Reconnaissance (1:20,000) Fish and Fish Habitat Stream Inventory of Skeena River Tributaries South of the Sicintine River

Watershed Code: 400 -

Kispiox Forest District Fish and Fish Habitat Inventory Project

Final Report

Prepared for:

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PROJECT REFERENCE INFORMATION

Project Code:	06-KISP-3068-0002-1998
Proponent:	Ministry of Environment, Lands and Parks
Inventory Program:	Forest Renewal BC
Contract Number:	Section of CSK 3068, Skeena Region
FRBC Project Number:	SB96120

WATERSHED INFORMATION

Stream Names:	Unnamed tributaries to the Skeena River
Watershed Codes:	400-63080, 400-62720, 400-62560, 400-61850
TRIM map sheets	94D.001, 93M.091
Total Number of Reaches:	103
Number of Reaches/Sites Sampled:	21
Fish Species Present:	CH, CT, RB, DV, TR
Biogeoclimatic Zone(s):	ICH
Survey Dates:	September 13 - 14, 1997
MELP Region:	Skeena Region (6)
Management Units:	6-7
Forest District:	Kispiox Forest District
Forest Licensee:	Skeena Cellulose Inc.

CONTRACTOR INFORMATION

Survey Agency:	Triton Environmental Consultants Box 88, Terrace, B.C., V8G 4A2 (250) 635-1494 C172
Project Director:	Adam Lewis, M.Sc., R.P.Bio.
Project Manager:	Arne Lorenz, B.Sc.
Field Crew:	Arne Lorenz, B.Sc., Sam Buchanan, D. Tech., Lloyd Dallyn and Chris Collins
Data Entry:	Lloyd Dallyn and Sam Buchanan
Inventory Mapping:	Shannon Shields, B.A., and Michele Patterson, D. Tech.

DISCLAIMER

The Province has not accepted the contents of this product for the purposes of the Forest Practices Code, and reserves the right to dispute the validity of summarized results. The Province does not necessarily agree with the classification assigned to any individual stream reach, for use in logging plans, silviculture prescriptions or any other application.

ACKNOWLEDGMENTS

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We would like to thank Todd Mahon, Skeena Cellulose Inc. representative who was the contract administrator and provided valuable input throughout the contract, and Paul Giroux, Fisheries Inventory Specialist, Ministry of Environment, Lands and Parks, Skeena Region, who acted as contract monitor and provided technical expertise as well as valuable input throughout the project.

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1. INTRODUCTION

1.1 Project Objectives

Triton Environmental Consultants Ltd. was contracted by the British Columbia Ministry of Environment, Lands and Parks, Fisheries Branch to conduct stream inventories in select watersheds within the Kispiox Forest District. Information was collected on the biological and physical stream characteristics, fish species assemblage, and fish distribution. The purpose of the Reconnaissance (1:20 000) Fish and Fish Habitat Inventory is to describe watershed-wide fish distributions and habitat characteristics for the project area.

1.2 Study Area

The project area is within the Kispiox Forest District in northwestern central British Columbia (Figure 1). The project area covered 11 discrete working areas (Table 1). This report covers Project Working Area #10: Skeena River tributaries south of the Sicintine River (Table 1). The working area 10 streams are left bank tributaries to the Skeena River south of the Sicintine River and are located in an area approximately 142 km north-northwest of Smithers (Figure 1). Access to this area was by helicopter from Hazelton, B.C..

Table 1. Watershed working areas within the Kispiox Forest District

Working Area #	Working Area	Stream Network	Watershed Code
1	Shedin Creek	Unnamed Creeks, Sperry Creek, Rosenthal Creek, Damsumlo Creek ⇒ Shedin Creek ⇒ Babine River ⇒ Skeena River ⇒ Pacific Ocean	480 027800
2	Goathead Creek	Unnamed Creeks ⇒ Goathead Creek ⇒ Shedin Creek ⇒ Babine River ⇒ Skeena River ⇒ Pacific Ocean	480 027800 11600
3	West Kitsuns Creek Tributary	Unnamed Creeks ⇒ Unnamed Creek ⇒ Kitsuns Creek ⇒ Kitseguecla River ⇒ Skeena River ⇒ Pacific Ocean	450 318200 18200 45700
4	Kitsuns Creek	Unnamed Creek ⇒ Kitsuns Creek ⇒ Kitseguecla River ⇒ Skeena River ⇒ Pacific Ocean	450 318200
5	Larkworthy Creek	Unnamed Creeks ⇒ Larkworthy Creek ⇒ Skeena River ⇒ Pacific Ocean	400 593800
6	Cranberry River Tributaries	Unnamed Creeks ⇒ Cranberry River ⇒ Nass River ⇒ Pacific Ocean	530-000000
7	Carrigan Creek Tributaries	Unnamed Creeks ⇒ Carrigan Creek ⇒ Skeena River ⇒ Pacific Ocean	400 519600
8	Skeena River Tributaries (S. of Larkworthy Cr.)	Unnamed Creeks ⇒ Skeena River ⇒ Pacific Ocean	400-
9	Deep Canoe Creek	Unnamed Creeks ⇒ Deep Canoe Creek ⇒ Skeena River ⇒ Pacific Ocean	400 574200
10	Skeena River Tributaries (S. of Sicintine R.)	Unnamed Creeks ⇒ Skeena River ⇒ Pacific Ocean	400
11	Moonlit Creek	Unnamed Creeks ⇒ Moonlit Creek ⇒ Kitwanga River ⇒ Skeena River ⇒ Pacific Ocean	400 694900 48600

Figure 1. Project overview map

1.3 Review of Existing Information

The Fisheries Information Summary System (FISS) Map 94D/04 and 93M/13 have no fisheries information for left bank tributaries to the Skeena River south of the Sicintine River.

2. METHODS

Standard methodology as outlined in Reconnaissance (1:20 000) Fish and Fish Habitat Inventory: Standards and Procedures (RIC 1997) for performing stream inventories were followed. The reconnaissance level fish and fish habitat inventory is a sample-based survey covering whole watersheds as defined from 1:20,000 scale maps and air photos. The project includes 6 phases as listed below:

Phase 1: Data Review: A review of all available background information was completed. All known fisheries information is summarized in this report; new data were transcribed onto the 1:20,000 TRIM maps, and 1:50,000 NTS maps to update Fisheries Information Summary System (FISS) database (DFO).

Phase 2: Classification and Sampling Design: A comprehensive map and air photo review was completed for all waterbodies identified on 1:20,000 TRIM maps. Reach characteristics (gradient, order, pattern, confinement) were recorded for all streams within the project area and recorded on the Reach Table (RIC,1997). The Reach Table was used to generate a sample size (a subset of reaches to be sampled) within the working area based on RIC guidelines. The Reach Totals and Sample Size Sheet (RIC, 1997) was generated which provides a summary of the number of reaches of each type (based on gradient class, size and pattern/confinement) to be sampled. Detailed Reach Forms were completed for selected reaches to be sampled.

Phase 3: Project Plan: A field sampling plan was developed to sample sites in a variety of stream gradients and stream orders. The purpose of the plan was to describe watershed wide fish distribution, not necessarily to sample all potential fish bearing reaches. Data from Phases 1 and 2, and the Project Plan were presented to and approved by Paul Giroux, MELP Fisheries Inventory Specialist.

Phase 4: Field Inventory: Field sampling of selected sites was completed from September 13 - 14, 1997.

Phase 5: Data Entry and Analysis: Field sampling data (including site cards, fish cards, and photodocumentation) were entered into the FDIS database. 1:50,000 scale NTS maps of the study area were updated with new information as per the FISS Data Compilation and Mapping Procedures (DFO, 1997).

Phase 6: Reporting and Final Mapping: Field and office data were mapped using Arc View and Arc Info software, photographs were scanned and printed, and draft and final reports were completed.

2.1 Changes To Methodology

2.1.1 Phase 2

The required number of sample sites as determined by the Reach Sampling Summary were chosen with bias (rather than randomly) to incorporate biological concerns (fish distribution) and access issues. Reach Sampling Summary totals were generated by lumping 9 working areas rather than using totals generated by the individual working area. Additional reaches were chosen upstream and downstream of known barriers to determine limits of fish distribution.

2.1.2 Phase 4

All sample site locations (except for no visible channel sites) were marked in the field with flagging tape and with the ILP and site numeric identifier (NID) on a steel tag fixed to a blaze on a tree.

2.1.3 Phase 5

Photographic data were edited when entered into FDIS from the original field data forms to reduce duplication of photographs and to eliminate poor quality photographs. Field data forms remain unaltered as a permanent record for the sample site. All photos were taken with 35mm slide film, and scanned using a Nikon LS-1000 film scanner. Slides were scanned at 300 dpi, and saved as *.JPG files (.8 compression). Stored photo files are about 300kb, and uncompress to about 5mg each. Digital photos were printed as thumbnails using Corel Mosaic. All site photos were copied to CD, 2 copies have been sent to MELP Smithers, and Triton will retain 1 copy on file.

2.1.4 Phase 6

The inventory and interpretative maps were combined to produce one map. The working area is indicated by blue coloured stream lines. Fish presence is represented by light red

highlighting over stream lines (sampled: solid or inferred: dashed) and no fish presence is represented by light blue highlighting over stream lines (sampled: solid or inferred: dashed). Stream classifications are provided for sampled reaches only. Stream summary symbols provide the following information for each sampled site:

- sample site ID,
- fish species presence, not sampled or no fish caught,
- stream or wetland,
- reach confinement,
- reach gradient,
- reach pattern,
- site gradient,
- site channel width,
- site morphology,
- site dominant substrate type,
- site disturbance(s) if applicable, and
- stream classification.

2.2 Field Assessments

Project Working Area #10: Tributaries to the Skeena River South of the Sicintine River was surveyed on September 13th and 14th, 1997. Field assessments followed procedures outlined in Reconnaissance (1:20 000) Fish and Fish Habitat Inventory: Standards and Procedures (RIC, 1997). Generally, the process we followed in the field was to:

- assess the watershed during a helicopter overflight to confirm reach boundaries, identify access points, and photograph reaches at a watershed scale.
- assess each reach on the ground by completing a standard site card, sampling for fish presence, completing a fish collection card and photographing representative habitats.
- identify key features such as barriers to fish migration, spawning locations and bridges; photograph and recorded features on site cards with a unique numeric identifier (NID).

Sample site lengths were equal to the greater of 100m or 10 bankfull widths. Stream widths were determined by measuring the channel width with a tape measure, or by visual estimate. At least 6 channel width measurements were made within each reach, each one at least one channel width distance apart. These measurements were averaged to determine the average channel width. Stream gradients were measured using a clinometer. Stream morphology was determined using the *Channel Assessment Procedures Guidebook* (MOF 1996). Depths were measured using a folding meter stick. Water quality (pH and conductivity) was assessed using a Hannah pHTestr2^{TM} and TDSTestr3^{TM}. Turbidity was assessed by ground estimate. Habitat quality was assessed for rearing, spawning, overwintering and cover, each

of these habitat types was rated as either Good, Fair, Moderate or Poor. Wildlife observations were noted.

2.3 Fish Sampling

Fish presence was determined by electrofishing at least $100m^2$ or the equivalent of 10 bankfull widths of habitat in each reach using a Smith Root Model 12B electroshocker. Captured fish were measured (nose-fork length) and keyed out to species using the *Field Key to the Freshwater Fishes of British Columbia* (McPhail and Carveth, 1994). Fish collection forms were completed for each site where fish sampling occurred.

3. INVENTORY DATA

3.1 Survey Information

A total of 103 reaches were identified within Working Area 10. A total of 21 sample sites in 7 tributaries to the Skeena River were visited for inventory purposes.

Project inventory maps are presented in Appendix A - Inventory Map. Individual site card information and fish collection data is presented in Appendix B - Stream Site Data from FDIS and Fish Collection Data. Individual site photographs and contact sheets are presented in Appendix C - Photograph Captions and Contact Sheets.

3.1.1 Problems

Watershed codes were not available at the time of mapping and have therefore not been included. All streams were identified with a numeric interim locational point (ILP), ILP's are used throughout this report to identify specific streams.

3.2 Fish Distribution

Fish distribution is confined to three confirmed and two inferred left bank Skeena River tributaries in this working area. One tributary (ILP 00054 mapsheet 94D.001) is within a low elevation plateau area adjacent to the Skeena River south of the Sicintine River. Two 3rd order streams (ILP 00001 and 00039 map sheet 93M.091) along the Skeena River valley wall are fish bearing up to the first impassable barrier upstream from the mouth. No barriers were noted in unnamed stream ILP 00054 (map sheet 94D.001). Unnamed stream ILP 00001 (map sheet 93M.091) is fish bearing to a series of waterfalls starting approximately 450m upstream from the mouth. Unnamed stream ILP 00039 (map sheet 93M.091) is fish bearing to a 10m waterfall approximately 540m upstream of the mouth. Unnamed stream ILP 00038

(map sheet 93M.091) was inferred fish bearing due to potential access from the Skeena River, this tributary was dewatered at the time of the survey. Unnamed stream ILP 00044 (map sheet 94D.001) was inferred fish bearing due to potential access from the Skeena River.

Fish species captured were chinook salmon (*Oncorhynchus tshawytscha*), cutthroat trout (*O. clarki*), rainbow trout (*O. mykiss*), Dolly Varden char (*Salvelinus malma*), and trout (unidentified to species). No fish were captured in any of the stream reaches on the Skeena valley wall. Cutthroat and rainbow trout, trout (unidentified to species), and Dolly Varden char were captured in unnamed stream ILP 00054 (map sheet 94D.001). Chinook salmon, rainbow trout and trout (unidentified to species) were captured in unnamed stream ILP 00039 (map sheet 93M.091). Chinook salmon, rainbow trout and Dolly Varden char were captured in unnamed stream ILP 00001 (map sheet 93M.091).

3.3 Fish Habitat

Fish habitat is confined to the streams described above. Fish were captured in a tributary in the low elevation plateau area of the Skeena River south of the Sicintine River and in two 3rd order steams up to the first impassable barrier. Two streams (ILP 00044 map sheet 94D.001 and ILP 00038 map sheet 93M.091) were included as fish habitat based on gradient, access, and habitat suitability, although no fish were present.

Only rearing habitat was encountered during our field sampling. No definite spawning areas were encountered although potential spawning habitat for salmonids was present in Reach 1 of both unnamed streams ILP 00001 and 00039 (map sheet 93M.091).

Unnamed stream ILP 00054 provides low gradient rearing habitat suitable for juvenile salmonids. Unnamed streams ILP 00001 and 00039 (map sheet 93M.091) provide cascade/pool habitat (6% gradient) suitable for juvenile salmonids.

3.4 Fish Condition

All captured fish appeared to be healthy. Chinook salmon ranged in size from 60mm - 64mm; rainbow trout ranged in size from 100mm - 122mm; cutthroat trout ranged in size from 77mm - 200mm; trout ranged in size from 34mm - 54mm; and Dolly Varden ranged in size from 40mm - 90mm; all were considered to be rearing. No attempt was made to examine captured fish internally for the determination of maturity. No fish were exhibiting spawning colouration.

3.5 Rehabilitation/Enhancement Opportunities

This working area has had no apparent land use activity and does not require rehabilitation nor does it require enhancement.

3.6 Follow-up Sampling

No follow-up sampling is recommended for Working Area 10. Inferred fish presence in sampled reaches (unnamed streams ILP 00044 map sheet 94D.001 and ILP 00038 map sheet 93M.091) were based on unimpeded access from the Skeena River, gradient, and habitat suitability. The sampling rate and locations of sites was sufficient to infer fish distribution at the 1:20,000 level for the entire watershed. Where forest harvesting is planned adjacent to inferred fish bearing or non-fish bearing stream reaches with average reach gradient less than 20%, 1:5,000 scale riparian area classifications should be performed to confirm fish presence or absence.

3.7 Other Concerns/Interest Points

There are no concerns or interest points for this working area.

3.8 Non-Fish Bearing Reaches

Non-fish bearing reach reports are provided for relevant reaches including intermittent streams (Table 2). The most downstream reach of a stream which was determined to be non-fish bearing is identified in the report. All subsequent reaches upstream are non-fish bearing by default and are not identified separately. No reports are provided for the TRIM anomaly of a no visible channel - a channel that appears on a TRIM map but was not found in the field.

Table 2. Non-Fish Bearing Status Report for Working Area 10 Streams

Initial Sampling Date	Follow-up Sampling Date	Watershed Code or ILP Number	Stream Name	Reach Number	Site Number	Map Sheet Number	Capture Method (elecrofishing settings)	Area Covered (m^2)	Sampling Effort	Cond. (µS)	Water Temp. (deg. Celsius)	Flow Stage (VO)	Turbidity (V0)	Known Fish Presence (u/s-d/s)	Obstructions to Fish Migration	Seasonal Habitat Availability	Seasonal Fish Use
13/09/1997	-	48	Unnamed	1	1071	94D.001	no habitat to sample for fish	-	-	100	9	Low	Clear	AF downstream in Skeena River	42% gradient at mouth	None	None
14/09/1997	-	44	Unnamed	1	3064	94D.001	EF, 300/60/8; Minnow traps	120	205 seconds, 4 trap hours	190	7	Low	Clear	AF downstream in Skeena River	20% gradient downtream	None	None
13/09/1997	-	21	Unnamed	1	1076, 1077	93M.091	fish sampling in site 1077; EF, 400/70/6	375	340 seconds	30	9	Low	Clear	AF downstream in Skeena River, fish access to barrier in this stream	10m falls 450m upstream from mouth	All	None
13/09/1997	-	1	Unnamed	2	3056	93M.091	EF, 400/60/8	500	405 seconds	50	8	Low	Clear	AF downstream in Skeena River, fish access to barrier in this stream	Series of falls strating 300m upstream from mouth	All	None

4. REFERENCES

Department of Fisheries and Oceans. 1997. Fisheries Information Summary System Data Compilation and Mapping Procedures.

McPhail, J.D. and R. Carveth. 1994. Field Key to the Freshwater Fishes of British Columbia.

Ministry of Environment and Department of Fisheries and Oceans. 1995. Fisheries Information Summary System. Map sheet 94D/04 and 93M/13.

Ministry of Forests. 1988. Biogeoclimatic and Ecoregion Units of the Prince Rupert Forest Region.

Ministry of Forests. 1995. Fish Stream Identification Guidebook.

Ministry of Forests. 1996. Channel Assessment Procedures Guidebook.

Province of British Columbia, Resources Inventory Committee. 1997. Reconnaissance (1:20,000) Fish and Fish Habitat Inventory: Standards and Procedures.

Appendix A - Inventory Map

Appendix B - Stream Site Data from FDIS and Fish Collection Data

Appendix C - Photograph Captions and Contact Sheets

Photo Date	Watershed/ Working area	Stream Name or ILP	ILP Mapsheet	Card Site #	Site or Feature NID	NID Mapsheet #	Roll #	Frame #	CD#	Folder	Image	Focal Length (St, Wd, Te)	Dir (Up, Dn, Xs, Fish, Ae)	Comments (Description and/or scale item)
97-Sep-13	Area10	00048	94D.001	1071	01071	94D.001	10	11	KISPIOX	10	11	St	Dn	Steep small stream, devil's club.
97-Sep-13	Area10	00048	94D.001	1071	01071	94D.001	10	12	KISPIOX	10	11	St	Up	Steep small stream, devil's club.
97-Sep-13	Area10	00048	94D.001	1071	01071	94D.001	10	13	KISPIOX	10	13	St	Up	Steep small stream, devil's club.
97-Sep-13	Area10	00044	94D.001	1072	01072	94D.001	10	14	KISPIOX	10	14	St	Up	Small falls, mossy log in foreground.
97-Sep-13	Area10	00044	94D.001	1072	01072	94D.001	10	15	KISPIOX	10	15	St	Dn	Boulders, electroshocking in background.
97-Sep-13	Area10	00044	94D.001	1072	01072	94D.001	10	16	KISPIOX	10	16	St	Up	Mossy functional LWD.
97-Sep-13	Area10	00044	94D.001	1072	01072	94D.001	10	17	KISPIOX	10	17	St	Up	Boulders near confluence with Skeena.
97-Sep-13	Area10	00049	94D.001	1073	01073	94D.001	10	18	KISPIOX	10	18	St	Ae	Aerial view of where stream should be, seepage zone.
97-Sep-13	Area10	00049	94D.001	1073	01073	94D.001	10	19	KISPIOX	10	19	St	Ae	Aerial view of where stream should be, seepage zone.
97-Sep-13	Area10	00039	93M.091	1074	01074	94D.001	10	20	KISPIOX	10	20	St	Dn	Alpine stream, person shocking.
97-Sep-13	Area10	00039	93M.091	1074	01074	94D.001	10	21	KISPIOX	10	21	St	Up	Alpine stream, anode pole across channel.
97-Sep-13	Area10	00027	94D.001	1075	01075	94D.001	10	23	KISPIOX	10	22	St	Dn	Small alpine stream, stick in mid channel.
97-Sep-13	Area10	00027	94D.001	1075	01075	94D.001	10	24	KISPIOX	10	23	St	Up	Small alpine stream with overhanging riparian vegetation.
97-Sep-13	Area10	00021	94D.001	1076	01076	94D.001	10	25	KISPIOX	10	24	St	Ae	Aerial view of LP00021
97-Sep-13	Area10	00021	94D.001	1076	02052	94D.001	10	26	KISPIOX	10	25	St	Up	Falls 6m, part of series of continuous chutes/falls.
97-Sep-13	Area10	00021	94D.001	1076	02053	94D.001	10	27	KISPIOX	10	26	St	Up	Falls, 5m, at Reach 1 / Reach 2 break.
97-Sep-13	Area10	00021	94D.001	1077	01077	94D.001	10	28	KISPIOX	10	27	St	Up	Reach 2, downstream end, above falls at Reach break.
97-Sep-13	Area10	00021	94D.001	1077	02054	94D.001	10	29	KISPIOX	10	28	St	Up	Person shocking in pool below 3m falls.
97-Sep-13	Area10	00021	94D.001	1077	01077	94D.001	10	30	KISPIOX	10	29	St	Dn	Broken log across channel.
97-Sep-13	Area10	00021	94D.001	1077	01077	94D.001	10	31	KISPIOX	10	30	St	Up	LWD instream.
97-Sep-13	Area10	00021	94D.001	1076	02052	94D.001	10	32	KISPIOX	10	31	St	Ae	Aerial view of chutes/ cascades in Reach 1.
97-Sep-14	Area10	00060	94D.001	1078	01078	94D.001	7	1	KISPIOX	7	1	St	Up	Two logs across channel.
97-Sep-14	Area10	00060	94D.001	1078	01078	94D.001	7	2	KISPIOX	7	2	St	Dn	Radio on log across channel
97-Sep-14	Area10	00060	94D.001	1078	01078	94D.001	7	3	KISPIOX	7	3	Te	Fish	CT 110mm
97-Sep-14	Area10	00060	94D.001	1078	01078	94D.001	7	4	KISPIOX	7	4	Te	Fish	CT 110mm
97-Sep-14	Area10	00060	94D.001	1078	01078	94D.001	7	5	KISPIOX	7	5	Te	Fish	RB 110
97-Sep-14	Area10	00060	94D.001	1078	01078	94D.001	7	7	KISPIOX	7	6	St	Up	Person on right bank, glide/run.

Photo Date	Watershed/ Working area	Stream Name or ILP	ILP Mapsheet	Card Site #	Site or Feature NID	NID Mapsheet #	Roll #	Frame #	CD#	Folder	Image	Focal Length (St, Wd, Te)	Dir (Up, Dn, Xs, Fish, Ae)	Comments (Description and/or scale item)
97-Sep-14	Area10	00060	94D.001	1078	01078	94D.001	7	8	KISPIOX	7	7	St	Dn	Channel flowing through deciduous zone.
97-Sep-14	Area10	00060	94D.001	1078	02055	94D.001	7	9	KISPIOX	7	8	St	Xs	Backwater from beaver dam (top of dam visible in background)
97-Sep-14	Area10	00055	94D.001	1079	01079	94D.001	7	10	KISPIOX	7	9	St	Up	Alder overhanging small beaver dam
97-Sep-14	Area10	00055	94D.001	1079	01079	94D.001	7	11	KISPIOX	7	10	St	Dn	Alder overhanging backwatered run type habitat.
97-Sep-14	Area10	00054	94D.001	1080	01080	94D.001	7	12	KISPIOX	7	11	St	Up	Shallow riffle, mossy log across channel
97-Sep-14	Area10	00054	94D.001	1080	01080	94D.001	7	13	KISPIOX	7	12	St	Dn	Alder swale over channel, reeds on right bank.
97-Sep-14	Area10	00054	94D.001	1080	01080	94D.001	7	14	KISPIOX	7	13	Te	Fish	CT 82mm
97-Sep-14	Area10	00054	94D.001	1080	01080	94D.001	7	15	KISPIOX	7	14	Te	Fish	CT 82mm
97-Sep-14	Area10	00054	94D.001	1080	01080	94D.001	7	16	KISPIOX	7	15	Te	Fish	CT 200mm
97-Sep-14	Area10	00054	94D.001	1080	01080	94D.001	7	17	KISPIOX	7	16	Te	Fish	CT 200mm
97-Sep-14	Area10	00054	94D.001	1080	01080	94D.001	7	18	KISPIOX	7	17	St	Xs	Large backwatered/ponded area upstream of beaver dam.
97-Sep-14	Area10	00049	94D.001	1081	01081	94D.001	7	19	KISPIOX	7	18	St	Up	Low flow, mud substrate, no defined channel, person on right.
97-Sep-14	Area10	00049	94D.001	1081	01081	94D.001	7	20	KISPIOX	7	19	St	Up	Muddy substrate, person on left, low flow.
97-Sep-13	Area 10	00011	93M.091	3055	03055	93M.091	16	24	KISPIOX	16	24	St	U	Open book on log.
97-Sep-13	Area 10	00011	93M.091	3055	03055	93M.091	16	25	KISPIOX	16	25	St	D	Book, meterstick across channel.
97-Sep-13	Area 10	00001	93M.091	3056	3056	93M.091	16	26	KISPIOX	16	26	St	U	Bucket on right side in channel.
97-Sep-13	Area 10	00001	93M.091	3056	3056	93M.091	16	27	KISPIOX	16	27	St	D	Bedrock outcrop on left bank, overstream veg.
97-Sep-13	Area 10	00001	93M.091	3056	3056	93M.091	16	28	KISPIOX	16	28	St	Xs	Eroding bank.
97-Sep-13	Area 10	00001	93M.091	3056	3056	93M.091	16	29	KISPIOX	16	29	St	U	Person shocking in pool.
97-Sep-13	Area 10	00001	93M.091	3057	4025	93M.091	16	30	KISPIOX	16	30	St	Ae	Falls, 7m, upstream limit to fish use.
97-Sep-13	Area 10	00001	93M.091	3057	4026	93M.091	16	31	KISPIOX	16	31	St	Ae	Falls 7m, in Reach 2 (3056).
97-Sep-13	Area 10	00001	93M.091	3057	4027	93M.091	16	32	KISPIOX	16	32	St	Ae	Falls 10m, in Reach 2 (3056).
97-Sep-13	Area 10	00001	93M.091	3057	03057	93M.091	16	33	KISPIOX	16	33	St	Fish	Fish on fry board.
97-Sep-13	Area 10	00001	93M.091	3057	4025	93M.091	16	34	KISPIOX	16	34	St	U	Falls, 7m, upstream limit to fish use. Use for feature photo.
97-Sep-13	Area 10	00001	93M.091	3057	03057	93M.091	16	36	KISPIOX	16	36	St	D	Riffle pool.
97-Sep-13	Area 10	00018	93M.091	3058	03058	93M.091	6	1	KISPIOX	6	1	St	U	Person upstream in meadow.

Photo Date	Watershed/ Working area	Stream Name or ILP	ILP Mapsheet	Card Site #	Site or Feature NID	NID Mapsheet #	Roll #	Frame #	CD#	Folder	Image	Focal Length (St, Wd, Te)	Dir (Up, Dn, Xs, Fish, Ae)	Comments (Description and/or scale item)
97-Sep-13	Area 10	00018	93M.091	3058	03058	93M.091	6	2	KISPIOX	6	2	St	D	Notebook on log across channel.
97-Sep-13	Area 10	00024	93M.091	3059	3059	93M.091	6	3	KISPIOX	6	3	St	U	Person in grass next to channel.
97-Sep-13	Area 10	00024	93M.091	3059	3059	93M.091	6	4	KISPIOX	6	4	St	D	Tree mid channel.
97-Sep-13	Area 10	00038	93M.091	3060	03060	93M.091	6	5	KISPIOX	6	5	St	U	Bucket on dry channel.
97-Sep-13	Area 10	00039	93M.091	3061	03061	93M.091	6	6	KISPIOX	6	6	St	D	Extensive bar, person on left.
97-Sep-13	Area 10	00039	93M.091	3061	03061	93M.091	6	7	KISPIOX	6	7	St	U	Eroding bank, fallen trees.
97-Sep-13	Area 10	00039	93M.091	3061	03061	93M.091	6	8	KISPIOX	6	8	St	D	Riffle, log across channel.
97-Sep-13	Area 10	00039	93M.091	3061	03061	93M.091	6	9	KISPIOX	6	9	St	U	Pool under log, person on bank.
97-Sep-13	Area 10	00039	93M.091	3061	03061	93M.091	6	10	KISPIOX	6	10	St	Fish	Fish on fry board.
97-Sep-13	Area 10	00039	93M.091	3061	03061	93M.091	6	11	KISPIOX	6	11	St	Fish	Fish on fry board.
97-Sep-14	Area 10	00011	93M.091	3055	03055	93M.091	6	12	KISPIOX	6	12	St	X	Bugs (waterboatmen) on map.
97-Sep-14	Area 10	00006	93M.091	3062	03062	93M.091	6	13	KISPIOX	6	13	St	U	Person shocking in channel.
97-Sep-14	Area 10	00006	93M.091	3062	03062	93M.091	6	14	KISPIOX	6	14	St	U	Small steps, mossy banks.
97-Sep-14	Area 10	00006	93M.091	3062	03062	93M.091	6	15	KISPIOX	6	15	St	D	Mossy logs over channel.
97-Sep-14	Area 10	00008	93M.091	3063	03063	93M.091	6	16	KISPIOX	6	16	St	U	Person measuring depth.
97-Sep-14	Area 10	00008	93M.091	3063	03063	93M.091	6	17	KISPIOX	6	17	St	U	LWD steps.
97-Sep-14	Area 10	00008	93M.091	3063	04030	93M.091	6	18	KISPIOX	6	18	St	U	Bedrock cascade with person for scale.
97-Sep-14	Area 10	00008	93M.091	3063	03063	93M.091	6	19	KISPIOX	6	19	St	U	Person on log over channel.
97-Sep-14	Area 10	00039	93M.091	3061	04031	93M.091	6	20	KISPIOX	6	20	St	Ae	Aerial view of falls.
97-Sep-14	Area 10	00044	94D.001	3064	03064	94D.001	6	22	KISPIOX	6	21	St	U	Person with anode pole and bucket beside channel.
97-Sep-14	Area 10	00044	94D.001	3064	03064	94D.001	6	23	KISPIOX	6	22	St	U	Channel in forest with mossy banks.
97-Sep-14	Area 10	00001	93M.071	3045	03045	93M.071	6	25	KISPIOX	6	24	St	Ae	Aerial view of NVC trib to Skeena.
97-Sep-14	Area 10	00018	93M.071	3044	04015	93M.071	6	26	KISPIOX	6	25	St	Ae	Aerial view of steep chutes/falls from mouth, 20m.
97-Sep-14	Area 10	00050	93M.071	1082	02100	93M.071	6	27	KISPIOX	6	26	St	Ae	Aerial view of falls 6m.