	
PEANUT L												28						28 - 28	
FOOTSORE L												23						23 - 23	
MCDONELL L			21											9				9 - 21	
DUNALTER L			12					6		4	16							4 - 16	
HODDER L									8			16						8 - 16	
BEAR L	16																	16 - 16	
STEPHENS L		14																14 - 14	
KLATE L											11							11 - 11	
CHISHOLM L		11																11 - 11	
MCBRIDE L	9													9				9 - 9	
NILKITWA L															9			9 - 9	
DUTI (N) L															8			8 - 8	
KHTADA L	7																	7 - 7	
PINE TREE L		6																6 - 6	
KITSUMKALUM L					5													5 - 5	
MORICE L		4																4 - 4	
Combined	619	567	906	85	348	332	288	269	524	421	786	752			217	212	134	18	18 - 906

Note: Locations are sorted in descending order of maximums of each range (see Appendix 1 and 2 for watershed code and location descriptions)

4.3.7 Pink Salmon

The guide reported catch of pink salmon has been predominantly from the lower Skeena River (i.e. downstream of 1.5 km upstream of the Zymoetz River), ranging from 51% to 99% of the total annual reported catch. Because guide reported catch of pink salmon has been from classified waters (Skeena River 2) has been 100% of total reported catch in some years, it appears that catch of pink salmon was not consistently reported for non-classified waters. The apparent lack of reporting catch of pink salmon in non-classified water is also supported by the inconsistent numbers of pink salmon from Skeena River 1 (i.e. immediately downstream of Skeena River 2) and Skeena River 3 (i.e. immediately upstream of Skeena River 2) compared to reports for Skeena River 2. Even the inconsistent variation in guide reported catch of pink salmon from Skeena River 2 (i.e. Exchamsiks River to 1.5 km upstream of Kitsumkalum River, 21-2629 pink salmon) suggests that the catch of pink salmon in classified waters may not have been consistently reported. The high number of pink salmon reported by angling guides from the Skeena River 2 (Class II) in 2007/2008 does suggest that either the catch of guided anglers or the reporting of guided angler catch may have changed.

Table 34. Guide reported catch of pink salmon for *Class I or Class II waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Class I or Class II Waters	Guide Reported Pink Salmon Catch / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
SKEENA R 2	917	545	415	107	34	326	517	89		21	155	522			143	624	185	2629	21 - 2629
BULKLEY R		4	117																4 - 117
KITSUMKALUM R A			14			2		11	9	26	1	19			73	1	26		1 - 73
SKEENA R 4		25	24	55	8		22	7		13	6	71		5	12	28			5 - 71
KISPIOX R							7		15	54	22	3							3 - 54
GITNADOIX R A	12																		12 - 12
BABINE R 2							6												6 - 6
ECSTALL R															1				1 - 1
Combined	929	574	570	162	42	328	552	107	24	114	184	615			149	709	214	2655	24 - 2655

Table 35. Guide reported catch of pink salmon for *non-classified waters* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Non-Classified Waters	Guide Reported Pink Salmon Catch / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
SKEENA R 3				121		21	14	2		92	49	245			136	646	93	423	2 - 646
SKEENA R 1		32	18		2	63	37	5		55	23	55			79	353	1	131	1 - 353
BULKLEY R		169	35	42			136	9							5	6	12		5 - 169
KISPIOX R		108	7		7	18	11	9	10	61									7 - 108
SKEENA R (Non-Classified)															84	90	2		2 - 90
SKEENA R 2																		40	40 - 40
KASIKS R								7							6	26		12	6 - 26
MORICE R						3									10	6	11	3	3 - 11
ZYMOETZ R 2			1			3			3	5		1			7	6		3	1 - 7
SHEGUNIA R		6																	6 - 6
GAMBLE C																		3	3 - 3
KLEANZA C											2	1							1 - 2
Combined	0	315	61	163	9	108	198	32	13	213	74	302			312	1136	108	635	0 - 1136

Table 36. Guide reported catch of pink salmon for *lakes* in the Skeena watershed from 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years.

Lakes	Guide Reported Pink Salmon Catch / Licence Year																	RANGE	
	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07		07/08
BABINE L					71														71 - 71
HIDDEN L			65																65 - 65
LAKELSE L												8			6				6 - 8
MORICE L																		7	7 - 7
Combined	0	0	65	0	71	0	0	0	0	0	0	8		6	0	0	7	0 - 71	

Note: Locations are sorted in descending order of maximums of each range (see Appendix 1 and 2 for watershed code and location descriptions)

5.0 DISCUSSION

This summary report of the AGMS database presents data from submitted angling guide reports for the Skeena watershed from 1990/1991 to 2001/2002 and 2004/2005 to 2007/2008 licence years. The way the data has been organized in AGMS is intended to simplify future assessments of the information to help BC Fisheries and various angling management teams ensure that the existing licences, CAP's and data requirements remain affective, appropriate and useful. Overall, the input of angling guide data from angling guide reports submitted for 2004/2005 to 2007/2008 into the BCE AGMS data management tool appears to provide some useful additions to the summaries of freshwater angling guide activities and results.

This presentation of the AGMS data will hopefully identify some useful insights into angling guide management (Section 4.1) and angling guide activities (Section 4.2) and relative inter-annual steelhead abundance in the Skeena watershed. With respect to reported licence use in classified waters of the Skeena watershed, no trends in the number of guides submitting reports each year were identified. Future comparisons of issued licences to guides reporting their activities may be valuable to check that all licenced guides are consistently reporting, when the numbers of allocated days to individual licenced guides are updated in AGMS. The data in AGMS has identified only one location in the Skeena watershed with classified status (i.e. Kispiox rivers) that have may have exceeded the CAP for guided angler days under the Wildlife Act (BC Environment 2008b). It may be useful to conduct a more detailed review of the reports from individual guides and for future angling management teams to evaluate the needs and impacts of modifying the present CAP's to ensure that management practice and guided angler activities are effective. Further analyses of any potential correlations among the dates, locations, species, and species catch related to the high numbers of angler days reported for classified waters in 1990/1991, 1995/1996, and 2000/2001 may also be helpful with future reviews of the present licence and guided angler allocation CAP's.

The total reported catch from angling guides in the Skeena watershed and its spatial distribution (Section 4.3) has identified many variations in guided angling success and different combinations of species. Overall, steelhead are the most commonly reported species by angling guides in the Skeena watershed, but notable numbers of pink, chinook, sockeye, and coho salmon and bull trout have also been reported in classified waters. Steelhead, chinook, and coho salmon are the three species with the highest total catches from the 17 classified waters in the Skeena watershed (i.e. based on AGMS data). Steelhead trout have had the highest total catch of all species reported by angling guides from the Babine, Bulkley, Morice, Sustut, Kispiox, Zymoetz (i.e. 1 and 2), Skeena River 4 (i.e. upstream of the Zymoetz) and Kluatantan rivers. Interestingly, more than 50% of the guide reported annual steelhead catch has been reported for the upper Zymoetz River during its non-classified status (e.g. 65% in 2001/2002). Chinook have had the highest total catch of all species reported by angling guides from the 1990/1991 to 2000/2001 and 2004/2005 to 2007/2008 licence years from the Skeena River 2, Kitsumkalum and Ecstall rivers with classified status, and from Skeena River 3, Sustut and Kispiox rivers with non-classified status. Coho salmon have had the highest total catch of all species reported by angling guides from the Gitnadoix River with classified status, and from the Exchamsiks, Kasiks, Skeena River 1, Zymagotitz, and Exstew rivers, and Goat Creek with non classified status. The tables summarizing spatial distribution of species catch by guided anglers (Section 4.3) provide a useful tracking of guided angling pressure on different species at

different locations, thus adding these tables to the automatic update and presentation service in AGMS may also be useful.

The data summarized for the annual catch of individual species (Sections 4.3.1 to 4.3.7) including spatial distribution shows notable inter-annual variations, and requires more detailed analyses incorporating the reported angler days (i.e. catch per unit effort) and dates of angling activity to evaluate the cause of the variations if required for future management purposes. The data summary presented in this report is useful to interpret intra-spatial comparisons (e.g. 98% more steelhead reported by angling guides from the Babine River than from the Bulkley River in the 2007/2008 licence year) and for intra-annual comparisons between classified and non-classified time periods of the same locations (e.g. 65% of steelhead reported by angling guides for the Zymoetze River 2 in the 2001/2002 licence year were during non-classified water period).

Based on this update and summary of the AGMS database, the data provided annually by angling guides in the Skeena Region appear to provide a useful summary of their guiding activities and potentially relative inter-annual steelhead abundance in the Skeena River watershed. Some modifications to the present dataset (e.g. addition of unique identifiers to tables) are recommended if use of the AGMS database is to continue. If recent plans to convert the guide reporting to an on-line web service go forward, it may be useful to add an upload service to AGMS to allow the web data to be used for further in-house quality assurance, monitoring and data interpretation. An update to the angling guide data report forms may also be useful following a review of this summary report by the appropriate angling management team members. Prior to using the AGMS data to assess inter-annual steelhead abundance, an assessment of the variability and biases of the different data collection methods and the accuracy of guide submissions should be conducted for historical information and a quality assurance program should be implemented to provide more certainty of the precision of results from future data. Overall, the AGMS data entry tool is presently usable for data entry and for review of specific information (i.e. individual angling guide licence reviews), but some modifications to its forms, reports, and automated displays of summary information may be useful if this tool is to be actively used to monitor licenced guides and guided angling activity.

6.0 LITERATURE CITED

- BC Environment. 2009a. 2008-2009 Freshwater Fishing Regulations Synopsis. 96 p.
- BC Environment 2009b. Wildlife Act Angling and Scientific Collection Regulation Schedule A. Queens Printers, BC. Available at http://www.bclaws.ca/Recon/document/freeside/--%20w%20--/wildlife%20act%20%20rsbc%201996%20%20c.%20488/05_regulations/10_125_90.xml#ScheduleA.
- BC Environment 2010. Skeena Quality Waters Strategy, Angling Management Plans. <http://www.env.gov.bc.ca/skeena/qws/planning/amp.html>
- DeGisi, J. 1998. AGMS2 Software Manual. Prepared for Fisheries Section, BC Environment, Skeena Region, Smithers BC. 60 p.
- Dolan, 2008. Angling Management Plan Skeena Quality Waters Strategy. Draft. Prepared by Alan Dolan and Associates for BC Environment. Available at <http://www.env.gov.bc.ca/skeena/qws/docs/SkeenaAnglingManagementPlan.pdf>. 114 p.
- Gottesfeld, A., K.A. Rabnett and P.E. Hall. 2002. Conserving Skeena Fish Populations and their Habitat. Skeena Fisheries Commission, Hazelton BC. 281 p.
- Morten, K.L. and C.K. Parken. 1998. A survey of Bulkley River steelhead anglers during the Classified Waters Period of 1997. Unpublished report prepared by Cascadia Natural Resource Consulting for BC Environment, Smithers, BC. SK #113.
- PASBC. 2009. Number of guides licenced to operate in classified waters in the Skeena Region for 2007/2008. Personal communications.
- Peard, D., 2010. B.C. Environment, Skeena Fisheries Branch. Personal communications regarding multiple mid-season licence transfers by angling guides from 2004 to 2008.
- Saimoto, R.K. and R.S. Saimoto, 2009. Angling Guide Data Summary for the 2007/2008 Licence Year in the Skeena. Unpublished report prepared by SKR Consultants Ltd. for Pacific Salmon Foundation and Ministry of Environment, Smithers, BC. 40 pp.
- Walters, C.J., J.A. Lichatowich, P.M. Peterman and J.D. Reynolds. 2008. Report of the Skeena Independent Science Review Panel. A report to the Canadian Department of Fisheries and Oceans and British Columbia Ministry of Environment. May 2008. 144p.

