Reconnaissance (1:20,000) Fish and Fish Habitat Inventory in the Babine Lake Watershed

• Telzato Creek
(WSC 480-992900)

Prepared for:
Babine Forest Products Co.
Box 4000
Burns Lake, BC
V0J 1E0

Prepared by:
FINS Consulting Ltd.
#215 - 4546 Park Avenue
Terrace, BC
V8G 1V4

Project Reference Information

Watershed Group	Babine Lake
Parent Waterbody	Babine Lake
Parent Waterbody Code	480
FDIS Project WSC	480-000000
FDIS Project Number	06-FRAN-0000-0002-1998
FRBC Project Number	IVBVS615
MELP Project Number	06-FRAN-3020-0002-1998
Forest District	Lakes Forest District
Forest Tenure Licensee	Babine Forest Products Company

November 1998

Project Reference Information

Watershed Name	Telzato Creek
Watershed Code (ILP)	480-992900 (44080)
UTM at Mouth	10.357240.6039800
NTS Maps	93 K/6
TRIM Maps	93K.044, 93K.045
FRBC Region	Smithers Region
MELP Region	06
DFO Sub-District	4D
Wildlife Management Unit	6-6
BGC Zone	SBS
Watershed Area	28 km^2
Total of All Stream Lengths	38 km
Stream Order	4^{th} order
Total Number of Reaches	54
Planned Discretionary Sites	12
Planned Discretionary Sites (%)	22%
Surveyed Sites	5
Surveyed Sites (%)	9%
Fish Species Present	CO, RB, CAS
Field Sampling Dates	September 5 - October 18, 1997

Abbreviations Used in this Report

BGC	biogeoclimatic zone	m	meter
C	clear (not turbid)	mm	millimeter
C.	creek	M	moderate flow or moderate turbid
CAS	prickly sculpin (*Cottus asper*)	MELP	Ministry of Environment, Lands and Parks
CD	compact disc	M/L	mainline
CO	coho salmon (*Oncorhynchus kisutch*)	MT	minnow trap
Cond.	conductivity	NA	not applicable
CW	channel width	NFC	no fish captured
DFO	Department of Fisheries and Oceans	NFP	no fish present
Dist.	distance	NS	not sampled
Dpth	depth	NTS	National Topographic Survey
d/s	downstream	PCC	peamouth chub (*Mylocheilus caurinus*)
EF	electrofishing	Prop	proposed
ESSF	Engelman Spruce-Subalpine Fir BGC	R.	river
FDIS	Field Data Information System	RB	rainbow trout (*O. mykiss*)
FISS	Fisheries Information Summary System	Rd	road
FPC	Forest Practices Code	Rip	riparian
FRBC	Forest Renewal of British Columbia	sec	seconds
Grad	slope gradient	SBS	Sub-Boreal Spruce BGC
H	high flow	SK	sockeye salmon (*O. nerka*)
Hz	Hertz	S6 - S2	riparian classes
ILP	Interim Locational Point	T	turbid
Info.	information	TRIM	Terrain Resource Information Management
km	kilometer	Turb	turbidity
L	low flow or lightly turbid	u/s	upstream
L.	lake	UTM	Universal Transverse Mercator coordinates
LKC	lake chub (*Couesius plumbeus*)	V	volts
LSU	longnose sucker (*Catostomus catostomus*)	WSC	watershed code
LWD	Large Woody Debris	µs	microseconds

Contractor Information

Project Manager:	Karen Grainger, R.P.Bio., Babine Forest Products Box 4000, Burns Lake, B.C. V0J 1E0 (250) 692-7177
Sub-contractor:	FINS Consulting Ltd. #215 - 4546 Park Avenue, Terrace, BC, V8G 1V4 (250) 635-8481
Field crew: **Data Entry by:** **Report prepared by:** **Report edited by:**	S. Redden, M. Jedrzejczyk, S. Bellehumeur, M. Janowicz S. Redden, M. Jedrzejczyk S. Redden, M. Jedrzejczyk S. Redden, M. Jedrzejczyk
Maps prepared by:	Cliff Manning Forestry Services Lot 13, Burns Lake, B.C. (250) 692-3459

Disclaimer

This product has been accepted as being in accordance with approved standards within the limits of Ministry quality assurance procedures. Users are cautioned that interpreted information on this product developed for the purposes of the Forest Practices Code Act and Regulations, for example stream classifications, is subject to review by a statutory decision maker for the purposes of determining whether or not to approve an operational plan.

Acknowledgments

Funding for this project was provided by Forest Renewal B.C. We would also like to give special thanks to those people who made this project possible, tolerable and even fun. Paul Giroux, who helped throughout the project and maintained the “common sense” approach, Lynn Miers, whose quick responses to our frequent requests still amaze us, the staff at Cliff Manning Forestry Services who always had maps ready for us, in addition to a helpful hint about “how to get there”, and most of all, Karen Grainger for, above all else, putting up with us throughout the field portion of the project.

Table of Contents

List of Tables

List of Figures

1. Introduction

This introduction is separated into two main sections. **Section 1.1** defines and discusses the overall project area covered under the scope of this contract. "Project Area" for the purposes of this report refers to the area encompassed by all watershed units. An explanation of how the entire project area was divided into 14 independent reports and a brief summary of the results will also be included in this section. **Section 1.2** introduces the specific watershed or watershed unit covered under the scope of this report. All references to the watershed will be made using the watershed (unit) name and not the term "project area".

1.1. Overview of the Project Area

The objective of this project was to conduct a Reconnaissance (1:20,000) Fish and Fish Habitat Inventory in several watersheds in the Burns Lake area. The project area is located within four high level watershed groups, shown in Table 1 below, which are the ultimate parent watersheds of all streams within the project area.

Table 1: Summary of Watershed Groups in Project Area

Watershed Group	Watershed Code (WSC)
Babine Lake (BABL)	480-000000
Francois Lake (FRAN)	180-374000-95200
Cheslatta River (CHES)	180-545300
Bulkley River (BULK)	460-000000

1.1.1 Reporting Structure

In all, 14 reports have been completed. Twelve of these reports cover watershed units that are 4th order (or higher) except for the Dog Creek watershed which is 3rd order. Numerous smaller drainages that are independent of the above watersheds were placed into two separate reports based on their high level watershed group.

Site numbers have been assigned in an upstream ascending order for each major watershed so that there are two sets of site numbers: those in the Fraser River drainage (Sites 1-207) and those in the Skeena River drainage (Sites 1-179).

Table 2 on the following page highlights the specific drainage and site numbers covered by each report in relation to each watershed group. It should be noted that phases 1 to 3 have been completed for the Allin Creek and Maxan Creek watersheds, but due to time constraints the remaining phases were deferred until the 1998 season.

Table 2: Summary of Reports Completed for 1997 Field Season

Major Watershed	Watershed Group	*Report Name* (WSC)	Sites	Comments
Skeena River	**BABL**	"***ILP 52001***" (480-857300)	19-37	Entire watershed
		"***Deep Creek***" (480-886700)	49-55	Entire Deep Creek watershed
		"***Henrietta Creek***" (480-927700-23400)	82-147	Report covers Henrietta C. watershed u/s from confluence with Hannay L. outlet
		"***Four Mile Creek***" (480-964000)	161-166	Entire Four Mile Creek watershed
		"***Telzato Creek***" (480-992900)	175-179	Entire Telzato Creek watershed
		"***Small Drainages within the Babine Lake Watershed***" (480-******)	1-18, 38- 48, 56-81, 148-160, 167-174	Report covers Finch C. watershed, 15 small tributaries to the north side of Babine L., 12 small tributaries to the south side of Babine L., and 6 small tributaries to the south side of Taltapin L.
Fraser River	**CHES**	"***Ootsanee Creek***" (180-545300-45700)	1-42	Entire Ootsanee Creek watershed
		"***Dog Creek***" (180-545300-76100)	43-52	Entire Dog Creek watershed
	FRAN	"***Uncha Creek***" (180-374000-95200-41400)	53-101	Report covers Uncha C. watershed u/s from Uncha L., 3 small tributaries to Uncha L. and one tributary to Takysie L.
		"***Eagle Creek***" (180-374000-95200-019-7890)	117-129	Entire Eagle Creek watershed
		"***Decker Creek***" (180-374000-95200-01900-8460)	135-148	Entire Decker Creek watershed
		"***Gerow Creek***" (180-374000-95200-01900-8700)	150-187	Entire Gerow Creek watershed
		"***Forgie Creek***" (180-374000-95200-01900-9100)	190-206	Entire Forgie Creek watershed
		"***Small Drainages within the Francois Lake Watershed***" (180-374000-95200-*****)	102-116, 131-134, 149, 188, 189, 207	Report covers 4 small tributaries to Francois L. and 8 small tributaries to Burns L., Decker L. and the Upper Endako R.

Table 3 below presents an overview of reach sampling statistics for each report within the project area. Sample sizes within the Deep Creek, Four Mile, Telzato and Eagle Creek watersheds were low due to obstructions to fish in their lower reaches which precluded fish presence, and therefore sampling, in their upper watersheds.

Table 3: Reach Sampling Summary by Report

Report Name	Total Reaches	# of sites	% of Total
Small Drainages within the Babine Lake Watershed	405	76	19
ILP 52001	71	19	27
Deep Creek	74	7	9
Henrietta Creek	261	66	25
Four Mile Creek	160	6	4
Telzato Creek	54	5	9
Ootsanee Creek	174	42	24
Dog Creek	52	10	19
Uncha Creek	231	49	21
Small Drainages within the Francois Watershed	160	23	14
Eagle Creek	133	13	10
Decker Creek	77	14	18
Gerow Creek	177	38	21
Forgie Creek	66	17	26
TOTAL	**2095**	**385**	**18**

1.1.2 FDIS Database Summary

Four project watershed codes were assigned by MELP for use in this project. They were for the Maxan (460-924300), Cheslatta (180-545300), Francois (180-374000-95200) and Babine Lake (480-000000) watersheds. One FDIS database was created with the above four Project WSC's.

The database contains information for the entire project area. In all, the database contains 2951 reaches, 519 reach cards and 385 site cards. There are 150 reach cards completed for the Maxan and Allin Creek watersheds, but since field sampling of these watersheds was deferred until the 1998 season, there are no associated site cards for these systems. All fish cards are within one database (253 cards).

Table 4 on the following page summarizes the information contained with the FDIS database.

Table 4: FDIS Database Contents

Entire Project Area	
Number of Reach Table Records	2951
Number of Reach Card Records	519
Number of Site Card Records	385
Number of Lake Table Records	171
Number of Lake Form Records (Pre-field)	10
Number of Photo Records	637
Surveyed Watersheds	
Number of Reaches within surveyed watersheds	2095
Number of Reach Cards within surveyed watersheds	369
Number of Reaches Surveyed	369
Postponed Watersheds	
Sample Reaches postponed to 1998 Field Season within Maxan and Allin Watersheds	150
Number of Reaches within Maxan C. watershed	571
Number of Reach Cards for Maxan C. watershed	86
Number of Reaches within Allin C. watershed	281
Number of Reach Cards for Allin C. watershed	64
Fish Collection Card Database	
Total Number of Fish Cards in "fcoll.mdb" database	253

1.1.3 Lake Approach

As required by Reconnaissance Fish and Fish Habitat Inventories, all lakes within the project area were included in phases 1 to 3. However, field sampling of lakes was not included under the scope of this project and was deferred to future inventories. In all, 171 lakes have been entered into the FDIS Lake Table. Of these, 99 have been classified as lakes (32 primary; 67 secondary) while 72 have been categorized into wetland reaches (36 type 1; 3 type 3; 9 type 4 and 24 type 5). Most lakes were excluded from future field sampling on the basis of very small size, planned stream sampling of inlets and outlets and/or location in the watershed above steep gradients/ obstructions. Initially, 10 lakes had been chosen for sampling but because lake field sampling would not take place in the 1997 field season, this number was further reduced to 2 by using results from the 1997 stream survey. The two lakes chosen for field sampling for the 1998 field season were ILP 83006 reach 4 and Maxan Creek reach 14. Further information on all lakes and wetlands within the project area is available in the Lake Table in the FDIS database, while justification for exclusion from field sampling is summarized in spreadsheet format in Appendix VI.

1.1.4 Methodology

1.1.4.1 Reach Sampling

Methodology used throughout this project were consistent with the standards and methods as defined in "Reconnaissance (1:20,000) Fish and Fish Habitat Inventory (May 1997)". Due to time constraints, not all reaches were sampled as identified in the Project Plan. Immediately prior to field sampling, individual areas were prioritized for sampling by Babine Forest Products Co. and reaches were systematically sampled according to their priority level. Sampling in both the Maxan Creek (Project WSC 460-924300) and Allin Creek watersheds (Project WSC 180-374000-95200) was rescheduled for the 1998 field season. Sampling in the Taltapin, Decker-Stearns and Palling sub-units was undertaken, although these areas had not been included in the project plan. Phases 1 to 3 had been completed for these areas prior to field sampling, consistent with the methods used for all watersheds.

1.1.4.2 ILP Referencing

ILP maps and tables have been sent to MELP in Victoria but watershed codes have not yet been received (Nov. 30, 1998). Although several streams within the project area had existing 37-digit watershed codes, the new 45-digit codes were not available. All streams in the project area were consequently assigned ILP's whether they were coded or not. As such, our databases, reports and maps use ILP's as stream references, although a cross reference table for all coded streams has been included in Section 1.2.

In addition, all 5-digit ILP numbers assigned are unique within the entire project area - there are no two alike. This was done to avoid confusion in ILP referencing throughout the project and having to reference the ILP map number each time the ILP is referenced. Every ILP created uses the last two digits of its ILP map, combined with its number on the map. That is, the first ILP on TRIM mapsheet 93K.0**52** would be ILP 52001. There was no overlap of mapsheet numbers among the different TRIM map series (i.e. 93F. vs. 93K vs. 93 L series). Relevant TRIM maps for each report are listed in the Project Reference Information of the reports.

1.1.4.3 FPC Field Data Interpretation (NFC vs. NFP vs. NS vs. NVC)

Specific terminology has been used throughout this report regarding fish sampling results (or lack thereof) in a specific reach and the associated interpretation of these results for the purposes of FPC stream classification. The terminology has inherent ramifications for the data interpretation process, specifically for the fish-bearing status of sampled reaches. This terminology is explained below and will aid in understanding classification of reaches as fish-bearing, non-fish-bearing or designated for follow-up sampling. All reaches and their fish-bearing status codes are presented in Table 6 in Section 2.1, while only non fish-bearing reaches and reaches designated for follow-up sampling are discussed in the fish-bearing status section of this report. Note that for the following sections,

- Confirmed fish-bearing reaches are summarized with all reaches in Table 6 only
- Non fish-bearing reaches are further discussed in Section 2.4.1 and are summarized in Table 7
- Reaches designated for follow-up sampling are further discussed in Section 2.4.2.and are summarized in Table 8

1.1.4.3.1 Fish Captured

- Fish sampling conducted, fish captured
- Fish presence confirmed
- Fish-bearing FPC Classification assigned for these reaches.
- Table 6 only

1.1.4.3.2 NFC (No Fish Captured)

Scenario 1

- Fish sampling conducted, no fish captured
- Fish presence confirmed in upstream reaches
- Fish presence inferred
- Fish-bearing FPC Classification assigned for this reach.
- Table 6 only

Scenario 2

- Fish sampling conducted, no fish captured
- Fish habitat present and easily accessible to fish from downstream fish-bearing reaches, fish presence not confirmed in upstream reaches
- Fish presence inferred
- Fish-bearing FPC Classification assigned for this reach.
- Table 6 and Table 8.

1.1.4.3.3 NFP (No Fish Present)

- Fish sampling conducted, no fish captured
- No accessible habitat (due to obstruction, lack of sufficient flow, habitat, etc)
- Fish absence confirmed
- Non fish-bearing FPC Classification assigned for this reach.
- Table 6 and Table 7.

1.1.4.3.4 NS (Not Sampled)

Scenario 1

- Fish sampling not conducted
- Habitat available and easily accessible to fish but channel not accessible to sample (i.e. deep wetland reaches, canyons)
- Fish presence inferred
- Fish-bearing FPC Classification assigned for this reach
- Table 6 and Table 8

Scenario 2

- Fish sampling not conducted
- Channel dry but potential fish habitat available and accessible to fish from downstream fish-bearing reaches at higher flow conditions
- Fish presence inferred
- Fish-bearing FPC Classification assigned for this reach
- Table 6 and Table 8

Scenario 3

- Fish sampling not conducted
- No existing fish habitat at any flow conditions (i.e. very steep)
- Non fish-bearing FPC Classification assigned for this reach
- Table 6 and Table 7

1.1.4.3.5 NVC (No Visible Channel)

There were generally two types of situations in which site assessment in the field revealed no visible channel. They include reaches where no channel was present (or not a stream by FPC definition) or wetland-type reaches where there was no defined channel present, just wet, spongy ground where flow was generally percolating through the ground. These different types of NVC reaches were noted in the comments on the site cards and are included in Table 6. It is expected that NVC channels would receive a "Non Classified Drainage (NCD) FPC classification.

1.1.4.4 Report Photographs

In addition to photo documentation requirements, all photos taken for each report have been included in Appendix II as thumbnail photos. All photos are indexed and include all essential reference information (ILP, reach, site, view, time, roll, frame, CD and image #). Table 6 (Summary of Surveyed Reaches) in Section 2.1 references the corresponding thumbnail photos for each sampled reach.

1.1.4.5 Field Equipment

The following is a list of field equipment used throughout reach sampling.

- 2 Smith-Root model 12B P.O.W. Backpack Electrofishers
- 50 Gee-type minnow traps
- 2 Hanna pHep 3 waterproof pH meters
- 2 Hanna DIST WP 3 conductivity meters
- 2 Suunto clinometers, alcohol thermometers, Silva compasses
- 2 Pentax Zoom 90WR cameras
- assorted other equipment including tight chains, hip chains, stop nets, dip nets, fishing rods, magnifying lenses
- 2 4X4 trucks equipped with Level 1 First Aid kits and 4 personal First Aid kits, as per WCB requirements
- 50 HP jet boat

1.1.5 Logistics

The major problem encountered throughout the course of the sampling that was common to all drainages within the project area throughout the survey was the effect of extreme low water levels on sampling effectiveness. This was especially prominent in direct tributaries to Babine Lake where access for fish to these streams from the lake was further exacerbated by very low Babine Lake levels. Dry channels and very low water levels often precluded effective fish sampling. In these situations, fish presence and habitat information at each site was assessed based on the presence of fish habitat and its accessibility from downstream fish-bearing reaches at high flow conditions. Sampling results in the Henrietta watershed were often inconclusive due to cold water temperatures and the lateness of season. Fish and fish habitat assessments were again assessed in the above-mentioned manner.

1.2. Overview of the Telzato Creek Watershed

1.2.1 Location/Access

The Telzato Creek watershed is located northeast of Burns Lake and flows into the south side of Babine Lake approximately 1.5km west of the Sutherland River mouth. Access to the watershed from Burns Lake is by vehicle north on Old Babine Lake road to the 18km board, then east on the Augier road to the 26km board. At this point, bear left down the Taltapin road to the 31km board then turn left onto the Grizzly road. This road crosses Telzato Creek in reach 5 (~4km u/s from the mouth) at approximately the 60 km board. Access to the watershed is by boat for the lower reaches and by vehicle via the Taltapin and Grizzly roads for the upper watershed. Access to reaches from these roads was either by vehicle near spur road crossings and/or by foot.

The three maps on the following page identify the Telzato Creek watershed in relation to the local area stream network, the location of the watershed within its high level watershed group and the location of the entire project area within the province of British Columbia.

1.2.2 Existing Watershed Codes

At the time of ILP generation, no new watershed codes were available for this system. As such, all streams were assigned ILP's for all phases of this project. References to all streams are therefore made using ILP's in the databases, photodocumentation, maps, and in this report. However, Table 5 below provides a cross-reference for all streams that had watershed codes (coded ILP's) at the time this report was produced. Note that this table includes all ILP's with watershed codes within the entire watershed and not only sampled ILP's. All streams with gazetted names or aliases will be referred to by those names in this report while all unnamed streams will be referred to by their ILP number, for ease of presentation.

Table 5: ILP/Watershed Code Cross Reference Table

ILP #	Gazetted Name (Alias)	Watershed Code
44080	(Telzato Creek)	480-992900
45006	None	480-992900-46700
45008	None	480-992900-46700-08400
45014	None	480-992900-70000
45016	None	480-992900-80800

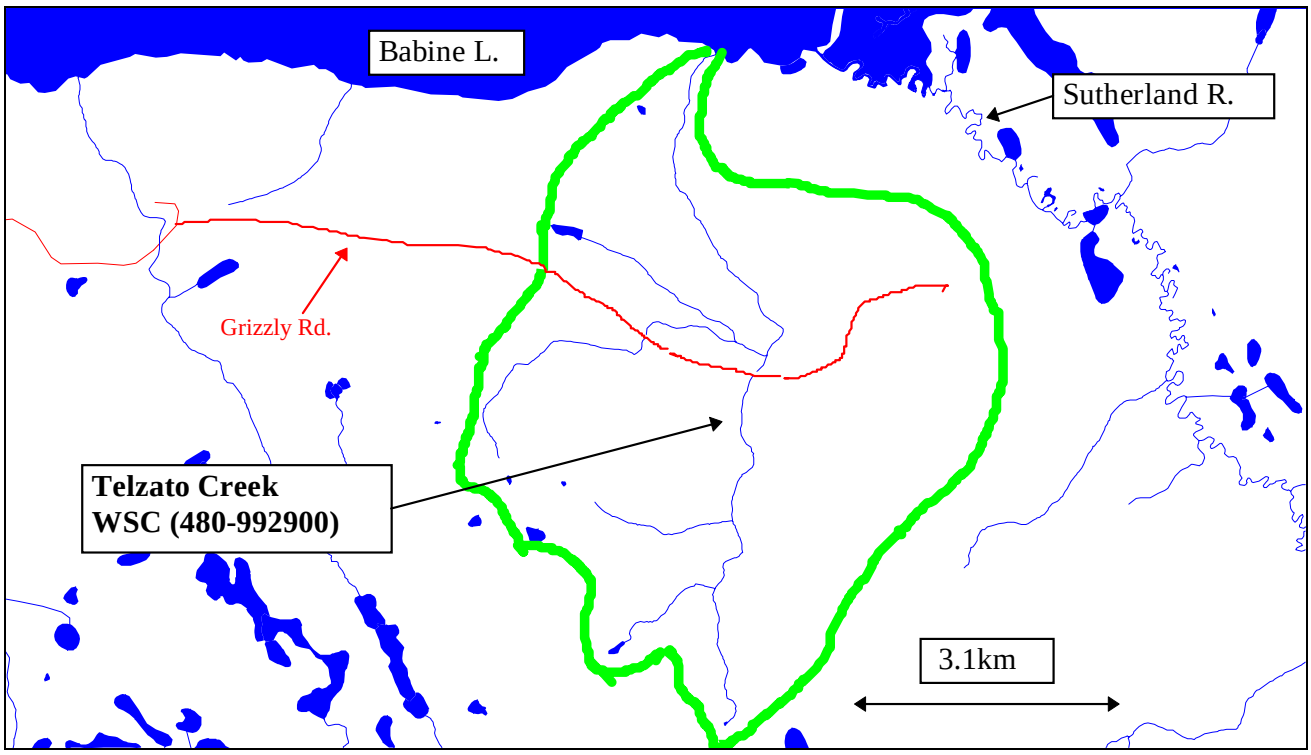

Figure 1: Telzato Creek Watershed

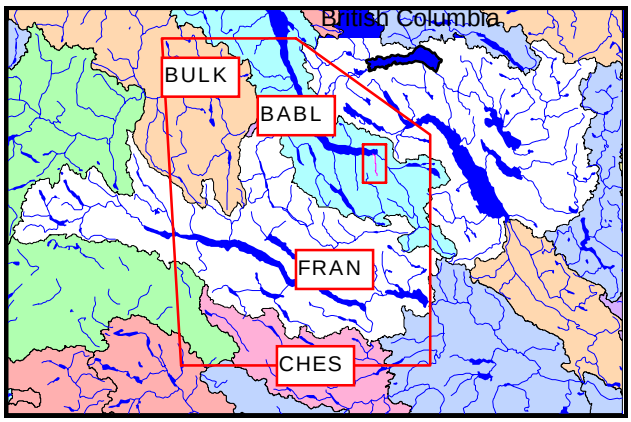

Figure 2: Location of Telzato Creek Watershed within BABL watershed group

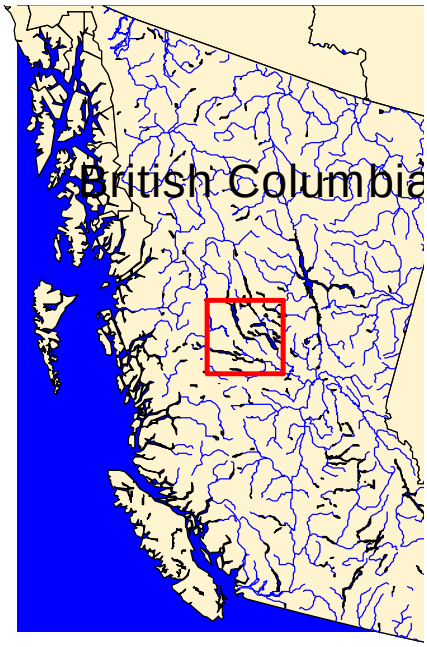

Figure 3: Location of Project Area within B.C.

2. Results and Discussion

2.1 Sampling Summary

Based on map and aerial photo interpretation, 54 reaches were identified within the Telzato Creek watershed. Although 12 of these reaches (22%) were chosen for sampling during the planning phase of this project, only 5 sites were sampled (9%). The number of reaches sampled was lower than planned due to the presence of a falls obstruction in reach 2 of Telzato Creek which rendered the rest of the watershed non fish-bearing. Most reaches were sampled in order to confirm fish absence above these falls.

Table 6 below summarizes all surveyed reaches, providing identification and location of each reach within the watershed, in addition to general channel characteristics and fish sampling results at each site. It should be noted that:

1. The **Dist. From Mouth** column refers to the location of the lower boundary of the surveyed reach and not the location of the sample site. Sample site locations are indicated on the attached maps.

2. The **Fish Info**. column indicates fish sampling results with four possible scenarios:

    - fish captured: species listed
    - no fish captured, fish presence inferred: NFC- inferred species listed
    - no fish captured, no fish present: NFP
    - fish sampling not conducted: NS

3. The **Channel** column indicates:

    - Grad.: average stream gradient at the site (in %)
    - CW: average stream channel width at the site (in m)
    - Dpth.: average residual pool depth at the site (in m)

The **Prop. Rip. Class** column indicates the expected FPC classification of this reach, based on fish sampling results, channel characteristics and interpretation of the field data. The red classifications indicate confirmed fish presence while the blue indicates fish absence (either NFP code or NS with no available fish habitat). The highlighted codes in parentheses indicate that fish presence has been inferred (either NFC code or NS with available fish habitat). These reaches have been designated for follow-up sampling. Further information on the fish-bearing status of surveyed reaches is presented in Section 2.4 Fish Bearing Status.

Table 6: Summary of all Surveyed Reaches in the Telzato Creek Watershed

Site #	Stream Name	ILP #	Reach	Dist. From Mouth (km)	Corresponding Thumbnail Photo in Appendix II	Parent Waterbody and Stream Location	Fish Info.	Channel			
								Grad (%)	CW (m)	Dpth (m)	Prop Rip. Class
175	Telzato Creek	44080	1	0	1-4	Babine Lake south shore 1.5km west of Sutherland River	NFC-CO,RB	5.3	6.9	0.3	S2
176	Telzato Creek	44080	2	0.28	5-7	As above	CAS,CO,RB	10.0	7.9	0.9	S2
177	Telzato Creek	44080	2	0.28	8-9	As above	NFP	9.0	7.5	0.6	S5
178	Telzato Creek	44080	5	3.74	10-11	As above	NFP	1.0	1.9	0.1	S6
179	Unnamed	45002	2	0.33	12-13	Telzato Creek Reach 4: right bank tributary at 3.61km	NFP	1.5	0.8	0.1	S6

2.2 Fish Species

The Telzato Creek watershed contains rainbow trout, coho salmon and prickly sculpin. All captured fish appeared healthy and did not exhibit any external signs of disease. The one coho salmon captured measured 94 mm in length and appeared to be a 1+ year juvenile. No other species were encountered in the system during this inventory.

Figure 4 below provides general information on frequency of occurrence of fish within different length classes for the Telzato Creek watershed for all fish captured during this inventory. Due to the limited scope of this project, this information should only be used to suggest the length distribution of the population within this system.

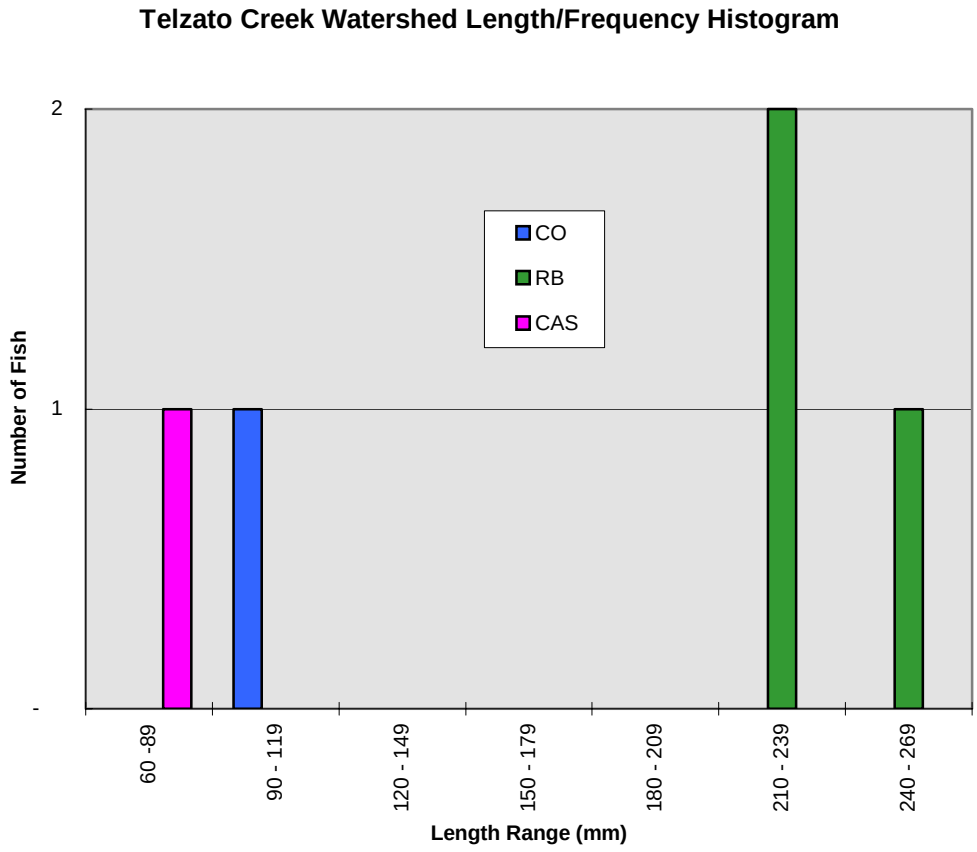

Figure 4: Length/Frequency Histogram of Fish in the Telzato Creek Watershed

2.3 Fish Distribution

2.3.1 Obstructions

A series of three vertical rock falls measuring 10m in height are present in reach 2 of Telzato Creek and are located 460m upstream from the mouth. These falls are a definite barrier to all fish species. The mouth of the creek was also totally dewatered and inaccessible to fish from Babine Lake at the time of sampling.

2.3.2 Fish Use

At the time of this survey, fish presence in this watershed was limited to the short section of reach 2 of Telzato Creek below the falls. These falls are a definite barrier to all fish species and mark the upstream distribution limit for all fluvial[1], adfluvial[2] and anadromous[3] species. No fluvial species are present above the falls. Rainbow trout were the most abundant species in the system, although only very low numbers of fish were captured. Fish sampling in reach 1 of Telzato Creek yielded no fish due to extensive dewatering of the channel.

Although coho salmon were found in this system, their presence was limited to reach 2 and only one coho was captured. At the time of this survey, the mouth of Telzato Creek was totally dry and inaccessible to fish from Babine Lake. It is likely that salmon species frequently encounter access problems into this system during the summer/early fall low water period.

The only surveyed tributary in this watershed flows into Telzato Creek above the falls and is consequently non fish-bearing.

Figure 5 below summarizes the relative rainbow trout abundance for all confirmed and inferred fish-bearing reaches within the Telzato Creek watershed. Inferred fish-bearing reaches have been included in this figure to provide an indication of levels of effort expended sampling for fish in each reach.

[1] Resident in river for entire life.
[2] Spends part of life in lake and part in river.
[3] Spawn in river, migrate to ocean.

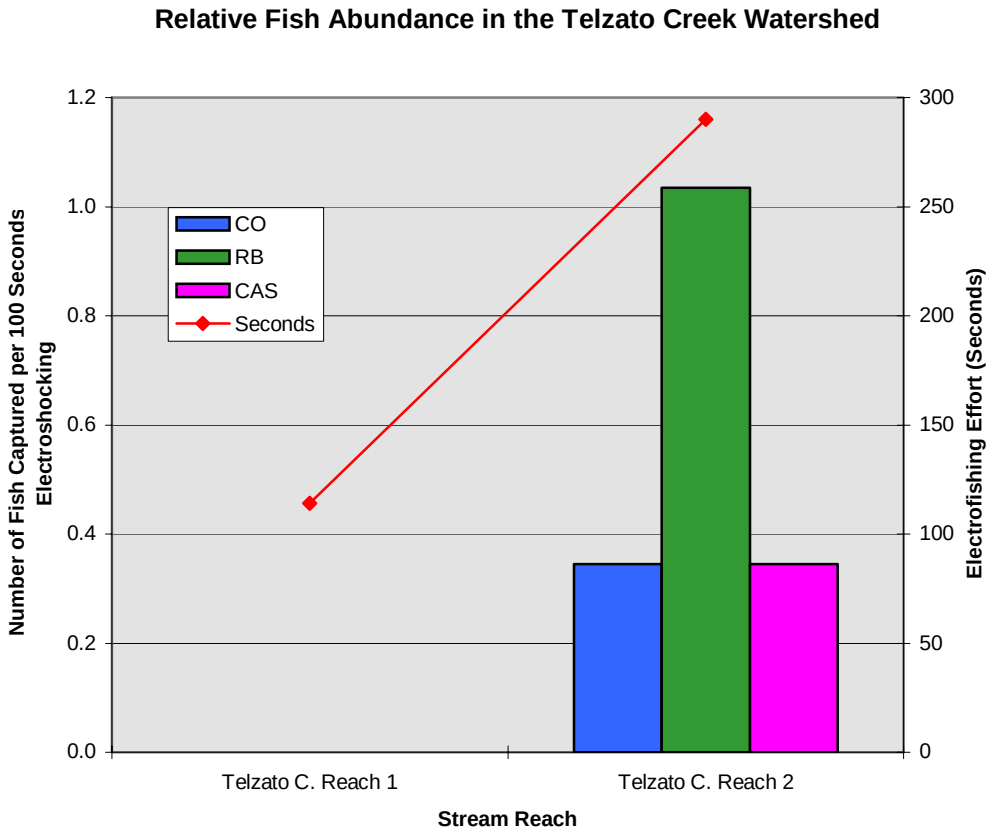

Figure 5: Relative Fish Abundance in the Telzato Creek Watershed

2.3.3 Fish Habitat

The only fish-bearing reaches in this watershed are Telzato Creek reach 1 and the short section of reach 2 below the falls obstruction. Reach 2 offered the best overall habitat for rainbow trout and coho salmon. Much of reach 1 was dewatered or intermittent and shallow offering very little usable fish habitat. Extensive scouring of the channel in this reach has recently occurred, altering channel morphology and depositing large volumes of gravel in multiple channels in the first 100m of the creek.

Habitat within the only surveyed tributary is not accessible to fish as it flows into Telzato Creek above the falls.

2.4 Fish Bearing Status

The following sections present information on the fish-bearing status of sampled reaches. The first section provides justification for non fish-bearing reaches within the Telzato Creek watershed. The second section identifies and prioritizes reaches where follow-up sampling should be conducted (inferred fish-bearing reaches). Confirmed fish-bearing reaches have not been included in this section but are included in Table 6. Please refer to the definitions provided in section 1.1.4.3 regarding methodology and interpretation of data.

2.4.1 Non-Fish Bearing Reaches

Table 7 summarizes all reaches that have been assigned a non fish-bearing FPC classification. Justification for the non fish-bearing classification is provided in the comments section of the table.

2.4.2 Follow-up Sampling Required (Inferred Fish-bearing Reaches)

None of the surveyed reaches within the Telzato watershed require follow-up sampling. Telzato Creek was confirmed to be non fish-bearing above the falls in reach 2. There were no fish-bearing tributaries to Telzato Creek surveyed below these falls.

Table 7: Summary of Data from Surveyed Non-Fish Bearing Reaches in the Telzato Creek Watershed

Stream Name	Watershed Code/ILP	Site	Reach	Grad (%)	Temp. (°C)	Cond. (uS)	Flow	Turb	Sampling Methods					Comments
									Electrofishing			Other		
									area (m^2)	effort (sec)	Settings V/Hz/µs	Type	Effort	
Telzato Creek Watershed - Sites 175-179														
Telzato C.	**44080**	**177**	2	9	6.3	241	L	C	560 560	251 203	500/60/4 600/60/4			No fish above falls obstruction in reach 2. No fluvial populations above falls.
Telzato C.	**44080**	**178**	5	1	9	189	L	C	280 280	88 104	700/70/2 600/60/4			No fish above falls in reach 2
Unnamed	**45002**	**179**	2	1.5	8.0	173	L	C	48	98	600/60/2			No fish due to falls in Telzato Creek reach 2

Project Area Bibliography

Hancock, M.J., Leaney-East, A.J., Marshall, D.E. 1983. Catalogue of Salmon Streams and Spawning Escapements of Statistical Area 4 (Upper Skeena River). Canadian Data Report of Fisheries & Aquatic Sciences. No. 394.

Bustard, D. and Associates. 1989. Assessment of Rainbow Trout Recruitment from Streams Tributary to Babine Lake. Prepared for B.C. Ministry of Environment, Smithers, B.C.

Luiker, E.A., and Hickey, D.G. 1996. A Reconnaissance Survey of Llgityuz Lake (Watershed Code 180-5453-457 03). Prepared by EDI Environmental Dynamics Inc., Prince George, B.C. for MELP Fisheries Branch, Skeena Region, Smithers, B.C. February 1996. iv + 20pp + Appendices A to D.

Carmichael, N.B. and Bonner, L. 1977. An Inventory of the Pinkut Watershed. Stream Inventory, Fish and Wildlife Branch, Victoria, B.C.

AGRA Earth and Environmental Ltd. 1996. Part 3: Level I Fish Population and Riverine Habitat Assessment Maxan Watershed. February 1996. Prince George, B.C. iv + 25pp +Appendix 1.

Babine Forest Products Co. in partnership with the Ned'u'ten Fisheries Commission. 1996. Watershed Restoration Program, Taltapin Watershed, Level I Fish and Fish Habitat Assessment. Prepared for Watershed Restoration Program, Lakes Forest District, Burns Lake, B.C., and Skeena MELP Fisheries Branch, Smithers, B.C. July, 1996. 50pp.

Caw, G.B. 1978. An Inventory of the Ootsanee Lake Drainage, Tributary to Cheslatta Lake and Streams Tributary to the South Bank of Cheslatta Lake. Fish and Wildlife Branch, Victoria, B.C.

SKR Consultants Ltd. 1996. Fish-Stream Identification: Lakes Forest District, Small Business Forest Enterprises Program (Decker Lake tributaries). Prepared by SKR Consultants Ltd., Smithers, B.C. for the Lakes Forest District Small Business Forest Enterprises Program, Burns Lake, B.C.

Degisi, J.S. and Burrows, J.A. 1995. Reconnaissance Survey of Unnamed "Gerow" Lake Watershed Code 180-3740-952-019-870-01. Smithers, B.C. Prepared for MELP Fisheries Branch, Skeena Region, Smithers, B.C. iii + 16pp + Appendices A to E.

Degisi, J.S. and Burrows, J.A. 1995. Reconnaissance Survey of Anders Lake Watershed Code 180-3740-952-665-230-01. Smithers, B.C. Prepared for MELP Fisheries Branch, Skeena Region, Smithers, B.C. iii + 18pp + Appendices A to E.

Fish presence and distribution information within the project area was also obtained from FISS maps within the Smithers MELP regional library. These maps included: 93K/3, 93K/4, 93K/5, 93K/6, 93K/12, 93F/11, 93F/12, 93F/13, 93F/14, 93L/1 and 93L/8.

List of Appendices

Appendix I: Attachments Available at MELP Office

Appendix II: Thumbnail Photographs

Appendix III: FDIS Reach/Site Summaries

Appendix IV: FDIS Site Cards

Appendix V: Fish Collection Cards

Appendix VI: Lake Table