

HQ1517

**Operational Stream Inventories for
FL A-16825 and A-16823**

**(Including Several Operational Sites Visited throughout the
1997, 1998 and 1999 Field Seasons)**

**A Compilation of Data from Operational Fish Stream
Identification and Follow-up Sampling for
Various Streams in the Babine Lake (BABL),
Bulkley River (BULK), Cheslatta River (CHES),
Upper Trembleur Lake (UTRE) and Francois Lake (FRAN)
High-Level Watershed Groups**

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Abbreviations Used in this Report

BFP	Babine Forest Products Company	MW	mountain whitefish (<i>Prosopium williamsoni</i>)
C.	creek	N	No or None
CAS	prickly sculpin (<i>Cottus asper</i>)	N/A	not available
CO	coho salmon (<i>Oncorhynchus kisutch</i>)	NCD	not classified drainage
DFO	Department of Fisheries and Oceans	NFC	no fish captured
d/s	downstream	NFP	no fish present
EF	electrofishing	NS	not sampled
FSID	Fish-stream Identification	NVC	no visible channel
FISS	Fisheries Information Summary System	OP	Operational Inventory
FPC	Forest Practices Code	PCC	peamouth chub (<i>Mylocheilus caurinus</i>)
FRBC	Forest Renewal of British Columbia	Prop	proposed
FRIM	Reconnaissance (1:20,000) Fish and Fish Habitat Inventory: Standards and Procedures (Version 1.1)	R.	river
H	High value fish habitat	RB	rainbow trout (<i>O. mykiss</i>)
hr	hour	Rd.	road
Hz	Hertz	Resamp	Resampling
ILP	Interim Locational Point	S2 - S6	riparian classes
Infer	Inferred	(S2 - S6)	inferred riparian classes
Info.	information	sec	seconds
km	kilometer	sin	sinus
KO	kokanee (<i>O. nerka</i>)	SK	sockeye salmon (<i>O. nerka</i>)
L	low value fish habitat	Spp.	species
L.	lake	tan	tangent
LKC	lake chub (<i>Couesius plumbeus</i>)	TRIM	Terrain Resource Information Management
LNC	longnose dace (<i>Rhinichthys cataractae</i>)	u/s	upstream
LSU	longnose sucker (<i>Catostomus catostomus</i>)	UTM	Universal Transverse Mercator coordinates
m	meter	V	volts
M	moderate value fish habitat	WSC	watershed code
MELP	Ministry of Environment, Lands and Parks	x-ing	crossing
M/L	mainline	Y	Yes
MT	minnow trap	µs	microseconds

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1. Introduction

1.1 Project Scope and Objectives

The purpose of this project was to compile and summarize all fisheries information collected in the Burns Lake area throughout the Babine Forest Products Company (BFP) operating area during operational fish inventories conducted throughout the 1997, 1998 and 1999 field seasons. This information is supplemental to the information collected during Reconnaissance Inventories completed in this area and was generally gathered to provide BFP with site-specific fisheries information which was then used to aid in forest development planning and activities. Most of this fisheries information was collected either to fill information gaps and improve fish distribution information for watershed areas sampled during Reconnaissance Inventories, or to confirm Forest Practices Code (FPC) stream classifications proposed during these inventories.

1.2 Location

All streams are located within the Lakes Forest District in the Babine Forest Products Company operating area. They are all within the Bulkley River (BULK), Francois Lake (FRAN), Babine Lake (BABL), Upper Trembleur (UTRE) and Cheslatta River (CHES) high level watershed groups. The location map (Figure 1) on the following page provides the general location of the study area.

1.2.1 Access

Access to all reaches sampled during these operational inventories was by vehicle from various logging roads and cutblock spur roads.

2. Historical Information

An abundance of fisheries information has been collected and presented under the scope of several reconnaissance and operational inventories completed over the past four years. Results from these inventories have not been summarized in the report. Rather, relevant information from these inventories has been applied in specific situations in this project to provide rationale for fish-bearing status and stream classification. Applied information is presented in this report in the stream summary table and hardcopy maps.

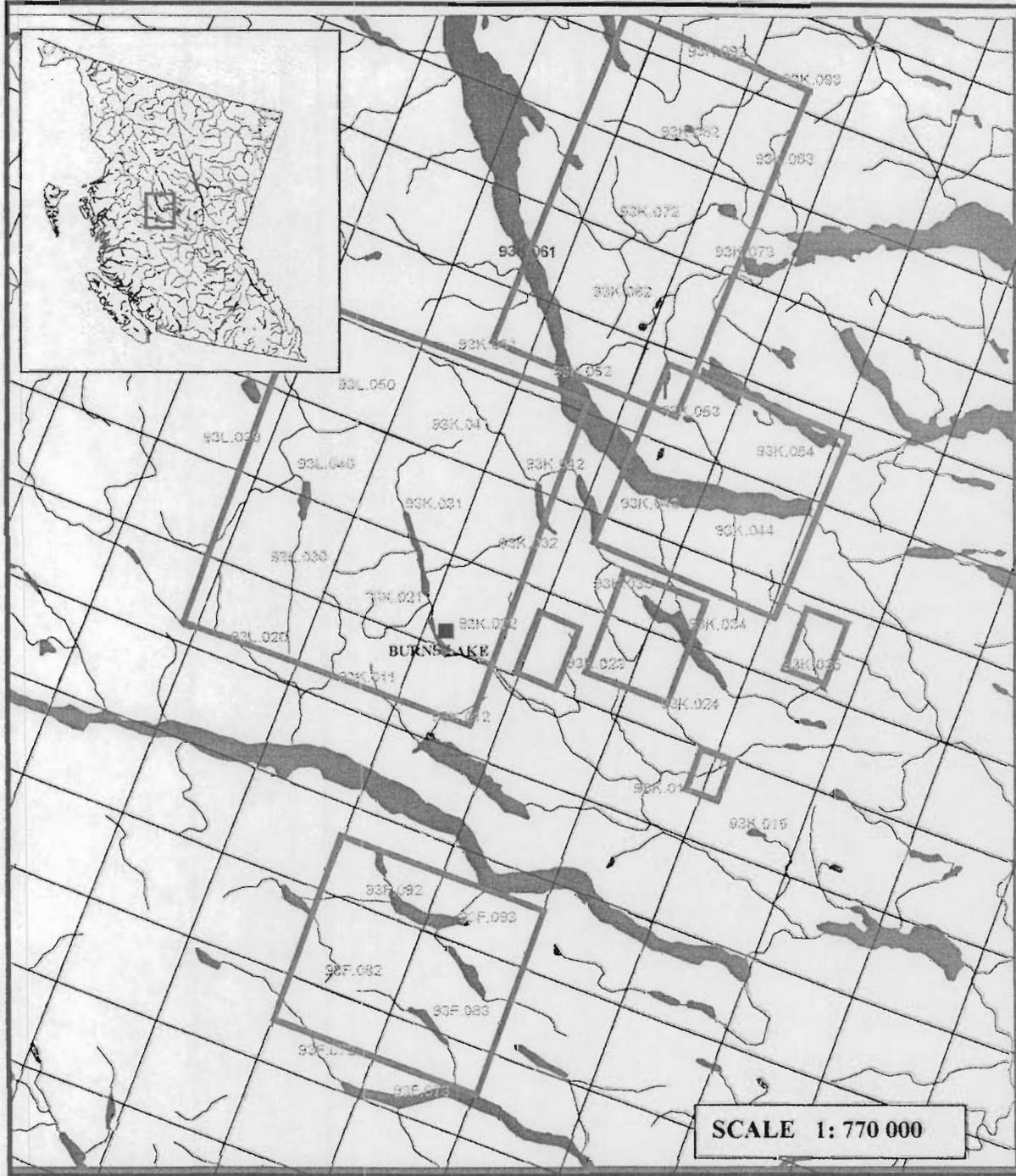


Figure 1: Location of Project Area. (Inset map shows the location within the province of British Columbia.)

3. Methods

Methodology used throughout this project was consistent with the standards and methods outlined in the following publications:

- Forest Practices Code (FPC) of British Columbia Act (1995)
- Fish-stream Identification Guidebook, Second Edition (FSID) (FPC, 1998)
- Riparian Management Area Guidebook (FPC, 1995)

3.1 Field Data Collection

Field data was collected on Site Cards, Fish Collection Forms and Individual Fish Data Cards. These field cards are the current accepted method of collecting data for fish sampling and stream classification. Supporting documentation regarding terminology and use of these field cards is available in "Reconnaissance (1:20,000) Fish and Fish Habitat Inventory: Standards and Procedures (MELP, 1998). Copies of all field cards, arranged by site number, are provided in Appendix I.

3.2 Fish Sampling

Electrofishing and visual observation were the primary methods used for fish sampling throughout the field portion of the project. These methods were to be supplemented by the use of minnow traps, when logistically feasible, when electrofishing was not effective or potentially harmful to fish (i.e. deep wetland channels, low water temperatures) and sampling results were inconclusive, but these circumstances did not occur.

3.3 Measurements

Stream channel and wetted widths were determined using a meter stick for smaller streams and a hip chain for streams with channel widths greater than 2.0m. A minimum of six channel width measurements were made along each site at a distance of approximately one channel width apart. Stream depth measurements were determined using a meter stick. Stream gradient measurements were determined using an Abney level or clinometer along several sections of the site. Site lengths were determined either by hip chain or by ground estimate. Measurements of falls were based on ground estimates or calculated using distance/ gradient while cascade heights and lengths were determined using a hip chain and Abney level/clinometer. Vertical cascade height was calculated using the gradient and slope distance according to the formula:

$$\text{Height (m)} = \sin(\tan^{-1}(\text{gradient (\%)}) \times \text{slope distance (m)})$$

Stream water temperatures were determined using an alcohol thermometer while pH and conductivity measurements were made using Oakton or Hanna portable meters, which were calibrated weekly using standardized solutions.

3.4 Mapping

Mapping convention for this project follows the standards as recommended in the FSID Guidebook, Second Edition (FPC, 1998). In all, 43 maps have been produced for this project. These maps are hand-drawn and have been adapted from 1:20 000 TRIM maps. They range in size from 8.5"x11" to 11"x17" and are all arranged by map number in pockets in Appendix II at the end of this report. A key map has also been included in this appendix, which depicts coverage of the individual maps in relation to the study area, as well as to individual TRIM mapsheet coverage. The maps depict the stream network, base coordinates from the UTM grid and mapping symbols, as recommended in the FSID Guidebook. All new and relevant historical site data has been presented and referenced on the maps. The fish-bearing status of specific streams is represented on the maps using colour linework. Solid red lines indicate confirmed fish presence while dashed red lines indicate that fish presence has been inferred but is considered likely. Dashed blue lines indicate that fish presence has been inferred but that fish absence is suspected in that reach while solid blue lines indicate confirmed fish absence.

Maps have been generally numbered from north to south and from east to west moving south through the project area, as shown on the key map.

3.5 Site Numbering Convention

Site numbers for this project have been assigned in an upstream ascending order on each map for all sampled sites under the scope of this project. Historical sites have their relevant reach summary symbol on the map, but do not include any site numbering reference.

3.6 Referencing

All sampled streams retained their original reference identifier as assigned during past inventories (i.e., gazetted name, watershed code, assigned name or interim locational point (ILP) number) for ease of referencing with prior projects. Streams without an historic reference were assigned a unique identifier.

3.7 NVC (No Visible Channel) Reaches

There were three types of situations in which site assessment in the field revealed no visible channel. They include reaches where no drainage was present, reaches that were not a stream by FPC definition, or wetland-type reaches where there was no defined channel present. The type of NVC reaches was noted in the comments on the site cards and in Table 1. NVC reaches received a "Non Classified Drainage" (NCD) FPC classification.

3.8 Photographs

Representative photographs and any significant features are presented in Appendix II, arranged by site number. They have been reduced in size so that multiple photos can be presented on one page. Each photo is labeled with site number, stream identifier and any relevant comments that aid in interpretation, so that each photo can be easily cross-referenced in the report.

3.9 Field Equipment

All sampling equipment specifications are listed below:

- 2 Smith-Root model 12B P.O.W. Backpack Electrofishers
- 50 Gee-type minnow traps
- 2 Oakton pHTestr2 pH meters (with pH 7 & 10 buffer solutions)
- 2 Oakton TDSTestr3 conductivity meters (with 1413 μ S/cm solution)
- 2 Abney Levels, alcohol thermometers, Silva compasses
- 2 Pentax Zoom 90WR cameras
- assorted other equipment including tight chains, hip chains, dip nets, fishing rods, magnifying lenses, meter sticks
- 2 4X4 trucks equipped with Level 1 First Aid kits and 4 personal First Aid kits, as per WCB requirements
- 12'6" inflatable Quicksilver boat with Mariner 20 HP jet
- Dissecting kit

4. Results and Discussion

4.1 Approach Used to Determine Fish-bearing Status

The following section summarizes the information collected and conclusions reached for each sample site within the project area. This has been based both on interpretations and conclusions from the synthesis of data collected during previous inventories and from new information collected as part of this project. Historical information was used only as further supporting evidence in determining fish-bearing status.

Determining whether or not any fish use occurs in a specific reach is a complex process, involving much more than applying fish sampling results on a site-specific basis. Specifically, in applying a non fish-bearing status to a reach when fish are not captured in a sampling event, a more systematic process is required in order to provide an adequate rationale to support a conclusion of fish absence. Biological evaluation is used which factors in such considerations as historical sampling information, known fish distributions and behavior, barriers, gradients, invertebrate presence, habitat quality, and presence/absence of headwater lakes. An overview of the process used in determining fish-bearing status is presented in a flowchart in Figure 2 below.

As a general rule, two conditions must usually exist in order for fish to inhabit a specific stream reach; 1) presence of fish habitat and 2) accessibility to that habitat. There are exceptions to this, such as presence of resident or adfluvial populations above barriers which otherwise block access, but these situations are considered on an individual basis when appropriate sampling can be undertaken to accurately determine fish presence under these circumstances.

Determining presence of fish habitat requires biological judgement but is based on many tangible factors. A "snapshot" method is used to determine presence of fish habitat at the time of sampling, but this is not sufficient when lack of water limits available habitat. Under these circumstances, a temporal approach is required which factors in the potential for fish habitat presence during a different flow period. In this manner, different habitat requirements for suspected fish species are also considered, such as potential seasonal use for rearing (i.e., higher flow rearing or refuge habitat) or spawning (i.e. suitable gravels, gradient and potential flow). Again, biological judgement is required to recognize this potential habitat, bearing in mind how the different flow regimes may affect the availability of this habitat. Moreover, the presence of potential overwintering or perennial habitat upstream in the watershed (i.e. lakes, wetlands, pools >0.5m deep) is also taken into account and has influence on the fish-bearing status of a specific reach. Existence of habitat or potential habitat, if present, is noted and described in the comments on the site cards.

Once presence of fish habitat has been established, it must be determined whether fish are capable of accessing this habitat. The presence of obstructions to fish in the form of falls, cascades, impassable gradients and lack of connectivity within a watershed may limit fish distribution within a watershed and must be evaluated. When questionable obstructions or soft barriers (i.e., beaver dams, wetlands, NVC reaches) are present, the process for determining the presence of fish

habitat upstream must be undertaken and combined with adequate sampling in order to determine fish use.

The fish-bearing status of a specific reach is dependent on the presence of fish habitat, the accessibility to that habitat and is supported by the results of fish sampling. The above process for determining fish presence is an overview of the variables evaluated before fish-bearing status can be accurately ascertained. This entire process is always supplemented by existing fisheries information and interpretations from map and air photo analysis.

Once a non-fish bearing conclusion has been established for a sampled reach, all reaches located upstream from that location are considered to be non fish-bearing. This is inherent in the process used to determine the non fish-bearing status.

4.2 Summary of Sampling Results

For the purposes of this report, all of the results for this project have been summarized into tabular format (Table 1). Each row summarizes the information collected at the sampling site and includes comments, which aid in the interpretation of the data. In the cases of resampling, reference to the results of the initial or original sampling is made in the comments to provide further rationale for the fish-bearing status of the stream in question. Detailed site-specific information is available in the field cards in Appendix I. The following defines the columns used in this table.

Sub-unit	Area as defined within BFP's operating area. Usually incorporates the name of a major watershed in the area.
Compilation Project Map #	The reference number for the maps included in Appendix III in this report
Site #	The reference number for the site assigned for this report.
Stream ID (Name, Alias, ILP, Assigned Name)	Stream identifier
Watershed Code	Hierarchical code to identify a stream, as defined in the Watershed Atlas.
Reach #	The reach in which the sample site is located.
Project in which current information collected	Auspices under which new information was collected (i.e. Operational 1998 (OP98). Resampling 1999 (Resamp99).
Original Inventory	Auspices under which any original information was collected (1997 1:20k Reconnaissance, etc.)
Original Report	Report name from original inventory from which historical information was compiled.
Previously Sampled (Y/N)	Whether or not the specific stream reach was previously sampled. Prior sampling conducted in proximal reaches is mentioned in the comments, when applicable..
Date	Date of sampling.
RMA Class (S1-S6, (S1)-(S6), NCD)	Assigned FPC classification, based on interpretation of all information.
Average Gradient (%)	Average stream gradient over site length.
Average Channel Width (m)	Average channel width over site length
Fish presence (Y/N/Infer)	Conclusion of fish presence – Y = confirmed fish presence, N = confirmed fish absence, Infer = fish presence inferred
Fish Species Codes (inferred)	Fish species captured or inferred (expected) in reach
Fish Barrier Type	Description of barrier to fish (if present)

Fish Barrier Location	Location of barrier
Fish Habitat Value (H, M, L, N)	Subjective rating of habitat value, based on biological judgement
Sampling Specifications	Description of fish sampling methods
Minnow Traps	Sampling method
#MT/hr	Number of minnow traps set and time set (in hours)
Electrofishing	Sampling method
Dist(m)	Distance of stream electrofished
Time (sec)	Time of electrofishing
Settings (V/Hz/μs)	Settings used for the electrofisher
Comments	Any further comments as they relate to the site. Usually provides rationale for fish-bearing status conclusions, a brief description of habitat and any other pertinent historical sampling information which supports conclusions.

Stream Classification Process

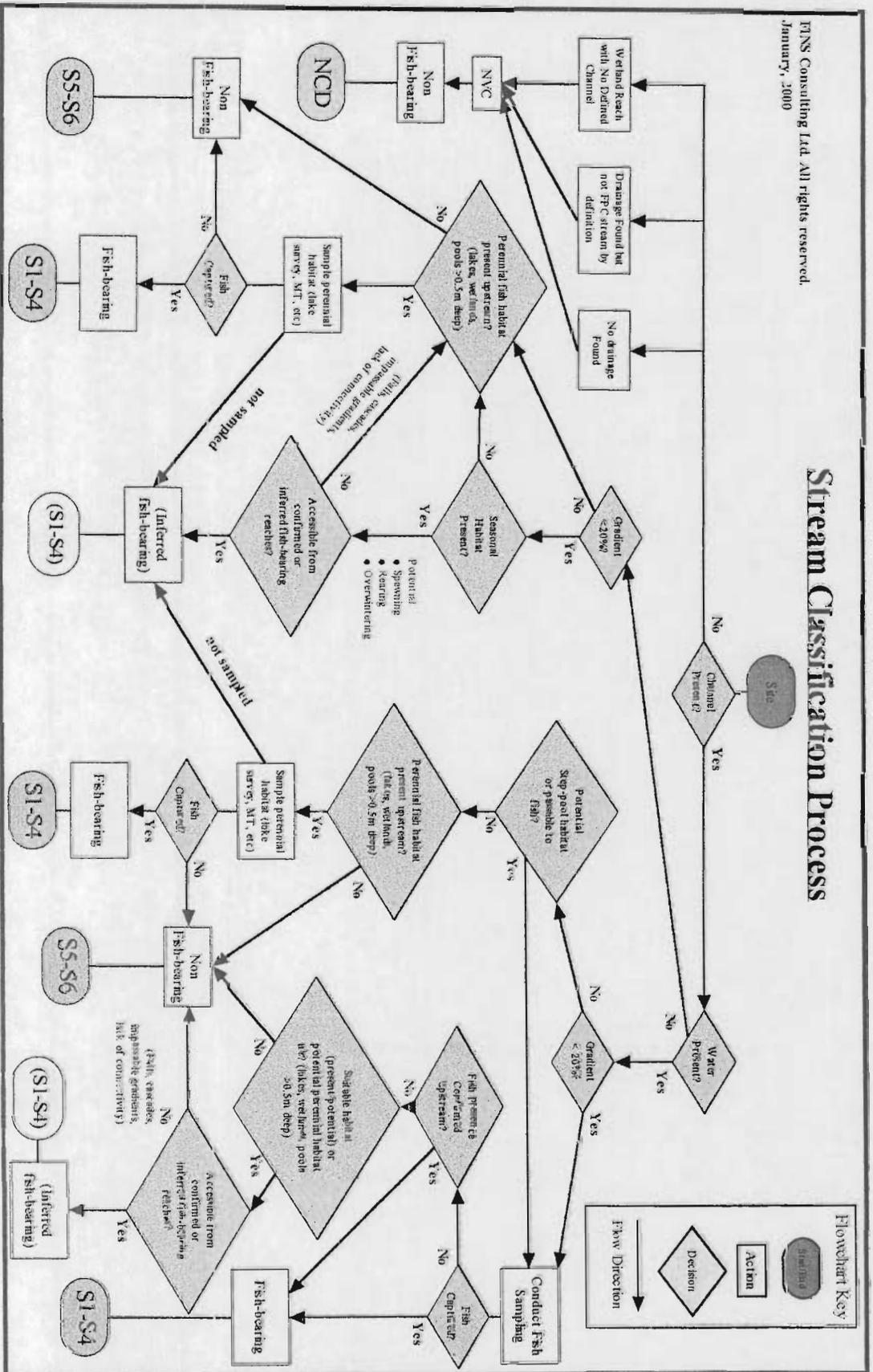


Figure 2: Flowchart of the stream classification process used in determining fish-bearing status of surveyed reaches

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, ILP, Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (unfarred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments	
																			Minnow Traps	Electrofishing	Settings		
																			#AT/Tr	Disk (m)	Time (sec)	(V/H/Is)	
Upper Tildesley	1	1	Tildesley Creek	182-819600-95800-19000	6.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Fleming Area"	Y	10/05/98	S2	3	18.0	Yes	RB	4m falls	8.2km ups from Klayvalukut L.	H		60	79	700/70/6	Reach was previously sampled in 1996 with NFC - unfarred non fish-bearing at that time but with further sampling recommended to confirm. Sampling in 1998 confirmed RB presence above the 1st falls and adjusted the PFC class from S5 to S2.
Upper Tildesley	2	2	Tildesley Creek	182-819600-95800-19000	7.0	OP98	1996 1.20K Reconnaissance Inventory	"Fleming Area"	N	10/20/98	S5	3	7.6	No	None	6m falls	Start of reach 4575m dis from proposed Fleming Ext pool crossing	H		700	1039	800/80/6	Reach is within 1996 project area but not sampled under 1996 field program. 6m falls at start of reach are a definite barrier to all fish and the mark the upper distribution limit of fish use in the Tildesley watershed. Sampled extensively in 3 sites in excellent overall RB habitat above falls with no fish captured. Confirmed non fish-bearing.
Upper Tildesley	3	3	TT5		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Fleming Area"	N	10/05/98	S6	20	1.0	No	None	300m high x 300m long cascade	At mouth	N		150	88	600/60/6	Stream is within 1996 project area but not sampled under 1996 field program. Creek is too steep for fish use - entire site is 30% cascade gradient, which is unusable and impassable to all fish. Sampled occasional pools within gradient with NFC. Non fish-bearing from mouth.
Upper Tildesley	4	4	TTKF		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Fleming Area"	N	10/05/98	S3	3	1.6	Infer	(RB) steep cascade (2m high x 8m long cascade)	end of reach (450m from mouth)	M		110	164	600/60/6	Stream is within 1996 project area but not sampled under 1996 field program. Moderate rearing habitat available and accessible to fish from Tildesley Creek. However, unlikely to be used due to low population density in watershed above 1st falls in Tildesley Creek. Infered fish-bearing to cascade/steep gradient at end of reach.	
Upper Tildesley	5	5	TTKF		2.0	OP98	1996 1.20K Reconnaissance Inventory	"Fleming Area"	N	10/05/98	S6	20	1.3	No	None	see above	See above	N		184	179	600/60/4	Stream is within 1996 project area but not sampled under 1996 field program. Overall too steep for fish use and impassable to fish due to presence of cascade and steep gradient. No suitable fish habitat and no fish present above cascade at end of reach 1 dis.
Upper Tildesley	6	6	TTKG		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Fleming Area"	N	10/21/98	S6	25	1.7	No	None	10m high x 30m long cascade/steep gradient	At mouth	N		60	107	600/70/6	Stream is within 1996 project area but not sampled under 1996 field program. Creek is too steep for fish use and the cascade at the mouth is impassable to all fish. Sampled occasional pools within steep gradient with NFC. Non fish-bearing from mouth.
Upper Tildesley	7	7	TTKH		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Fleming Area"	N	10/21/98	S6	19	1.4	No	None	Steep gradient	At mouth	N		110	191	700/60/4	Stream is within 1996 project area but not sampled under 1996 field program. Creek is too steep for fish use with frequent impassable cascades, which are impassable to all fish. Sampled occasional pools within steep gradient with NFC. Non fish-bearing from mouth.
Upper Tildesley	8	8	TTKJ		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Fleming Area"	N	10/21/98	S6	21	1.6	No	None			N		65	77	600/70/6	Stream is within 1996 project area but not sampled under 1996 field program. Creek is too steep for fish use and no instream cover. Sampled occasional pools within steep gradient with NFC. Non fish-bearing from mouth.
Upper Tildesley	9	9	TTKI		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Fleming Area"	N	10/21/98	S6	22	0.8	No	None			N		50	138	500/60/8	Stream is within 1996 project area but not sampled under 1996 field program. Steep (35%) valley wall trickle at mouth with no access for fish from Tildesley Creek and no suitable fish habitat. Non fish-bearing from mouth.

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, ILP, Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (Inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments			
																			Minnow Traps	Electrofishing	Settings				
																			#KTHr	Dist (m)	Time (sec)	(V11/2/99)			
Upper Tidesley	1	10	T17		2.0	OP98	1996 1.20K Reconnaissance Inventory	"Planning Area"	N	10/21/98	S6	23	0.4	No	None	18m high x 70m from mouth (east of reach 2)	N		55	109	500/60/4	Stream is within 1996 project area but not sampled under 1996 field program. Cascade at start of reach (70m from mouth) is impassable to fish. Stream above cascade rises in gradient and is a shallow trickle down valley with no fish habitat or fisheries potential. Confirmed non fish-bearing from cascade.			
Upper Tidesley	1	11	T18		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Planning Area"	N	10/21/98	S6	26	0.4	No	None	Steep gradient	At mouth	N		310	87	600/60/4	Stream is within 1996 project area but not sampled under 1996 field program. No fish habitat as stream is too steep for fish use. 36% gradient gully middle with no fish access or suitable habitat. Sampled occasional pools, but otherwise too steep and shallow to stock. Confirmed non fish-bearing from mouth.		
Upper Tidesley	1	12	T18K		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Planning Area"	N	10/21/98	S2	8	6.8	Yes	RB		H		700	682	700/60/6	Stream is within 1996 project area but not sampled under 1996 field program. Excellent rearing habitat for RB in boulder pools below small cascades. Limited spawning habitat due to large substrate size and moderately steep gradient. Good overwintering in abundant deep pools. Stream is a major tributary to Tidesley Creek (approx 50% of size). Surveyed to 1152m with no barriers to RB encountered. RB captured to 580m, but very low abundance. Confirmed fish-bearing to 1152m, then inferred fish use.			
Upper Tidesley	1	13	T18KN		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Planning Area"	N	10/21/98	S6	25	1.5	No	None	Steep gradient	At mouth	N		105	161	600/70/6	Stream is within 1996 project area but not sampled under 1996 field program. No fish habitat as stream is too steep for fish use. 25% gradient gully middle with no fish access or suitable habitat. Sampled occasional pools, but otherwise too steep and shallow to stock. Confirmed non fish-bearing from mouth.		
Upper Tidesley	1	14	T18NL		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Planning Area"	N	10/20/98	S6	17	1.2	No	None	Steep gradient	At mouth	N		170	312	500/60/6	Stream is within 1996 project area but not sampled under 1996 field program. Marginal habitat present at high flow but gradient is steep (16%) and rises to >20% at 40m from mouth. NFC in entire section from mouth. Confirmed non fish-bearing.		
Upper Tidesley	1	15	T19		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Planning Area"	N	10/20/98	S6	8	0.8	No	None			N			Not sampled	Stream is within 1996 project area but not sampled under 1996 field program. Watched for only 12m near mouth = very shallow exposed trickle over fins. Past 12m, channel deepens and becomes undercurrent. No suitable fish habitat present in this stream. Confirmed non fish-bearing from mouth.			
Upper Tidesley	1	16	T18KM		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Planning Area"	N	10/20/98	S6	2	1.6	No	None			L		300	375	500/90/6	Stream is within 1996 project area but not sampled under 1996 field program. Reach is mainly bog with deep mixed channel providing good rearing for RB. However, flows into Tidesley Creek in non fish-bearing section above 6m falls. 2nd sample with NFC in Tidesley watershed above falls. Confirmed non fish-bearing.		

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, ILP, Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments		
																			Minnow Traps	Electrofishing	Settings			
																			#MTR/hr	Dist Time (hr)	Settings (V/Hz/ps)			
Upper Tidesley	1	17	TKKM		2.0	OP98	1996 I.20K Reconnaissance Inventory	"Flaming Area"	N	10/20/98	S6	10	1.6	No	None			N		30	47	600/60/6	Stream is within 1996 project area but not sampled under 1996 field program. 95% of reach flows underground with no suitable fish habitat. Also flows into Tidesley Creek in non fish-bearing section above em falls. 3rd sample with NFC in Tidesley watershed above falls. Confirmed non fish-bearing.	
Upper Tidesley	2	18	TT1		2.0	OP98	1996 I.20K Reconnaissance Inventory	"Flaming Area"	N	10/05/98	NCD			No	None			N					Stream is within 1996 project area but not sampled under 1996 field program. Stream at site location is a dry gully with occasional collection pools. No continuous channel bed is present and it is therefore not a stream by FPC definition.	
Upper Tidesley	2	19	TT2		1.0	OP98	1996 I.20K Reconnaissance Inventory	"Flaming Area"	N	10/06/98	S6	22	0.2	No	None			N		100	68	400/60/4	Stream is within 1996 project area but not sampled under 1996 field program. Tiny, steep trickle down Tidesley valley wall with no usable fish habitat. Barely large enough to fit probe into channel.	
Upper Tidesley	2	20	TT3		1.0	OP98	1996 I.20K Reconnaissance Inventory	"Flaming Area"	N	10/06/98	S6	2	1.1	No	None			N		115	191	600/60/6	Stream is within 1996 project area but not sampled under 1996 field program. Marginally a stream. Shallow collection area from runoff down valley wall with no usable fish habitat or potential.	
Upper Tidesley	2	21	TKKB		3.0	Resamp98	1996 I.20K Reconnaissance Inventory	"Flaming Area"	N	07/28/98	NCD	1	NA	No	None	No Channel	Within Reach 3 but not determined - wetland inaccessible	N		Not sampled			Stream is within 1996 project area but not sampled this far up in 1996. Stream at this site is large wetland of moist ground with no defined channel bed present, no suitable fish habitat and no connectivity to us reaches. No fish present.	
Upper Tidesley	2	22	TKKB		4.0	Resamp98	1996 I.20K Reconnaissance Inventory	"Flaming Area"	N	07/28/98	S6	3	1.3	No	None	See Above	See Above	N		160	194	500/60/4	Stream is within 1996 project area but not sampled this far up in 1996. This reach located above large NCD reach and therefore has no connectivity to us fish-bearing reaches.	
Upper Tidesley	2	23	TKKC		4.0	Resamp98	1996 I.20K Reconnaissance Inventory	"Flaming Area"	Y	07/28/98	(S3)	4	3.3	Infer	(RB)			M		170	194	700/60/6	NFC in trickle over fins, organics and is frequently intermittent.	
Upper Tidesley	2	24	TT1		1.0	OP98	1996 I.20K Reconnaissance Inventory	"Flaming Area"	N	10/05/98	S6	6	0.6	No	None	10m high x 4m mouth		N		600	237	600/60/4	Resampled reach from 1996 inventory. Previously inferred fish-bearing, but 2nd negative sampling effort is still inconclusive. Good RB habitat present in this reach, no confirmed barriers present ds so have to retain fish-bearing inference.	
Upper Tidesley	2	25	TKKD		4.0	Resamp98	1996 I.20K Reconnaissance Inventory	"Flaming Area"	Y	07/28/98	S2	11	6.0	Yes	RB	18m high x 15m long cascade	1st of reach	M		1983	144	700/60/6	Stream is within 1996 project area but not sampled under 1996 field program. Marginal habitat present at high flow but this is inaccessible to fish due to the cascade barrier at the mouth, which prevents fish access. NFC above cascade and no permanent habitat upstream. Confirmed non fish-bearing.	
Upper Tidesley	2	26	TKKD		5.0	Resamp98	1996 I.20K Reconnaissance Inventory	"Flaming Area"	Y	07/28/98	S5	32	6.5	No	None	16m high x 4m cascade		M		160	318	600/70/4	Stream is within 1996 project area but not sampled under 1996 field program. Marginal habitat present at high flow but this is inaccessible to fish due to the cascade barrier at the mouth, which prevents fish access. NFC above cascade and no permanent habitat upstream. Confirmed non fish-bearing.	

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, I.L.P., Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments
																			#MT/Tr	Altitude Traps	Electrofishing	
Lower Tidesley	3	27	T13.5		1.0	OP98	1996 I.20K Reconnaissance Inventory	"Planning Area"	N	10/06/98	S6	1	0.8	No	None			N	108	121	600/60/4	Stream within 1996 project area but not sampled during 1996 field program. Tiny, shallow rickle over fins, organics, abundant algae. No suitable fish habitat available.
Lower Tidesley	3	28	T14	182-819600-95800-19000-2390	1.0	Resamp98	1996 I.20K Reconnaissance Inventory	"Planning Area"	Y	10/06/98	S3	3	4.0	Yes	RB			M	2	31	600/60/6	Resampled reach from 1996 inventory. Confirmed RB presence and FPC class S3 in reach 1.
Lower Tidesley	3	29	T14	182-819600-95800-19000-2390	3.0	Resamp99	1996 I.20K Reconnaissance Inventory	"Planning Area"	N	07/15/99	S3	5	2.5	Yes	RB			H	95	18	600/60/6	Confirmed FPC class S3 above Rip road crossing.
Lower Tidesley	3	30	T14A		1.0	OP99	1996 I.20K Reconnaissance Inventory	"Planning Area"	N	07/15/99	NCD			No	None			N	Not sampled			Stream within 1996 project area but not sampled during 1996 field program. No channel found for this reach. Not an FPC stream.
Lower Tidesley	3	31	T14B		1.0	CP99	1996 I.20K Reconnaissance Inventory	"Planning Area"	N	07/15/99	NCD			No	None			N	Not sampled			Stream within 1996 project area but not sampled during 1996 field program. No continuous channel bed in this reach. Not an FPC stream.
Lower Tidesley	3	32	T15	182-819600-95800-19000-2640	2.0	Resamp97	1996 I.20K Reconnaissance Inventory	"Planning Area", "FSID at Several Existing Road Crossings for BFP Co."	N	10/10/97	(S4)	4	0.8	Infer	(RB)			L	400	213	N/A	Sampled Reach 1 in 1996 inventory and resampled Reach 2 during higher flow to determine fish use in different habitat. Assumed RB use based on accessibility but only marginal fish habitat available. Was incorrectly called T14 in 1997 operational report.
Lower Tidesley	3	33	T15	182-819600-95800-19000-2640	2.0	Resamp99	1996 I.20K Reconnaissance Inventory	"Planning Area", "FSID at Several Existing Road Crossings for BFP Co."	N	07/15/99	S6	4	1.4	No	None			L	100	64	500/60/4	Second sample in this reach during different season at higher flow. Very shallow stream with no instream cover for fish. Lacks sufficient fish habitat. Confirms fish absence in this reach.
Lower Tidesley	3	34	T16	182-819600-95800-19000-2850	2.0	Resamp99	1996 I.20K Reconnaissance Inventory	"Planning Area"	N	07/15/99	S6	4	0.8	No	None			N	65	137	400/60/4	Sampled Reach 1 in 1996 inventory and resampled Reach 2 during higher flow to determine fish use in different habitat. Small channel over fins and organics. Very shallow with marginal fish habitat. 1.50m downstream from Rip road. gradient is 1.5% and channel is occasionally subterranean.
Lower Tidesley	3	35	T17		2.0	Resamp97	1996 I.20K Reconnaissance Inventory	"Planning Area", "FSID at Several Existing Road Crossings for BFP Co."	N	10/10/97	S6	13	0.8	No	None			L	300	186	n/a	Sampled Reach 1 in 1996 inventory and resampled Reach 2 during higher flow to determine fish use in different habitat. No fish use due to relative steepness (13%) and lack of suitable fish habitat.
Lower Tidesley	3	35	T17		2.0	Resamp99	1996 I.20K Reconnaissance Inventory	"Planning Area", "FSID at Several Existing Road Crossings for BFP Co."	Y	07/15/99	S6	13	0.8	No	None			L	400	192	500/60/4	Marginal habitat, moderately steep. Likely seasonal. Very shallow trickle over cobbles. No fish use - 3rd sample of this stream with no fish captured.

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Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, I.L.P., Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments
																			#MT/Tr	Dist (m)	Time (sec)	
Lower Tidesley	3	36	TI7A		1.0	OP99	1996 I.20K Reconnaissance Inventory	"Fleming Area"	N	07/15/99	NCD			No	None			N	Not sampled			Stream is within 1996 project area but not sampled under 1996 field program. No continuous channel bed in this reach. No substrate - water collects in disconnected mossy pools. Not an FPC stream.
Lower Tidesley	3	37	R3701		2.0	OP99	1996 I.20K Reconnaissance Inventory	"Fleming Area"	N	07/15/99	NCD			No	None			N	Not sampled			Stream is within 1996 project area but not sampled under 1996 field program. No continuous channel bed in this reach. No fluvial substrate. Not an FPC stream.
Lower Tidesley	3	38	FLENI		1.0	OP97	1996 I.20K Reconnaissance Inventory	"FSID at Several Proposed and Existing Road Crossings for BFP Co."	N	09/21/97	S6	10	1.4					M	400 320	n/a		Stream is within 1996 project area but not sampled under 1996 field program. Moderate fish habitat in step-pool morphology, but no fish in T152 renders this system non-fish bearing.
Lower Tidesley	3	39	FLENI A		1.0	OP97	1996 I.20K Reconnaissance Inventory	"FSID at Several Proposed and Existing Road Crossings for BFP Co."	N	09/21/97	S6	10	0.6					N	Not sampled			Stream is within 1996 project area but not sampled under 1996 field program. Seasonal, intermittent and vegetated channel with no usable fish habitat.
Lower Tidesley	3	40	TI51		2.0	Resamp97	1996 I.20K Reconnaissance Inventory	"Fleming Area", "FSID at Several Proposed and Existing Road Crossings for BFP Co."	N	10/10/97	S3	5	3.6	Infer	(RB)			H	400 269	n/a		NFC in Reach 1 in Recony6. Sampled Reach 2 to determine fish use in different habitat. Still excellent salmonid habitat - fish use inferred based on accessibility from Tidesley Creek.
Lower Tidesley	3	41	TI51		2.0	Resamp98	1996 I.20K Reconnaissance Inventory	"Fleming Area", "FSID at Several Proposed and Existing Road Crossings for BFP Co."	Y	07/28/98	S3	4	3.0	Infer	(RB)			H	350 196	600/60/6 700/70/6		No confirmed fish use, but still no conclusive justification for fish absence. Fish use still assumed.
Lower Tidesley	3	41	TI51		2.0	Resamp99	1996 I.20K Reconnaissance Inventory	"Fleming Area", "FSID at Several Proposed and Existing Road Crossings for BFP Co."	Y	07/15/99	S3	4	3.0	Yes	RB			H	50 94	500/60/6		RB use confirmed after 4th sampling event. FPC classification of S3 confirmed at Rip road crossing. Beaver dam near mouth may have hindered prior access for RB into this reach but has since been washed out.
Lower Tidesley	4	42	TI55		3.0	Resamp98	1996 I.20K Reconnaissance Inventory	"Fleming Area"	Y	07/28/98	S3	7	3.0	Yes	RB			H	10 24	600/60/6		Resampled reach from 1996 inventory - NFC in 1996 but RB presence confirmed during 2nd sampling in 1998.
Lower Tidesley	4	43	TI55		4.0	Resamp98	1996 I.20K Reconnaissance Inventory	"Fleming Area"	N	07/28/98	S3	4	2.9	Yes	RB			M	400 156	700/80/4		Sampled to determine fish-bearing status from 1996 inventory. Reach not previously sampled. RB presence confirmed in this reach in good overall RB habitat.
Lower Tidesley	4	44	TI55B		2.0	Resamp98	1996 I.20K Reconnaissance Inventory	"Fleming Area"	Y	07/27/98	S6	5	1.4	No	None			N	103 161	600/60/4 700/70/6		Resampled reach from 1996 inventory. Previously inferred fish-bearing, but 2nd negative sampling effort in shallow, marginal habitat. Confirmed fish absence.

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, ILP, Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (Inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments
																			#With Traps	Dist Time (m)	Setups (hrs)	
Lower Tidesley	7	57	FILEM2	182-819600-95800-23700-6910	at Nose Rd x-ing	OP99	1996 1:20K Reconnaissance Inventory	"Planning Area"	N	07/16/99	S6	4	0.8	No	None			L	Not sampled			Shallow trickle with lack of sufficient habitat to support fish. Not enough water to sample.
Lower Tidesley	7	58	FUF	182-819600-95800-44600		Resamp98	1996 1:20K Reconnaissance Inventory	"Planning Area"	Y	07/27/98	S3	2	1.5	Yes	RB			M	230 49 300/80/6		Resampled reach from 1996 inventory. Confirmed RB use in reach 2 up to swamp 230m upstream from branch road crossing. Swamp section contains numerous BD ponds, stagnant, filmy, odorous water, orange algae - unsuitable habitat for RB.	
Lower Tidesley	7	59	FUF	182-819600-95800-44600		Resamp98	1996 1:20K Reconnaissance Inventory	"Planning Area"	N	07/27/98	S6	0	2.0	No	None			L	440 156 500/100/6		Swamp section contains numerous BD ponds, stagnant, filmy, odorous water, orange algae - unsuitable habitat for RB. Fish absence confirmed.	
Lower Tidesley	7	60	FUF	182-819600-95800-44600		Resamp98	1996 1:20K Reconnaissance Inventory	"Planning Area"	Y	07/27/98	S6	2	1.1	No	None			N	Not sampled		Resampled this reach at different season. Channel dry with no fish habitat or fisheries potential.	
Lower Tidesley	7	60	FUF	182-819600-95800-44600		Resamp99	1996 1:20K Reconnaissance Inventory	"Planning Area"	Y	07/16/99	S6	2	1.1	No	None			N	150 126 500/60/6		Third visit to this reach. Shallow trickle with very few shallow pools. Seasonal, no potential to support downstream RB populations. Inaccessible due to extensive weedland in reach 2.	
Lower Tidesley	7	61	FUC	182-819600-95800-47800	at Nose Rd x-ing	Resamp99	1996 1:20K Reconnaissance Inventory	"Planning Area"	Y	07/16/99	S5	2	0.8	No	None			L	140 93 400/60/6		Resampled site from 1996 inventory to determine fish use in different season. Shallow, swampy reach full of organics, barely flowing. Barely possible to sample - no suitable fish habitat or fisheries potential. Confirmed non fish-bearing from the mouth.	
Lower Tidesley	8	62	FUJ	182-819600-95800-51300		Resamp99	1996 1:20K Reconnaissance Inventory	"Planning Area"	N	07/16/99	NCD			No	None	back of channel		N	Not sampled		Sampled at Nose Road crossing. No channel found at mapped location. Creek likely dissipates between Nose and Spur road crossing. Confirmed non fish-bearing from the mouth.	
Lower Tidesley	8	63	HUJ	182-819600-95800-51300		Resamp99	1996 1:20K Reconnaissance Inventory	"Planning Area"	Y	07/16/99	S6	4	0.8	No	None			L	Not sampled		Resampled site from 1996 inventory to determine fish use in different season. Seasonal channel (dry already). Inaccessible from Planning Creek due to back of channel near mouth. No suitable fish habitat.	
Lower Tidesley	8	64	FUM	182-819600-95800-57300		Resamp98	1996 1:20K Reconnaissance Inventory	"Planning Area"	Y	07/29/98	S6	0	N/A	No	None			L	100 203 400/80/6		Sampled at start of reach. No salmonid habitat - swampy, stinky, stinky water with no fisheries values.	
Lower Tidesley	8	65	FUM	182-819600-95800-57300		Resamp98	1996 1:20K Reconnaissance Inventory	"Planning Area"	Y	07/29/98	S6	0	6.0	No	None			N	120 180 500/100/6		Sampled at block 129-02. No defined channel through swamp - no fish present and no fish habitat.	
Lower Tidesley	8	66	FUN			OP98	1996 1:20K Reconnaissance Inventory	"Planning Area"	N	07/29/98	S6	5	1.4	No	None			N	Not sampled		Stream within 1996 project area but not sampled during 1996 field program. Stream totally dry at time of sampling. Seasonal nature precludes use for spawning or overwintering. No suitable potential RB habitat.	



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Sub-unit	Completion Project Map #	Site #	Stream ID (Name, Alias, ILP, Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1-S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N Infer)	Fish Species Codes (Inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments
																			#MTHr	Dist (m)	Time (hrs)	
Lower Tidesley	8	67	FUN		2.0	OP98	1996 1.20K Reconnaissance Inventory	"Flaming Area"	N	07/29/98	S6	4	2.1	No	None			N	Not sampled	Not sampled	Stream within 1996 project area but not sampled during 1996 field program. Stream totally dry at time of sampling. Seasonal native precludes use for spawning or overwintering. No suitable potential RB habitat.	
Lower Tidesley	8	68	FUN1		1.0	CP98	1996 1.20K Reconnaissance Inventory	"Flaming Area"	N	07/29/98	NCD			No	None			N	Not sampled	Not sampled	Stream is within 1996 project area but not previously sampled during 1996 field program. Not a stream by FPC definition. No continuous channel bed, just few isolated puddles in vegetated runoff channel.	
Lower Tidesley	8	69	FUK	182-819600-95800-60200	3.0	OP99	1996 1.20K Reconnaissance Inventory	"Flaming Area"	Y	07/16/99	NCD			No	None			N	Not sampled	Not sampled	No defined channel present - squishy wetland corridor with no continuous channel bed. Not an FPC stream.	
Lower Tidesley	8	70	F11		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Flaming Area"	N	10/22/98	NCD	NA	NA	No	None			N	Not sampled	Not sampled	Stream is within 1996 project area but not previously sampled during 1996 field program. Not a stream by FPC definition. No continuous channel bed, just vegetated forest floor.	
Lower Tidesley	8	71	F12		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Flaming Area"	N	10/22/98	NCD	NA	NA	No	None			N	Not sampled	Not sampled	Stream is within 1996 project area but not previously sampled during 1996 field program. Not a stream by FPC definition. No continuous channel bed, just few isolated puddles.	
Lower Tidesley	8	72	F13		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Flaming Area"	N	10/22/98	S6	5	0.7	No	None			N	420	79	700/90/6	Stream is within 1996 project area but not previously sampled during 1996 field program. Stream is dry, shallow and intermittent with no suitable fish habitat. Channel is frequently vegetated. Likely just a spring runoff channel.
Lower Tidesley	8	73	F14		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Flaming Area"	N	10/22/98	NCD			No	None			N	Not sampled	Not sampled	Stream is within 1996 project area but not previously sampled during 1996 field program. Not a stream by FPC definition. No continuous channel bed, just few isolated puddles.	
Lower Tidesley	8	74	F15		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Flaming Area"	N	10/22/98	NCD			No	None			N	Not sampled	Not sampled	Stream is within 1996 project area but not previously sampled during 1996 field program. Not a stream by FPC definition. No continuous channel bed, just few isolated puddles in vegetated runoff channel.	
Lower Tidesley	9	75	FUS		1.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Flaming Area"	Y	07/27/98	S5	2	3.2	No	None			N	630	204	690/60/6	Resampled reach from 1996 inventory. NFC in 1996 during stocking and minnow traps. NFC in 1998 during extensive electrofishing. Large channel is due to scouring during high flow, but water present is a trickle of stagnant water filled with algae. Only LKC captured in Flaming wetland us from stream FUL.
Lower Tidesley	10	76	Flaming Creek	182-819600-95800	6.0	Resamp99	1996 1.20K Reconnaissance Inventory	"Flaming Area"	Y	07/16/99	S5	1	4.5	No	None			L	75	227	500/60/6 105 164 700/80/4	Sampled reach 6 during higher flow to determine fish use in best available habitat. Excellent sampling conditions in 80m of suitable RB habitat but still no fish captured. Extensive sampling in 1996 in this reach and reaches downstream (to FUL) with no RB captured indicate the absence of RB in this reach.
Lower Tidesley	11	77	61004		5.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Small Balance"	Y	07/28/98	S6	3	1.0	No	None			N	100	109	700/60/4	2nd sampling at this location. Water is stagnant, algae-filled and extremely shallow. No fish captured. No fish habitat.

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																			Minnow Traps	Electrofishing	Disturbance	
Rederton	12	78	Sag Creek	480-825200	4.0	1998 I:20K Reconnaissance Inventory	"Subdrainages in the Babine Lake Watershed"	N	07/14/99	S5	1	6.3	Yes	LNC	6m falls	2.5km from mouth identified in Reconyx8	N	4 / S1				Sampled above falls in 1998 - resampled stream in different habitat in reach 4 near lake outlet to confirm non fish-bearing status above falls in watershed. Second sampling above falls - confirms non fish-bearing status. Resampled site from 1997 inventory. Dry with only a couple of segment pools to stock. NFC even this early in summer. 2nd sampling with NFC.
Froggy South	13	79	S2008		1.0	1997 I:20K Reconnaissance Inventory	"I.L.P. S2001"	Y	07/29/98	S6	9	1.0	No	None				N				Resampled site from 1997 inventory. Dry with only a couple of segment pools to stock. Shallow with no suitable RB rearing spawning or overwintering. NFC in fall and early summer. 3rd sampling with NFC.
Froggy South	13	79	S2008		1.0	1997 I:20K Reconnaissance Inventory	"I.L.P. S2001"	Y	10/04/99	S6	6	0.5	No	None				N				Resampled site from 1997 inventory. Dry with only a couple of segment pools to stock. Shallow with no suitable RB rearing spawning or overwintering. NFC in fall and early summer. 3rd sampling with NFC.
Froggy South	13	80	S2010		1.0	1997 I:20K Reconnaissance Inventory	"I.L.P. S2001"	Y	10/04/99	S6	3	0.8	No	None				N				Resampled site from 1997 inventory. Very shallow with no pools - creek trickles over fins, organics. No spawning, overwintering or rearing potential. 3rd sampling with NFC.
Froggy South	13	81	S2010		1.0	1997 I:20K Reconnaissance Inventory	"I.L.P. S2001"	Y	07/29/98	S6	4	0.9	No	None				N				Resampled site from 1997 inventory. Channel almost entirely dry - carries only small amount of flow even during runoff (small channel, all fins). Channel accessible but no habitat for them to access. 2nd sampling with NFC.
Froggy South	13	82	S2015		1.0	1997 I:20K Reconnaissance Inventory	"I.L.P. S2001"	Y	07/29/98	S6	1	1.0	No	None				N				Resampled reach from 1997 inventory. No connectivity to downstream reaches. Channel at mouth is dispersed in grassy wetland. No overwintering or spawning potential (all fins, organics). 2nd sampling with NFC.
Froggy South	13	82	S2015		1.0	1997 I:20K Reconnaissance Inventory	"I.L.P. S2001"	Y	10/04/99	S6	1	1.0	No	None				N				Few exposed pools to sample. However, no access to fish - mouth is dispersed with no connectivity to dy reaches. 3rd sampling with NFC.
Gullwing	14	83	GULL1	480-953800-21600-40500	6.0	1996 I:20K Reconnaissance Inventory	"Gullwing Area"	N	07/14/99	S6	7	0.9	No	None	10m falls	270m from mouth - identified in Reconyx6	M					Sampled above falls in 1996 inventory and resampled stream in different habitat in reach 0 near lake outlet and in GULLA to confirm non fish-bearing status above falls in watershed. Second sampling above falls - confirms non fish-bearing status.
Gullwing	14	84	GULLA	480-953800-21600	1.0	1996 I:20K Reconnaissance Inventory	"Gullwing Area"	N	07/14/99	S6	6	1.5	No	None	see above	See above	M					Second sampling above falls on stream GULLA - confirms non fish-bearing status. See comments above.
Gullwing	14	85	GTT		1.0	1996 I:20K Reconnaissance Inventory	"Gullwing Area"	N	07/29/98	S6	19	0.5	No	None	10m high x 20m long cascade	10m high x 20m long cascade	N					Stream within 1996 project area but not sampled during 1996 field program. Caerdyk steep gradient right at mouth. predators fish access into this stream. Above the cascade, the channel is dry and intermittent over fins with no resident polychaete.
Gullwing	14	86	GULL2		3.0	1996 I:20K Reconnaissance Inventory	"Gullwing Area"	N	07/29/98	S6	2	1.1	No	None				N				Reach within 1996 project area but not previously sampled. Confirmed RB in reach 2 dis in 1996, sampled reach 3 to determine us limit of fish use. Habitat in this reach deteriorates rapidly at the end of reach 2. At the start of reach 3, there was marginal rearing habitat but no spawning or overwintering habitat for RB. Shocked extensively with NFC. No fish use in this reach.

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, I.L.P., Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments
																			#AT/Tr	Narrow Traps	Electrofishing	
Gullwing	15	87	BAAB3	480-974700	2.0	Resamp99	1996 I,20K Reconnaissance Inventory	"Gullwing Area"	Y	07/13/99	S6	8	2.7	No	None	1.5m falls	340m from mouth - identified in Recon96	L	Dist (m)	Time (sec)	Settings (V/H/I/Js)	Resampled reach from 1996 inventory. Habitat isolated by 1.5m falls obstruction at end of reach 1 downstream. No fish present above. Second sampling above falls - confirms non fish-bearing status.
Gullwing	15	87	BAAB1/ Kulho C./ Hanson C.	480-999000	6.0	Resamp99	1996 I,20K Reconnaissance Inventory	"Gullwing Area"	Y	07/13/99	S3	6	3.0	Yes	RB			H	300	123	700/70/6	Resampled reach from 1996 inventory. RB presence and FPC class S3 confirmed in this reach above cascade obstruction. Likely this reach provides the only spawning habitat for RB from lake - assume lake is fish bearing.
Gullwing	15	88	BAAB1/ Kulho C./ Hanson C.	480-999000	12.0	Resamp99	1996 I,20K Reconnaissance Inventory	"Gullwing Area"	N	07/23/99	S6	6	1.2	No	NFC			L	105	198	700/60/6	Reach within 1996 project area but not previously sampled. Sampled upstream at proposed Gullwing road crossing in reach 12. Moderately steep, seasonal and shallow with limited instream cover and marginal overall habitat. Lacks sufficient flow and water to support RB use. Fish absence confirmed in reach 2 at Gullwing road crossing.
Gullwing	15	89	BAAB1A	480-999000-43300	2.0	Resamp99	1996 I,20K Reconnaissance Inventory	"Gullwing Area"	N	07/23/99	S6	13	1.0	No	None			N	200	217	700/70/6	Sampled Reach 1 in 1996 inventory and resampled Reach 2 at proposed Gullwing road crossing in reach 2. Moderately steep (13%), seasonal and shallow with limited instream cover and marginal overall habitat. Lacks sufficient flow and water to support RB use. Fish absence confirmed in reach 2 at Gullwing road crossing.
Gullwing	15	90	BAAB1B	480-999000-67700	1.0	Resamp99	1996 I,20K Reconnaissance Inventory	"Gullwing Area"	N	07/23/99	S6	26	0.8	No	None			N	85	116	600/60/4	Reach within 1996 project area but not previously sampled. Sampled at Gullwing road crossing. Seasonal steep reach with no fish habitat or fisheries potential. Gradient exceeds 35%. 12.5m downstream from road crossing which precludes fish use.
Gullwing	16	91	BAAB3		1.0	Resamp99	1996 I,20K Reconnaissance Inventory	"Gullwing Area"	Y	07/29/98	S6	5	3.2	No	None			N	Not sampled			Resampled reach from 1996 inventory. Channel is totally dry with no fish habitat. No sampling possible. No spawning substrate present, no overwintering potential due to lack of water. No fish use in this stream.
Gullwing	16	92	BAAB3		2.0	Resamp98	1996 I,20K Reconnaissance Inventory	"Gullwing Area"	N	07/29/98	S6	6	1.7	No	None			N	Not sampled			Reach within 1996 project area but not previously sampled. Sampled to confirm fish-bearing status in the system. This reach also totally dry with no fish habitat or fisheries potential. 2nd sampling of system with no fish encountered.
Donald Landing	17	93	SBAB2	480-912900	2.0	Resamp99	1996 I,20K Reconnaissance Inventory	"Pinkut Area"	Y	07/14/99	S6	15	0.9	No	None	4m falls	200m from mouth - identified in Recon96	L	250	337	600/60/6	Resampled reach from 1996 inventory. Second sampling above falls - confirms non fish-bearing status.
Donald Landing	17	94	SBAB1	480-916700	3.0	Resamp99	1996 I,20K Reconnaissance Inventory	"Pinkut Area"	Y	07/14/99	S6	17	1.5	No	None	cascade	100m from mouth - identified in Recon96	L	300	183	600/60/6	Resampled reach from 1996 inventory. Second sampling above cascade - confirms non fish-bearing status.
Donald Landing	17	95	Stream 99		1.0	Op99	1999 Operational Inventory		N	10/22/99	NCD			No	None			N	Not sampled			No channel present - not a stream by FPC definition. Alluvial fan with no channel bed - no connectivity to u/s reaches.
Donald Landing	17	96	Stream S199		1.0	Op99	1999 Operational Inventory		N	10/22/99	NCD	26		No	None			N	Not sampled			No channel present - not a stream by FPC definition. Just a vegetated wet area at 26% gradient.

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Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, ILP, Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications		Comments		
																			Minnow Traps	Electrofishing			
																				#AVT/hr	Dist (m)	Time (sec)	Settings (VHz/Hz)
Donald Landing	17	97	43701		1.0	OP99	1999 Operational Inventory		N	07/14/99	S6	9	0.9	No	None			N	Not sampled		Sampled from mouth at Babine Lake. Channel is seasonal and small and already dry during this higher flow period. Inaccessible at mouth - no channel present for 5m. Lacks any fish habitat or fisheries potential.		
Donald Landing	17	98	43001 (fisheries Creek)	480-920600	5.0	Resamp99	1997 1.20k Reconnaissance Inventory	"Small Drainages within the Babine Lake Watershed"	N	07/10/99	S6	5	2.2	No	None	0.9km from mouth - identified in Recon97	H	4.50	180	178	500/60/6	Sampled different habitat in reach 5 to confirm non fish-bearing status above falls in watershed. Second sampling above falls - confirms non fish-bearing status.	
Talipau	18	99		480-927700-03700	8.0	Resamp99	1998 1.20k Reconnaissance Inventory	"Subdrainages in the Babine Lake Watershed"	Y	07/11/99	S3	2	3.0	Yes	RB		H	60	148	600/70/6	Resampled reach from 1998 inventory. Fish presence and FPC class S3 confirmed in this reach.		
Talipau	18	100		480-927700-03700-14900	5.0	Resamp99	1998 1.20k Reconnaissance Inventory	"Subdrainages in the Babine Lake Watershed"	N	07/11/99	NCD			No	None		N	Not sampled		Reach within 1998 project area but not previously sampled. Sampled different habitat in reach 5 to determine fish use in this reach. No channel present in this reach. Not an FPC stream.			
Talipau	18	101		480-927700-03700-27300	1.0	OP99	1998 1.20k Reconnaissance Inventory	"Subdrainages in the Babine Lake Watershed"	N	07/11/99	(S4)	4	1.2	Infer	(RB)		M	160	295	600/70/6	Reach within 1998 project area but not previously sampled. Inferred fish-bearing due to accessibility from downstream fish-bearing water. Resample to confirm.		
Talipau	18	102		480-927700-03700-27300	2.0	OP99	1998 1.20k Reconnaissance Inventory	"Subdrainages in the Babine Lake Watershed"	N	07/11/99	S6	1	1.7	No	None		L	65	147	700/70/6	Reach within 1998 project area but not previously sampled. Leads suitable RB habitat. Shallow, seasonal and swampy. No RB habitat present upstream from this reach.		
Talipau	18	103		480-927700-03700-27300	3.0	OP99	1998 1.20k Reconnaissance Inventory	"Subdrainages in the Babine Lake Watershed"	N	07/11/99	S6	5	1.1	No	None		L	105	194	700/70/6	Reach within 1998 project area but not previously sampled. Seasonal and very shallow with marginal RB habitat. If used by RB, would be present now during higher flow.		
Talipau	18	104		480-927700-03700-36300	1.0	OP99	1998 1.20k Reconnaissance Inventory	"Subdrainages in the Babine Lake Watershed"	N	07/11/99	S6	4	0.5	No	None		N	155	194	700/70/6	Reach within 1998 project area but not previously sampled. Small, shallow trickle over fines and organics. Lacks suitable RB habitat or any fisheries potential.		
Four Mile	19	105	44008		1.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Drainages within the Babine Lake Watershed"	N	07/30/98	S6	2	1.4	No	None	Lack of channel for 1.5m	N	Not sampled		Within 1997 project area, but no sampling in this reach in 1997. Reach is entirely dry with no channel present at mouth (no access for fish). NFC is 1997 in reach 2 and in 1998 in reach 2.			
Four Mile	19	106	44008		2.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Drainages within the Babine Lake Watershed"	Y	07/30/98	S6	5	1.2	No	None	See above	N	Not sampled		This reach also entirely dry with no fish habitat. 2nd sampling of this reach with no fish present. Confirms non fish-bearing status from 1997 inventory. Second sampling above falls - confirms non fish-bearing status.			
Four Mile	19	107	Four Mile C / 44034	480-864000	4.0	Resamp99	1997 1.20k Reconnaissance Inventory	"Four Mile Creek"	Y	07/10/99	S5	3	4.2	No	None	1.5m falls identified in Recon97	H	4.52			Resampled reach from 1997 inventory. Second sampling above falls - confirms non fish-bearing status.		
Talipau	20	108	54017		1.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Drainages within the Babine Lake Watershed"	Y	07/31/98	S6	12	0.6	No	None		L	200	107	660/70/6	Resampled reach from 1997 inventory. NFC in second sampling event. Small shallow trickle at moderate gradient.		

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																			Minnow Traps	Electrofishing	Dist Time Settings (#M/T/hr (00) (ss)) (V/H/Hz)	
Talapan	20	109	B3002	480-927700-27900	1.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Small Drainages within the Babine Lake Watershed"	Y	07/30/98	S6	7	1.8	No	None			L	123	179	700/60/6	Resampled reach from 1997 inventory. Stream dewatered at the mouth. Inaccessible with marginal habitat between Talapan Lake and road crossing. Gradient rises to 21% upstream from road with no usable fish habitat. High gradient precludes fish passage into upstream reaches. Small, shallow, seasonal trickle over fines and gravels. Moderate gradient. Lacks suitable RB habitat or any fisheries potential.
Talapan	20	110	B3801		1.0	OP99	1999 Operational Inventory		N	07/11/99	S6	13	0.3	No	None			N	40	88	700/70/6	Resampled reach from 1997 inventory. Sampled in different season - dewatered dry with no usable fish habitat. No channel found at mapped location.
Talapan	20	111	B3008	480-927700-29098	1.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Small Drainages within the Babine Lake Watershed"	Y	07/30/98	S6	22	0.7	No	None			N	Not sampled			No continuous channel bed in this reach. Not an FPCC stream.
Talapan	20	112	B3802		1.0	OP99	1999 Operational Inventory		N	07/11/99	NCD			No	None			N	Not sampled			Seasonal trickle over moss, organics - marginal FPCC stream. Dissipates in ten 10m downstream from Talapan road crossing. No fish habitat or fisheries potential.
Talapan	20	113	B3803		1.0	OP99	1999 Operational Inventory		N	07/11/99	NCD			No	None			N	Not sampled			Sampled Reach 2 in 1997 inventory and resampled Reach 1 during higher flow to determine fish use in lower waterbed. No visible channel. Stream lacks continuous channel bed in this reach and is not an FPCC stream. Channel disperses in forest floor downstream from steeper gradient in reach 2.
Talapan	20	114	B3804		1.0	OP99	1999 Operational Inventory		N	07/11/99	S6	15	0.2	No	None			N	40	61	700/70/6	Sampled Reach 4 in 1997 inventory and resampled Reach 2 during higher flow to determine fish use in better available habitat. Steep seasonal stream with no usable fish habitat. High gradient (>20%) precludes fish passage into upstream reaches.
Talapan	20	115	B3011	480-927700-30068	1.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Small Drainages within the Babine Lake Watershed"	N	07/30/98	NCD			No	None			N	Not sampled			Reach resampled from 1996 inventory. No water present in channel now (none in 1996 either). Water mist flow silt into Pinkut Creek. No fish habitat or potential.
Talapan	20	116	B3012	480-927700-31049	2.0	Resamp99	1997 1.20K Reconnaissance Inventory	"Small Drainages within the Babine Lake Watershed"	N	07/11/99	S6	18	1.2	No	None			N	60	94	700/70/6	Resampled reach 2 as well as reach 1 from 1996 inventory to determine upstream fish distribution. Moderate rearing habitat available for RB but sampler extensively with no fish captured. Reach is inaccessible to fish due to lack of water/ connectivity from dry reach 1 downstream.
Anger-Phukai	20	117	LAMP11		1.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Pinkut Area"	Y	07/30/98	S6	3	1.7	No	None			N	Not sampled			Resampled reach from 1997 inventory. NTC in second sampling event. Marginal habitat. Sampling in French C watershed suggests lack of fish use in any of the small feeder tributaries. RB only caught in mainstem d/s.
Anger-Phukai	20	118	LAMP11		2.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Pinkut Area"	N	07/30/98	S6	12	1.8	No	None			L	500	307	400/80/6	Resampled reach 2 as well as reach 1 from 1996 inventory to determine upstream fish distribution. Moderate rearing habitat available for RB but sampler extensively with no fish captured. Reach is inaccessible to fish due to lack of water/ connectivity from dry reach 1 downstream.
Talapan	21	119	B3011		1.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Small Babine"	Y	07/30/98	S6	8	1.0	No	None			L	400	113	400/70/6	Resampled reach from 1997 inventory. NTC in second sampling event. Marginal habitat. Sampling in French C watershed suggests lack of fish use in any of the small feeder tributaries. RB only caught in mainstem d/s.
Talapan	21	120	B3022		1.0	OP98	1997 1.20K Reconnaissance Inventory	"Small Babine"	N	07/30/98	S6	2	1.3	No	None			N	190	78	400/70/6	Reach within 1997 project area but not previously sampled. frequent sub flow with no fish habitat, access or spawning potential. 5m near mouth possibly accessible as refuge habitat.

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																			#MT/Tr	Dist (m)	Time (hrs)	
Hannetta	22	121	35007	480-027700-23400-50500	1.0	Resamp99	1997 1.20K Reconnaissance Inventory	"Hannetta Creek"	Y	07/12/99	S3	15	2.9	Infer	(RB)			L	650	714	700/706	Resampled reach from 1997 inventory. Sampled Reach 1 above Hannetta road crossing to determine fish habitat availability. Surveyed for 650m above road crossing - still no confirmed RB use. Reach above road is moderate gradient (1.5%) with limited rearing and overwintering sections in occasional steep pools. Low overall fisheries value but potential use possible by RB.
Hannetta	22	122	35010		1.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Hannetta Creek"	Y	07/30/98	S6	1	1.0	No	None			L	190	191	600/706	Resampled reach from 1997 inventory. Abundant beaver activity near mouth. Channel restricted at road crossing - channel is dispersed over mosses in forest floor. Stocked BD impoundments near mouth with NFC. Confirmed fish absence from 1997 follow-up sampling. Also, gradient at road is >20% with no fish habitat or potential.
Hannetta	22	123	35014		2.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Hannetta Creek"	Y	07/30/98	S4	8	1.4	Yes	RB			M	10	26	600/706	Confirmed RB presence from 1997 inventory follow-up sampling.
Hannetta	22	124	35014		3.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Hannetta Creek"	Y	07/30/98	S4	13	1.3	Yes	RB			M	200	84	700/706	Confirmed RB presence from 1997 inventory follow-up sampling. However, RB present only to 200m into reach at which point gradient rises to >20%. See reach 3.1 data.
Hannetta	22	125	35014		3.1	Resamp98	1997 1.20K Reconnaissance Inventory	"Hannetta Creek"	N	07/30/98	S6	24	0.8	No	None	24% gradient	Start of reach 3.1 (200m ups from old reach 3 lower boundary)	L	110	137	700/606	Confirmed RB absence above gradient barrier. No fish present above reach 3.
Hannetta	22	126	35018		2.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Hannetta Creek"	N	07/30/98	S4	1	0.7	Infer	(RB)			L	160	174	500/706	Within 1997 project area, but no sampling in this reach in 1997. Shallow, marginal habitat but easily accessible from downstream reaches. Unlikely fish use.
Hannetta	22	127	35018		3.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Hannetta Creek"	Y	07/30/98	S6	7	0.8	No	None	10m high x 10m long cascade 42% gradient)	Start of reach 3	L	120	199	600/706	Sampled reach 3 and 4 in 1997, reach 4 in 1996 (RJA - HENXA) and reach 3 and 4 in 1998, all with NFC. Steep with >20% sections. Cascade at start of reach is impassable with no fish present above.
Hannetta	22	128	35018		4.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Hannetta Creek"	Y	07/30/98	S6	5	0.6	No	None	See above	See above	L	119	147	650/706	Resampled reach from 1997. Cascade at start of reach 3 is impassable with no fish present above. Sampled reach 3 and 4 in 1997, reach 4 in 1996 (RJA - HENXA) and reach 3 and 4 in 1998, all with NFC.
Hannetta	22	129	35019		3.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Hannetta Creek"	Y	07/30/98	S4	8	0.8	Yes	RB			M	160	94	650/706	Confirmed RB presence from 1997 inventory follow-up sampling.
Hannetta	22	130	35019		4.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Hannetta Creek"	N	07/30/98	S4	9	0.8	Yes	RB			L	130	74	600/706	Some rearing in boulder cover but no spawning or overwintering habitat. Confirmed RB use into reach 4 of this stream. No upper limit of fish use determined.
Hannetta	22	131	35029		5.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Hannetta Creek"	Y	07/30/98	S6	4	0.9	No	None			L	300	228	500/706	Sampled this stream in reach 4 and 5 in 1997 and in reaches 5 and 6 in 1998 with all negative sampling results. Very shallow, no pools. RB do not move through shallow water wetland in reach 4.

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																			#MT/yr	Dist (m)	Time (sec)	
Burns	25	142	22007		2.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Francois"	N	07/14/98	S5	0	4.0	No	None			N	Not sampled			Within 1997 project area, but no sampling in this reach in 1997. Mainly dry wetland corridor with occasional shallow, muddy, algae filled pools. Inaccessible due to lack of defined channel and numerous BD's downstream.
Burns	25	143	21001		1.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Francois"	N	07/14/98	S6	8	0.6	No	None			N	Not sampled			Within 1997 project area, but no sampling in this reach in 1997. Dry, channel entering reach 2 (wetland) of 22007 d/s. No suitable fish habitat, no access through d/s reaches (no connectivity).
Burns	25	144	22002		2.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Francois"	N	07/14/98	S6	5	2.0	No	None			N	300	438	500/70/4	Within 1997 project area, but no sampling in this reach in 1997. Nice RB habitat in steep pools, but no fish captured during extensive sampling. Also NFC in reach 3 us in 1997. Confirms fish absence above reach 1 of ILP 22007 due to lack of connectivity. d/s Resampled reach from 1997 inventory. NFC both years and in reach 2 d/s confirms fish absence.
Burns	25	145	22002		3.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Francois"	Y	07/14/98	S6	1	1.2	No	None			N	270	154	400/70/4	Resampled reach from 1997 inventory. NFC both years and in reach 2 d/s confirms fish absence.
Engle Creek	26	146	21095		1.0	CP98	1997 1.20k Reconnaissance Inventory	"Small Francois"	N	07/15/98	N/C/D			No	None			N	Not sampled			Within 1997 project area, but no sampling in this reach in 1997. No defined channel present at mouth. Water is dispersed in permeable fan near Decker Lake and flows subsurface for 225m. No access for fish from the lake and no permanent habitat available.
Engle Creek	26	147	21095		2.0	CP98	1997 1.20k Reconnaissance Inventory	"Small Francois"	N	07/15/98	S6	5	2.7	No	None	No defined channel at mouth		M	270	154	500/60/6	Within 1997 project area, but no sampling in this reach in 1997. Good RB habitat available but isolated above lack of channel downstream. No fish captured in excellent sampling conditions.
Engle Creek	26	148	21088		2.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Francois"	N	07/14/98	S3	8	1.6	Yes	RB			L	150	157	500/70/4	Within 1997 project area, but no sampling in this reach in 1997. Moderate habitat for RB in lower part of reach, but habitat deteriorates in upper section, with little usable habitat.
Engle Creek	26	149	21088		3.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Francois"	Y	07/14/98	S4	1	1.1	Infar	(RB)			L	300	389	500/70/4	Resampled reach from 1997 inventory. No fish captured again but marginal RB habitat available and accessible from downstream reaches.
Engle Creek	26	150	21088		4.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Francois"	N	07/15/98	S4	2	0.8	Infar	(RB)			L	200	260	600/60/6	Within 1997 project area, but no sampling in this reach in 1997. Shallow, marginal habitat but accessible from downstream reaches. Unlikely fish use.
Engle Creek	26	151	21088		5.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Francois"	N	07/15/98	S6	9	0.8	No	None			N	110	107	600/60/4	Within 1997 project area, but no sampling in this reach in 1997. Moderately steep with extensive rubble and no pools. Extremely shallow. NFC in reach 3 and 4 downstream.
Engle Creek	26	152	21090		1.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Francois"	N	07/15/98	S6	2	0.7	No	None			N	100	101	500/60/4	Within 1997 project area, but no sampling in this reach in 1997. No fish habitat. Intermittent, stagnant pools over fines, organics, < 5cm deep, no spawning or overwintering habitat available.
Engle Creek	26	153	21081		1.0	Resamp98	1997 1.20k Reconnaissance Inventory	"Small Francois"	Y	07/15/98	S6	1	0.8	No	L.K.C.			N	110	88	600/60/6	Resampled reach 1 further upstream than in 1997. Same reach but not fish-bearing from this location. Site is located above numerous BD's and wetlands that preclude RB use in this area. Water is stagnant, algae-filled and not suitable for salmonids.

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																			Minnow Traps	Electrofishing	Settings			
																			#MT/yr (gm)	Dist Time (sec)	Settings (V/Hz/g)			
Kenow Creek	26	154	21024		01	Resamp98	1997 1.20K Reconnaissance Inventory	"Kenow Creek"	N	07/25/98	S3	13	1.7	Infer	(RB)			M		70	169	400/90/6	Sampled reach 1 further upstream in 1997 - partitioned into 2 reaches (01 and 1) due to relative steepness at mouth. N/C, but habitat is accessible. Good boulder pool RB habitat. Excellent rearing for RB, no spawning substrate too large, riprap and channel too steep. Potential overwintering agent but good RB habitat available and accessible from downstream reaches.	
Kenow Creek	26	155	21024		10	Resamp98	1997 1.20K Reconnaissance Inventory	"Kenow Creek"	Y	07/25/98	S3	3	2.5	Infer	(RB)			M		600	421	600/60/6	Report by Wildlife Resources Ltd in 1997. RB presence confirmed to a barrier. Sampled during different season to confirm fish absence above falls. Habitat isolated above falls with no resident fish populations present. No fish captured above the falls during this inventory. Fish absence confirmed in entire Powderhouse C. drainage above falls in reach 3	
Kenow Creek	27	156	21024	180-374000-95200-01900-88800	30	Resamp98	1997 1.20K Reconnaissance Inventory	"Fish Inventory and Stream Classification, 1997 - Decker Lake Tributaries"	N	10/23/98	S6	6	2.7	No	None	Pin falls	Falls located approx 3.5km upstream from Decker L. Falls (LTM)=10.315 870.6023905		M		470	607	600/80/6	Resampled reach from 1997 inventory. No fish captured in entire Powderhouse C. drainage above falls in reach 3
Kenow Creek	27	157	31002		80	Resamp98	1997 1.20K Reconnaissance Inventory	"Forge Creek"	Y	07/26/98	S3	2	1.8	Yes	RB			M		15	48	500/70/4	Resampled reach from 1997 inventory. Confirmed presence of RB and FP/C class of S3.	
Kenow Creek	27	158	31002		110	Resamp98	1997 1.20K Reconnaissance Inventory	"Forge Creek"	N	07/26/98	S6	8	0.8	No	None			N		40	88	600/60/4	Sampled Reach 12 in 1997 inventory and resampled Reach 11. Mainly dry, intermittent channel with few isolated stagnant and very shallow pools. Unsuitable fish habitat and also lacks connectivity above wetland reaches downstream. Fish absence confirmed.	
Kenow Creek	27	159	31004	180-374000-95200-01900-88870-3235	70	Resamp99	1997 1.20K Reconnaissance Inventory	"Forge Creek"	Y	07/24/99	S6	4	0.9	No	None			N		105	74	700/70/6	Resampled reach from 1997 inventory. Sampled at higher flow, still lacks suitable fish habitat. Fish absence confirmed in entire ILP 31004 drainage above reach 6.	
Kenow Creek	27	160	31006	180-374000-95200-01900-88870-3235	20	Resamp99	1997 1.20K Reconnaissance Inventory	"Forge Creek"	Y	07/24/99	S6	3	0.3	No	None			N		60	71	700/70/6	Resampled reach from 1997 inventory. Sampled at higher flow, still lacks suitable fish habitat. Fish absence confirmed in entire ILP 31006 drainage above reach 1.	
Kenow Creek	27	161	31008	180-374000-95200-01900-88870-3235-572	20	Resamp99	1997 1.20K Reconnaissance Inventory	"Forge Creek"	N	07/24/99	S6	15	0.8	No	None			N		115	178	700/70/6	Resampled reach from 1997 inventory. Sampled at higher flow, still lacks suitable fish habitat. Fish absence confirmed in entire ILP 31008 drainage above reach 1.	
Kenow Creek	28	162	ENIDTRIA		30	Resamp98	1996 1.20K Reconnaissance Inventory	"Bridges Area"	Y	07/29/98	S6	1	2.0	No	None			L		47	35		Resampled reach from 1996 inventory. RB presence previously inferred. Long wetland reach with abundant new kind old beaver dams. Water is stagnant and murky with no suitable salmonid habitat. Confirmed fish absence in this stream.	

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Ahas, ILP, Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N Infer)	Fish Species Codes (inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments		
																			Minnow Traps	Electrofishing	Dist. Time (hrs)			
Garow Creek	28	163	ENDTR1A		6.0	Resamp98	1996 1.20k Reconnaissance Inventory	"Eridako Area"	N	07/26/98	S6	1	1.6	No	None			N			400	215	400/80/6	Sampled at reach 2. Water is filmy, stagnant and filled with orange algae within wetland corridor. No suitable salmonid habitat. 2nd site in system with NFC after extensive sampling.
Garow Creek	29	164	ENDTR1		4.0	Resamp98	1996 1.20k Reconnaissance Inventory	"Eridako Area"	Y	07/26/98	S3	2	1.8	Yes	RB			M			80	76	400/80/6	Resampled reach from 1996 inventory. RB presence previously inferred, but confirmed during resampling.
Garow Creek	29	165	ENDTR1		5.0	Resamp98	1996 1.20k Reconnaissance Inventory	"Eridako Area"	N	07/25/98	S3	5	2.5	Infer	(RB)			M			750	316	400/80/6	Sampled to determine upper fish distribution limit from 1996 inventory. Moderate to good RB rearing habitat. Sampled extensively with NFC, but RB presence still inferred. Confirmed presence upstream.
Garow Creek	29	166	ENDTR1		5.1	Resamp98	1996 1.20k Reconnaissance Inventory	"Eridako Area"	N	07/25/98	S3	9	2.4	Yes	RB	8m high x 30m long cascade	End of reach	M			530	231	400/80/6	Sampled this reach to confirm fish-bearing status above cascade. RB still present. Excellent rearing in LWD-dep pool, spawning and overwintering habitat fair to moderate. RB presence confirmed throughout this reach. Extensive riffle with rearing cover primarily consisting of Boulder/pool habitat. No exceptional spawning or overwintering habitat. Sampled to determine upper fish distribution limit from 1996 inventory. Good rearing available in deep pool and cutbank type cover. Spawning is fair in occasional gravel pockets, but too angular in general. Lacks significant deep pools (>0.5m) for overwintering habitat. RB use confirmed.
Garow Creek	29	167	ENDTR1		5.2	Resamp98	1996 1.20k Reconnaissance Inventory	"Eridako Area"	N	07/26/98	S3	2	2.7	Yes	RB			M			230	197	400/80/6	Sampled to determine upper fish distribution limit from 1996 inventory. Only sampled pool immediately below falls and upper limit of RB distribution for stream ENDTR1. No fish present in watershed above falls.
Garow Creek	29	168	ENDTR1		6.0	Resamp98	1996 1.20k Reconnaissance Inventory	"Eridako Area"	N	07/26/98	S3	10	2.7	Yes	RB			M			210	72	400/80/6	Sampled to determine upper fish distribution limit from 1996 inventory. Falls at end of reach. 10 downstream are impassable to all fish. Shocked extensively above falls with no fish captured. Moderate RB habitat available but isolated above falls.
Garow Creek	29	169	ENDTR1		8.0	Resamp98	1996 1.20k Reconnaissance Inventory	"Eridako Area"	N	07/26/98	S3	2	1.5	Yes	RB			M			320	146	400/80/6	Sampled to determine upper fish distribution limit from 1996 inventory. Falls at end of reach. 10 downstream are impassable to all fish. Shocked extensively above falls with no fish captured. Moderate RB habitat available but isolated above falls.
Garow Creek	29	170	ENDTR1		10.0	Resamp98	1996 1.20k Reconnaissance Inventory	"Eridako Area"	N	07/26/98	S3	17	1.8	Yes	RB	5m high falls	End of reach	M			1	3	400/80/5	Sampled to determine upper fish distribution limit from 1996 inventory. Only sampled pool immediately below falls and upper limit of RB distribution for stream ENDTR1. No fish present in watershed above falls.
Garow Creek	29	171	ENDTR1		11.0	Resamp98	1996 1.20k Reconnaissance Inventory	"Eridako Area"	N	07/26/98	S6	3	1.5	No	None	See above	See above	M			230	413	400/80/6	Sampled to determine upper fish distribution limit from 1996 inventory. Falls at end of reach. 10 downstream are impassable to all fish. Shocked extensively above falls with no fish captured. Moderate RB habitat available but isolated above falls.
Palling	30	172	ENDTR2		5.0	Resamp98	1996 1.20k Reconnaissance Inventory	"Eridako Area"	Y	07/26/98	S5	4	3.4	No	None	5m falls	Start of reach	M			95	104	700/60/6	Mainstem of stream was not within 1996 project area, but the falls were identified and the stream was sampled above the falls in 1996 with no fish captured. NFC during this sampling - habitat for RB was minimal due to lack of water - has a large channel but has no overwintering habitat for a resident population above the falls.

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, ILP, Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments	
																			#NT/Tr	Dist (m)	Time (hrs)		Settings (V/I/Hz/ps)
Pulling	30	173	ENDTR2A		1.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	07/26/98	S3	3	1.5	Yes	RB			M	100	52	500/90/6	Reach within 1996 project area but only reach 2 sampled in 1996 with N/C. This reach provides excellent RB rearing in deep pool areas, but spawning limited by lack of flow, fines in substrate and no overwintering (too shallow). However, RB fry were very abundant (many observed), suggesting spawning use. EPC S3 confirmed.	
Pulling	30	174	ENDTR2A		2.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	Y	07/26/98	S3	3	3.0	Yes	RB			M	5	20	500/80/6	Resampled reach from 1996 inventory and confirmed RB use. Stopped sampling after fish capture.	
Pulling	30	175	ENDTR2A		3.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	07/26/98	S6	4	1.2	No	None			N	120	178	500/70/6	Reach within 1996 project area but only reach 2 sampled in 1996. Very shallow, small and water is filled with algae. Lacks suitable salmonid habitat. Sampled extensively with N/C, habitat deteriorates with every metre.	
Pulling	30	176	ENDTR2B	180-374000-95200-01900-9560	1.0	Resamp99	1996 1.20K Reconnaissance Inventory	"Erdako Area"	Y	07/22/99	S6	3	2.1	No	None			M	200	353	600/60/6	Sampled during different season to confirm fish absence above falls identified in 1996 inventory. Fish absence confirmed in errie ENDTR2B drainage	
Pulling	30	177	Retroul Creek		7.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	Y	07/26/98	S3	3	2.3	Yes	RB			M	3	5	600/80/4	Resampled reach from 1996 inventory. Reach was initially inferred as non fish-bearing due to the cascade barrier but RB presence was confirmed above the cascade during this resampling. Sampled only enough to confirm fish presence.	
Pulling	30	178	Retroul Creek		8.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	07/26/98	S3	3	2.0	Yes	RB			M	220	300	600/60/4	Sampled to determine upper fish distribution limit from 1996 inventory. Good rearing available in deep pool and cutbank type cover. Spawning is good in numerous gravel pockets - numerous RB fry present suggesting spawning use. Moderate overwintering in deeper pool areas.	
Pulling	30	179	Retroul Creek		9.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	07/26/98	S6	1	1.4	No	None			N	400	306	600/70/4	Sampled to determine upper fish distribution limit from 1996 inventory. Reach is wetland forest complex. Water quality very poor with abundant algae. Shocked extensively with N/C - beaver dams and extensive wetlands in reach 8 downstream further hinder RB passage into this reach, but no suitable salmonid habitat anyway. Confirmed fish absence in this reach.	
Pulling	30	180	RE		1.0	OP98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	07/26/98	S6	3	0.4	No	None			N	160	51	600/70/4	Stream within 1996 project area but not previously sampled. Tiny, extremely shallow channel. Consists of disconnected, shallow segment pools (only few to stock) over fines/organics. No suitable salmonid habitat.	
Pulling	31	181	Erdako R.	180-374000-95200-01900	5.0	Resamp99	1996 1.20K Reconnaissance Inventory	"Erdako Area"		07/22/99	S3					N/C	End of reach			220	611	700/70/6	Sampled during different season to confirm fish absence above falls identified in 1996 inventory. Fish absence confirmed above falls at end of reach 4 on Erdako River.
Pulling	31	182	Erdako R.		2.0	Resamp99	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	07/25/98	S3	8	1.9	Yes	RB			M	54	89	700/70/4	Reach within 1996 project area but only reach 1 sampled in 1996. Good RB rearing in abundant cover. Good spawning grounds available, pools not deep enough to provide significant overwintering.	

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, ILP, Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments	
																			Minnow Traps	Electrofishing	Settings		
Palling	31	183	END3		4.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	07/25/98	S3	17	3.0	Infer	(RB)	10m high x 30m long cascade	see above	M		115	301	700/60/6	Reach within 1996 project area but only reach 1 sampled in 1996. Resampled to determine upper fish distribution limit. Nice potential habitat but NPC. Fish presence inferred to cascade obstruction, which marks upper distribution limit and end of reach.
Palling	31	184	END3		4.1	Resamp98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	07/25/98	S6	17	3.0	No	None	see above	see above	L		211	141	700/70/4	Reach within 1996 project area but only reach 1 sampled in 1996. Reach is same as reach 4 but separated by cascade barrier at end of reach 4, which marks end of fish use in this stream. Cascade is impassable to all fish. Some potential rearing pools sampled, but much of stream is steep and dry with no overwintering habitat.
Palling	31	185	END3A		1.0	QP98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	07/25/98	S6	14	1.2	No	None			N		99	288	700/70/4	Reach within 1996 project area but stream not sampled in 1996. Reach has moderate to steep gradient sections, lacks sufficient water for fish. Water has abundant algae. Lacks suitable fish habitat or any fisheries potential.
Palling	31	186	END4		1.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	Y	10/04/98	S4	6	1.0	Yes	RB			M		220	140	600/70/4	Reach is within 1996 project area but only this reach sampled in 1996. Sampled to determine upstream fish distribution. RB were captured in intermittent channel, present in one of the isolated deep pools 35m up from the mouth. Most of flow comes from END4A - flow upstream from this rth is very limited.
Palling	31	187	END4		2.0	Resamp98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	10/04/98	S4	7	0.8	Infer	(RB)	5m high x 13m long cascade	End of reach	L		NA	NA	NA	Reach is within 1996 project area but only reach 1 sampled in 1996. Sampled to determine upstream fish distribution. Channel is totally dry - no fish habitat available. However, there is potential habitat at higher flow that is accessible to fish. However, the cascade at the end of the reach is impassable to fish with no overwintering habitat upstream and marks the upper limit of fish distribution.
Palling	31	188	END4		2.1	Resamp98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	10/04/98	S6	7	0.6	No	None	see above	see above	L		4	35	500/70/6	Sampled above cascade to confirm fish absence. Channel is almost totally dry with only a few shallow pools available to sample. NPC and no overwintering habitat to support resident RB.
Palling	31	189	END4A		1.0	QP98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	10/04/98	S4	11	0.4	Infer	(RB)			L		180	240	500/70/4	Stream within 1996 project area but not previously sampled. Try, extremely shallow channel at moderate gradient but some habitat available and accessible from END4.
Palling	31	190	END4A		2.0	QP98	1996 1.20K Reconnaissance Inventory	"Erdako Area"	N	10/04/98	S6	7	0.3	No	None			N		105	237	500/70/6	Stream within 1996 project area but not previously sampled. Try, shallow channel (3x4m) with mainly undisturbed flow/vegetation. No suitable fish habitat at all water level. NPC in 2 sites in this stream.
Bronson	32	191	Adopt Creek (31901F)		2.0	QP97	1997 Operational Inventory	"FSID at Several Proposed and Existing Road Crossings for BFP Co."	N	10/19/97	S2	5	5.3	Yes	RB			H		N/A	437	N/A	Sampled as part of operational project to determine fish values at proposed Perry road crossing (see report). Overall excellent RB habitat in low gradient riffle-pool morphology. Good spawning and overwintering potential.

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, ILP, Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments		
																			Mittow Traps	Electrofishing	Settings			
																			#ATM	Dist (m)	Time (hrs)	Settings (V/Hz/Hz)		
Bronnan	32	192	Alport Creek (S1901F)		2.0	Resamp99	1997 Operational Inventory	FISID at Several Proposed and Existing Road Crossings for BFP Co.	Y	10/23/99	S5	15	5.8	No	None	2m high x 3m long cascade followed by 11m falls	Start of reach 330m ups from Perry road crossing)	H			130	696	700/90/8	Resampled stream above falls (only sampled below falls in 1997 operational inventory). Excellent rearing, spawning and overwintering habitat for RB but isolated above series of impassable falls and cascade barriers, beginning at start of reach. Sampled extensively, but NFC in two sites above falls. Would have been present in excellent habitat. RB present below falls (from 1997 operational sampling).
Bronnan	32	193	Alport Creek (S1901F)		3.0	Resamp99	1997 Operational Inventory	FISID at Several Proposed and Existing Road Crossings for BFP Co.	N	10/23/99	S5	2	6.0	No	None	see above	see above	H			140	425	700/90/8	Excellent rearing, spawning and overwintering habitat for RB but isolated above series of impassable falls and cascade barriers, beginning at start of reach. Sampled extensively, but NFC in two sites above falls. Would have been present in excellent habitat. RB present below falls (from 1997 operational sampling).
Bronnan	32	194	All.1	60-		Op97	1997 Operational Inventory	FISID at Several Proposed and Existing Road Crossings for BFP Co.	N	10/19/97	S6	12	1.4	No	None			L			350	334	N/A	Sampled as part of operational project to determine fish values at proposed Perry road crossing (see report). Moderately steep, channel dissipates into wetland downstream. No accessible fish habitat due to extensive wetlands and beaver activity downstream.
Bronnan	32	194	All.1	60-		Resamp99	1997 Operational Inventory	FISID at Several Proposed and Existing Road Crossings for BFP Co.	Y	07/24/98	S6	12	1.4	No	None			L			N/A	104	700/60/6	Sampled at higher flow, still lacks suitable fish habitat. Fish absence confirmed in this stream at Perry road crossing.
Bronnan	32	195	All.3	60-		Op97	1997 Operational Inventory	FISID at Several Proposed and Existing Road Crossings for BFP Co.	N	10/19/97	S6	5	1.2	No	None			L			100	196	N/A	Sampled as part of operational project to determine fish values at proposed Perry road crossing (see report). Very shallow with no usable fish habitat and also inaccessible due to extensive wetlands and beaver activity downstream.
Bronnan	32	195	All.3	60-		Resamp99	1997 Operational Inventory	FISID at Several Proposed and Existing Road Crossings for BFP Co.	Y	07/24/98	S6	5	1.2	No	None			L			N/A	174	600/60/6	Sampled at higher flow, still lacks suitable fish habitat. Fish absence confirmed in this stream at Perry road crossing.
Bronnan	32	196	All.4A			Op97	1997 Operational Inventory	FISID at Several Proposed and Existing Road Crossings for BFP Co.	N	10/19/97	S6	12	0.5	No	None			N					Not Sampled	Sampled as part of operational project to determine fish values at proposed Perry road crossing (see report). Very small, moderately steep and seasonal. Channel totally dry at time of survey. No fish habitat or fisheries potential.
Bronnan	32	196	All.4A			Resamp99	1997 Operational Inventory	FISID at Several Proposed and Existing Road Crossings for BFP Co.	Y	07/24/98	S6	12	0.5	No	None			N			N/A	35	700/60/6	Sampled at higher flow, still lacks suitable fish habitat. Fish absence confirmed in this stream at Perry road crossing.
Bronnan	32	197	All.2	60-		Op97	1997 Operational Inventory	FISID at Several Proposed and Existing Road Crossings for BFP Co.	N	10/19/97	S6	4	1.3	No	None			N					Not Sampled	Sampled as part of operational project to determine fish values at proposed Perry road crossing (see report). Seasonal, dry channel. No fish habitat or fisheries potential.

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Completion Project Map #	Site #	Stream ID (Name, Alias, ILP, Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments
																			#AT/Tr	Dist (m)	Time (sec)	
Broman	32	197	AIL2	460-829700-20600-39300	2.0	Resamp99	1997 Operational Inventory	"FSID at Several Proposed and Existing Road Crossings for HRP Co."	Y	07/24/99	S6	5	0.8	No	None			N	100	61	700/60/6	Sampled at higher flow, still lacks suitable fish habitat. Fish absence confirmed in this stream at Perry road crossing.
Broman	32	197	AIL2 (\$1902A)		1.0	OP97	1997 Operational Inventory	"FSID at Several Proposed and Existing Road Crossings for HRP Co."	Y	10/21/99	S6	5	0.8	No	None			N	Not Sampled			Resampled reach from 1997 operational sampling done for Perry road. Tiny, dry channel entering large wetland d/s (no connectivity). Lacks any potential RB habitat.
Broman	32	198	TAM2	460-951600-53800	1.0	CP98	1996 L20k Reconnaissance Inventory	"Eradiko Area"	N	07/28/98	S3	10	1.0	Yes	RB			M	351	837	700/70/4	Reach within 1996 project area but not sampled in '96 field program. RB presence confirmed in moderate flowing habitat. Good spawning available in gravel patches. No visible channel. Stream lacks continuous channel bed and is not an FFC stream. RB caught in reach 1 of this stream, but TAM2 is actual mainstem. Fish absence confirmed in entire TAM2 drainage above reach 1.
Broman	32	199	TAM2	460-951600-53800	2.0	CP98	1996 L20k Reconnaissance Inventory	"Eradiko Area"	N	07/25/98	NCD			No	None			N	Not sampled			Reach within 1996 project area but not sampled in '96 field program. Real mainstem of TAM2, accessible but marginal habitat that deteriorates at the road crossing.
Broman	32	200	TAM2A		1.0	CP98	1996 L20k Reconnaissance Inventory	"Eradiko Area"	N	07/28/98	(S4)	6	1.4	Infer	(R1)			L	200	174	700/70/4	Small intermittent channel near headwaters. Shallow, multi-channel reach. Reach lacks any suitable fish habitat or fisheries potential. RB use inferred in reach 1 that starts at junction with TAM2. Fish absence confirmed in entire TAM2A drainage above reach 1.
Broman	32	201	TAM2A		2.0	OP98	1996 L20k Reconnaissance Inventory	"Eradiko Area"	N	07/28/98	S6	5	0.6	No	None			N	120	104	700/70/4	Reach 1 sampled in 1998 inventory. Resampled at higher flow. Habitat in this reach is best for RB in entire drainage. Negative sampling results confirm fish absence in this reach likely as a result of the extensive wetlands. No resident potential due to seasonal nature. Fish absence confirmed in entire ILP 40305 drainage above reach 1.
Crow-Tony	33	202	40305		4.0	Resamp99	1998 L20k Reconnaissance Inventory	"Subdrainages in the Bulley River Watershed"	Y	07/23/99	S6	4	2.3	No	None			L	75	164	600/60/4	Reach 1 sampled in 1998 inventory. Resampled at higher flow. Habitat in this reach is best for RB in entire drainage. Negative sampling results confirm fish absence in this reach likely as a result of the extensive wetlands. No resident potential due to seasonal nature. Fish absence confirmed in entire ILP 40305 drainage above reach 1.
Maxon	34	203	20016	460-924300-75872	1.0	Resamp99	1998 L20k Reconnaissance Inventory	"Subdrainages in the Bulley River Watershed"	Y	07/22/99	S6	13	0.5	No	None			N	130	73	500/60/6	Resampled this reach in 1998 inventory. Resampled at higher flow, still lacks suitable fish habitat. Fish absence confirmed.
Maxon	34	204	20017	460-924300-77181	1.0	Resamp99	1998 L20k Reconnaissance Inventory	"Subdrainages in the Bulley River Watershed"	Y	07/22/99	S6	3	0.1	No	None			N	140	117	500/60/6	Resampled this reach at higher flow. Stream disperses into forest floor and wetland upstream from the mouth. Inaccessible to fish from Maxon Creek. Still lacks suitable fish habitat. Fish absence confirmed in entire ILP 29017 drainage.
Maxon	34	205	20018	460-924300-79783	2.0	Resamp99	1998 L20k Reconnaissance Inventory	"Subdrainages in the Bulley River Watershed"	N	07/22/99	S6	7	2.0	No	None			L	300	342	500/70/6	Reach 1 sampled in 1998 inventory. Sampled Reach 2 to determine fish use in better available habitat. Shallow, moderately steep reach with very little instream cover. Sampled at higher flow but still lacks suitable fish habitat. Fish absence confirmed in entire ILP 20016 drainage.
Maxon	34	206	20020	460-924300-82256	2.0	Resamp99	1998 L20k Reconnaissance Inventory	"Subdrainages in the Bulley River Watershed"	Y	07/22/99	S6	7	0.6	No	None			N	160	173	600/70/6	Resampled this reach at higher flow, still lacks suitable fish habitat. Fish absence confirmed in entire ILP 20020 drainage above reach 1.

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, I.L.P., Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N Infer)	Fish Species Codes (Inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments
																			#MT/yr	Dist (m)	Time (sec)	
Odsasnee	39	219	R3019		1.0	Resamp98	1997-120K Reconnaissance Inventory	Odsasnee Creek*	Y	07/17/98	(S4)	3	1.1	Infer	(RB)			M	103	138	400/100/4	Resampled from 1997 inventory. Still NFC but easily accessible to fish from Hewson Lake (if fish present in lake).
Odsasnee	39	220	R3019		2.0	Resamp98	1997-120K Reconnaissance Inventory	Odsasnee Creek*	N	07/17/98	S6	2	1.1	No	None			L	505	537	500/100/4	Extra resampling site from 1997 inventory. Poor fish habitat above road (100m us from Hewson). Stagnant, algae-filled water, channel mainly organic substrate. Very shallow. NFC in system in 4 sites in 1997 & 1998.
Odsasnee	39	221	R3023		1.0	Resamp98	1997-120K Reconnaissance Inventory	Odsasnee Creek*	N	07/17/98	(S4)	2	1.1	Infer	(RB)			M	344	366	400/100/6	Sampled reach 2 in 1997 with NFC. NFC in resampling now, but nice creek with diverse and abundant cover. Good potential RB spawning areas and good overwinter potential. Lack of fish capture may suggest fish absence in Hewson lake etc.
Odsasnee	40	222	R3006		2.0	Resamp98	1997-120K Reconnaissance Inventory	Odsasnee Creek*	Y	07/17/98	S3	5	1.8	Yes	RB			H	80	94	400/100/2	Resampled reach from 1997 inventory, but in upper end of reach. RB presence confirmed here - abundant fry and young juveniles - high value RB spawning habitat.
Odsasnee	40	223	R3006		3.0	Resamp98	1997-120K Reconnaissance Inventory	Odsasnee Creek*	Y	07/17/98	S4	2	0.9	Yes	RB			M	100	50	400/100/2	Resampled reach from 1997 inventory. RB presence confirmed here. BD present at lake outlet may hinder RB passage, but potential to move in and out of lake.
Odsasnee	41	224	R3027		1.0	OP98	1997-120K Reconnaissance Inventory	Odsasnee Creek*	N	07/17/98	NCD	N/A	N/A	No	None			N	Not sampled			Stream within 1997 project area, but not sampled in 97 field program. No channel found near mouth at Odsasnee Lake. Not an FPC stream.
Odsasnee	41	225	R3038		1.0	OP98	1997-120K Reconnaissance Inventory	Odsasnee Creek*	N	07/17/98	NCD	N/A	N/A	No	None			N	Not sampled			Stream within 1997 project area but not sampled in 97 field program. No channel found near mouth at Odsasnee Lake. Not an FPC stream.
Odsasnee	41	226	R3033		1.0	OP98	1997-120K Reconnaissance Inventory	Odsasnee Creek*	N	07/16/98	(S4)	1	1.5	Infer	(RB)			M	Not sampled			Stream within 1997 project area but no sampling done on this stream. This reach large wetland inaccessible for sampling on foot.
Odsasnee	41	227	R3033		2.0	OP98	1997-120K Reconnaissance Inventory	Odsasnee Creek*	N	07/16/98	(S4)	3	1.2	Infer	(RB)			M	160	405	500/70/4	Stream within 1997 project area but no sampling done on this stream. Good potential RB rearing and spawning habitat but too shallow for overwintering. 2nd site NFC but channel still accessible to fish from Odsasnee C.
Odsasnee	41	228	R3033		3.0	OP98	1997-120K Reconnaissance Inventory	Odsasnee Creek*	N	07/16/98	(S4)	5	1.1	Infer	(RB)			M	230	195	400/90/8	Stream within 1997 project area but no sampling done on this stream. Good potential RB rearing and moderate potential spawning and overwintering habitat. 3rd site NFC but channel still accessible to fish from Odsasnee C.
Odsasnee	41	229	R3033		4.0	OP98	1997-120K Reconnaissance Inventory	Odsasnee Creek*	N	07/16/98	S6	7	1.5	No	None	3m high x 15m long cascade		L	300	200	400/90/8	Stream within 1997 project area but no sampling done on this stream. 4th site NFC in this stream. Cascade at start of reach is impassable to fish. No fish present in wetlanded above cascade.
Odsasnee	41	230	R3018		2.0	Resamp98	1997-120K Reconnaissance Inventory	Odsasnee Creek*	N	07/16/98	S4	2	1.0	Yes	RB			M	210	130	400/70/6	Sampled reach 1 in 1997 with RB captured, then NFC in reach 3. Resampling in reach 2 confirmed RB presence in this reach. However, habitat deteriorates in the upper end of reach near block and unlikely fish use above reach 2.
Choshita	42	231	P30 C. (I.L.P. 72001)		7.0	Resamp98	1997-120K Reconnaissance Inventory	"Dag Creek"	Y	07/17/98	S6	1	1.2	No	None			N	110	180	600/70/6	Resampled reach from 1997 inventory. NFC both years likely due to presence of numerous wetlands (BD's downstream). Confirms fish absence.

Table 1: Resampling and Operational Survey Data from 1997-1999.

Sub-unit	Compilation Project Map #	Site #	Stream ID (Name, Alias, ILP, Assigned Name)	Watershed Code	Reach #	Project in which current information collected	Original Inventory	Original Report	Previously Sampled (Y/N)	Date	RMA Class (S1-S6, (S1)-(S6), NCD)	Average Gradient (%)	Average Channel Width (m)	Fish presence (Y/N/Infer)	Fish Species Codes (inferred)	Fish Barrier Type	Fish Barrier Location	Fish Habitat Value (H, M, L, N)	Sampling Specifications			Comments			
																			Minimum Traps	Elutriation	Settings				
																			#MTR	Dist (m)	Time (sec)	(V/H/z/s)			
Outsance	43	232	73002		1.0	Resamp98	1997 1.20K Reconnaissance Inventory	"Outsance Creek"	Y	02/17/98	S4	14	1.2	Yes	RB			NI	260	103	400/70/6	Resampled reach from 1997 inventory and confirmed RB presence.			
Outsance	43	233	73002		1.1	Resamp98	1997 1.20K Reconnaissance Inventory	"Outsance Creek"	N	07/17/98	S6	19	0.9	No	None			N	148	199	400/70/6	Determined upstream distribution limit for this stream under follow-up sampling from 1997 inventory. Shallow stream with no instream cover or habitat for fish. No overwintering habitat present.			
Outsance	43	234	73007	180-545300-45700-35684	2.0	Resamp99	1997 1.20K Reconnaissance Inventory	"Outsance Creek"	N	07/12/99	S6	2	1.2	No	None			L	230	302	500/60/6	Sampled reach 1 in 1997 and resampled in Reach 2 during higher flow to determine fish use in better available habitat. Small, shallow stream with no perennial habitat to support resident RB population, extensive wetland downstream further precludes RB use in this stream.			
Outsance	43	235	73008	180-545300-45700-35684-1330	2.0	Resamp99	1997 1.20K Reconnaissance Inventory	"Outsance Creek"	N	07/12/99	S6	3	0.5	No	None			N	280	173	500/60/6	Sampled reach 1 in 1997 and resampled in Reach 2 during higher flow to determine fish use in better available habitat. Tiny trickle with no pools and no suitable RB habitat.			
Outsance	43	236	73011	180-545300-45700-36074	1.0	Resamp99	1997 1.20K Reconnaissance Inventory	"Outsance Creek"	N	07/12/99	NCD			No	None			N	120	78	500/6/6	Sampled reach 2 in 1997 and resampled in Reach 1 during higher flow to determine fish use in better available habitat. No visible channel. Stream lacks continuous channel bed and is not an FPC stream. Water trickles over grasses and rocks.			
Outsance	43	237	73012	180-545300-45700-36519	1.0	OP99	1997 1.20K Reconnaissance Inventory	"Outsance Creek"	N	07/12/99	NCD			No	None			N			Not sampled	UTM 10 340605 5962270. No visible channel. Stream lacks continuous channel bed and is not an FPC stream. Not within any reaches inventories (operational site).			
Kamp	43	238	73101			OP99			N	07/12/99	NCD			No	None			N			Not sampled				

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5. List of Appendices

Appendix I: Copies of Field Cards

Appendix II: Photographs

Appendix III: Hardcopy Maps